OpenScape Business V3

Sales Information

Unify PH SMB PM

Issue:	1.00
Date:	29.05.2020
Status:	Released

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Version table:

Version	Date	Author	Changes
1.0	29.04.2020		Released

1 Description of Product/Solution/Service

1.1 System Overview

OpenScape Business is the state-of-the-art, future-proof, all-in-one Unified Communication & Collaboration solution designed to meet the needs of small and medium businesses with one or more locations.

OpenScape Business offers small and medium-sized businesses the answer to their individual and diverse communication needs, combined in a secure, flexible and scalable solution with various deployments (on-premise, hosted, cloud-based or combined) and purchase options (CAPEX and OPEX).

The OpenScape Business solution architecture can be deployed independently of the existing telephony infrastructure, regardless of whether traditional telephony, IP or DECT is involved.

From powerful telephony to a comprehensive UC solution OpenScape Business is easily scalable and can be expanded with the cloud-based team collaboration solution Circuit as the business grows and voice and communications requirements change. OpenScape Business always provides the right solution for companies with up to 500 stations or 2000 stations in a network

With OpenScape Business V3, the solution gains a technology boost to be future proofed for innovations and security requirements.

OpenScape Business is the all-in-one solution for small and medium-sized enterprises and offers:

- Integrated voice services, presence management (presence status), drag and drop conferencing, visual voicemail (voicemail box), AutoAttendant, Multimedia Contact Center, IM (Instant Messaging), Mobility, directory access with database connection, fax, integration into business processes, and much more
- UC clients individually customized for the workplace and way of working
- UNIFY's Circuit, a cloud-based collaboration solution as supplement for OpenScape Business, combines voice and video communication, screen sharing, messaging, and file sharing in a single application
- Circuit can be connected to OpenScape Business via a telephony connector, delivering powerful enterprise telephony and collaboration services in one solution.
- The perfect solution for customers with one location or network-wide solution with multiple locations
- Permanent (CAPEX) or subscription-based (OPEX) usage models provide the customer with full flexibility. OpenScape Business S can thus be used as an on-site, hosted, cloud-based installation or as a combined solution.

Depending on the existing infrastructure, different OpenScape Business HW models are available for different extension sizes (OpenScape Business X1/X3/X5 or X8).

In addition, it is possible to operate the OpenScape Business S software on a standard server (softswitch), naturally also in fully virtualized environments. Thus OpenScape Business S can be used as installation on-site, hosted, cloud-based or as combined solution together in a network with OpenScape Business X systems.

The sum of supported subscribers consisting of IP, analog, and digital subscribers as well as the number of supported UC users depends on the model:

Model	Voice Users	UC Users
Model X1	Up to 30	Up to 30
Model X3 / X5 / X5	Up to 500	Up to 500
Model S	Up to 1500	Up to 1500

Table 1 Supported number of Voice and UC users

VoIP and data components as well as the Unify Communication UC Smart or UC Suite applications including the contact center application are already integrated in all OpenScape Business models based on high-performance mainboards.

Details of the sales expansion stages of the models can be found in chapter 1.3.11 “Expansion capabilities “.

For the versatile and heterogeneous communication requirements, all IP, analog and digital subscriber and trunk interfaces are available. Support for new SIP / IP-based trunks is already integrated.

OpenScape Business V3 - well prepared for the future: Secure, flexible, scalable and even more powerful.

- The technology upgrade with performant mainboards makes OpenScape Business future-proof and ready for enhancements, innovations and security requirements.
- UC Booster Card and servers and other hardware components are no longer needed, simplifying installation and configuration.
- A fast and durable M.2 SSD replaces the SDHC card (optional pluggable SSD for UC applications)
- Advanced features:
  - “Standardized" technology approach
  - Co-processor for powerful on-board encryption
  - Gigabit network interfaces
  - Audio in "on board"
- Basis for future software releases and innovations
- Smooth migration path and investment protection for customers: just swap the mainboard, use other hardware and phones.
- V3 software is backward compatible and also available for current V2 mainboards and UC hardware.
- Existing licenses from OpenScape Business V2 can be reused.
- Convenient license migration via CLS Connect Service

With OpenScape Business V3, we continue to focus on the needs of our customers and partners. Other software versions are already being planned and will be gradually released.

1.2 New functionality and handling of Version V3R0

SW version V3 is used across the entire OpenScape Business model range and replaces SW version V2.

In the OpenScape Business X models, the SW V3 supports not only new high-performance mainboards, hereafter also called "V3 mainboards", but also the existing mainboards of version V2, hereafter referred to as "V2 mainboards".

Significant functional changes in OpenScape Business V3 are listed here. Details can be found in the corresponding chapters of this sales information.

- New high-performance V3 mainboard for the model X8 with:
  - Full UC function on the mainboard
  - No need for booster hardware and fan kits for the UC features
  - Direct analog input for music on hold. No longer need for EXM / EXMR module
  - Use of M.2 SATA SSD as storage medium for the operating system
  - Optional M.2 NVMe SSD for Media Data of the UC Suite

The V3 Mainboards for models X5, X3, X1 are in preparation and will be released later

- Higher capacities for certain functions in conjunction with V3 mainboards

- Support of existing OpenScape Business Systems with V2 mainboards and UC Booster HW within the V2 capacity limits
- Licensing
  - Re-use of existing licenses
  - Unification of the UC User Licensing:
    - Only one "UC User License to license all UC clients except myPortal for Outlook. (For details, see chapter1.8.3.5).
    - Renaming of the myPortal for Outlook license to UC Groupware User License. This can be used for licensing myPortal for Outlook and all other UC clients. (For details, see chapter 1.8.3.5.1).
  - Introduction of a system-wide CSTA license for Open Scape Business S V3 and OpenScape Business X V3 mainboards with externally connected CSTA applications (not required for V2 mainboards with UC Booster card / server).
  - CAPEX based OpenScape Business Circuit User license with a term of 3 years integrated into the order structure of OpenScape Business simplifies the marketing of Circuit. For details see chapter 1.8 “Licensing”.

The new functions and maximum capacities are described in detail in the following chapters.

Discontinued functions in V3

Some OpenScape Business V2 HW / SW functions are discontinued with OpenScape Business V3. In this case, a distinction is made as to whether the functions are generally no longer supported, or only in combination with the V3 or V2 mainboards or OpenScape Business S / UC boosters. This distinction is necessary in order to further support the existing functionality of the OpenScape X models in the event of a servicing update from V2 to V3.

Function	Supported with V3 Mainboards	Supported with V2 Mainboards	Supported with OSBiz S / UC Booster Server
Xpressions Compact cards	×	×	n/a
Optipoint 5xx device family	×	✓	n/a
Optipoint 4xx device family	×	✓	✓
Gateview	×	✓ (1	✓ (1
myPortal Smart Client	×	× (2	× (2
TAPI 120 WSI	×	✓	×
Remote access via ISDN with PPP (RAS)	×	× (2	n/a
XMPP service	×	×	×
myPortal for OpenStage	×	×	×
VPN termination via WAN Interface	×	×	×

Table 2 Discontinued functions

1) Function in phase out. SW Support ends September 2020
2) Existing installations will not be blocked. Unify does not provide technical support anymore. SW is no longer available in the Download Center of the System Administration Portal. The successor solution is myPortal @work.

1.2.1 New Sales Processes (Sales Bulletin)

SW Version V3 offers performance scaling of the X8 models depending on the required performance. To make this scaling possible, the mainboards were decoupled from the basic systems of the X8 systems and introduced as their own order position.

Depending on the selected mainboard, the appropriate storage medium containing the system SW must be added via an order item.

1.3 OpenScape Business Models

Different models are available for the use of telephony and UC functionality. You can choose between hardware models and pure software models that operate on standard servers or in a virtual environment with VMware vSphere or Hyper V.

The various communication platforms of OpenScape Business offer a high degree of flexibility in terms of scope of services and design. Four different scalable HW models and one SW model are available.

X1	X3R	X3W	X5R	X5W	X8
					

Table 3 OpenScape Business X - HW models

The **HW models X3 / X5 / X8** support stations for IP, Digital (ISDN, Up0), Analog (a / b) and Cordless (DECT) and connection to the public network using ITSP (SIP), ISDN (BRI and PRI), CAS and analog and onboard IP (provisioned on the mainboard).

The **HW Model X1** supports stations for IP, Digital (Up0), Analog (a / b) and Cordless (DECT) and connection to the public network via ITSP (SIP), analog and onboard IP (provisioned on the mainboard).

The UC functionality is already integrated in every HW model OpenScape Business X1 / X3 / X5 / X8 where the performance depends on the mainboard used. Here a distinction is made in:

- **V3 mainboards**
  with fully integrated UC functionality without additional UC Booster HW.
- **V2 mainboards**
  with fully integrated UC Smart and optional UC Booster HW extensions for UC Suite functionality.
  For V2 mainboards, the UC Smart function is already integrated on the mainboard. The UC Suite function also requires a plug-in module (UC Booster Card for models X3 / X5 / X8) or an external UC server (UC Booster Server).

The **SW model OpenScape Business S** is an "all-in-one" server-based UC software solution with support for IP stations and connection to the public network via ITSP (SIP).

OpenScape Business S can be operated either on its own server HW or in a virtual environment with VMware vSphere / Hyper V under the "Suse Linux Enterprise Server" operating system.

If TDM interfaces are required for connecting TDM devices or TDM lines, OpenScape Business X1 / X3 / X5 / X8 can be used as a gateway to OpenScape Business S.

The expansion limits of the hardware platforms can be found in chapter 1.3.11 “Expansion capabilities“.

1.3.1 OpenScape Business X1

Communication platform in a wall mount housing which needs to be mounted on a wall

Figure 1 OpenScape Business X1

OpenScape Business X1 consists of the mainboard OCCS. No further peripheral modules can be connected to it.

The OCCS mainboard provides slots for the following options:

- CMAe card
- EXMR card

The connection of telephones, trunk lines, DECT base stations, music on hold, etc. takes place directly on the mainboard or via an external main distributor.

The power supply unit (PSU) is integrated into the system housing on the right to the mainboard. For the bridging of power failures optional uninterruptible power supplies from external suppliers can be used. (switch over time up to 20 msec)

Construction data

- Dimensions (height x width x depth): Approx. 470 mm x 370 mm x 80 mm
- Weight: approx. 2.76 kg

Terminal values (rating plate)

- 0.7 A / 100 - 240 VAC
- 50 - 60 Hz

1.3.2 OpenScape Business X3R

OpenScape Business X3R is a communication system in a 19-inch rack mount case that can be mounted in a 19-inch rack or as a wall-mounted unit.

Figure 2 OpenScape Business X3R

OpenScape Business X3R has three slot levels, which are equipped as follows:

- Slot level 1: slots for two peripheral boards
- Slot level 2: slot for the OCCMR mainboard
- Slot level 3: slots for three options, slot 2 for the UC Booster Card (OCAB)

The front panel of the mainboard provides several RJ45 jacks for connecting telephones, trunks, LAN switches, etc.

The OCPSM power supply is located in the rear part of the 19" rack housing.

For bridging of power failures the system has to be connected to an external uninterruptible power supply. (switch over time up to 20 msec).

Note

When using the OCAB board, the X3R/X5R fan kit is required.

Construction data

- Dimensions (height x width x depth): approx. 88 mm x 440 mm x 380 mm
- Height units 19'' rack-mount installation: 2
- Weight: approx. 6 kg

Ringer Equivalence Number (type plate)

- 1,3 A / 115 - 230 VAC
- 50 - 60 Hz

1.3.3 OpenScape Business X3W

OpenScape Business X3W is a communication system that can be wall-mounted.

Without fan unit
(Series delivery)

X3W housing with X3W/X5W housing cover and fan unit
(when using the UC Booster Card)

Figure 3 OpenScape Business X3R

OpenScape Business X3W includes a board shelf with three slot levels, which are equipped as follows:

- Slot level 1: slots for two peripheral boards
- Slot level 2: slot for the OCCM mainboard
- Slot level 3: slots for five options

The connection of telephones, CO trunks, etc., can be made directly at the boards or via an external main distribution frame.

The power supply OCPSM is located at the right side within the wall mount housing.

For bridging of power failures the system has to be connected to an external uninterruptible power supply. (switch over time up to 20 ms).

Note

When using the OCAB board, the X3W/X5W fan kit and the X5W case cap are required.

Construction data

- Dimensions (height x width x depth): approx. 450 mm x 460 mm x 128 mm
- Weight: approx. 6 kg

Ringer Equivalence Number (type plate)

- 1,3 A / 115 - 230 VAC
- 50 - 60 Hz

1.3.4 OpenScape Business X5R

The OpenScape Business X5R is a communication system in a 19-inch rack mount case that can be mounted in a 19-inch rack mount cabinet or as a wall-mounted unit.

OpenScape Business X5R was certified with the environmental label „Blauen Engel“ The Blue Angel guarantees that a product or service meets high standards when it comes to its environmental, health and performance characteristics.

More information you will find here: https://www.blauer-engel.de/en

Figure 4 OpenScape Business X5R

OpenScape Business X5R has five slot levels, which are equipped as follows:

- Slot levels 1 through 3: each slot level provides slots for two peripheral boards
- Slot level 4: slot for the OCCMR mainboard
- Slot level 5: slots for three options, slot 2 for the UC Booster Card (OCAB)

The front panel of the mainboard provides several RJ45 jacks for connecting telephones, trunks, LAN switches, etc.

The OCPSM power supply is located in the rear part of the 19" rack housing.

OCPSM does not require an external power box for systems with maximum capacity. For bridging of power failures the system has to be connected to an external uninterruptible power supply. (switch over time up to 20 ms).

Note

When using the OCAB board, the X5R fan kit is required.

Construction data

- Dimensions (height x width x depth): approx. 155 mm x 440 mm x 380 mm
- Height units 19’’ rack-mount installation: 4
- Weight: approx. 8 kg

Ringer Equivalence Number (type plate)

- 2,6 A / 115 - 230 VAC
- 50 - 60 Hz

1.3.5 OpenScape Business X5W

OpenScape Business X5W is a communication system that can be wall-mounted.

Figure 5 OpenScape Business X5W

OpenScape Business X5W includes a board shelf with six slot levels, which are equipped as follows:

- Slot levels 1 through 3: Each slot level provides slots for two peripheral boards
- Slot level 4: Slot for the OCCM mainboard
- Slot level 6: Slots for five options

The connection of telephones, CO trunks, etc., can be made directly at the boards or via an external main distribution frame.

The power supply OCPSM is located at the right side within the wall mount housing.

For bridging of power failures the system has to be connected to an external uninterruptible power supply. (switch over time up to 20 ms).

Note

When using the OCAB board, the X3W/X5W fan kit is required.

Construction data

- Dimensions (height x width x depth): approx. 450 mm x 460 mm x 200 mm
- Weight: approx. 8 kg

Ringer Equivalence Number (type plate)

- 2,6 A / 115 - 230 VAC
- 50 - 60 Hz

1.3.6 OpenScape Business X8

OpenScape Business X8 is a modular communication system that can be used as a one-box system (base box) or a two-box system (base box + expansion box). OpenScape Business X8 can be installed as a standalone unit or mounted in a 19-inch rack.

Figure 6 OpenScape Business X8

The base box has 9 slots, and the expansion box has 13 slots for peripheral boards.

The V3 mainboard OCCLA has a fixed slot (slot 6, only in the base box).

Depending on your requirements, up to three LUNA2 power supply units can be used in the base box and up to four in the expansion box (see the Service manual for details). No other components are required if it is operated as a power supply. For the bridging of power failures optional uninterruptible power supplies from external suppliers can be used. (switch over time up to. 20 ms)

There are several options for connecting phones, CO trunks, etc. with OpenScape Business X8:

- SIVAPAC connectors are available on the backplane for connecting the external main distribution frame.
- Connector panels with 24 RJ45 jacks for direct connection of telephones, trunks, etc. The connector panels are clipped onto the SIVAPAC connectors on the backplane.
- For U.S. only: Connector panels with CHAMP jacks for connecting the external main distribution frame MDFU-E. The connector panels are clipped onto the SIVAPAC connectors on the backplane.

The type of connection used will be decided in consultation with the customer on conclusion of the agreement. The system boxes will be delivered accordingly with or without clipped-on connector panels.

Note:

Only for X8 systems with V2 mainboard OCCL: The UC Booster Card (OCAB) is mounted on the mainboard. When using the OCAB board, the X8 fan kit is required. The fan kit is also required in case of analog cards in slots 5 and/or 7 in conjunction with a V3 mainboard.

Construction data

- Dimensions (height x width x depth): approx. 490 mm x 440 mm x 430 mm
- Height units for 19'' rack-mount installation: 11
- Weight, including cabinet feet:
  - Base box: approx. 16.5 kg
  - Expansion box: approx. 15 kg

Ringer Equivalence Number (type plate)

- Base box:
  - 6 A / 110 VAC
    3 A / 230 VAC
  - 50 - 60 Hz
- Expansion box:
  - 8 A / 110 VAC
    4 A / 230 VAC
  - 50 - 60 Hz

1.3.7 Optional HW Booster Extensions

Voice Channel Booster Extensions for the hardware models X3, X5 or X8

All OpenScape Business mainboards have DSP channels for 8 simultaneous connection transitions from IP to TDM or TDM to IP. For an increase to 48 or 128 simultaneous IP / TDM transitions, the optionally available Voice Channel Booster Cards OCCBL (OCCB3) or OCCBH (OCCB1) can be plugged onto the mainboards.

UC Booster Extensions for the V2 mainboards of the models X3, X5 or X8

For the V2 mainboard variants UC Booster are needed to realize the UC Suite and other functions

- **OpenScape Business UC Booster Card**
  Plug-in module for OpenScape Business X3 / X5 / X8 for UC Suite or UC Smart. Through the UC Booster Card (OCAB), the models X3, X5 and X8 with the V2 mainboards can be equipped with the following functions:
  - UC Suite / UC Smart for Unified Communications and Collaboration for up to 150 users
  - Open Directory Service
  - CSTA interface for connecting OpenScape Business TAPI 120/170 or other external CSTA applications

  The operation of the UC Booster Card in the OpenScape Business X models requires in principle a model-specific fan unit. These are listed in chapter 3.1.2.2 Special kits and other.

- **OpenScape Business UC Booster Server**
  External server for OpenScape Business X3 / X5 / X8 for UC Suite or UC-Smart. With the UC Booster Server the models X3, X5 and X8 with the V2 mainboards can be equipped with the following functions:
  - UC Suite for Unified Communications and Collaboration for up to 500 users,
  - UC Smart for Unified Communications and Collaboration for up to 150 users,
  - Open Directory Service
  - CSTA interface for connecting OpenScape Business TAPI 120/170 or other external CSTA applications

  The UC Booster Server can be operated either on its own server HW or in a virtual environment with VMware vSphere / Hyper V under the "SUSE Linux Enterprise Server" (SLES 64 bit) operating system. When using the UC Booster Server, the UC Booster Card is not needed.

1.3.8 Structure and Environmental Conditions

	X1	**X3R**	**X5R**	**X8**
		X3W	**X5W**	
Structure		Rack	Rack	Standard system (even for installation in rack)
	Wall-mount system	Wall-mount system	Wall-mount system	
Dimensions (HxBxT in mm)	470x370x80	89x440x380 (2U)	155x440x380 (3,5U)	490x440x430
		450x460x130	450x460x200	
Weight: Rack/Wall	2,76 kg	about 6 kg	about 8 kg	about 34 kg (fully loaded)
Power supply	The models are equipped for connection to the power supply. • Rated input voltage (AC): 100 to 240 V • Nominal frequency: 50/60 Hz • Battery power (DC): -48 V only for model X8			

Power consumption	Depending on the hardware platform and expansion			
Environmental Conditions	• Operating conditions: +5 to +40 °C (41 to 104 °F) • Humidity: 5 to 85%			
Housing color	Iceblue	Green / Gray	Green / Gray	Green / Gray
		Iceblue	Iceblue	

Table 4 Design and environmental conditions of the HW models

Temperature monitoring and automatic shutdown of modules

OpenScape Business Systems are designed for use in a specified temperature range. To guarantee the system operation the system temperature is monitored.

Information can be provided on the telephone, e-mail notification or signaling via SNMP trap in case of temperature exceeds 60 degrees Celsius in systems with analogue subscriber modules (SLAV8 / 16). In case of temperatures above 65 degrees Celsius the analogue modules are automatically switched off.

For V2 mainboards is additive:
Information can be provided on the telephone, e-mail notification or signaling via SNMP trap in case of temperature exceeds 55 degrees Celsius in systems with an installed UC Booster Card (OCAB). In case of temperatures above 6o degrees Celsius the OCAB is automatically shut down.

The system administrator can start up again the modules by a system restart, after checking the system and correcting the root cause of the shutdown.

1.3.9 OpenScape Business S

The OpenScape Business S model is an all-in-one server-based UC software solution with support for up to 1500 IP subscribers and connection to the public network via ITSP (SIP).

The OpenScape Business S solution can be operated either on its own server HW or in a virtual environment with VMware vSphere / Microsoft Hyper V under the "SUSE Linux Enterprise Server" (SLES 64 bit) operating system.

It supports the same Internet Telephony Service Providers and IP phones as the X1 / X3 / X5 / X8 models.

If TDM interfaces are required for connecting TDM terminals or TDM lines, OpenScape Business X1 / X3 / X5 / X8 can be used as a gateway to OpenScape Business S.

DECT telephones are switched on either directly via Cordless IP or via an OpenScape Business X1 / X3 / X5 / X8 gateway with integrated Cordless Solution (CMI).

When networking systems, OpenScape Business, HiPath 3000 (TDM), OpenScape 4000, OpenScape Voice systems are supported. OpenScape Office MX / LX systems are not supported in the networking.

The expansion limits of the OpenScape Business S Application can be found in chapter 1.3.11 “Expansion capabilities”.

OpenScape Business S software

The OpenScape Business S SW can either be ordered on DVD or downloaded as an ISO SW image from the Unify Software Download Server (SWS). When ordering a DVD, a second DVD will always be delivered with the appropriate SLES operating system. The ISO SW image contains only the OpenScape Business S software. In addition to the previously mentioned formats, the OpenScape Business S SW including the SLES is provided as a so-called "OVA Image" for quick and easy installation in virtual environments.

1.3.10 Functional differences between OpenScape Business S and X models

Based on the system architecture the following restrictions are applicable to OpenScape Business S in comparison to the hardware-based models:

- The number of voicemail messages in the voicemail box is not displayed in the display of the system telephone (MWI).

- With Smart VM voicemail fax, busy or silent tone detection is not supported. Incoming faxes cannot be transferred to a standard fax machine after the fax call has been answered by UC Smart voicemail. The Smart Voicemail records for about 1-2 minutes.
- Callers transferred by the Company Auto Attendant to busy subscribers will receive busy tone. There is no possibility to leave a voicemail message,
- Callers transferred by the AutoAttendant to idle subscribers cannot be transferred to the intercept position by time.
- Call out through the Smart voicemail system to the sender of a voicemail message (Calling Party Number), after listening to this message, is only possible if the user number programmed in Smart VM is identical to the number of the calling person.
- Connections to the SmartVM mailbox will occupy SIPQ trunk connections with UC Booster Server and OpenScape Business S. Those connections do not require trunk licenses.
- Connections to announcements will occupy MEB channels.
- 60 MEB channels are available for connections to the Smart voicemail and Auto Attendant

1.3.11 Expansion capabilities

Which deployment model or mainboard you choose depends on the expansion levels, among other things.

The following table shows the possible maximum values (expansion levels) for the respective OpenScape Business model. Please note that a distinction is made between static maximum values and dynamic maximum values as well as in sum values for function categories and associated individual functions.

- The static maximum values apply for each operating situation of the system. They are mainly determined by physical conditions such as available expansion slots, expansion modules or SW configuration limits.
- The dynamic maximum values refer to system resources that are only temporarily used by special functions during operation. They are assigned to the function when required and released again when the function is finished. A typical example for a dynamically used resource are the signal processor (DSP) channels of the mainboard or the Voice Channel Booster Card, which are used for IP/TDM transitions, fax connections or encryption.
- For certain function categories general maximum values apply, which must not be exceeded by the sum of the corresponding individual functions.
  Example: Line Channels
  For the model X8, the sum of the maximum possible analog, digital (S0, S2m), ITSP and MEB lines is 504, but the sum of the maximum available line channels is 250 lines for the model X8.

Please also observe the notes on specific functions given below the respective table.

1.3.11.1 Lines

	X1	**X3**		**X5**		**X8**		**Server (S)**
	Wall	**Rack**	**Wall**	**Rack**	**Wall**	**V2 Mainboard**	**V3 Mainboard**	
Line channels maximum								
Max. number of line channels (*1	**250**	**250**	**250**	**250**	**250**	**250**	**250**	**250**
Line channels for connection of telephony service provider, networking, external computer								
SIP trunk channels / SIP provider	30 / 8	60 / 8 **(*2**	60 / 8 **(*2**	60 / 8 **(*2**	60 / 8 **(*2**	60 / 8 **(*2**	120 / 8	180 / 8
SIPQ-channels (Networking)	100	100	100	100	100	100	100	100

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
ISDN S_0 – channels (BRI)	4 Mainboard	20 Mainboard + 2*STLSX4R	20 Mainboard + 2*STLSX4	52 Mainboard + 6*STLSX4R	52 Mainboard + 6*STLSX4	128 SW-Limit	128 SW-Limit	n/a
ISDN S_{2M} – channels (PRI)	-	30 1*TS2R	30 1*TS2	30 1*TS2R	30 1*TS2	180 3*DIUT2	180 3*DIUT2	n/a
Analog (a/b) channels	-	8 2*TLANI4R	16 2*TLANI8	24 6*TLANI4R	48 6*TLANI8	120 15*TMANI	120 15*TMANI	n/a
Line channels for internal purposes								
MEB channels for internal announcements **(*3**	0	16	16	16	16	16	16	16
MEB channels for UC Suite **(*4**	0	60/30/0 **(*5**	60/30/0 **(*5**	60/30/0 **(*5**	60/30/0 **(*5**	60/30/0 **(*5**	60	60

Table 5 Expansion Level Line Channels

***1)** Sum of; SIP trunk, ITSP, SIPQ, TDM line channels and MEB channels

***2)** In networking with OpenScape Business S as ITSP gateway, more than 60 channels are also possible

***3)** The MEB channels are dynamically assigned by the system for system-internal announcements. They are always included in the maximum number of line channels.

***4)** For systems with UC Suite, the MEB channels are dynamically generated for: Voicemail, AutoAttendant, Fax, Call Me connections, announcements and conference calls. They only count towards the maximum number of line channels in UC Suite systems.

***5)** Values are staggered according to UC Booster configuration: Booster Server / Booster Card / without UC Booster

1.3.11.2 Stations/Users

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
Stations maximum								
Max. number of stations (*2	**30**	**500**	**500**	**500**	**500**	**500**	**500**	**1500**
IP Stations								
IP-Stations System (HFA)	20 **(*3**	500	500	500	500	500	500	1500
IP-Stations (SIP)	20 **(*3**	500	500	500	500	500	500	500
TDM Stations								
Max. number of TDM Stations (*4	**30**	**384**	**384**	**384**	**384**	**384**	**384**	**n/a**

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
Analog stations (TDM	4 Mainboard	20 Mainboard + 2*SLAV8R or 1*SLAV16R	20 Mainboard + 2*SLAV8 or 1*SLAV16	52 Mainboard + 2*SLAV8R + 2*SLAV16R	68 Mainboard + 4*SLAV16	384 16*SLMA16	384 16*SLMA16	n/a
UP0 Master stations (TDM) **(*8**	8 Mainboard	24 Mainboard + 2*SLU8NR	24 Mainboard + 2*SLU8N	56 Mainboard + 6*SLU8NR	56 Mainboard + 6*SLU8N	384 16*SLMU	384 16*SLMU	n/a
UP0 Slave stations (TDM) (incl. a/b and S0 adapters)	8	24	24	56	56	116	116U	n/a
S0 ISDN stations (TDM)	2 Mainboard	36 Mainboard+ 4*STLSX4R	36 Mainboard + 4*STLSX4	36 Mainboard + 6*STLSX4R	52 Mainboard + 6*STLSX4R	128	128	n/a
DECT-CMI stations (TDM)	16 Mainboard+ CMAe BS 1-7	64 Mainboard+CMAe BS 1-7 SLU8NR BS 8-15	64 Mainboard+CMAe BS 1-7 SLU8NR BS 8-15	64 Mainboard+CMAe BS 1-7 SLU8NR BS 8-15	64 Mainboard+CMAe BS 1-7 SLU8NR BS 8-15	250 4*SLMU + 4*CMAe	250 4*SLMU + 4 CMAe	n/a
Mobility users								
Max. number of mobility users (*5	**30**	**150**	**150**	**150**	**150**	**150**	**500**	**250**
Mobility Entry users	30	150	150	150	150	150	150	150
myPortal to go users **(*6**	30	150/150/50 **(*1**	150/150/50 **(*1**	150/150/50 **(*1**	150/150/50 **(*1**	150/150/50 **(*1**	500	250
Circuit users **(*7**	30	150	150	150	150	150	150	250
Skype for Business users	30	150	150	150	150	150	150	250

Table 6 Expansion Level Stations/Users

***1)** Values are staggered according to UC Booster configuration: Booster Server / Booster Card / without UC Booster

***2)** Sum of: IP (HFA), IP (SIP), Analog, UP0 Master/Slave, DECT (CMI), ISDN S0, Mobility and Deskshare subscribers

***3)** Sum of IP user and desk share user (limitation via configuration)

***4)** Sum of: Analog, UP0, DECT (CMI) and ISDN S0 subscribers

***5)** Sum of: Mobility Entry, myPortal to go- Circuit- Skype for Business participants

***6)** The number of simultaneous VoIP connections of the subscriber depends on:

a) the DSP channels available in the system for gateway calls (IP/TDM transition). Details See chapter 1.3.11.8-

b) the internal RTP proxy channels available in the system for VoIP calls via the Internet. Details See chapter 1.3.11.9.

***7)** The number of simultaneous connections depending on the DSP channels available in the system for gateway calls (IP/TDM transition). Details See chapter 1.3.11.8.

***8)** Depending on the types of phones and the total power requirements of the communication system

1.3.11.3 Smart Voicemail

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
Smart Voicemail								
Smart Voicemail boxes	30	320	320	320	320	320	500	1500
Messages per Voicemail Box	100	100	100	100	100	100	100	100
Recording time per call (Minutes)	2	2	2	2	2	2	4	2
Total recording capacity in hours	32	32	32	32	32	32	64/32 **(*1**	32
Simultaneous Voicemail Connections (Channels)	10	10	10	10	10	10	30	60
Announcements	16	16	16	16	16	16	16	16
Company Auto-Attendant	100	100	100	100	100	100	100	100

Table 7 Expansion level Smart Voicemail

***1)** Values are staggered according to M.2 NVMe SSD configuration: with M.2 NVMe SSD / without M.2 NVMe SSD

1.3.11.4 UC-Smart

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
UC Smart User maximum								
Max number of UC Smart user (Accounts)	**30**	**250/150/50 (*1**	**250/150/50 (*1**	**250/150/50 (*1**	**250/150/50 (*1**	**250/150/50 (*1**	**500**	**250**
UC Smart Clients								
Number of simultaneous active UC clients. (*2	**50**	**500/300/150 (*1**	**500/300/150 (*1**	**500/300/150 (*1**	**500/300/150 (*1**	**500/300/150 (*1**	**1000**	**1000**
myPortal @work **(*3**	30	250/150/50 **(*1** Max.30 simultaneous VoIP calls	250/150/50 **(*1** Max.30 simultaneous VoIP calls	250/150/50 **(*1** Max.30 simultaneous VoIP calls	250/150/50 **(*1** Max.30 simultaneous VoIP calls	250/150/50 **(*1** Max.30 simultaneous VoIP calls	500 Max.70 simultaneous VoIP calls	250 Max.60 simultaneous VoIP calls
myPortal to go (***3**	30	150/150/50 **(*1**	150/150/50 **(*1**	150/150/50 **(*1**	150/150/50 **(*1**	150/150/50 **(*1**	500	250

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
Deskphone CP400/600 (UC-mode)	30	250/150/50 **(*1**	250/150/50 **(*1**	250/150/50 **(*1**	250/150/50 **(*1**	250/150/50 **(*1**	500	250
OpenScape Business Attendant	8	8	8	8	8	8	8	8
UC Smart Managed Conference (via UC Client)								
Number of managed conferences	5	5	5	5	5	5	5	10
Number of users per managed conference	16	16	16	16	16	16	16	16
Channels for managed conferences	30	30	30	30	30	30	30	60

Table 8 Expansion Level UC Smart

***1)** Values are staggered according to UC Booster configuration: Booster Server / Booster Card / without UC Booster

***2)** Sum of: myPortal @work, myPortal to go, CP400/600 UC mode, Application Launcher, Business Attendant, TAPI 120 (WSI), 3rd-party WSI Clients (Background: Several clients with the same UC Smart Account can log on to the system)

***3)** The number of simultaneous VoIP connections of the subscriber depends on:

a) the DSP channels available in the system for gateway calls (IP/TDM transition). Details See chapter 1.3.11.8-

b) the internal RTP proxy channels available in the system for VoIP calls via the Internet. Details See chapter 1.3.11.9.

***4)** The number of simultaneous connections depending on the DSP channels available in the system for gateway calls (IP/TDM transition). Details See chapter 1.3.11.8.

1.3.11.5 UC-Suite

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
UC Suite User maximum								
Max number of UC Suite user (Accounts)	**-**	**250/150/0 (*1**	**250/150/0 (*1**	**250/150/0 (*1**	**250/150/0 (*1**	**250/150/0 (*1**	**500/300 (*3**	**1500**
UC Suite Clients								
Number of simultaneous active UC Clients. (*2	**-**	**500/150/0 (*1**	**500/150/0 (*1**	**500/150/0 (*1**	**500/150/0 (*1**	**500/150/0 (*1**	**1000/600 (*3**	**1500**
myPortal for Desktop	-	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/300 **(*3**	1500
myPortal for Outlook	-	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/300 **(*3**	1500
myAgent (simultaneous active)	**-**	64	64	64	64	64	64	64

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
myAgent (configurable)	-	192	192	192	192	192	192	192
myReports	-	1	1	1	1	1	1	1
myAttendant	-	20	20	20	20	20	20	20
myPortal @work **(*4**	-	250/150/0 **(*1** Max.30 simultaneous VoIP calls	250/150/0 **(*1** Max.30 simultaneous VoIP calls	250/150/0 **(*1** Max.30 simultaneous VoIP calls	250/150/0 **(*1** Max.30 simultaneous VoIP calls	250/150/0 **(*1** Max.30 simultaneous VoIP calls	500/300 **(*3** Max.70 simultaneous VoIP calls	250 Max.60 simultaneous VoIP calls
myPortal to go **(*4**	-	150/150/0 **(*1**	150/150/0 **(*1**	150/150/0 **(*1**	150/150/0 **(*1**	150/150/0 **(*1**	500/300 **(*3**	250
Deskphone CP400/600	-	250/150/0 **(*1**	250/150/0 **(*1**	250/150/0 **(*1**	250/150/0 **(*1**	250/150/0 **(*1**	500/300 **(*3**	250
OpenScape Business Attendant	-	8	8	8	8	8	8	8
UC Suite Voicemail								
VM boxes	-	500/500/0 **(*5**	500/500/0 **(*5**	500/500/0 **(*5**	500/500/0 **(*5**	500/500/0 **(*5**	500	1500
VM groups	-	20/20/0	20/20/0	20/20/0	20/20/0	20/20/0	32	20
Messages per voicemail box **(*6**	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Recording time per call (minutes)	-	15	15	15	15	15	15	15
Total recording capacity (hours) **(*6**	-	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Simultaneous connections to voicemail (MEB-channels)	-	30	30	30	30	30	60	60
Auto Attendant	-	20/20/0 **(*1**	20/20/0 **(*1**	20/20/0 **(*1**	20/20/0 **(*1**	20/20/0 **(*1**	20	20
UC Suite Fax								
Fax boxes	-	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500	1500

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
Fax box groups	-	60/60/0 (*1	60/60/0 (*1	60/60/0 (*1	60/60/0 (*1	60/60/0 (*1	60	60
Stations per Fax box group	-	10/10/0 (*1	10/10/0 (*1	10/10/0 (*1	10/10/0 (*1	10/10/0 (*1	10	10
Fax length in pages	-	500/500/0 (*1	500/500/0 (*1	500/500/0 (*1	500/500/0 (*1	500/500/0 (*1	500	500
Simultaneous T.38 Faxes	-	8/3/0 **(*1**	8/3/0 **(*1**	8/3/0 **(*1**	8/3/0 **(*1**	8/3/0 **(*1**	8	8
UC Suite Conferences								
Simultaneous UC Suite Conferences	-	5/5/0 **(*1**	5/5/0 **(*1**	5/5/0 **(*1**	5/5/0 **(*1**	5/5/0 **(*1**	5	5
Users per UC Suite Conference	-	16/16/0 **(*1**	16/16/0 **(*1**	16/16/0 **(*1**	16/16/0 **(*1**	16/16/0 **(*1**	16	16
Number of channels for UC Suite Conferences	-	20/20/0 **(*1**	20/20/0 **(*1**	20/20/0 **(*1**	20/20/0 **(*1**	20/20/0 **(*1**	20	60

Table 9 Expansion Level UC Suite

***1)** Values are staggered according to UC Booster configuration: Booster Server / Booster Card / without UC Booster

***2)** Sum of: myPortal Desktop, myPortal for Outlook, myAttendant, myAgent, myReports, myPortal @work, myPortal to go, CP400 / 600 UC mode (Background: Several clients with the same UC Suite account can log on to the system)

***3)** The lower value applies to systems with UC Suite Contact Center.

***4)** The number of simultaneous VoIP connections of the subscriber depends on

a) the DSP channels available in the system for gateway calls (IP/TDM transition). Details See chapter 1.3.11.8-

b) the internal RTP proxy channels available in the system for VoIP calls via the Internet. Details See chapter 1.3.11.9.

***5)** The UC Booster Card supports a maximum of 500 voicemail boxes, regardless of the UC Suite client limit (150 users).

***6)** The value depends on the available hard disk HD / SSD storage capacity. A subscriber-related limitation is not implemented.

1.3.11.6 CTI, CRM, Database Connections

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
CTI, CRM and Database Connections								
Application Launcher User	30	250/150/50 **(*1**	250/150/0 **(*1**	250/150/0 **(*1**	250/150/0 **(*1**	250/150/0 **(*1**	500/150 **(*2**	250
TAPI 120 User (in UC WSI Modus)	30	0/0/30 **(*1**	0/0/30 **(*1**	0/0/30 **(*1**	0/0/30 **(*1**	0/0/30 **(*1**	-	-
TAPI 120 User (via CSTA)	-	150/150/0 **(*1**	150/150/0 **(*1**	150/150/0 **(*1**	150/150/0 **(*1**	150/150/0 **(*1**	500	250
TAPI 170 User (via CSTA)	-	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500/150/0 **(*1**	500	1500

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
CSTA Links	-	4/4/0 **(*1**	4/4/0 **(*1**	4/4/0 **(*1**	4/4/0 **(*1**	4/4/0 **(*1**	4 **(*4**	4
Directory Service Connectors	-	4/4/0 **(*1**	4/4/0 **(*1**	4/4/0 **(*1**	4/4/0 **(*1**	4/4/0 **(*1**	4	4

Table 10 Expansion Level CTI, CRM and Database Connections

***1)** Values are staggered according to UC Booster configuration: Booster Server / Booster Card / without UC Booster

***2)** Values are staggered according to M.2 NVMe SSD configuration: with M.2 NVMe SSD / without M.2 NVMe SSD

***3)** When delivered from the factory, a CSTA link is free for connecting applications. The other three are preassigned by optional internal applications (UC Suite, DSS Server, CMD). If these applications are not used, the links can also be used to connect external applications.

***4)** A CSTA license is required to connect external applications. Excluded: Connection of TAPI 120 and TAPI 170).

1.3.11.7 Other system functions and system resources

In the following, the expansion stages of some selected system functions and system resources are listed. For more information, see the Administration Manual.

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
System functions								
System controlled conference (via phone)								
Number of system conferences	5	10	10	10	10	10	10	10
Participants per system conference	8	8	8	8	8	8	8	8
Channels per system conference	32	32	32	32	32	32	32	32
Directory entries								
Global Directory (values in thousands)	30	100/100/30 (*1	100/100/30 **(*1**	100/100/30 **(*1**	100/100/30 **(*1**	100/100/30 **(*1**	100	100
Circuit Connection								
Number of Tenants per system / network	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Number of simultaneous connections **(*3**	8	60	60	60	60	60	120	180
System resources								
DSP-channels								

	X1	X3		X5		X8		Server (S)
	Wall	Rack	Wall	Rack	Wall	V2 Mainboard	V3 Mainboard	
DSP G.711 without encryption	8	128/48/8 (*7	128/48/8 (*7	128/48/8 (*7	128/48/8 (*7	128/48/8 (*7	128/48/8 (*7	n/a
DSP G.711 + G.729 without encryption	8	104/40/8 (*7	104/40/8 (*7	104/40/8 (*7	104/40/8 (*7	104/40/8 (*7	104/40/8 (*7	n/a
DSP G.711 with encryption	6	102/38/6 (*7	102/38/6 (*7	102/38/6 (*7	102/38/6 (*7	102/38/6 (*7	102/38/6 (*7	n/a
DSP G.711 + G.729 with encryption	6	81/31/6 (*7	81/31/6 (*7	81/31/6 (*7	81/31/6 (*7	81/31/6 (*7	81/31/6 (*7	n/a
DSP Fax T.38 (for ISDN Gateway) (*4	3	12/6/3 (*7	12/6/3 (*7	12/6/3 (*7	12/6/3 (*7	12/6/3 (*7	12/6/3 (*7	n/a
DSP Fax T.38 (for UC Suite Fax) (*5	-	8/6/0 (*7	8/6/0 (*7	8/6/0 (*7	8/6/0 (*7	8/6/0 (*7	8/6/0 (*7	n/a
RTP Proxy channels								
RTP Proxy channels	30	60	60	60	60	60	120	180
MEB -line channels								
MEB-line channels in total	**0**	**76/46/0 (*1**	**76/46/0 (*1**	**76/46/0 (*1**	**76/46/0 (*1**	**76/46/0 (*1**	**16/76 (*2**	**76**
MEB-Line channels for announcements	0	16/16/0 (*1	16/16/0 (*1	16/16/0 (*1	16/16/0 (*1	16/16/0 (*1	16	16
MEB Line channels for UC Suite	-	60/30/0 (*1	60/30/0 (*1	60/30/0 (*1	60/30/0 (*1	60/30/0 (*1	60	60
CSTA external connections								
Monitor points	n/a	1500	1500	1500	1500	1500	3750	3750
Web Services API (WSI)								
Sum of simultaneous client connections to the WSI (*6	50	500/300/150 (*1	500/300/150 (*1	500/300/150 (*1	500/300/150 (*1	500/300/150 (*1	1000	1000

Table 11 Expansion Level other system functions / resources

***1)** Values are staggered according to UC Booster configuration: Booster Server / Booster Card / without UC Booster

***2)** The value depends on UC Suite: System with UC Suite / System without UC Suite.

***3)** The number of simultaneous connections depending on the DSP channels available in the system for gateway calls (IP/TDM transition). Details See chapter 1.3.11.8.

***4)** Values apply to OpenScape Business as ISDN gateway. G.711 to T38 or vice versa without UC Suite Fax

***5)** UC Suite can generally handle up to 8 simultaneous fax connections. OpenScape Business X3/X5/X8 as ISDN gateway can process 3 to 12 simultaneous faxes depending on the DSP module. Both parameters in combination determine the number of simultaneous T.38 or G.711 fax connections.

***6)** Sum of: myPortal @work, myPortal to go, CP400/600 UC mode, Application Launcher, Business Attendant, TAPI 120 (WSI), 3rd Party WSI Clients. (Background: Several clients with the same UC Smart Account can log on to the system).

***7)** Values are staggered according to Voice Channel Booster configuration: with OCCBH / with OCCBL / mainboard only

1.3.11.8 Details on the use of DSP channels

Within OpenScape Business "DSP channels" are used for the conversion (transcoding) of data streams. In principle this is required if there is an IP to TDM or TDM to IP transition for the voice data or if an encryption of the voice data is required. In detail:

- Voice connection between IP telephone and ISDN or analog (trunk) line.
- Voice connection via IP SIP/ITSP line and internal UP0/E, a/b or ISDN telephones.
- Voice connection from IP line or IP subscriber to an internal conference. Here, a gateway channel is required for each line/IP client involved in a conference.
- Connections from UP0/E, a/b or ISDN phones or ISDN/ analog lines to UC Suite announcements, voicemail, fax or conferences.
- Encrypted voice connections between terminals and encrypted voice connections over ITSP lines.
- Connections to internal Music on Hold require one DSP channel per configured MoH codec.

For the following connections no DSP channel is needed for:

- Connection between internal IP users without encryption (direct payload)
- Connection between ITSP and IP subscriber without encryption. (direct payload)

The DSP channels are realized by a signal processor, which is integrated on the respective V2 or V3 motherboard in the models X1, X3, X5 and X8.

Depending on the type of transcoding, one signal processor can handle more or less DSP channels simultaneously. The following coding (codecs) is supported.

- **For voice connections**
  - Conversion from IP (G.711) to TDM with G.711 or vice versa.
  - Conversion from IP (G.711) to TDM with G.711 or vice versa with encryption (SPE).
  - Conversion from IP (G.729) to TDM with G.711 or vice versa.
  - Conversion from IP (G.729) to TDM with G.711 or vice versa with encryption (SPE).
- **For fax connections**
  - Conversion from T.38 to G.711 when using OpenScape Business as ISDN gateway.
  - Conversion from G.711 Fax to T.38 Fax or vice versa when using the UC-Suite Fax feature.

If the capacity of the signal processor integrated on the mainboard is not sufficient to realize the required number of DSP channels, they can be extended by using the optionally available "Voice Channel Booster" cards OCCBL or OCCBH.

The maximum number of available DSP channels depending on the encoding is shown in Table 11. Please note that each row represents the maximum number of similar DSP channels, but these are dynamically allocated by the system during operation. The number of DSP channels currently occupied during operation can be determined via the OpenScape Business Assistant (WBM). You find further notes about determining the required number of DSP channels in the administration manual.

1.3.11.9 Details on the use of RTP proxy channels

OpenScape Business uses an internal "RTP proxy" for all VoIP connections via the Internet. The proxy offers a pool of RTP channels that are assigned to the VoIP connections via Internet as follows.

- 1 RTP proxy channel per ITSP call
- 1 RTP proxy channel per circuit call
- 1 RTP proxy channel per system Device @Home in one call
- 1 RTP proxy channel per SIP Device @Home in one call
- 1 RTP proxy channel per myPortal to go VoIP @Home in one call
- 1 RTP proxy channel per myPortal @work VoIP @Home in one call

Within the different OpenScape Business models a different number of RTP proxy channels is available. See Table 11.

Examples:

- An external outgoing voice call from an internal IP system subscriber via an ITSP line requires an RTP proxy channel.
- An external voice call from the myPortal to go VoIP Client via internal (campus) WiFi to a subscriber in the public network via an ITSP line requires an RTP proxy channel. This is used for the connection via ITSP to the called subscriber in the public network.
- An external voice call from the myPortal to go VoIP Client via public WiFi to a subscriber in the public network over an ITSP line requires two RTP proxy channels. One RTP proxy channel is required for connecting the VoIP Client to OpenScape Business and another RTP proxy channel for the connection via ITSP to the called subscriber in the public network.
- An external voice call arriving via ITSP to a myPortal @work VoIP Client in the home office requires two RTP proxy channels. One RTP proxy channel is required for the connection from the ITSP to the OpenScape Business system and another one for the connection from OpenScape Business via Internet to the myPortal @work VoIP Client in the home office.

1.3.12 Supported Boards

The OpenScape Business V3 SW supports a wide range of motherboards, peripheral boards and modules. These include boards that are in the product phase-out phase or boards that are no longer in production and have already been replaced by successor boards.

A complete overview of current assemblies in the sales portfolio about as well as assemblies that are no longer supported / produced is contained in **chapter 3 Boards and Modules.**

Changes in the course of product development are possible at any time. These are communicated via sales circulars.

Technical support is provided by Unify exclusively for boards / devices of the current product portfolio and discontinued components that have not yet reached the end of the HW/SW support.

1.3.13 Information on selected modules

The following gives specific information on selected modules. Further information on modules is contained in chapter 3 Boards and Modules.

1.3.13.1 Mainboards

The System Software V3 supports the V3 mainboards and V2 mainboards. The mainboards can be ordered individually via order items as needed. An exception is the model X1 here is the mainboard always installed in the system and cannot be ordered separately.

1.3.13.1.1 V3 Mainboards

The mainboards introduced for the first time with OpenScape Business Version 3 are available for every OpenScape Business X model and are divided into two performance variants (Basic and Advanced) for the X3 and X5 models. Only one V3 mainboard is available for the X8 and X1 system.

The V3 mainboards offer the following connectors and option slots:

Mainboard	**OCCLA Advanced**
System	**X8**
Connectors	
LAN (Gigabit)	1
WAN (Gigabit)	1
Admin (Gigabit)	1
UP0/E subscr.	0

a/b subscr.	0
USB 3.0 Host	2
USB 2.0 Dev.	1
Audio In MoH	1
Optionen	
M.2 SATA SSD	✓
M.2 NVMe SSD	✓
OCCBL / OCCBH OCCB1 / OCCB3	✓
CMAe	✗
STRB	✗
STRBR	✗

Table 12 V3 Mainboards – Connectors and option slots

INFO:

The options have to be ordered always separately. Also the operating system on M.2 SATA SSD needs to be ordered separately.

1.3.13.1.2 V2 Mainboards

The "V2 Mainboards" introduced with OpenScape Business V1 / V2 are also supported by the System SW V3. However, these boards do not reach the performance of the V3 Mainboards. The V2 Mainboards offer the following connections and option slots:

Mainboard	**OCCL**	**OCCMR**	**OCCM**	**OCCS**
System	**X8**	**X3R/X5R**	**X3W/X5W**	**X1**
Connectors				
LAN (Gigabit)	1	1	1	1
WAN (Gigabit)	1	1	1	1
Admin (Gigabit)	1	1	1	0
UP0/E – Subscr.	0	8	8	8
a/b – Subscr.	0	4	4	4
S_0 – Trunk/Subscr.	0	2	2	2
USB 2.0 Host	1	1	1	0
USB 1.1 Dev.	1	1	1	0
SDHC Card slot	1	1	1	1
Options				
OCAB	✓	✓	✓	✗
OCCBL / OCCBH OCCB1 / OCCB3	✓	✓	✓	✓
CMAe	✗	✓	✓	✓
EXM	✓	✓	✓	✗
EXMR	✓	✓	✓	✗
STRB	✗	✓	✓	✗
STRBR	✗	✓	✓	✗

Table 13 V2 Mainboards – connections and option slots

INFO:

The options must be ordered always separately. Also, the operating system on SDHC card needs to be ordered separately.

1.3.13.2 Power Supplies

Only the current OCPSM / LUNA2 power supplies or the power supplies specified explicitly in chapter **2 Migration and Upgrade** for a specific scenario ensure the safe operation of an OpenScape Business X system. Older power supplies must be replaced.

For emergency power operation, an external uninterruptible power supply (UPS) with a changeover time of less than 20 ms must be provided for newly ordered systems.

In the case of existing systems, an existing emergency power supply with power box / battery box or battery cabinet may continue to be used if this is explicitly described in chapter **2 Migration and Upgrade** for the corresponding scenario.

1.3.13.3 System backplanes / Connection Units

The System SW Version 3 offers the specified expansion limits and functions in conjunction with the newly delivered system boxes and the Connection Units (backplanes) installed.

The backplanes of legacy systems may vary in part, which may affect the functions and expansion limits. Corresponding instructions in chapter **2 Migration and Upgrade** for the corresponding scenario must be observed.

1.3.13.4 Peripheral modules

An overview of the peripheral modules currently available in the portfolio and supported by the System Version V3 is listed in chapter **3.1 Current Boards and Modules**.

For safety reasons, the operation of the already phased out Xpressions Compact card is actively blocked in the SW V3 systems.

Otherwise, the scenario-specific notes in **chapter 2 Migration and Upgrade** for older peripheral modules apply to legacy systems.

1.3.14 Supported Phones / Key Modules and Telephony Clients

OpenScape Business X1 / X3 / X5 / X8 / S enables the connection of telephones and devices via different system interfaces. In principle, the phones and devices are distinguished in:

- **TDM phones:**
  These included phones with an / a / b, digital UP0 and cordless / DECT interfaces
- **IP / HFA phones:**
  These include telephones / devices with Ethernet LAN / Wi-Fi interface and the HiPath Feature Access (HFA) protocol.
- **IP / SIP phones:**
  These include phones / devices with Ethernet LAN / Wi-Fi interface and SIP (Session Initiated Protocol).

On OpenScape Business X models TDM, IP HFA and SIP devices can be operated

OpenScape Business S only supports IP / HFA and SIP devices.

Device Category	Interface	Protocols	Connected to model	Remarks
IP HFA Devices (System Telephones))				
OpenScape Desk Phone CP100 HFA OpenScape Desk Phone CP200 HFA OpenScape Desk Phone CP205 HFA OpenScape Desk Phone CP400 HFA OpenScape Desk Phone CP600 HFA OpenScape Desk Phone CP600E HFA	Ethernet LAN	IP / HFA	X1, X3, X5, X8, S	
OpenStage 15 HFA OpenStage 40 HFA OpenStage 60 HFA	Ethernet LAN	IP / HFA	X1, X3, X5, X8, S	
OpenScape Desk Phone IP 35G HFA OpenScape Desk Phone IP 35G eco HFA OpenScape Desk Phone IP 55G HFA	Ethernet LAN	IP / HFA	X1, X3, X5, X8, S	
IP HFA PC Client				
OpenScape Personal Edition HFA	Ethernet LAN	IP / HFA	X1, X3, X5, X8, S	
TDM Devices (System telephones)				
OpenScape Desk Phone CP200 T OpenScape Desk Phone CP400 T	UP_0	Cornet	X1, X3, X5, X8	
OpenStage 10 T OpenStage 15 T OpenStage 30 T OpenStage 40 T OpenStage 60 T	UP_0	Cornet	X1, X3, X5, X8	
TDM Cordless (System telephones)				
OpenStage S4 OpenStage SL4 OpenStage M3 OpenStage S5	UP_0 ; Cordless	Cornet ; DECT	X1, X3, X5, X8	In OpenScape Business integrated Cordless / DECT application
Miscellaneous TDM Telephones				
ISDN-Telephones (generic)	S_0 / BRI	National ISDN	X1, X3, X5, X8	
Analog Telephones (generic)	a/b analog	National Protocol	X1, X3, X5, X8	
SIP Devices				
OpenScape Desk Phone CP100 SIP OpenScape Desk Phone CP200 SIP OpenScape Desk Phone CP205 SIP OpenScape Desk Phone CP400 SIP OpenScape Desk Phone CP600 SIP OpenScape Desk Phone CP600E SIP	Ethernet LAN	IP / SIP	X1, X3, X5, X8, S	
OpenStage 15 SIP OpenStage 40 SIP OpenStage 60 SIP	Ethernet LAN	IP / SIP	X1, X3, X5, X8, S	
OpenScape Desk Phone IP 35G SIP OpenScape Desk Phone IP 35G eco SIP OpenScape Desk Phone IP 55G SIP	Ethernet LAN	IP / SIP	X1, X3, X5, X8, S	

OpenStage WL3	Wi-Fi	SIP	X1, X3, X5, X8, S	Voice over Wi-Fi Telephone
SIP Phone Devices (generic)	Ethernet LAN	IP / SIP	X1, X3, X5, X8, S	RFC 3725-Support required for UC Suite
SIP PC Client				
OpenScape Personal Edition (SIP)	Ethernet LAN	IP / SIP	X1, X3, X5, X8, S	incl. Video
SIP Cordless IP				
OpenStage S4 OpenStage SL4 OpenStage M3 OpenStage S5	Ethernet; Cordless	SIP; DECT	X1, X3, X5, X8	Cordless IP Solution
SIP Gateways				
Mediatrix 4102S	Ethernet LAN	IP / SIP	X1, X3, X5, X8, S	VoIP Media Gateway (2 x analog Fax Telefon)

Table 14 Supported telephones and devices

Key modules	Connection to Device	Remarks
OpenStage Key Module	OpenStage 15 OpenStage 40 OpenStage 60 OpenStage 15, 40, 60 OpenStage 15, 40, 60 OpenStage 15, 40, 60	
OpenStage BLF 40	OpenStage 40 HFA OpenStage 60 HFA OpenStage 15 T OpenStage 30 T OpenStage 40 T OpenStage 60 T	Only for IP-, HFA und TDM variants
OpenScape Desk Phone Key Module KM 400 Key Module KM 600	OpenScape Desk Phone CP400 SIP / HFA CP600 SIP / HFA	

Table 15 Supported Key Modules

OpenScape Business V3 software images always include the appropriate telephone / device firmware for the released phones / devices. The integrated Deployment Server (DLI) can update the SW devices automatically if this function is enabled in the system and device configuration.

INFO

Telephones and terminal devices that are no longer included in the current Unify product portfolio can still be used connected and operated on OpenScape Business.

However, Unify no longer provides technical support for these devices and the automatic software update via the DLI is generally no longer supported. In the event of problems, the device must be replaced with a device from the current portfolio.

Further details, such as the required SW versions of the devices can be found in the respective technical release notes.

Optiset E devices cannot be operated on OpenScape Business.

OptiPoint 500 device family cannot be operated in combination with V3 mainboards.

1.3.15 Information on selected phones and devices

1.3.15.1 OpenScape Desk Phone CP Telephone Family

The connection of the new OpenScape Desk Phone CP family including DLI support is released with the SW version V3 of OpenScape Business.

The Desk Phone CP devices are delivering a SIP device ex-factory. The SW update to HFA will be initiated automatically via the OpenScape Business DLI functionality (automatic reflash) when the phone is connected to the system for the first time

1.3.15.1.1 Desk Phone CP 100

The OpenScape Desk Phone CP100 is very attractively priced and the the ideal device for low-cost entry-level scenarios. It has a large display, two fixed function keys and three soft-label keys. These soft label keys can be configured as function-, name or line keys.

The Desk Phone CP100 does not support any key modules.

1.3.15.1.2 Desk Phone CP 200

The Desk Phone CP200 is an uncompromising value phone for an entry into VoIP telephony. It supports the entire range of OpenScape features, has a headset socket with DHSG/EHS functionality and four programmable function keys. The keys are preprogrammed with ‘conversations’, ' people ',' forwarding 'and' redial '. However, they can also be configured as a four function, speed dial or line keys. In addition, the phone has fixed function keys for ‘hold’, 'transfer' and 'conference' to quickly interact with the call party.

The Desk Phone CP200 does not support any kex modules.

1.3.15.1.3 OpenScape Desk Phone CP205

The new OpenScape DeskPhone CP205 is based on the design and functions of the CP 200. Compared to the CP200, it includes an integrated Gigabit Ethernet switch. It also provides energy-efficient Ethernet handling (Green IT) with lower power consumption and less data activity.

1.3.15.1.4 OpenScape Desk Phone CP400

The DeskPhone CP400 is the telephone for the standard office workplace. The basic unit already has 16 freely programmable function keys with a three-color (red / green / orange) status indicator. It can be expanded with up to two KM400 key modules each with 16 function keys. This gives users direct and fast access to their familiar function, name or line buttons. The paper inscription reduces the acquisition costs and takes account of the customer's wishes according to many keys.

Even with two connected key modules, the device can be powered by PoE (Class 2).

1.3.15.1.5 OpenScape Desk Phone CP600

The Desk Phone CP600 is designed for the demanding professional user. The continuous paperless design is particularly suitable for mobile workstations. The basic unit is optimized for the "single-line" use. Four freely programmable functions keys can be created in the favorites. Up to four connectable KM600 key modules each with 12 keys meet the requirements for many freely programmable keys.

Properties	**CP400**	**CP600**
Graphical Display	Monochrome	16 Bit color depth
Optical call signaling (red/green/orange)	240*120 pixel	480*272 pixel
Context sensitive softkeys with LED (red/green/orange)	4	5
2 fixed function keys with LED (red or green)	2	2
16 Freely programmable keys with LED (red/green/orange)	16	16
4-Way-Navigator, plus OK-key	✔	✔
Audio keys (Mute/Loudspeaker/Headset) with LED (red or green)	✔	✔
Volume +/-	✔	✔

Open listening / Handsfree talking	✔	✔
Headset socket	✔	✔
Key Module	KM400	KM600
Display of presence status at device	4 Favorites Keys	4 Favorites Keys
Display of presence status at key module	-	✔
Change of presence status	✔	✔

Table 16 Properties of Desk Phone CP 400 / CP600

1.3.15.1.6 OpenScape Desk Phone CP 600E

The CP600E is based on the existing CP600 design and its user interface. The CP600E is attractively priced between the CP400 and CP600 and is specifically targeted at customers who want "self-labelling keys". It has a 4.3-inch graphic grayscale TFT display (4.3 *) with a resolution of 480 * 272 pixels.

1.4 System Features

Open Scape Business is a multi-site, all-in-one scalable, multi-site solution that includes a variety of integrated applications, services and the following features:

The functions of OpenScape Business shown below are continuously updated and adapted to current technological changes. The required SW updates are provided by Unify as part of the OpenScape Business SW support. SW Support ensures that adjustments, e.g. For changes in ITSP signaling, important security patches, fixes and general stability improvements or completely new functions can be easily introduced into the system. Each newly delivered system is equipped with SW support for a specified period, which should be extended after the expiration of the period. OpenScape Business systems without valid SW support are subject to the risk of loss of function, e.g. through changed interfaces on the part of the Internet Service Providers, through further development of operating systems and applications or also through cyber crime. Further information can be found in chapter 1.9 SW Support.

- **Convenient, telephony functions for fixed and mobile subscribers**
  - Sophisticated, comfortable, easy-to-use telephony features for each subscriber
  - Team and group functions for optimal collaboration
  - Support of a large variety of phone / client devices with different types of connections
    - Unify OpenStage and OpenScape system telephones connected via digital TDM or IP interfaces
    - Unify OpenStage and OpenScape SIP phones connected via IP interfaces
    - Unify CMI / DECT cordless devices
    - Unify PC Clients with Voice over IP (VoIP)
    - Android or Apple iOS based Smartphones with Unify App.
    - Analog & ISDN phones
    - 3rd party SIP devices or 3rd party SIP clients.
- **"State of the art" telephony function for lines in the public network**
  - Connection to the public telephone network via IP., digital ISDN or analogue trunk connections.
  - Gateway function to Internet Service Providers (ITSP)
  - Over 150 certified ITSP providers and connections
  - Integrated Session Border Controller (SBC) function
- **Integration of multiple sites by networking systems via digital and IP ports**
  - Network wide telephony features with a flexible route control (LCR) for connections to and from the public telephone network.
  - Netwide Unified Communications functions
  - Netwide Cordless (CMI) functions
  - Netwide system administration.
- **Directory functions**
  - System directory / speed dial destinations
  - Global Directory
  - UC Directories, Online connection to external directories and data sources
  - Unified presentation of contact data across all devices and clients (Unified Directory)
- **Call data management and accounting functions**
  - Configurable call data recording for incoming and outgoing trunk lines.
  - Integrated privacy features to comply with regulatory requirements.
  - Display of call charges / call data at the system devices.
  - Shipped application for the evaluation of the call data according to various criteria
  - Optional: online or batch transmission of call data records to 3rd party applications.
- **Unified Communication Services for voice, fax, e-mail and instant messaging with:**

  - CTI functions
  - Voicemail
  - Conference management
  - Presence management
  - Instant Messaging / chat
  - Fax functionality per subscriber / user
  - Journals / Conversations for voice calls voice mails and faxes
  - Favorites and team functions
  - Provision of various contact directories
  - Search in internal and external directories
  - Call recording of individual voice calls
  - AutoAttendant functions
- **Multimedia Contact Center as Add On to the Unified Communication Service**
  - Integrated multimedia inbound contact center for voice calls, fax and e-mail.
  - Intelligent call distribution functions with calendar.
  - Unified agent / supervisor desktop client
  - Wall board functionality
  - Realtime and historical reporting
- **Support of PC clients for:**
  - VoIP telephony
  - Mobile subscribers
  - Unified Communicators
  - Contact Center
  - Attendant workplaces
  - Collaboration
- **Support of mobile users**
  - OpenScape Business Telephony and UC features for:
    - CMI / DECT devices (voice only)
    - Android or Apple iOS smartphones
    - PC or tablet with Internet browser
  - One Number Service
  - Twinning with desk phone
- **Support of Home-Office workstations**
  - Secure connection of system and SIP terminals via the Internet
  - Secured connection of PC clients for telephony and UC applications via the Internet
- **Attendant**
  - Manual call handling via
    - Telephone
    - PC client
      - myAttendant
      - OpenScape Business Attendant
  - Automatic call handling by
    - Personal AutoAttendant per UC user
    - Company AutoAttendant systemwide
- **• Collaboration with Circuit of Cloud based communications solutions from Unify**
  - Connection to Circuit Tenant via Telephony Connector

  - Provision of OpenScape Business functions for circuit users
- **• Connections to external applications and data sources for integration into business processes**
  - Connection via PC client interface
    - Application Launcher
    - Microsoft Outlook
  - Connection via integrated services
    - Microsoft Active Directory
    - SQL & ODBC based databases
    - UC Applications / Clients via Web Services Interface (WSI)
    - CRM applications
    - Microsoft Exchange
  - o Connection via middleware
    - CTI applications via Microsoft TAPI
  - o Connection via system interfaces and protocols
    - CTI applications via CSTA
    - Microsoft Teams / Skype for Business over SIP
- **System administration and service functions**
  - System administration via web-based user interface
  - Remote access via IP with connection option to the Unify Remote Service platform.
  - Automatic SW update via central Unify SW Deployment Server
  - Automatic SW deployment for all connected Unify IP system and SIP devices
  - Backup / restore functions
- **Security features:**
  - Encryption of the administration interface (WBM) role-based system access with different rights
  - Encryption of signaling and voice data for system phones
  - Encrypted data transmission to the ITSP, if supported by ITSP
  - Client-dependent encryption of data transmission to the system PC clients
  - Integration into existing private key infrastructure (PKI) by importing appropriate certificates
  - Build your own PKI using an integrated certificate generator
  - Forced device authentication for SIP devices and system devices connected via the Internet
  - Encrypted system backup file
- **Other functions**
  - Announcement management
  - Hosting
  - Web Collaboration

Further information on the functions mentioned above can be found in the following chapters.

1.4.1 Subscribers/Stations

A subscriber or station is a communication partner connected to the communication system. In general, every station (apart from virtual stations) is assigned a terminal. A terminal is, for example,
a telephone, a fax device or a Voice over IP application on an appropriate HW platform ...

The following types of stations exist:

- IP stations (also known as IP clients)
  - SIP station (hereinafter also called SIP client / SIP phone, a subset of the IP stations)
  - System station (hereinafter also called system clients / system phones or HFA stations, a subset of the IP stations)

- UP0 stations
- Analog stations
- ISDN stations
- DECT stations
- Virtual Stations without a specific function
- Virtual stations with specific functions
    - Mobile stations (Mobile station integrations, mobility clients,)
    - Circuits stations
    - Skype for Business stations

The data of subscribers (name, station number, DID number, e-mail address, etc.) can be imported and exported as an XML file (details can be found in the Administrator Documentation).

Licensing Procedure for Stations

All stations are subject to licensing. To begin with, stations can be set up during the initial installation or later by using the Station wizards. After a successful setup, the subscribers can make internal calls. In the next step, the station licenses must be activated and assigned to the subscribers. Once the licenses have been assigned successfully, the subscribers can also make external calls.

INFO: Please observe the information in chapter 1.8 Licensing.

1.4.1.1 Functions at the Telephone

Convenient features support all communication processes in every workplace and in any work environment. Due to the Team function and integrated voicemail, no call is lost even when a phone happens to be unmanned. In the Exchange or secretariat, where many communication processes converge, the convenient Executive/Secretary function ensures a smooth flow of communication in the reception hall.

Furthermore, integrated call distribution ensures availability and guarantees the fastest customer contact. So, telephony is not only convenient, but also more efficient.

The following table shows an overview of the supported functions for the Unify system telephones and for the Unify SIP telephones. No distinction is made here as to whether the functions can be carried out using a button on the phone or by entering a service code. Details on the functions are contained in the OpenScape Business features description.

Short Description		IP(HFA) TDM	IP(SIP)
Call / connection-oriented functions			
Making Call		✓	✓
Digit Dialing	In the case of digit dialing, every digit is transmitted as soon as it is dialed.	✓	✗
En-Bloc Dialing	In en-bloc dialing, connections are only established after the complete phone number has been entered.	✓	✓
Individual Speed Dialing	Individual Speed Dialing (ISD) enables every subscriber to save 10 external numbers as individual speed-dial numbers.	✓	✗
System Speed Dialing	You can save frequently needed external phone numbers in the communication system. Every number is then represented by a speed-dial number which is used instead of the full phone number.	✓	✓
Direct station select	Press a direct station select key (DSS) to initiate an immediate call to the programmed destination	✓	✗
Speaker Calls / Direct Answering	The Speaker call function lets you set up an internal connection without the called subscriber lifting the hands	✓	✗
Redialing	The phone number dialed is saved after an external call is set up. If the destination is busy or not reachable, a user can press the Redial key to redial the same number	✓	✗

Short Description		IP(HFA) TDM	IP(SIP)
Call Signaling		✓	✓
Acoustic signaling	Incoming calls are signaled acoustically on the phone.	✓	✓
Call signaling internal	Each subscriber can be assigned one of a total of eight possible acoustic call signals for internal calls.	✓	✓
Call signaling internal	There are three different call types, each with different acoustics, that can be set for an external call	✓	✓
Visual Signaling	Incoming calls are signaled visually on the phone.	✓	✓
LED	The incoming call can also be signaled via an LED	✓	✓
Display	The following displays appear on the screen: • Caller number • For internal call forwarding: additionally, the dialed call number	✓	✓
Ringer Cutoff	The Ringer Cutoff feature signals incoming calls acoustically with only a brief alert tone (beep) and on the display.	✓	✗
Answering call		✓	✓
Off hooking telephone receiver	Calls are answered by hook off the telephone receiver	✓	✓
Line key on telephone	Calls are answered by pressing the line key on the telephone device	✓	✓
Call Pickup function	Calls signaled on other telephone devices can be answered by executing the call pickup function	✓	✓
Functions During the Call			
Place call on hold / retrieve call	Placing a call on hold causes the call to be held in a waiting state. During this period, the caller usually hears an announcement or music on hold. The hold ends when the held call is retrieved	✓	✓
Parking	Parking a call causes that call to be placed in a waiting state. During this period, the caller usually hears an announcement or music on hold. A parked call can be retrieved from any telephone.	✓	✗
Consultation	In the case of a consultation hold, a subscriber initiates a second call from the same phone or accepts a waiting call. In the meantime, the first call is placed on hold.	✓	✓
Toggle/Connect	The Toggle/Connect feature enables a subscriber to switch between two calls. When the subscriber is talking to one party, the other party is placed on hold. The subscriber can toggle between the two calls by pressing the appropriate trunk key.	✓	✓
Transfer Blind transfer Consultation transfer	A transfer enables a subscriber to transfer his or her call to another destination. As soon as a subscriber initiates a transfer, the waiting party is placed on hold for the time being. The following types of transfers are possible: • Blind transfer (also called an unscreened transfer): You can transfer the call without an answer from the subscriber at the destination of the transfer. • Consultation transfer: You can transfer the call only if the subscriber at the destination of the transfer answers. The	✓	✓

Short Description		IP(HFA) TDM	IP(SIP)
	transfer is completed by hanging up the handset		
DTMF Control		✓	✓
Automatic Recall	An automatic recall is received by the originator of a call if his or her call was placed on hold or parked for too long or if an attempt to transfer that call was unsuccessful.	✓	✗
3 party System conference (intern/extern)		✓	✓
Call Supervision (Selected Countries Only)	Call Supervision allows authorized subscribers to listen in on a call conducted by any internal subscriber. The microphone of the party listening in is automatically muted. The participants in the monitored call are not advised of the monitoring operation by any signal such as a tone or display.	✓	✗
Discreet Call (Whisper)	The Discreet Call (Whisper) feature enables a subscriber (e.g., at station C) to monitor a simple existing connection between two other stations (e.g., A and B) and to pass on information to station A that without being heard by station B.	✓	✗
Call waiting	Call waiting signals the arrival of a further incoming call to a subscriber who is on the phone	✓	✓
Override (Intrusion)	The Override feature enables an authorized subscriber to override (i.e., intrude into) a call of another internal subscriber.	✓	✗
Callback	A callback can then be activated if the subscriber called does not answer or is busy. An active callback triggers a call as soon as the called subscriber is available.	✓	✗
Automatic Call Completion on No Reply (CCNR) on the Trunk Interface	An internal subscriber who cannot reach an available external subscriber can activate a callback request at the central office. The system then monitors the connection of the called subscriber. As soon as the called subscriber initiates a connection setup and then ends this connection, the central office attempts to establish a connection between the two subscribers. This feature must be supported by the central office.	✓	✗
Hang up / Disconnect	Existing calls can be terminated ended by pressing the disconnect key or by hanging up the receiver.	✓	✓
		□	□
Control of availability		✓	✓
Call Forwarding—No Answer (CFNA	Call Forwarding—No Answer (CFNA) forwards calls that are not answered within a certain period. This type of forwarding is also referred to as fixed call forwarding, since it is only configurable by the administrator.	✓	✓
Call Forwarding After Timeout	Call Forwarding after Timeout forwards unanswered calls after a specific period. Call Forwarding after Timeout is analogous to Call Forwarding No Answer, the only difference being that subscribers can set the call forwarding themselves.	✓	✓
Call Forwarding (CF)	Subscribers can use Call Forwarding (CF) to redirect incoming calls to a destination of their choice.	✓	✓

Short Description		IP(HFA) TDM	IP(SIP)
Ringing group on	The feature "Ringing group on" allows internal subscribers to manage a personal list of internal call numbers which are called whenever their own number is called.	✓	×
Rejecting Calls	The subscriber can reject internal and external incoming initial calls. These calls can be rejected by pressing the Disconnect key.	✓	✓
Do Not Disturb	Do Not Disturb prevents incoming calls from being put through.	✓	✓
Rejecting Calls	The subscriber can reject internal and external incoming initial calls. These calls can be rejected by pressing the Disconnect key.	✓	×
Deferring a Call	Subscribers are provided the option of deferring an incoming call. The subscriber called can set up a connection without picking up the incoming call.	✓	×
Avisory message	The advisory message of a subscriber appears in the caller's display	✓	×
Message texts	Message texts are internal system texts that can be selected by a subscriber and sent to internal subscribers.	✓	×
Caller Identification Calling Line ID		✓	×
CLIP Calling Line Identification Presentation	Calling Line Identification Presentation (CLIP) shows the caller's number at the called station	✓	✓
CLIR Calling Line Identification Restriction	Calling Line Identification Restriction (CLIR) suppresses the station number of the caller at the station of the called subscriber	✓	✓
COLP Connected Line Identification Presentation	Connected Line Identification Presentation (COLP) transmits the call number of the called subscriber to the caller as soon as the two are connected.	✓	✓
COLR Connected Line Identification Restriction	Connected Line Identification Restriction (COLR) suppresses the display of the called station at the station of the caller.	✓	×
CLIP „no screening “. Transmission of Customer-Specific Phone Number Information)	CLIP No Screening transmits a call number specified by the caller instead of the caller's own number.	✓	×
Translating Station Numbers to Names	For calls made using system speed-dials (SSD) and for incoming calls from system speed-dial numbers, the name associated with the speed-dial destination is displayed after dialing instead of the speed-dial number	✓	✓

Table 17 Call / connection-oriented functions of the Unify IP/TDM und SIP telephones

	Short Description	IP(HFA) TDM	IP(SIP)
Automatic SW Update /DLI)		✓	✓1
Associated Services	An authorized station can control certain features on behalf of any other station	✓	×

	Short Description	IP(HFA) TDM	IP(SIP)
Intercept Position	The communication system diverts external calls that cannot be assigned to a station or answered to a set intercept position to ensure that no calls are lost. As an administrator, you can configure the intercept criteria. The intercept position can be an individual station, a group or an announcement device.	✓	✗
Caller list / call journal	The communication system maintains an individual caller list / call journal for the subscriber	✓	✓
Class of Service	Every subscriber is assigned a Class of Service group that defines the class of service (i.e., the permissions) of the subscriber for incoming and outgoing calls.	✓	✗
Night Service	During the night, incoming and outgoing calls can be treated differently than during the day. The system-wide switching between the day and night service is performed time controlled or manually.	✓	✗
Individual Telephone Lock	If the individual telephone lock is set for a phone, external calls cannot be conducted from that phone, and the user settings cannot be modified.	✓	✗
Multilingual text output	The language for display messages can be selected system-wide or also individually for the subscriber.	✓	✗
Internal Paging	Internal paging enables internal members of a group to be addressed directly. This feature is also known as a group broadcast	✓	✗
Connection data recording	The system can log the connection data of used lines. For every completed connection and/or every incoming connection, a connection data record is created. A separate connection data record is stored for each new connection segment (for example, as a result of transferring or forwarding to another subscriber). Internal connections are not logged	✓	✗
System directory Central speed dials	The system directory contains all central speed-dial numbers for which a name was assigned. UC Smart clients can access the system directory.	✓	✗
Tunk queuing	A subscriber can reserve a trunk in advance if there are no free trunks available (busy signal). As soon as a trunk becomes free, it is offered to the subscriber through an automatic recall.	✓	✗
Trunk keys (Multiple Lines)	MULAP (Multiple Line Appearance) keys (trunk keys) are programmed on a telephone with team functions with the individual telephone's number and the phone numbers of all other team members	✓	✗
Music-on-hold with system-controlled Announcements	The communication system allows on-hold announcements to be played for callers before answering a call and also when using call distribution and DTMF direct inward dialing. You can also replace the MOH melody in certain situations by an announcement, for example, if a party is placed on hold or if a subscriber is busy or being routed	✓	✗
Message Waiting Lamp (MWI)		✓	✓
Private Trunk	A private trunk is a Central Office (CO) trunk that is available exclusively to a specific subscriber.	✓	✗
One Number Service	The One Number Service (ONS) turns the mobile phone into a fixed network extension. The One Number Service enables a mobile subscriber to be reached through a single phone number worldwide	✓	✗

	Short Description	IP(HFA) TDM	IP(SIP)
Account codes	Account codes (ACCT) can be used to assign connection data and charges to specific projects.	✓	×
Relays	Actuators are control outputs which are activated or deactivated by control signals from the communication system. They cause a change in the state of the connected equipment and support functions for monitoring, alerting, control and regulation	✓	×
Verschlüsselung (SPE)	Signaling & Payload Encryption (SPE) serves to enhance security when transmitting voice data. The VoIP payload and signaling data streams from and to the gateway and between IP phones are encrypted.	✓	×
Reset services	All programmed features of the subscriber are reset to the standard setting via the code	✓	✓
Door intercom and door opener function	The subscriber can use the button on the phone or the function code to operate the door opener	✓	✓

Table 18 Other system functions for subscribers with Unify IP/TDM and SIP phones.

Functional boundary conditions and restrictions

The functions listed above depend on the type and the features of the used telephone device in general.

The following applies to the functions in combination with SIP devices:

Many functions that are supported by the Unify SIP devices are also possible for standard SIP phones, but these ultimately depend on the implementation of the SIP standard by the respective manufacturer, so the functions for 3rd party devices cannot be guaranteed. The following applies to all SIP devices:

The DLI function of the system only supports Unify SIP devices. (SW updates, setting additional SIP parameters etc.)

Only the following functions can be activated by SIP devices using service codes:

- Door intercom control: code 61
- Speed dial: code * 7nnnn (nnnn = speed dial number)
- Reset services: code # 0
- CLIR on / off: code * 86 / # 86
- Group call code *81/#81
- Enter / leave hunt group: code * 85 / # 85

An internal SIP subscriber hears "Music on Hold" instead of the ringing tone if it is forwarded by another subscriber with the "Consultation (attended / supervised) Transfer" function.

SIP devices must support the 3PCC function if they are to be used in connection with myPortal for Desktop / myPortal for Outlook or with UC / CTI applications.

SIP phones cannot be used for OpenScape Business Contact Center agents.

MULAP keys are not supported for SIP phones.

SIP device specific functions that are not supported by OpenScape Business must be deactivated in the SIP device according to the operation manual of the device.

1.4.1.2 Groups and Teams

Several features are provided by the communication system to enable and facilitate working in a team Besides call pickup groups, group calls and hunt groups, this also includes groups with team and executive/secretary functions.

- **Call Pickup Group**
  In the case of a call pickup group, a call for one member of the group is also signaled at all other group members.

- **Group Call**
  With a group call, by contrast, all members can be reached via a single phone number (group phone number). The first station to answer the call is connected to the calling party.
- **Hunt Group**
  In the case of a hunt group, an incoming call is signaled at one of the group members. If this member does not answer the call, the call is assigned to the next member. All members of the hunt group can be reached at the same phone number.
- **Team Configuration / Team Group**
  In a team configuration / team group, the phone numbers of all team members are programmed on so-called line keys (MULAP keys). Every team member has access to all lines (for example, for picking up calls) and can also make calls over several lines at the same time.
- **Executive/Secretary or Top Group**
  An executive/secretary / Top Group offers comfortable executive/secretary functions for groups with up to three executives and up to three secretaries
- **Basic MULAP**
  A Basic MULAP enables a subscriber who uses multiple telephones (e.g., a fixed-network telephone and a mobile phone) to be reached under a single phone number
- **Executive MULAP**
  You can configure Executive MULAPs if you want to use restricted executive and secretary functions
- **Voicemail Group**
  A voicemail group enables a specific group of subscribers to access voicemails. When a call is placed to the call number of a voicemail group, the call is sent directly to the voicemail box (i.e., the voicemail) of the group and not to the group members. After a voicemail is left in the voicemail box of the group, it is forwarded to the voicemail boxes of all members.
- **Fax Box Group**
  A fax box group (fax group) enables a specific group of subscribers to access fax messages. The fax box of the group is reached directly via the station number of the fax box group. After a fax message is left in the fax box of the group, it is forwarded to the fax boxes of all members
- **Call Distribution / UCD Group**
  The Uniform Call Distribution (UCD) feature of the communication system enables incoming calls to be uniformly distributed to a group of stations (UCD group).

1.4.2 Lines

OpenScape Business offers IP- lines, digital ISDN-lines or, if necessary, analog-lines for connecting to the public communication (CO) network, for networking OpenScape Business systems with each other or for connecting 3rd party communication systems.

OpenScape Business also uses IP-based lines to connect to Unify Circuit or other IP-based services.

IP, ISDN and analog lines can be operated in parallel in the OpenScape Business X models. This means that each OpenScape Business X system can also be used as a gateway to the other network.

1.4.2.1 Connection to the public communication network

OpenScape Business supports the connection to public communication networks both via the classic analog / ISDN interfaces and via the Internet.

1.4.2.1.1 IP connection via ITSP

The access to Internet Telephony Service Providers (ITSP) is done by all OpenScape Business systems either via an Internet modem or via an Internet router.

The Internet Telephony Service Providers (ITSP) offer different types of SIP system connections and have implemented the SIP standard in different ways in their switching computers. Under certain circumstances, these differences can lead to functional restrictions, up to the non-functioning of the connection. To reduce this risk, OpenScape Business offers a certification program which supports ITSPs testing test their SIP connections to OpenScape Business. The settings used are implemented afterwards into the ITSP configuration profiles of OpenScape Business. A system administrator can select these profile settings and put the ITSP connection easily into operation.

OpenScape Business is certified for more than 150 different ITSP or SIP connections. A current list of the certified ITSP is published in the Unify Enterprise Wiki within the following link:

https://wiki.unify.com/wiki/Collaboration_with_VoIP_Providers

Only certified SIP providers are released and supports by Unify in case of problems

The certifications of ITSP are valid only for connection via the integrated Session Boarder Controller (SBC). When using external session boarder controllers, the ITSP connections must be certified for the SBC used and the SBC in turn must be certified for use with OpenScape Business.

OpenScape Business supports the following standards and functions for ITSP connections:

- **SIP Connect 1.1**
  Extensions for connecting SIP providers to OpenScape Business have been implemented In accordance with the "SIP Connect 1.1" recommendation. A detailed list of the implemented RFCs can be found on the Unify Expert Wiki at:
- http://wiki.unify.com/wiki/OpenScape_Business#Supported_Standards

- **ITSP multilocation support**
  OpenScape Business supports multiple registration with ITSPs. The following scenarios can thus be implemented.
  - Customer with several Direct In Dialing numbering plans
  - Customer with multiple locations that are connected to a central OpenScape Business System
  - Customer with different external phone numbers

  In the aforementioned scenarios, OpenScape Business ensures that outgoing calls are always signaled with the local network number that applies to the respective system.

- **ITSP direction configuration**
  OpenScape Business also supports the direction configuration of the line seizure (incoming / outgoing / bidirectional) for ITSP connections. This offers the advantage e.g. to reserve a certain number of lines for incoming calls only and thus to increase the availability.

- **B-channel optimization with ITSP Call Deflection**
  With Call deflection the call forwarding is performed by the ITSP, based on the received forwarding target in the call release message. If ITSP Call Deflection is activated, no B channel is used by OpenScape Business in the conversation phase.

- **DTMF support according to RFC2833**
  OpenScape Business S supports the transmission of DTMF signals according to RFC2833 on ITSP lines, provided the ITSP provider supports the RFC2833 standard. The function is only available for the systems directly connected to the ITSP. With OpenScape Business S systems, DTMF can be transmitted simultaneously on all ITSP channels.

Technical boundary conditions for ITSP outside lines

The maximum number of simultaneously possible connections via the ITSP to the public telephone network depend on the max. transmission rate of the IP connection and on the maximum capacities of the OpenScape Business model used.

1.4.2.1.2 ISDN connection

With the OpenScape Business X hardware platforms, the ISDN CO tunk line access is either via the mainboard or via additional plug-in modules. Depending on the OpenScape Business X model and country / region, different ISDN interfaces are available for connection.

- IDSN Primary Rate (S2m or T1) connection
- ISDN connection with channel-associated signaling (CAS)
- ISDN Basic Rate (S0) connection

OpenScape Business S does not allow direct ISDN access.

1.4.2.1.3 Analog connection

For the OpenScape Business X hardware platforms, the analog CO trunk line requires an additional plug-in module. Depending on the OpenScape Business X model and country / region, different modules are available for connection. The analog connection parameters and the signaling are automatically set by OpenScape Business according to the country code.

Analog trunk lines are no supported by OpenScape Business S.

1.4.2.2 Networking of communication systems

OpenScape Business enables networking with each other as well as networking with HiPath 3000, OpenScape 4000 and OpenScape Voice systems. The supported network-wide functions depend on the networked systems and the type of connection. The following lines and signaling protocols are used depending on the system.

System 1	System 2	Line	Protocol	Remark
OpenScape Business	OpenScape Business	IP-Trunk	SIP-Q	IP Networking
OpenScape Business	OpenScape 4000	IP-Trunk	SIP-Q	IP Networking
OpenScape Business	OpenScape Voice	IP-Trunk	SIP-Q	IP Networking
OpenScape Business	HiPath 3000	ISDN (S2m/S0)-Trunk	QSIG, Cornet NQ	TDM Networking
OpenScape Business	HiPath 4000	ISDN (S2m/S0)-Trunk	QSIG	TDM Networking
OpenScape Business	OpenScape Business	ISDN (S2m/S0)-Trunk	QSIG	TDM Networking

Table 19 Overview – Lines und Protocols for OpenScape Business Networking

The greatest range of functions is provided by networking OpenScape Business systems with one another via IP lines.

In case of networked systems, the technical preconditions are very important for the functionality. These must therefore be checked before setting up networking. Chapter 1.12 Networking OpenScape Business shows the supported networking scenarios and their requirements.

1.4.2.3 Connection of services and applications

OpenScape Business supports the connection of cloud-based or server-based applications via IP lines with SIP protocol (native SIP lines).

The range of functions of the line connection is essentially limited to the basic functions of the SIP protocol and to the access to the voice / data in the B channels by the respective service.

The following services and applications are connected via SIP lines:

Service / Application	Line	Protocol	Remark
Unify Circuit	SIP-Trunk	Native SIP	See also chapter 1.5.4
OpenScape Alarm Server			
Skype4Business	SIP-Trunk	Native SIP	See also chapter 1.5.5
Microsoft Teams			See also chapter 1.5.6

Table 20 Overview Lines and Protocols for connections to Services / Applications

1.4.2.4 Licensing of lines

Line connections must be licensed differently in OpenScape Business depending on the use of the line:

Trunk lines
In Open Scape Business, IP (ITSP, SIP trunk) and ISDN (S2m, T1) trunk lines must be licensed for each channel used. Trunk lines via S0-interface are license-free.

Networking
A networking license is required in every connected OpenScape Business System for the IP networking of OpenScape Business systems via SIP-Q and for the TDM networking via QSIG or CorNet-NQ. No additional IP / ISDN trunk line licenses are required for network lines.

Connection of applications via SIP lines

Individual licensing conditions apply to the connection of services and applications via SIP lines. Notes on this are contained in the corresponding chapters.

Service / Application	Line License	Additional Conditions	Remarks
Unify Circuit	none	Circuit User License Optional. IP-, VM- und UC user License	See chapter 1.5.4**Fehler! Verweisquelle konnte nicht gefunden werden.**
Skype4Business	SIP-Trunk License per voice channel	Valid Software Support, IP User License	See chapter 1.5.5
Microsoft Teams			See chapter 1.5.6
OpenScape Alarm Response (OScAR)	TDM or SIP-Trunk License per voice channel		

Table 21 Overview Licenses for connections to Services / Applications

1.4.3 Information on selected system functions

The functions supported by OpenScape Business are listed in the service description. Some selected system functions are also described below.

1.4.3.1 Integrated deployment server

OpenScape Business Systems have an Integrated Deployment Server (DLI). With the internal DLI, all IP system telephones connected to the communication system can be configured centrally and automatically provided with the latest telephone software.

The DLI automatically loads the correct SW variant (HFA / SIP) into OpenStage Desk Phone devices when they are switched on for the first time and the access to the system-internal DHCP server is configured. The procedure is also supported for OpenStage Desk Phones that have already been in operation, but they must first be reset to the delivery state using a reload.

The DLI can also automatically supply system devices that are connected as System (HFA) Device@Home via the Internet with software updates. Safety aspects must be considered here. See also the notes in the OpenScape Business service documentation.

The IP devices connected to OpenScape Business systems can also be supplied with software and the required operating parameters via an external deployment server (DLS). The functions supported are listed in the table below.

Function	DLI	DLS	Remark
Central configuration of the parameters of the IP components	✓	✓	
Plug & Play operation of the IP components	✓	✓	The IP components can automatically log on to the system via a DHCP server, e.g. when a new connection or an IP component is replaced.
Central & automatic software update of the IP components	✓	✓	The IP components are automatically supplied with the latest software version when you log on for the first time or when a new software version is available. The IP address of the DLI / DLS must be configured in the IP component.
Central inventory management of the IP components	---	✓	The data on the hardware configurations of the IP components can be called up centrally.
Support of IP Mobility (Desksharing)	✓ (1, 2)	✓ (1, 3)	Telephony data of a user are stored centrally and can be called up on other telephones (e.g. key programming, phone book entries, journals).
Support of SPE in networks	---	---	
Central supply of several different platforms	---	✓	
Activation of the 2nd LAN interface of the IP system phones	✓	✓	
Authentication password for system (HFA) phones	✓	---	
Common admin password for all system (HFA) phones	✓	---	
Web Services Interface (WSI) access parameters for Deskphone CP400 / 600 HFA	✓	---	

Table 22 DLI / DLS Functions

1) Not supported for SIP devices
2) Not supported in networked OpenScape Business systems
3) Supported in networked OpenScape Business systems

1.4.3.2 Integrated session boarder controller (SBC) function

OpenScape Business offers an integrated Session Boarder Controller (SBC) function and does not require a dedicated external SBC. The internal SBC is activated automatically as soon as VoIP data have to be transmitted via an Internet telephony service provider (ITSP).

ITSP certifications on OpenScape Business are carried out exclusively with the integrated SBC function.

An explicit configuration of the SBC in the system administration is not necessary.

The integrated SBC function is also used in the subsequent functions of OpenScape Business.

- myPortal to go for VoIP functions over the Internet
- myPortal @work for VoIP functions over the Internet
- System (HFA) Device@Home
- SIP Device@Home

1.4.3.3 Blacklist for incoming calls

Incoming callers can be "rejected", e.g. in the event of ongoing SPAM or time-consuming commercial calls with the "Blacklist" function. This function can be applied to individual numbers, ranges of numbers or calls without a transmitted number.

Blacklist entries must be entered in international format. The "+" sign in front of the country code (canonical format) is supported.

Blocked calls are also logged in the connection data records (CDR).

1.4.4 Unified Communications and Collaboration

Unified Communication (UC) is a technology that improves communication in enterprises by integrating various communication media in a unified application environment. OpenScape Business simplifies business processes in enterprises by providing, among other things, an integrated presence management that enables users to automatically route calls to their mobile phones when they are out of the office, for example. However, several other features such as dial-in conferencing, personal voicemail (voicemail box), personal fax box, Instant Messaging (IM), use of the mobile phone as an extension of the PBX, Contact Center, video and web collaboration, etc., are also combined in this unified solution. UC streamlines business processes and saves working hours, and thus makes employees happier and businesses more profitable.

Alternatively, Open Scape Business provides two differently powerful UC solutions. UC Smart is already available in all OpenScape Business systems without additional hardware. Additional hardware components are required for the more powerful UC Suite solution. However, these are much lower for the V3 mainboards with only one additional SSD storage medium than for the V2 mainboards with an additional UC booster card or server.

Depending on the selected UC solution and the desired working method, different UC clients with different functions and integration options are available.

UC Smart-supported UC clients myPortal@work and myPortal to go can also be used with UC Suite. In addition to its myPortal for Desktop Standard Client, UC Suite offers the myPortal for Outlook Client for seamless Microsoft Outlook integration, the myAgent Client for the specific tasks in the Contact Center, and the myAttendant Client for the switchboard.

Licensing

The use of Unified Communications features is licensed. Depending on UC applications and the functions used, different licenses are required. Both UC user-related and system-related licenses are available.

Generally speaking, every UC user requires a UC User License. Details on licensing are included in chapter 1.8.3.5 User-oriented Licenses.

SW Deployment

The UC Suite or UC Smart SW is part of the SW system.

System Requirements

The following requirements must be considered for UC Suite:

Voice Channel Booster card (OCCBL / OCCB1 or OCCBH / OCCB3). The required number of DSP channels of the Voice Channel Booster card depends on the expansion of the system.

An additional SSD storage medium is required for systems with a V3 mainboard.

For systems with V2 mainboard, depending on the configuration, either a UC-Booster card or a UC-Booster server is required.

For UC Smart, the following prerequisites must be considered

For systems with V3 mainboard, an additional SSD memory card is required depending on the configuration.

For systems with V2 mainboard, depending on the configuration, either a UC booster card or a UC booster server is required.

Functional boundary conditions and restrictions

- UC Suite and UC Smart cannot be operated simultaneously/in parallel in one system
- UC Suite and UC Smart can be used in the following constellations in an OpenScape Business network.
    - All nodes with UC Suite and network-wide UC Suite functions.
    - All nodes with UC Smart and network-wide UC Smart functions
    - UC Smart and UC Suite each on certain nodes of an OpenScape Business network. For this applies.
        - UC Suite nodes can exchange UC information (e.g. presence status) with each other in the network

  - UC Smart nodes can exchange UC information (e.g. presence status) with each other in the network
  - UC Suite and UC Smart nodes cannot exchange UC information with each other
- Migration from UC Smart to UC Suite in an OpenScape Business System is possible. This requires a UC reconfiguration. All existing UC Smart data including voicemails are no longer available after the migration.
- The fax solution integrated in UC Suite provides personal fax boxes for individual users and should be used when employees occasionally send or receive faxes. In total, up to 3 faxes (X3, X5 and X8) or up to 8 faxes with OpenScape Business S can be sent or received in parallel. With intensive use, transmission delays can occur because the pending orders are processed sequentially.

1.4.5 Unified communications and collaboration functions

Via the aforementioned clients, users can use the UC function described below, whereby the usable range of functions always depends on the respective UC solution UC Smart or UC Suite. A comparative overview of the UC client functions is shown in chapter 1.4.10 “Function of the UC Clients in comparison".

Presence Status

The presence status enables you to keep track of the availability and accessibility of your team, even across locations! By using automatically generated announcements about your presence status, you can inform even external callers of your status, for example, "In a meeting until 12 Noon". This makes it possible to work more effectively because your customers can decide what to do, i.e., leave a message for you or contact a colleague immediately. You can change the presence status via your UC client or through your phone. Using the link to the Outlook Calendar and the calendar for the Mac (iCal), the presence status is set automatically if certain keywords have been entered in appointments.

Drag & Drop Conferences

Save travel costs, exchange information fast and effectively: Use the conference capabilities in OpenScape Business for this! No manual setup of conferences on the telephone: set up conferences very easily with a few clicks in your UC client, or extend a 2-party call from the pop-up to a conference. As the conference controller, you can choose whether you want to start a spontaneous conference or a scheduled conference - with or without Web Collaboration.

Favorites List

Save the phone numbers of your most important business partners and fellow workers in your personal favorites list! This allows you to establish contact quickly without wasting time searching for the phone number.

Directories

Browse all automatically connected phone books (directories in the system, in Exchange, directories connected via LDAP or the Open Directory Service with a single search command. This ensures the least amount of effort when looking for a contact.

Dialing with a Mouse Click

You found the phone number of a customer in an e-mail or on the Internet and want to contact that customer immediately? No problem! Simply highlight the phone number and then dial it automatically, without losing any time by typing the phone number at the phone.

Call Journal

Who called and when, and whom did I not reach? The phone journal provides you with this information at any time and allows you to contact them with a click.

Conversation view

Under folder/tab conversation all user information is found well organized and structured in a single place incl. Call Journal, Voicemail, Chat are found for the dedicated persons.

Status-Based Call Forwarding

Do you redirect your telephone, to your cell phone for instance, when you are out of the office? You forget to do this sometimes? Then automatic call forward will help you. When you set your presence state to "Out of Office", for instance, your calls are automatically forwarded to your cell phone. With the mobile client, this can, of course, also be conveniently done from the road.

CallMe!

You are in a hotel, still have to make some business calls, and are reluctant to take on additional costs? No problem, "CallMe" helps. When "CallMe!" is enabled, you can dial your contact in the UC client. OpenScape Business then calls you in your hotel room and connects you with your business partner. Your company pays for the costs of the call, and you save time.

Personal AutoAttendant

You can give callers options to increase your presence. For example: "Press 1 to reach me on my mobile phone or 2 to leave me a message."

Popup Window (also called Screen Pops)

Incoming calls are displayed immediately on the PC in a popup window. You decide what you do: Accept the call or transfer directly – and all of this by a click of the mouse! After you have accepted a call, automatically switch to the displayed options: You can, for instance, start Web Collaboration or forward a call tag by e-mail.

Voicemail Box and Fax Box

Use your personal voicemail box more effectively by having incoming voice messages sent to you by e-mail and accessing your important messages quickly via the UC client. Save yourself the long way to the fax machine. Your personal fax message box allows faxes to be received and sent directly through your PC.

Notifications

Incoming voice and fax messages can be automatically signaled by e-mail, SMS or a call (to your mobile phone, for example).

Instant Messaging

Communicate using chat in real time with a colleague, e.g., when his or her phone is busy, but you have to reach that colleague quickly because you have an important client on the phone. You can, of course, also chat with multiple subscribers, which is ideal for coordination while conducting a conference call.

Voice Recording

You can record a call or a conference easily, so no details are lost.

Web Collaboration

Web collaboration is a separate solution which enables several users to work on a document independent of their physical location allows multiple participants to work on a document concurrently, regardless of their location; you only need a computer with access to the Internet.

The solution provides secure multimedia conferencing, and is integrated seamlessly the GUI of OpenScape Business via the OpenScape Business Web Collaboration Connector.

OpenScape Web Collaboration improves cooperation and teamwork within your organization and with your business partners. Through integrated features such as desktop and file sharing, whiteboards and video conferencing, for example, project or sales meetings, training sessions and product presentations can be conducted without costly business trips.

1.4.6 UC-Clients

Depending on the selected UC solution and the desired working method, different UC clients with different functions and integration options are available.

The UC clients myPortal @ work and myPortal to go can be used with UC Suite and UC Smart.

With the myPortal for Outlook Client, UC Suite offers seamless integration in Microsoft Outlook / Exchange environments and the standard client myPortal for Desktop.

1.4.7 Common UC clients for UC Smart and UC Suite

The myPortal Portal @ work and myPortal to go Client can be operated on both UC Smart and UC Suite. The scope of services available depends on the selected UC solution. A comparative overview of the UC client functions is given in chapter 1.4.10 " Function of the UC Clients in comparison" .

1.4.7.1 myPortal @work

myPortal @work is a client for Microsoft Windows or Apple MacOS for UC Smart and UC Suite. Depending on the UC solution and the configured functions in OpenScape Business, the scope of the available UC functions varies. myPortal @work offers an embedded Voice over IP telephony client. If the VoIP option is activated, the VoIP function is used for all calls from the client.

myPortal @work can also be used in combination with existing myPortal for Desktop / Outlook clients on UC Suite.

Highlights from myPortal @work:

- Conversation-oriented graphical user interface with:
  - Flexible / scalable user interface with different views
  - Left or right docking - fitting to customer needs
  - Minimize to the tray function
  - Tray pop-up on incoming / outgoing calls
  - Combined input field for search and dialing functions
  - Conversation view for contacts
  - Faciliated conference management
- Integrated WebRTC-based VoIP client (incl. Device @ Home Support)
- Integrated desktop dialing function
  - Click to Dial via Hotkey
  - Telephony hyperlink services such as tel: and callto:

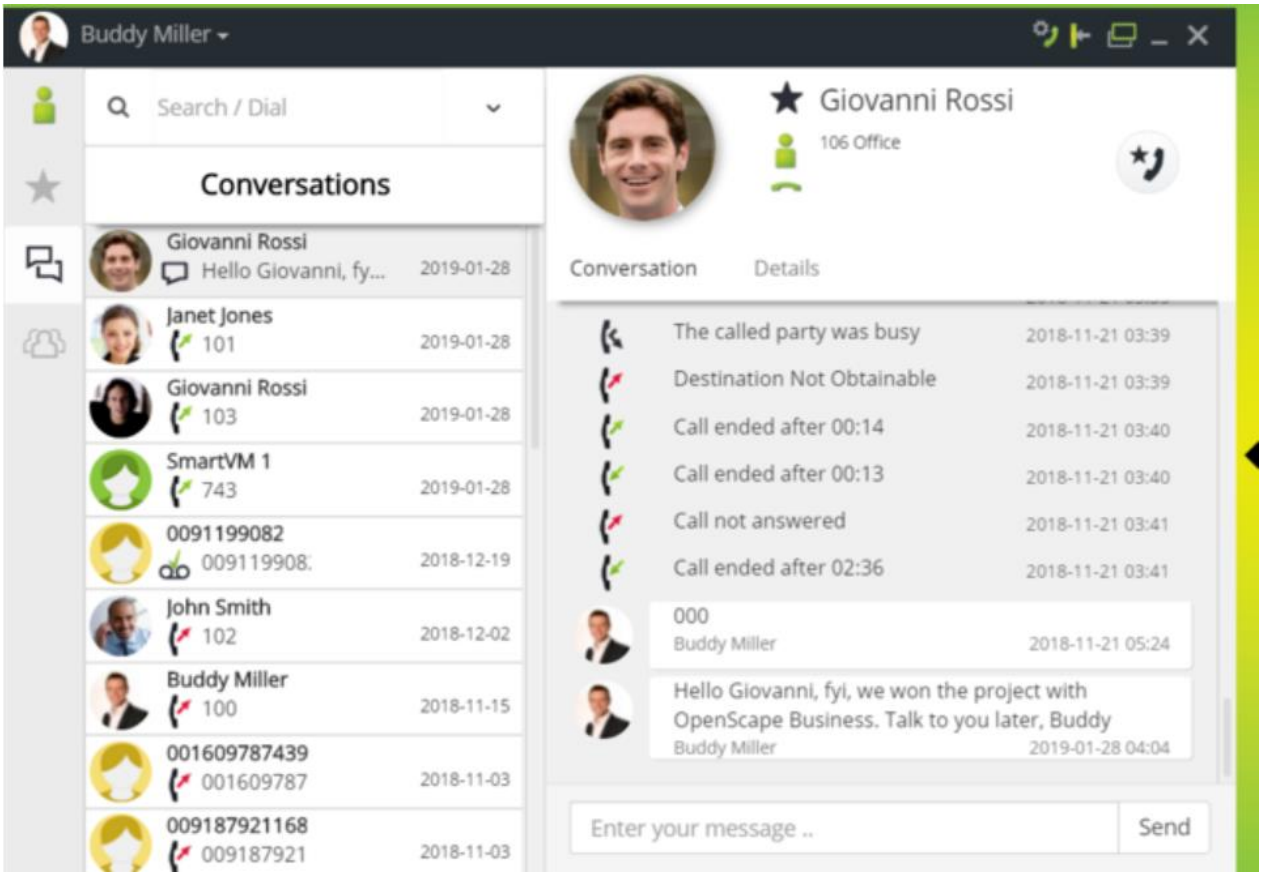

Figure 7 myPortal@work User Interface Detailed View

The myPortal @work user interface consists of several display elements that can be expanded and reduced to offer the user four different views with different levels of detail.

The user can switch between the views at any time as desired. The presence status as well as information about missed calls and new voice messages are shown in every view except the mini view.

The following applies to all views except the Mini View:

- The client can be positioned anywhere on the desktop. It can be operated in the background or always in the front.
- Tooltips display more information about objects in the graphical user interface, such as: Symbols, input fields or buttons. The corresponding tooltip is displayed when the mouse pointer is moved over an element for a short period of time.
- The corresponding call information and buttons are displayed for calls in pop-up windows or in the conversation work area, if this view is currently active.
- If myPortal @work is not connected to the communication system, the current screen is greyed out and an information text is displayed. In this case, you can still go to Menu to exit the application and select a different user profile on the login screen in logout mode.

A pop-up window provides, among other call control elements in the client user interface, a convenient way to answer calls with a single click. The phone number, name and picture of the caller are displayed together with the call control buttons depending on the call status

The exact scope of UC functions of myPortal @work is given in chapter 1.4.10 “Function of the UC Clients in comparison”.

The telephony functions of myPortal @work depend on whether an associated system telephone is controlled or whether the integrated VoIP function is used.

Function	Associated Device	VoIP

Make Call	✓	✓
Answer call	✓	✓
Disconnect call	✓	✓
Consultation Call	✓	✓
Attended Transfer	✓	✓
Blind Transfer (during a call)	✓	✓
Deflect call	✓	✓
Deflect to Voicemail	✓	✓
Recall	✓	✓1
Alternate /Toggle	✓	✓
System conference (phone-controlled)	✓	✓
Reject	✓	✓
Do not disturb	✓	✓
DTMF dialing while connected	✓	✓
Microphone mute / unmute	n/a	✓
Service Codes	✓	--- 2

Table 23 MyPortal @work – Supported Telephony Functions

1 The callback notification is not yet implemented in the GUI

2 The dialing of system service codes is not blocked, but in the event that the function does not work or does not work properly, no support is provided by Unify.

Licensing:

In addition to the IP or TDM user license, a UC user license must be set up in OpenScape Business to use myPortal @work. Optionally, the user of myPortal @work can be assigned, for example, a voicemail user license for using system voicemail.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment

The myPortal @work Client SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client.

System Requirements

The HW / SW requirements required for the myPortal @work PC Client are described in chapter 1.7.

Functional boundary conditions and restrictions

- **Caller ID:**
  For correct caller identification, the phone numbers in the personal and global contacts must be in canonical format.
- **VoIP functions**
  - When using the VoIP client from myPortal @work in combination with other UC Suite clients, it is recommended to use the consultation call from myPortal @work instead of the general consultation call from UC Suite.
  - The maximum number of simultaneous VoIP calls depends on the OpenScape Business System. The current values are listed in chapter 1.3.11.4 or 1.3.11.5 in Table 8 or Table 9.
  - Support for all headsets recognized by Windows as an audio input / output device. Manufacturer specific Push to Talk (PTT) functions are supported for Jabra and Plantronics headsets.
- **General restrictions**

- The UC Suite "Call-Me" function is not supported.
- The presence status synchronization does not work correctly in favorites.
- For conversations in UC Suite mode, only basic functions are available in V3. Calls from an external number are not displayed consistently
- The DND (Do not disturb) function is not available for participants in MULAPs
- The automatic software update is not supported in an Apple MAC environment.

- **Terminal server installation:**

  myPortal @work is released for Microsoft Terminal Server 2016 environments with the following functional restrictions:
  - The VoIP functionality is not available
  - Dialing using hyperlinks and click-to-dial is not supported
  - Upload of user pictures is not supported
  - AutoStart of the client is not supported
  - Limited GUI functionality when docking / undocking, pinning / pinning the client window on the desktop screen and minimizing the tray bar.

1.4.7.2 myPortal to go

myPortal to go is an app for mobile employees with Android or iOS smartphones. The myPortal to go client offers users access to the UC Suite / UC Smart functions of OpenScape Business. myPortal to go optionally offers a Voice over IP telephony client (HFA). If this option is activated, all telephone functions of the myPortal to go app use this client, provided the VoIP client is connected to the company LAN via Wi-Fi.

myPortal to go basically supports the following functions:

- Presence Status
- Status-based signaling suppression on the mobile device
- Status based call forwarding
- CallMe service (only with UC Suite)
- Search function within directories
  - Internal directory
  - Global Directory
  - External directory (UC Suite)
  - Speed Dial Destinations
  - Personal directory (including contacts in the smartphone)
- Favorites list
- Journal
- Voicemail Control
- Text messages via SMS
- Support of the One Number Service with the election procedures
  - Call through
  - Callback
- Call control functions via user interface:

Function	Associated Device	VoIP
Initiate / Make Call	✓	✓
Answer call	✓	✓
Disconnect call	✓	✓
Consultation Call	✓1	✓

Consultation Hold and Retrieve	✓1	✓
Alternate /Toggle	✓1	✓
Deflect call	✓1	---
Reject	✓	✓
Blind Transfer (during a call)	✓1	✓
Attended Transfer (during a call)	✓1	✓
System conference (phone-controlled)	✓1	✓
MF dialling within connection status	✓	✓

Table 24 myPortal to go Telephony Functions

1 not supported in case of a SIP devices

2

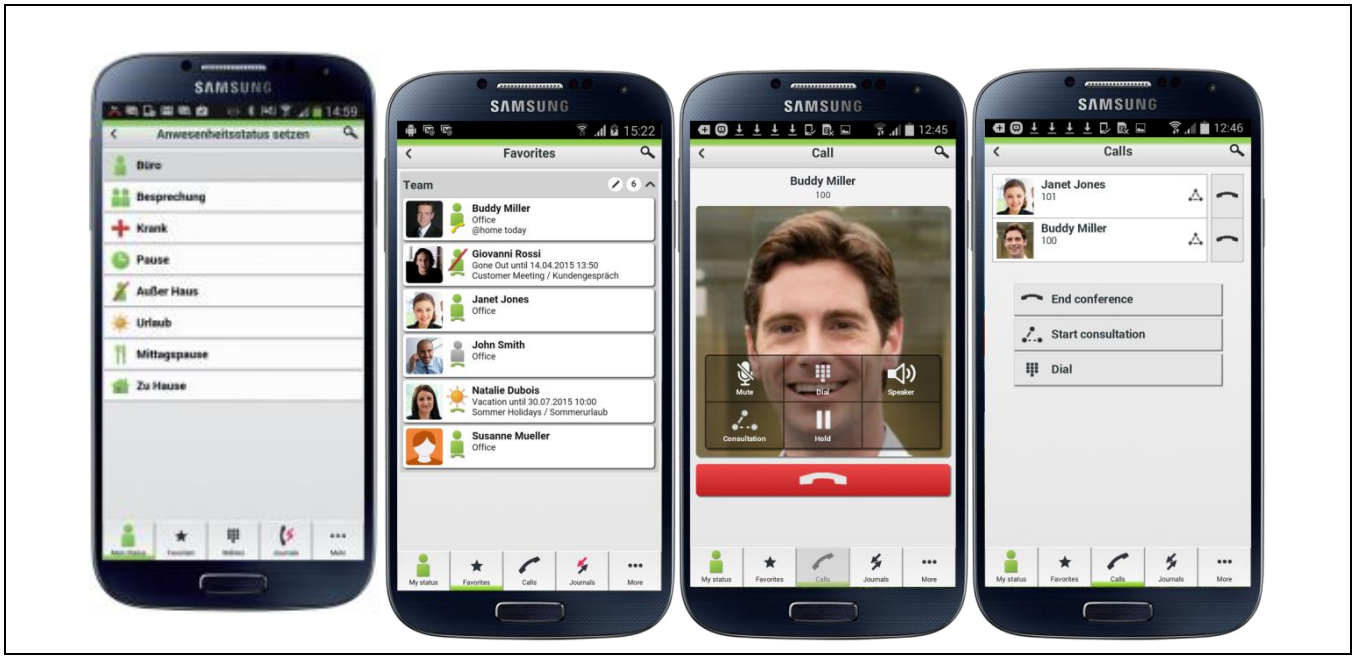

Figure 8 myPortal to go User Interface

Depending on the UC solution and the configured functions in OpenScape Business, the scope of the available UC functions varies. Small differences e.g. within the operation of some functions also results from different smartphone operating systems.

A mobile phone contract with data option (flat rate recommended) is required to use myPortal to go.

The UC functions of myPortal to go are described in chapter 1.4.10 “ Function of the UC Clients in comparison".

Information on the various possible uses of myPortal to go in the OpenScape Business Mobility environment is available in chapter 1.4.13.5 “Mobility with myPortal to go”.

Additional information

Further information on the functionality of myPortal to go can be found in the Unify Experts Wiki within the link:

http://wiki.unify.com/wiki/myPortal_to_go

Licensing:

In addition to the IP or TDM User license for the mobile subscriber, a UC User license must also be set up in OpenScape Business to use myPortal to go.

If the VoIP client integrated in myPortal to go is set up in "Dual Mode" mode in the OpenScape Business System, only one IP User and one UC User license are required. In this operating mode, the VoIP client needs not to be licensed separately.

If additional phones are assigned to the mobility user, an additional IP / TDM user license is required for each phone.

Optionally, the myPortal to go user can be assigned a Voicemail user license for using the System Voicemail Service.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment, Release Information and SW Support

The current version of the myPortal to go SW for Apple iOS or Google Android is deployed by Unify exclusively together with the associated release information via the app stores of the operating system manufacturers.

- Android: https://play.google.com/store
- iOS: http://store.apple.com

In the case of Android, no general functional guarantee can be given for a SW version, since each device manufacturer makes specific operating system modifications. In individual cases, these modifications can impair the functionality of the myPortal to go app. The app must therefore be tested on the respective device before use.

Security aspects

The VoIP client of myPortal to go App can be used on any Wi-Fi and can be registered and operated via the Internet with OpenScape Business. The MyPortal to go VoIP client must not be connected via public networks without proper security set up. To secure the connection, OpenScape Business provides the following technical mechanisms:

- Signaling Encryption
- Use of different registration ports for the VoIP client
- Authentication of the VoIP client

The security aspects regarding system access, encryption and authentication of the mobile VoIP client must be agreed with the customer.

Further technical information can be found in the administration manual and in the Security Checklist of OpenScape Business.

Functional boundary conditions and restrictions

- The range of functions and the deployment of iOS / Android operating system updates on the part of the manufacturers are beyond the responsibility of Unify. Resulting possible functional restrictions of myPortal to go are not necessarily subject to the SW support by Unify.
- VoIP Functionality
  Depending on the mobile operating system, the software version of OpenScape Business and the network environment, myPortal to go offers the Voice over IP (VoIP) function.
  - The VoIP client, which is embedded in the myPortal to go app, can be registered and operated with any WiFi service at OpenScape Business. The WiFi network and the mobile device should be configured for VoIP and support fast roaming and handover in the network.
  - Wi-Fi connection to OpenScape Business can be set up either via company WiFi or external WiFi (e.g. in the home office). Information on access via external WiFi can be found in the document **How to configure system device@home**
  - Automatic VoIP re-registration after loss of the WiFi signal and restoration of the WiFi signal is only possible if myPortal to go is active in the foreground.
  - Incoming GSM calls have priority over VoIP calls and can interrupt them.
- Dependency on Android devices
  - The voice quality of the VoIP client from myPortal to go depends on the hardware performance and the firmware version of the mobile device.

- Please note that problems with WiFi roaming are known on Android. (Dynamic connection to the access point with the strongest signal). The Android community offers several workarounds: You can search the Internet for "Android roaming wifi errors" for more information.

- Dependency on iOS devices
  - The VoIP app uses iOS framework functions with the following restrictions set by Apple:
    - The Apple Push Notification Service (APNS) informs the user about incoming VoIP calls when the app is not in the foreground. Both the communication server and the app require Internet access to Apple's APNS servers.
    - iOS can terminate the background mode of myPortal depending on the power consumption of the battery.

1.4.7.3 OpenScape Deskphone CP400 / 600 / 600E UC Functions

OpenScape Desk Phone model CP400 / CP600 / CP600E (HFA) users can use the following UC Smart or UC Suite functions directly on the phone, provided they have the appropriate UC licenses in the system.

- Display presence status of internal participants on:
  - Favorite keys
  - Key Module
- Change of own presence status
- Creation and display of favorites
- Conversation menu displaying:
  - Caller list with common view and synchronization of the call journal entries at myPortal @ work
- Dialing function (direct dialing function inclusing search)
- Quick access and search in directories
- Voicemail status display
- Voicemail control

Figure 9 Desk Phone CP 400 / 600 / 600E Conversation Menu, UC Functions

Licensing

Appropriate UC user licenses are required to use the UC functions on the CP device.

Functional boundaries and restrictions

UC support is not available on the device, if the CP device is used for Deskshare Users.

1.4.8 UC Suite specific Clients

1.4.8.1 myPortal for Desktop

myPortal for Desktop is a Java-based UC Client for Microsoft Windows and Apple MacOS. It offers access to all UC Suite functions of OpenScape Business.

Figure 10 myPortal for Desktop user interface - modern skin

The myPortal for Desktop user interface is available in different versions. The UC Client offers the following features:

- Presence Status
  - Status-based call forwarding
  - “Call Me” service with One Number Service (ONS)
- Favorites list
- Directories
- Journal for calls, voicemail and fax
- Search in directories
- Voicemail Control
- Send / forward fax
- Instant Messaging (chat)
- Call control (CTI)
  - For an associated telephone device
  - For the VoIP client of myPortal @ work
- Click to Dial / Hotkey Dialing
- Ad hoc conferences out of peer to peer call with two participants
- Conference Server control
- Record of voice conferences
- Record of voice calls
- Personal AutoAttendant
- Screen Pops
- Support of Web Collaboration
- Support of Microsoft Windows and Apple Mac OS

Compared to myPortal @work, additional functions such as personal fax box or "CallMe!" are available. Further information on the scope of functions of myPortal for Desktop is given in chapter 1.4.10 “ Function of the UC Clients in comparison".

Licensing:

In addition to the IP or TDM User license, a UC Suite user license must be added in OpenScape Business to use myPortal for Desktop. Optionally, further UC user licenses can be assigned to the user of myPortal for Desktop e.g. a Voicemail User license for using system voicemail.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment

The myPortal for Desktop Client SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client.

System Requirements

The hardware / software requirements for the myPortal for Desktop PC Client are described in chapter “1.7 Requirements for the OpenScape Business Clients”.

Functional boundary conditions and restrictions

Generally

A web browser on the client PC is required for key programming of the phone devices via the UC-Suite client.

MAC OS version

The following functions are not available under MAC OS.

- Send a fax
- Microsoft Outlook / Entourage integration.

Java

32-bit / 64-bit version:

In order to keep the workstation memory allocation low, the use of the 32-bit Java variant is generally recommended.

The 64-bit Java variant is mandatory to use the following functions:

- "Import Outlook contacts at startup" in connection with Microsoft Office 2013 in the 64 bit variant.

JRE / JDK

The JRE can be used under Microsoft Windows

Under Apple MAC OS, JDK is required to support TLS 1.2.

Oracle Java / OpenJDK

When using Oracle Java on the client PC, the license terms of Oracle regarding Java support must be observed. Alternatively, the OpenJDK Java variant can also be used.

OpenJDK 8 can be used as a free, open source alternative to the Oracle Java Runtime Environment. Recommended installers: https://www.azul.com/downloads/zulu/

1.4.8.2 myPortal for Outlook

With myPortal for Outlook, all the UC Suite features of myPortal for Desktop can be integrated as “Add in” seamlessly into Microsoft Office Outlook. Users thus have direct access to their personal voicemail and fax messages, for example, and they can dial directly from their Outlook contacts and use them for scheduling phone conferences.

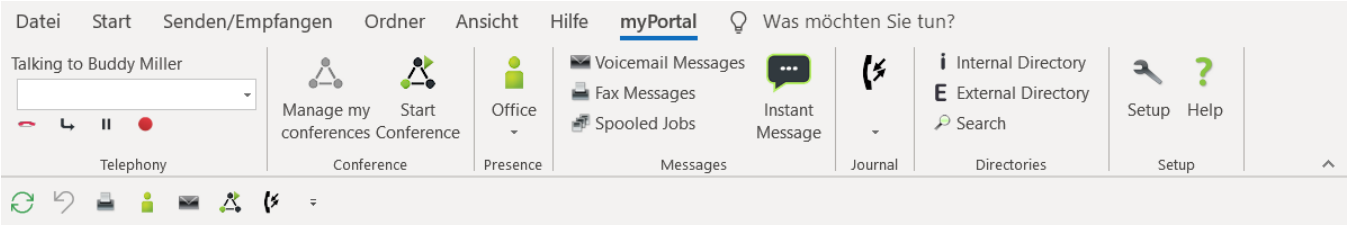

Figure 11 myPortal for Outlook User Interface - Ribbon Integration

myPortal for Outlook offers the following features:

- Presence Status
  - Status-based call forwarding
  - “Call Me” service with One Number Service (ONS)
- Favorites list
- Directories
  - Et. al. access to personal contacts
- Journal for calls, voicemail and fax

- Search in directories
- Voicemail Control
- Send / forward fax
- Instant Messaging (chat)
- Call control (CTI)
    - For an associated telephone device
    - For the VoIP client of myPortal @ work
- Click to Dial / Hotkey Dialing
- Ad hoc conferences out of peer to peer call with two participants
- Conference Server control
- Record of voice conferences
- Record of voice calls
- Personal AutoAttendant
- Screen Pops
- Support of Web Collaboration
- Support of Microsoft Windows and Apple Mac OS

Further information on the scope of functions of myPortal for Outlook is given in chapter 1.4.10 “ Function of the UC Clients in comparison".

Licensing:

In addition to the IP or TDM User license, a UC Suite Groupware User license must be added in OpenScape Business to use myPortal for Outlook. Optionally, further UC user licenses can be assigned to the user of myPortal for Outlook e.g. a Voicemail User license for using system voicemail.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment

The myPortal for Outlook Client SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client.

System Requirements

The hardware / software requirements for the myPortal for Desktop PC Client are described in chapter “1.7 Requirements for the OpenScape Business Clients”.

Functional boundary conditions and restrictions

Generally

A web browser on the client PC is required for key programming of the phone devices via the UC-Suite client.

Microsoft Office 365 environments

Microsoft Office 365 is a cloud application. This includes an Exchange server for the central distribution of emails, as well as the classic Microsoft Office products.

The following Exchange Server cloud functions can be used by a locally installed Microsoft Office Outlook together with myPortal for Outlook:

- Exchange calendar integration
- E-mail forwarding

1.4.9 Special UC Applications

1.4.9.1 myContacts

myContacts is an Outlook Add-In which is installed separately and provides Outlook contacts in myPortal @work and myPortal to go. It does not matter whether myPortal @work or myPortal to go is used together with UC Suite or with UC Smart.

myContacts can be used from Microsoft Outlook 2010 on, myContacts imports the first 3000 Outlook contacts at adjustable intervals automatically or manually triggered as required.

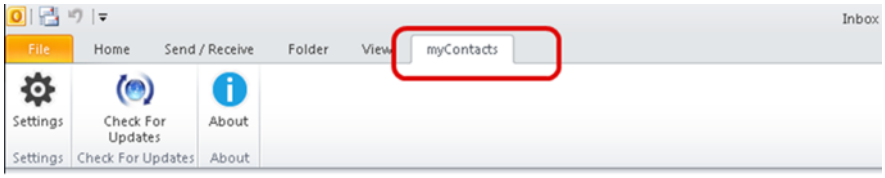

Figure 12 MyContacts AddOn

Licensing

No license is required to use myContacts.

SW Deployment

The myContacts SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client under Microsoft Outlook.

System Requirements

The system requirements required for myContacts are described in chapter "1.7 Requirements for the OpenScape Business Clients".

1.4.9.2 UC Suite Fax Printer

UC Suite enables UC Suite users to send and receive faxes individually. UC Suite centrally manages a fax input / output journal for each fax user and makes it available via the UC client.

To send fax messages from Microsoft Windows applications such as Microsoft Word, the UC Suite Fax Printer is installed on a UC client PC. Alternatively, the Fax Printer Driver can also be installed on any Windows client PC without a UC client.

The UC Suite Fax Printer offers the user two main components with the following functions:

- Fax Printer Cover Editor
  - Individual creation of fax cover sheets
- Fax Printer Driver
  - Sending faxes to individual recipients
  - Sending faxes to multiple recipients
  - Use of central cover pages
  - Use of predefined headers
  - Control via the PC client user interface
  - Support of serial fax
  - Control via command line

Licensing

To use the fax function in UC Suite, a fax license is always required for each user, regardless of whether the Fax Printer Driver is operated together with a UC client or as a standalone.

SW Deployment

The Fax Printer Driver SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client under Microsoft Windows.

System Requirements

The hardware / software requirements for the UC-Suite Fax Printer are described in chapter 1.7.4".

Functional boundary conditions and restrictions

The fax printer driver can only process documents with True Type fonts.

1.4.9.3 Application Launcher

OpenScape Business Application Launcher is a JAVA based program for MS Windows PC. It enables interaction with CRM / ERP applications. In case of an call it starts the corresponding application and transfers caller-related data such as phone number, name, etc. to the application.

Its extremely flexible setting options allow both fully automatic operation in the background and interactive operation via its own pop-up window.

If a user has to work with different applications, he can call the corresponding application from the pop-up window of the Application Launcher. Up to ten different applications are supported.

CRM / ERP applications are alternatively controlled by executing a batch file or by sending a URL request.

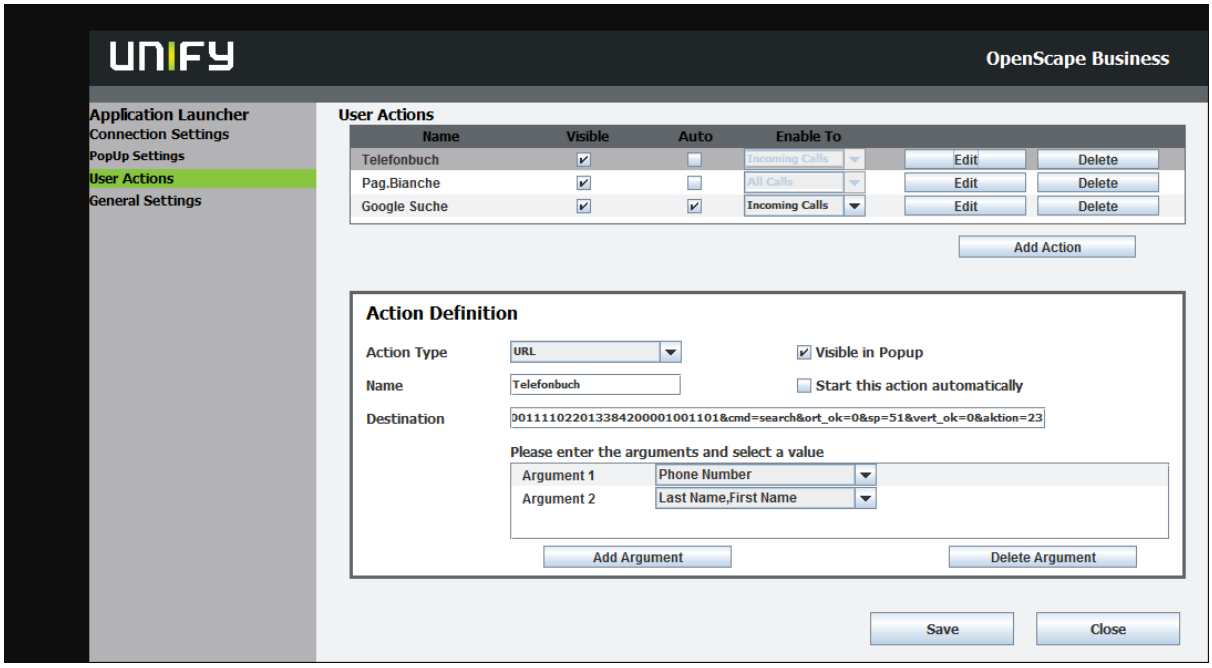

Figure 13 Application Launcher – Settings Menu

The application launcher can either be operated alone on the PC, in combination with other UC clients or also with the myAgent client of the contact center.

A typical use case for the Launcher application is to control a pop-up window in a CRM application when there is an incoming call. For applications that do not support their own PopUps, the PopUp window of the Application Launcher can be used to display the caller data.

In detail, the application launcher offers:

- Control of the PC application by executing a batch file or a URL for an incoming or outgoing call.
- Transfer of up to five configurable data (arguments) to other PC client or web-based applications
- Configurable behavior for all, for incoming or outgoing calls.
  - Pop-up window with configurable caller ID
  - Pop-up window with configurable action buttons
  - "Non verbose" mode without popup

- Connection to the Web Services Interface (WSI) of OpenScape Business
- Connection via LDAP to the Directory Service in OpenScape Business (optional)
- Caller list with:
  - up to 20 entries
  - WrapUp function
  - CTI redial
- Click to Call function (optional)
- Preview functions during configuration
- Offline test functions for developers

Licensing:

To use the Application Launcher, an Application Launcher User license and a UC User license must always be set up in OpenScape Business in addition to the IP or TDM user license.

If the Application Launcher is operated in connection with the myAgent Client, the myAgent User license can be used instead of the UC user license.

If the application launcher should also have access to the OpenDirectory Service, the OpenDirectory Base license is sufficient. If an external database is connected to the Directory Service, an OpenDirectory Connector license is also required.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment

The Application Launcher SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client under Microsoft Windows.

System Requirements

The HW / SW requirements required for the Application Launcher PC Client are described in Section 1.7.4

Functional boundary conditions and restrictions

The “Desktop Integration” SW must be installed on the client PC for use of the Click to Dial function. It is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client under Microsoft Windows.

Oracle Java

The Oracle JRE can be used under Microsoft Windows.

When using Oracle Java on the client PC, the license terms of Oracle regarding Java support must be observed. Alternatively, the OpenJDK Java variant can also be used. OpenJDK 8 can be used as a free, open source alternative to the Oracle Java Runtime Environment. Recommended installers:
https://www.azul.com/downloads/zulu/

1.4.10 Function of the UC Clients in comparison

The range of functions of the UC clients depends on the one hand on the UC Suite / UC Smart application itself and on the other hand on the functions configured in OpenScape Business. The following tables are intended to help you select the UC solution that is right for you. Detailed functional boundary conditions can be found in the corresponding chapters on UC Clients and in the OpenScape Business feature description.

UC Application	**UC Smart**			**UC Suite**			
UC Client: presence status	**myPortal @work**	**myPortal to go (App)**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go (App)**
Change presence status via client	✓	✓		✓	✓	✓	✓
Change presence status via Outlook calendar integration	✗	✗		✓	✓	✗	✗
Change presence status via iCal calendar integration	✗	✗		✓	✗	✗	✗
Change of own presence status via telephone device (Voicemail TUI)	✗	✗		✗	✗	✗	✗
Display presence status	✓	✓		✓	✓	✓	✓
Status display in favorites	✓	✓		✓	✓	✓	✓
Status display in the internal directory	✓	✓		✓	✓	✓	✓
Status display in the journal	✗	✗		✓	✓	✗	✗
Status display in conversation view	✓	✗		✗	✗	✓	---
Display of call- / telephone device status	✓	✓		✓	✓	✓	✓
User Client Status Display	✗	✗		✓	✓	✗	✗
Away from keyboard Status Display	✗	✗		✓	✓	✗	✗
Presence status based dependent call diversion	✓	✓		✓	✓	✓	✓
Enable CallMe	n/a	n/a		✓	✓	✓	✓

Table 25 Overview UC client functions – Presence status

UC Application	UC Smart			UC Suite			
UC Client Favorites	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Management of single favorites	✓	✓		✓	✓	✓	✓
Management of favorite groups	✓	✓		✓	✓	✓	✓
Create Groups	✓	✓		✓	✓	✓4	✓4
Edit Groups	✓	✓		✓	✓	✓4	✓4
Delete groups	✓	✓		✓	✓	✓4	✓4
Display Groups	✓	✓		✓	✓	✓	✓
Compact view	✓	✗		✓	✓	✓	✗

Table 26 Overview UC client functions – Favorites

4 Activation after prior configuration with myPortal for Desktop / myPortal for Outlook

UC Application	UC Smart			UC Suite			
UC Client Directories	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Personal directory	✓	✓		✓	✓	✓	✓
Display of personal directory	✓	✓1		✓	✗	✗	✓1
Managing of personal directory entries	✓	✓1		✓	✗	✗	✓1
Import personal contacts (CSV/XML)	✓	✗		✓	✓	✗	✗
Import personal contacts (Mac OS)	✗	✗		✓	✗	✗	✗
Internal Directory	✓	✓		✓	✓	✓	✓
Display Internal Directory	✓	✓		✓	✓	✓	✓
External Directory	✗	✗		✓	✓	✓	✓
Display External Directory	✗	✗		✓	✓	✓	✓
Global Directory	✓	✓		✗	✗	✗	✗
Display of Global Directory	✓	✓		✗	✗	✗	✗
LDAP directory access	✗	✗		✓	✓	✗	✗
Display Speed Dials	✓	✓		✗	✗	✓	✓
Search in directories	✓	✓		✓	✓	✓	✓
Seach Entry	✓	✓1		✓	✓	✓	✓1
Display Search Results	✓	✓1		✓	✓	✓	✓1
Access to contacts within mobile device	✗	✓1		✗	✗	✗	✓1
Access to Outlook contacts	✓2	✓2		✓	✓	✓2	✓2

Table 27 Overview UC client functions – Directories

1 myPortal to go also allows access to the local smartphone contacts.

2 After import using the Web Services Assistant

UC Application	UC Smart			UC Suite			
UC Client Journals / Conversions	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Voice Call Journal	✗	✓		✓	✓	✗	✓
All Calls	✗	✓		✓	✓	✗	✓
Open Calls	✗	✓		✓	✓	✗	✓
Missed Calls	✗	✓		✓	✓	✗	✓
Answered Calls	✗	✓		✓	✓	✗	✓
Scheduled Calls	✗	✗		✓	✓	✗	✗
Voice Mail Journal	✗	✓		✓	✓	✗	✓
Fax Journal	✗	✗		✓	✓	✗	✗
Conversations	✓	✗		✗	✗	✓	✗
Voice Call Events	✓	✗		✗	✗	✓	✗
Voice Mail Events	✓	✗		✗	✗	✗	✗
Chat Events	✓	✗		✗	✗	✓	✗

Table 28 Overview UC client functions – Journals / Conversations

UC Application	UC Smart			UC Suite			
UC Client Voicemail	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Voicemail server control via client user interface	✓	✓		✓	✓	✓	✓
Listen to voicemail via telephone	✓	✓		✓	✓	✓	✓
Listen to voicemail via Client HW	✗	✗		✓	✓	✗	✗
Send voice message as an e-mail	✓	✓		✓	✓	✓	✓
Voicemail server control from Clients via DTMF	✓5	✓5		✓	✓	✓	✓

Table 29 Overview UC client functions – Voicemail

5 Via Smart VM only in TUI mode OSO

UC Application	UC Smart			UC Suite			
UC Client Fax	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Sending Fax via MS Windows printer driver	✗	✗		✓	✓	✗	✗
Fax forwarding as .pdf or .tif file (MS Windows only)	✗	✗		✓	✓	✗	✗

Table 30 Overview UC client functions – Fax

UC Application	UC Smart			UC Suite			
UC Client Instant Messaging (Chat)	**myPortal @work**	**myPortal to go (App)**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go (App)**
Text messages via messaging server (Chat)	✓	✗		✓	✓	✓	✗
Text messages via SMS	✗	✓		✗	✗	✗	✓

Table 31 Overview UC client functions – Instant Messaging

UC Application	UC Smart			UC Suite			
UC Client Telephony functions	**myPortal @work**	**myPortal to go App**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go App**
Telephony function in general	✓	✓		✓	✓	✓	✓
Dial out of directories	✓	✓		✓	✓	✓	✓
Dial out of journal / conversation	✓	✓		✓	✓	✓	✓
Dial out of favorites	✓	✓		✓	✓	✓	✓
Dial out of search results	✓	✓		✓	✓	✓	✓
Dial via call number input (manual dialling)	✓	✓		✓	✓	✓	✓
Click to Call via Clipboard	✓	✗		✓	✓	✓	✗
Click to Call via CallTo:// or Tel://	✓	✗		✗	✗	✓	✗
Control of associated phone device	✓	✗		✓	✓	✓	✗
Embedded Telephony Client	✓	✓		n/a	n/a	✓	✓
Telephony Functions via associated System Phone							
Initiate / Make a call	✓	✓		✓	✓	✓	✓

UC Application	UC Smart			UC Suite			
UC Client Telephony functions	**myPortal @work**	**myPortal to go App**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go App**
Answer a call	✓	✓		✓	✓	✓	✓
Disconnect	✓	✓		✓	✓	✓	✓
Consultation / consultation hold	✓	✓		✓	✓	✓	✓
Attended transfer	✓	✓		✓	✓	✓	✓
Blind Transfer	✓	✓		✓	✓	✓	✓
Deflect call	✓	✓		✓	✓	✓	✓
Recall	✓	✓		✓	✓	✓	✓
Toggle / Alternate	✓	✓		✓	✓	✓	✓
System Conference	✓	✓		✓	✓	✓	✓
Call waiting rejection	✓	✓		✓	✓	✓	✓
Do Not Disturb	✓	✓		✓	✓	✓	✓
DTMF control	✓	✓		✓	✓	✓	✓
Mute / Unmute microphone	✓	✓		✓	✓	✓	✓
Execution of service codes	✓	✓		✓	✓	✓	✓
Call hold / retrieve	✓	✓		✓	✓	✓	✓
Call Pick Up	✓	✓		✓	✓	✓	✓
Call forwarding	✓	✓		✓	✓	✓	✓
Telephony Functions via integrated Client	□	□				□	□
Initiate / Make a call	✓	✓		✗	✗	✓	✓
Answer a call	✓	✓		✗	✗	✓	✓
Disconnect	✓	✓		✗	✗	✓	✓
Consultation / consultation hold	✓	✓		✗	✗	✓	✓
Attended transfer	✓	✓		✗	✗	✓	✓
Blind Transfer	✓	✓		✗	✗	✓	✓

UC Application	UC Smart			UC Suite			
UC Client Telephony functions	**myPortal @work**	**myPortal to go App**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go App**
Deflect call	✓	✓		✗	✗	✓	✓
Recall	✓	✓		✗	✗	✓	✓
Toggle / Alternate	✓	✓		✗	✗	✓	✓
System Conference	✓	✓		✗	✗	✓	✓
Call waiting rejection	✓	✓		✗	✗	✓	✓
Do Not Disturb	✓	✓		✗	✗	✓	✓
DTMF control	✓	✓		✗	✗	✓	✓
Mute / Unmute microphone	✓	✓		✗	✗	✓	✓
Execution of Service codes	✓3	✓3		✗	✗	✓3	✓3

Table 32 Overview UC client functions – Telephony

3 The dialing of system service codes is not blocked, but if the function does not work or does not work properly, no support is provided by Unify

UC Application	UC Smart			UC Suite			
UC Client Conference server	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Scheduled Conferences	✗	✗		✓	✓	✗	✗
Permanent / Open Conferences	✗	✗		✓	✓	✗	✗
Conference server control	✓	✗		✓	✓	✗	✗

Table 33 Overview UC client functions – Conference server

UC Application	UC Smart			UC Suite			
UC Client miscellaneous functions	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Voice call recording	✗	✗		✓	✓	✗	✗
Send e-mail	✗	✗		✓	✓	✗	✗
Send SMS	✗	✓		✗	✗	✗	✓

Pop-Up Window	✓	✓		✓	✓	✓	✓
System phone key programming	✓6	✗		✓	✓	✓6	✗

Table 34 Overview UC client functions – Miscellaneous

6 Via Web Assistant

UC Application	**UC Smart**			**UC Suite**			
Collaboration with 3rd party servers	**myPortal @work**	**myPortal to go**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go**
Access to LDAP directory server	✗	✗		✓	✓	✗	✗
Collaboration with Microsoft Exchange Server	✗	✗		✓	✓	✓	✗
Outlook Calendar Integration	✗	✗		✓	✓	✗	✗
iCal Calendar Integration	✗	✗		✓	✓	✗	✗
Collaboration with WebCollaboration Server	✓	✗		✓	✓	✓	✗

Table 35 Overview UC client functions – Collaboration with 3rd party servers

1 myPortal to go also allows access to the local smartphone contacts.

2 After import using the Web Services Assistant

3 The dialing of system service codes is not blocked, but if the function does not work or does not work properly, no support is provided by Unify

4 Activation after prior configuration with myPortal for Desktop / myPortal for Outlook

5 Via Smart VM only in TUI mode OSO

6 Via Web Assistant

1.4.11 UC client functions in the OpenScape Business Network

In an OpenScape Business network, the individual network nodes exchange, among other things, information about the participants set up in the respective nodes and their status. This information is available to all UC participants in the network on their clients.

The UC client users always log on to the node network in which they were set up by the system administrator.

UC information can only be exchanged in the network between nodes with the same UC solution. There is no exchange of information between UC Suite and UC Smart.

The table below shows the UC client functions that contain network-wide information.

UC Application	**UC Smart**			**UC Suite**			
Netwide UC client function	**myPortal @work**	**myPortal to go (App)**		**myPortal for Desktop**	**myPortal for Outlook**	**myPortal @work**	**myPortal to go (App)**
Visibility of user presence status	✓	✓		✓	✓	✓	✓
Display of status in favorites	✓	✓		✓	✓	✓	✓
Display of status in directories	✓	✓		✓	✓	✓	✓
Display of status in journals	---	---		✓	✓	---	---
Visibility of call status	✓	✓		✓	✓	✓	✓
Internal directory	✓	✓		✓	✓	✓	✓
Instant messaging (Chat)	✓	✓		✓	✓	✓	✓

Table 36 UC Client Functions with network-wide information

1.4.12 Multimedia Contact Center to Improve Availability and Customer Service

The Contact Center is a powerful solution for the optimal distribution and handling of incoming calls, faxes and e-mails. Intelligent, skills-based routing ensures that callers are always connected to the most qualified agent, regardless of the contact medium. A number of convenient functions for handling and wrapping up calls, faxes and e-mails are offered to the Contact Center agents via the myAgent application. myReports provides a number of report templates for analyzing the Contact Center operations.

The Multimedia Contact Center is fully integrated in the UC Suite software. It includes all required software components. The Contact Center functions themselves are released through licenses.

The Contact Center uses the resources of the communication system such as queues for incoming calls and unified communication functions to record and play back announcements.

The central software component of the Contact Center controls all routing functions for incoming calls, faxes, and e-mails and also controls the LAN-connected PC workplaces of agents and wallboard displays.

On the PC workplaces of agents, the myAgent application is installed. The myReports application can be optionally installed to generate and send reports. The required software can be downloaded directly from the download area of the communication system and installed on the client PC.

The OpenScape Business Assistant (WBM) is used to set up the Contact Center basic functions, schedules, distribution rules as well as the agents. The settings for the daily operation of the Contact Center such as the assignment of agents to queues, for example, can also be made directly via myAgent.

1.4.12.1 Contact Center Function in Detail

Intelligent Call Distribution

The integrated Multimedia Contact Center of OpenScape Business allows you to improve your customer service and thus the satisfaction of your customers. Thanks to the intelligent distribution of calls, your customers are served quickly and efficiently and always connected to the appropriate staff. Apart from the call distribution, you can also offer your customers the alternative option to establish contact by fax and/or an e-mail. As with calls, the queries using these media are always routed automatically to the correct employee. If all the staff are busy, callers can also leave voicemails. Your employees can then call them back, so no potential orders are lost.

Customer Status dependent Call Distribution
OpenScape Business Contact Center offers the option of distributing calls according to criteria that are stored in an external database. This allows call distribution according to existing "service level agreements" and to offer customers individual services. The external database is queried via LDAP on the basis of the transmitted number of the caller.

Flexible Queue Options
With the individual queue options, your customers are forwarded to the appropriate employee as soon as possible. For example, when all your employees (agents) are busy on the phone, an individual announcement can be played back to the customer, or the customer can be optionally forwarded to members of another service group. To reduce the waiting time, customers can optionally also leave a message, and your employees can call them back later when fewer new calls come in.

Individual announcements
When all employees (agents) are busy, individual announcements can be given to the customer. This can include either general information, information about his current position in the queue or his expected waiting time.

Agents in Multiple Groups
In order to make the best possible use of the skills of your employees, they can also be assigned to multiple contact center groups. Each agent will then always first receive calls of the group for which he or she has been assigned the highest level of competence (e.g., if an agent was assigned a skill level of 100% in the Sales group, but only 80% in the Service group, calls for the Sales group are preferentially routed to that agent)

Wallboard
To ensure that your employees are always informed about the utilization of the contact center, e.g., how many calls are currently in queue, these details can be displayed in real time on a large screen monitor or a projection device.
The "Visual" wallboard provides the supervisor with an expanded graphic display of the contact center utilization.

Caller list
The caller list of the contact center shows detailed information on all the previously handled calls, faxes and e-mails of your customers. Search and sort functions enable agents to quickly find specific details.

Preferred Agent
In order to provide your customers with even more personalized service, the OpenScape Business Contact Center can be set so that a particular customer is always forwarded automatically to his or her contact partner (preferred agent).

VIP Service
VIP customers can be forwarded directly to free agents without lingering for extended periods in a queue. This ensures that your VIP customers are served quickly, and no important job is lost.

Number-Based Voice Prompts
OpenScape Business can play back individual announcements, depending on the caller's number. For example, if you have international customers, these callers can be received in their own respective languages and thus feel well cared for.

Wrap up
OpenScape Business gives your staff the time to complete follow-up tasks and wrap up customer calls. The warp up time is customizable. Advanced options such as the reason for the call: order, information, complaint, etc. can thus be recorded and evaluated later.

Authorization Level (Class of Service)
Depending on the structure of your Contact Center, different permissions can be assigned for the role of an employee as an agent, a supervisor (team leader) or an administrator.

Administration of the Contact Center
Depending on their assigned role (authorization level), users can select and easily customize a number of options individually:

- Queues
- Schedules
- Breaks
- Wrap-up Codes
- Announcements
- External Directory

Call recording
The agent / supervisor can record a call for training or documentation purposes. The recording is saved together with the call data in the call list and can be played back later on the PC or by telephone.

Fax and e-mail processing
Incoming faxes and e-mails are placed in the appropriate queues in the contact center and are routed to the agents authorized to process faxes and e-mails, according to the first in / first out principle. Agents can send a response via e-mail or fax via their myAgent client or contact the sender by phone.

Reporting
Reports provide detailed insight into the efficiency of a business contact center.

OpenScape Business Contact Center offers real-time reporting on calls in the contact center, as well as historical reporting on calls, faxes and e-mails.

Graphic overviews and diagrams enable to identify problems early and to react to quickly. For example, real-time reporting can show unusually high call volumes for a specific queue, which means that the supervisor has to assign more agents to this queue, or the analysis of the call history shows high call volumes on certain days of the week, which means that the supervisor has more staff for must plan these days.

Login via System Phone
An agent / supervisor can also log in or log out of the contact center via his assigned phone without the myAgent client being active.

Adjustable queue size (Queue Depth)

Using the "Queue Depth" feature, the maximum number of active and waiting calls per queue can be set individually. If thresholds are exceeded, the system rejects incoming calls to the contact center. The caller is signaled busy. The rejected calls are registered by OpenScape Business and can be evaluated via myReports. If the thresholds are undershot again, new incoming calls are routed to the contact center.

Emergency Operation
To increase availability, the internal call distribution UCD is available as an alternative in the event of problems. The UCD distribution rules for emergencies must be taken into account when setting up UCD groups within the framework of the initial setup of the Contact Center.

Licensing:
Every OpenScape Business Contact Center user needs an Agent User license in addition to his IP or TDM user license. The user can then be configured either as an agent, supervisor or as a contact center administrator. Agent user licenses are statically assigned to a user at the time of configuration and cannot be shared by several users.

A voicemail user license per agent is required for the function Voicemail and call recording.

In addition to the Agent User license, a user needs the myAttendant license so that he can also change the presence status of other UC users via the myAgent Client.

In the event that email and fax media are to be processed in the contact center, a system-wide contact center email or fax license is required.

The same applies to the creation of reports using myReports, which also requires a system-wide license.

SW Deployment
The Contact Center SW is part of the OpenScape Business SW image. The system software on the appropriate storage medium for V3 or V2 mainboards must be ordered separately. Alternatively, the system software can also be downloaded from the Unify software download server.

System Requirements

- M.2 NVMe SSD in connection with V3 mainboards
- UC Booster Card or UC Booster Server in connection with V2 mainboards

Functional boundary conditions and restrictions

Max. Number of agents

A total of 192 Agent User licenses can be assigned, of which only 64 can be active in the system at the same time.

Supported trunk lines

All external connections to the contact center must be made via ISDN or IP trunks. It should be noted that the connection via IP trunks is only possible via certified Internet Telephony Service Providers (ITSP).

Supported telephone devices / subscribers

OpenScape Business Contact Center works in conjunction with system telephones (IP / HFA, TDM with display). SIP, ISDN and analogue telephone devices, mobility subscribers, virtual subscribers, groups or MULAP subscribers cannot be operated as agents in the contact center.

Integration of CMI / DECT devices

DECT phones can be used as phones for contact center agents. Differences in the operating procedure compared to corded telephones must be noted.

- Requirements for the use of DECT phones
  - Only the DECT phones currently approved for use with HiPath Cordless Office and OpenScape Business Cordless may be used.
  - The area in which the contact center agents are located must provide seamless radio coverage.
  - The number of base stations must be such that there are sufficient B channels available for the DECT telephones of the contact center agents.
  - A contact center agent should preferably not leave the radio area while logged on to a queue of the contact center.
- Effects to be considered when using DECT phones:
  - Search time
    With an incoming call, the time to find the DECT phone can be several seconds (in the worst case up to 20 seconds) before a call is signaled on the DECT phone. During the search time, the caller hears the ring tone. The contact center evaluates this time as the time until the call is answered. The actual time until a call is answered by a contact center agent is made up of the search time and the ringing time. If a contact center agent leaves the radio area with his DECT telephone, longer search times can result.
  - DECT phone cannot be found
    If a contact center call exceeds the specified time until the agent accepts the call (contact center agent is outside the radio range, for example), the agent is automatically logged off from the queue or queues. It is recommended to set up agents with DECT phones as "permanently active" agents.

Login via phone without myAgent

If the agent is logged in via the phone, only calls are delivered to him. The pop-up window for call processing and for entering the processing code are not available. This also applies if the myAgent Client is active and the agent has logged in via the phone. In this case, the full myAgent functionality can be used again if the agent logs out on the phone and then logs in again via myAgent.

Networking

With networking, all agents must be connected to the communication system in which the contact center is configured.

Call recording

The number of recordings that can be stored depends on the duration of the call and the available storage capacity on the M2. NVMe SSD or the hard drive.

1.4.12.2 myAgent Client

myAgent is a Microsoft Windows based client for UC Suite. It offers the user interface which employees (agents) can provide qualified responses to customers. Thanks to the integrated presence display, agents can quickly bring in other experts, since they can immediately see which experts are currently available to support them. myAgent also ensures that your agents always know how many callers are still in the queue and can thus always respond appropriately.

Depending on the assigned role (authorization level), more than 20 predefined reports can be created, e.g., to check how many calls were received by each agent.

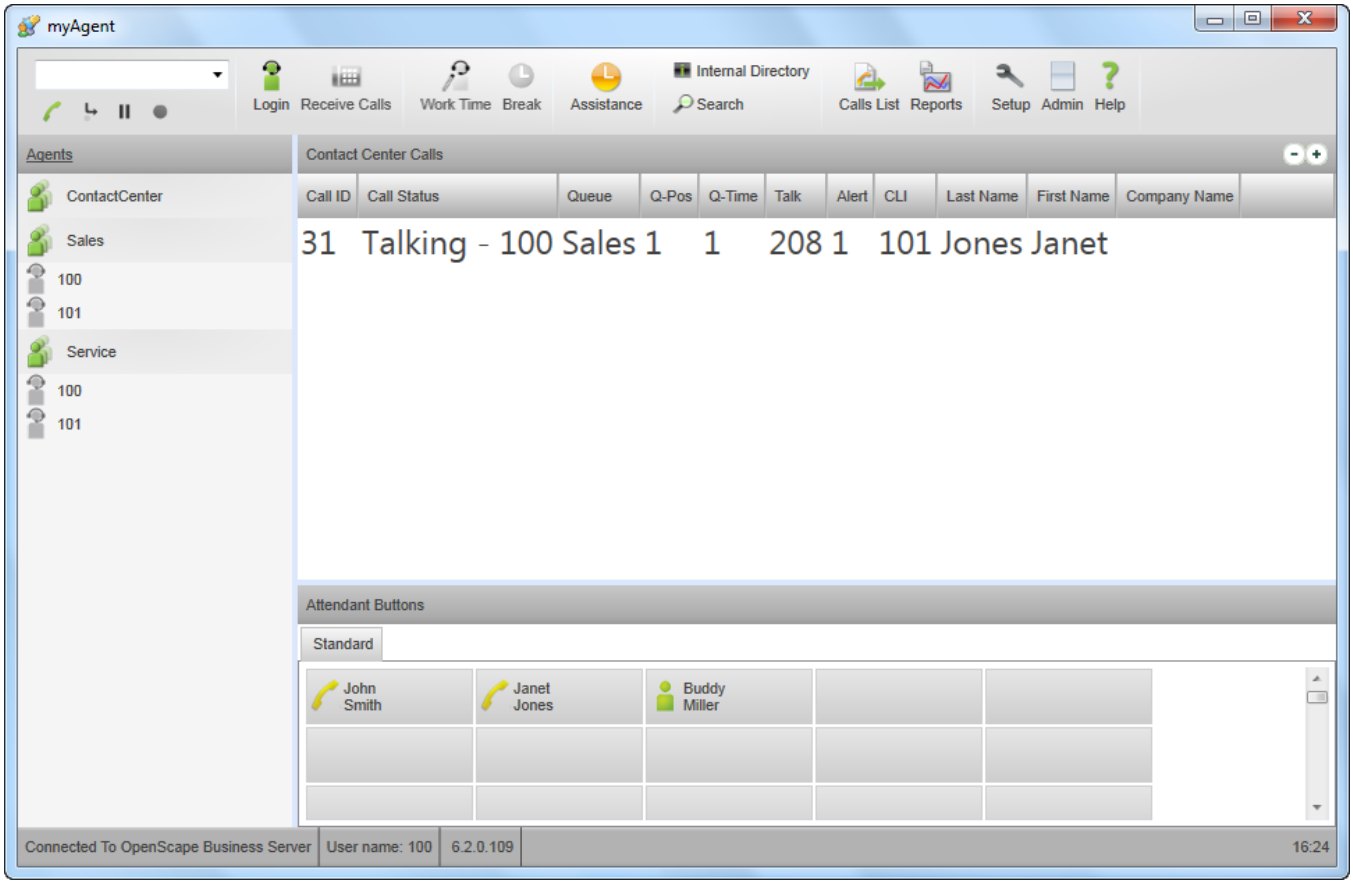

Figure 14 myAgent

myAgent provides the following features to all agents:

- Login with free choice of the associated phone
- Display the agent status of your own groups
- Change of own agent status
- Pop-up window for processing calls, faxes, emails
- Call Control
- Record
- Hot key functions
- Activation of “wrap up” times and breaks
- Caller List
- Access to the internal directory
- Search by name in the internal, external and external offline directory:
- Instant messaging
- Request for support from the supervisor
- Team bar - attendant buttons
  - Display of the presence status of internal participants
  - Change in the presence status of internal participants (myAttendant license required)
- Real time views - Real time reporting via:
  - Currently processed, waiting calls / contacts
  - Current agent status - agent assignment list
  - Service Level Grade of Service
  - Average times (average times per queue)

- Wall display - queue details

For contact center supervisors / administrators, myAgent also offers:

- Extended views of all agents, groups and queues
- Agent Administration
  - Assign agents to the queue
  - Set agents to available / not available
- Processing options for support requests by agents
  - Listening to calls (depending on the country)
  - Intrusion on calls
  - Instant messaging
- Real-time views / real-time reporting via:
  - all queues and the associated service level
  - The agents assigned to the queues and their current status
- Visual wallboard
- Historical reports based on predefined report templates
- Alarm Configuration
- Contact center administration

Licensing
A myAgent User license must be assigned to each agent in OpenScape Business in addition to the IP or TDM user license. Optionally, for example, the myAgent user can be assigned a voicemail user license for using system voicemail.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment
The myAgent Client SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client.

System Requirements
The HW / SW requirements required for the myAgent PC Client are described in chapter”1.7 Requirements for the OpenScape Business Clients”.

Functional boundary conditions and restrictions

Differences myAgent - myReports reports
The reports provided by myAgent represent a subset of the myReports reports. In contrast to myReports, the reports from myAgent can only be output on the screen in PDF format, "ad-hoc", using an Internet browser.

Visibility of agent status and calls
Agents can only see the calls for their own group(s) and the agents and their status of their own groups. Supervisors or administrators have the option of displaying all calls from all groups as well as all agents and their status.

Telephone key programming
A web browser on the client PC is required for key programming of the phone devices via myAgent and for contact center administration by the supervisor.

1.4.12.3 myReports Client

myReports is a Java-based UC client for Microsoft Windows. myReports enables the creation of historical reports for the OpenScape Business Contact Center as well as reports for UC Suite subscribers.

To evaluate incoming calls, faxes and emails, there are over 120 predefined report templates available, which offer different filter criteria and display options for resource utilization analysis.

The automation features of myReports enable the ad-hoc creation and output of reports on the screen or printer as well as the scheduled generation of reports and their delivery by e-mail or storage at a configurable location in the file system.

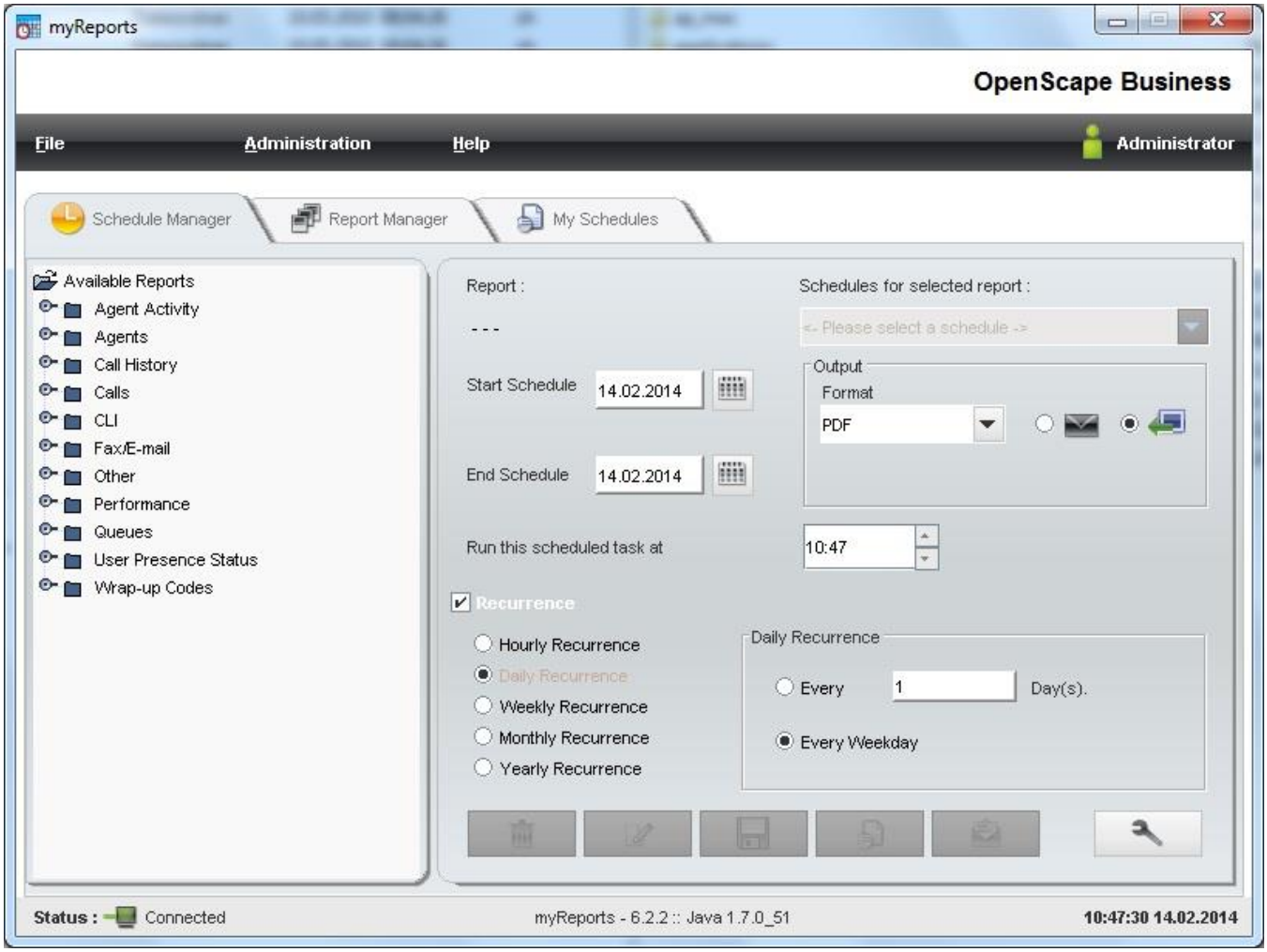

Figure 15 myReports

myReports offers the following features:

- User-specific creation of schedules for the generation and delivery of reports with
  - Selection of a report template from over 100 predefined report templates and setting the time for the creation of the report
  - Setting possible repetitions at hourly, daily, weekly or monthly intervals
  - Setting the report delivery options as an e-mail attachment or a file stored in the file system
  - Defining the file format (PDF, Excel or Word)
- Schedule management with:
  - Individual storage of user created schedules for report generation
  - Editing function for the schedule parameters
- Multi-user support
  Different users can create and manage individual schedules for reporting
- Predefined report templates for reports on:
  - Calls in general
  - Queues
  - Agents
  - Performance
  - Avg. G.O.S
  - Wrap-up codes
  - etc.

An overview of the report templates included in myReports with output examples can be found in the Unify wiki at the following link: http://wiki.unify.com/wiki/myReports

Licensing
A myReports system license must be set up in OpenScape Business for general use of myReports.

Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing”.

SW Deployment
The myReports Client SW is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client.

System Requirements
The HW / SW requirements for the myReports PC Client are described in chapter “1.7 Requirements for the OpenScape Business Clients”.

Functional boundary conditions and restrictions
The myReports SW can be set up on several PC clients in the network, but only one user can log on to the system via myReports.

MyReports can be used in the contact center by supervisors and administrators. Agents cannot log in to myReports.

MyReports uses predefined report templates that cannot be changed by the customer. For the creation of customer-specific reports using 3rd party applications, my Reports provides two so-called “export reports”. These reports contain all contact center relevant call data for the specified period.

Java

32-bit / 64-bit version:

In order to keep the workstation memory allocation low, the use of the 32-bit Java variant is generally recommended.

JRE / JDK

The JRE can be used under Microsoft Windows

Oracle Java / OpenJDK

When using Oracle Java on the client PC, the license terms of Oracle regarding Java support must be observed. Alternatively, the OpenJDK Java variant can also be used.

OpenJDK 8 can be used as a free, open source alternative to the Oracle Java Runtime Environment. Recommended installers: https://www.azul.com/downloads/zulu/

1.4.13 Mobility

OpenScape Business offers integrated mobility solutions for every company. Mobility includes mobility on the road, mobility in the office and mobility at home. This typically includes the integration of mobile phones/smartphones, the usage of Cordless and Wi-Fi phones, etc., down to Desk Sharing and teleworking.

The integration of mobile phones / Smartphones uses the mobility functions:

- One number service
- Callback or call through dialing
- Mobility entry
- Dual Mode Telephony

that can be used either directly from a mobile phone with DTMF control or from a smartphone with myPortal to go.

Licensing
The use of the aforementioned functions requires an IP user who is set up as a mobility user in the system.

Functional boundary conditions and restrictions

For all mobility solutions the accessibility of your public emergency call center (e.g. 112) has to be verified. If it cannot be guaranteed that the caller reaches the correct emergency center when the emergency number is dialed, an alternative solution has to be organized. (e.g. call the emergency number via mobile phone)

1.4.13.1 One Number Service

The mobile phone integration using the One Number Service offers a single number for the desk phone (system phone) in the office and the mobile phone. A caller dials the office number of the desk phone (land line number). Outgoing calls from the mobile phone are signaled with the land line number to the called parties. Additional advantage of the One Number Service is the system-wide busy indicator for the mobile subscriber, independent from the used device.

1.4.13.2 Callback and Call Through Dial Modes

Smartphone users can choose between different dialing modes for outbound calls:

- Callback
- Call Through

Both dialing modes can be used by the mobile device either via phone call connection an DTMF control or via a pure data connection

Callback / Call Through via phone call (classic version)

In case of Callback mode the mobile device calls a specific direct in dialing number (DISA number). The system disconnects the call immediately, before a connection is established and initiates a callback to the caller. After the callback call is established, no further authentication is requested by the communication system. The user of the mobile phone can now initiate inbound and outbound calls via the communication system and use the Mobility features via DTMF control.

In case of Call through mode the mobile device calls a specific direct in dialing number (DISA number). The systems disconnected the connection immediately, the communication systems check if the transferred number of the caller is authorized. In case of a positive result of this check, the user of the mobile phone can initiate inbound and outbound calls via the communication system and use the Mobility features via DTMF control.

Prerequisites for dialing by phone call

- DISA port number is configured.
- External number of the mobile phone user is transferred to the communication system (CLIP information)
- External number of the calling mobile device is registered within the communication system. Otherwise the call is disconnected.

Callback / Call Through by via data connection (myPortal to go version)

In case of Callback mode the mobile device signals to the system the intention to dial a specific destination number via Callback. After a positive authorization check the system initiates a callback to the mobile device and transfers the call afterward to the destination number.

If Call Through is used the mobile phone signals firstly the intention to carry out a call and notifies the destination number to the communication system. Then the phone calls the DISA port of the communication system. After checking the caller ID (CLIP) and the authorization, the communication system connects the dialed destination number to the mobile phone. This call is charged to the mobile phone and to the communication system (depending on the number dialed). The call through mode is recommended for mobile phone contracts with telephony flat rate.

Prerequisites for dialing by data connection

- myPortal to go is installed on the mobile device
- The data connection link from mobile device to the communication system is established
- The DISA DID-number is configured within the communication system
- External number of the calling mobile device is registered within the communication system. Otherwise the call is disconnected.

1.4.13.3 Mobility Entry

Mobility Entry enables the integration of mobile phones.

Mobility Entry enables subscribers to control voice connections/features (via codes) using DTMF after dialing into the system. The communication system must support DISA for this. This provides subscribers with access to certain system features via mobile phones.

Functional boundary conditions and restrictions

For Mobility Entry, there is no client available on the mobile phone. myPortal for Mobile is available for convenient use.

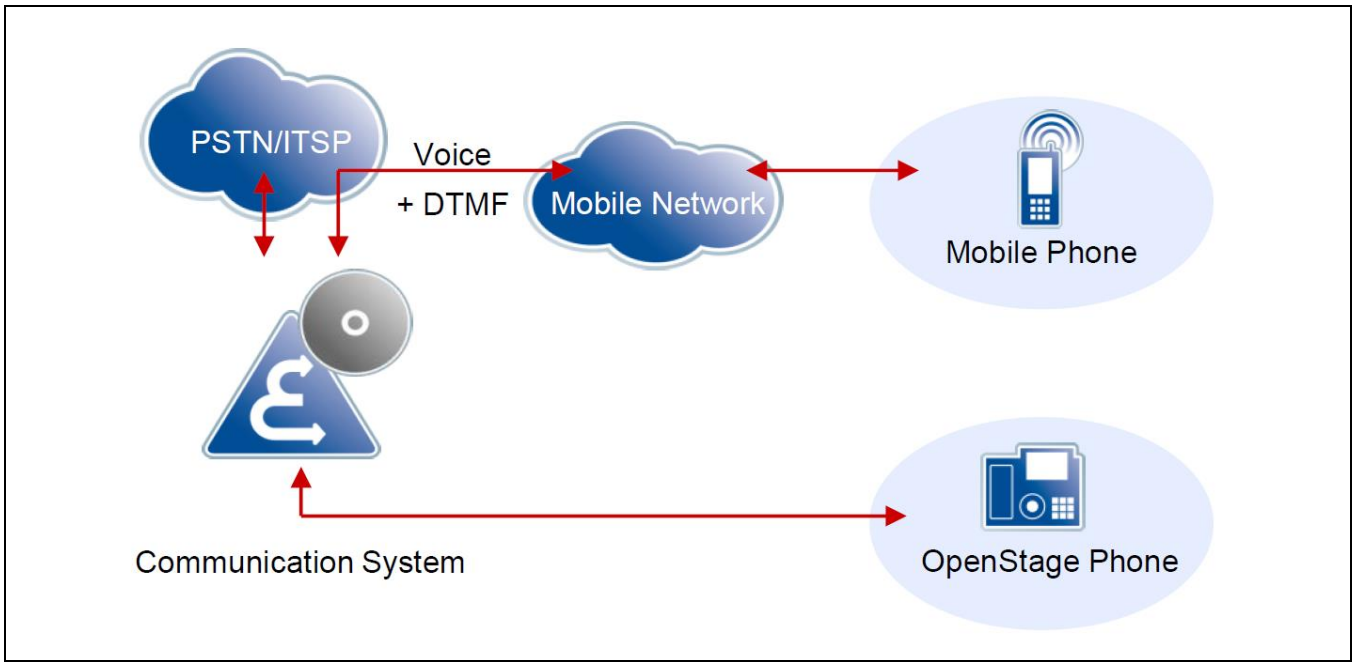

Figure 16 Mobility Entry - Voice and data channel

Mobility Entry offers the following features:

- One Number Service
- Dialing method for outgoing calls
  - Callback
  - Call Through
- Features in a Dormant State
  - Dial a number
  - Program or delete call forwarding
  - Activate or deactivate Do Not Disturb
  - Send message
  - Reset all services
  - Activate or deactivate station number suppression (CLIR)
- Features in the Call State
  - Consultation
  - Alternate (Toggle/Connect)
  - Conferencing
  - Disconnect and return to held call
  - Activate callback
  - Enabling DTMF suffix dialing

1.4.13.4 Mobility with Dual-Mode-Telephony

Dual-mode mobile phones (Smartphones) support both mobile networks and Wi-Fi networks. Registration as a SIP or system station on the communication system is possible via Wi-Fi, depending on the VoIP client used.

If the dual-mode mobile phone is in the Wi-Fi range, it is automatically called as a SIP station. If it is outside the Wi-Fi range, the dual-mode mobile phone is called via the mobile network (mobile phone integration functionality is available).

Automatic forwarding to the mobile network phone number only works if the associated SIP / System station is entered in the system as a mobile phone station (mobile phone integration). This means that if the VoIP client is registered, it will be called as a VoIP subscriber, if not, then it will be called via the mobile phone network number assigned in the mobile phone integration configuration.

Calls on the company premises occur over the Wi-Fi. As long as calls are made via a VoIP client, no call charges are incurred on the mobile phone. Handover and roaming are supported within the Wi-Fi range (if the wireless LAN infrastructure is designed for it), but not from Wi-Fi to GSM, and vice versa.

Dual mode telephony also supports the VoIP system client integrated in myPortal to go.

1.4.13.5 Mobility with myPortal to go

myPortal to go integrates mobile devices (smartphones, tablet PCs) functionally into OpenScape Business. A user can access Unified communications features via his mobile device in the same way as using his myPortal for Desktop / Outlook client or UC Smart client. This allows the usage of the smartphone as universal device either for the office or on the road. Information on the UC functions of myPortal to go can be found in chapter 1.4.7.2 "myPortal to go ".

The mobile device with the myPortal to go app is connected to OpenScape Business via the mobile network or WiFi. A corresponding contract with data option is required for the connection via the mobile network. Voice and data are transmitted separately by myPortal to go in the mobile network. Voice is not transmitted in the data channel with the mobile network connection.

Operating modes and application scenarios for myPortal to go

myPortal to go can be used in the following application scenarios. The App basically supports the two operating modes:

- Mobility mode, with unrestricted telephony and UC features, regardless of location, including the One Number Service.
- Desk Phone mode, without the One Number Service but with the UC features and convenient dialing aid for the desk phone in the office.

Functional boundary conditions and restrictions

MyPortal to go does not support the control of mobility features using DTMF during a voice connection.

If a SIP phone is used as a desk phone, certain functions such as hold, and conference cannot be controlled via myPortal to go.

1.4.13.5.1 myPortal to go scenario 1: Desk Phone and Smartphone (Twinning)

This mode combines the mobile device with the the desk phone in the office an the UC application at the PC desktop The scenario offers:

- One Number Service
  - Incoming calls are signaled in parallel at both devices. Caller will get only the office number even if the call is answered on the mobile device.
  - Outgoing calls are signaled to the called destination always with the office number. Call through and Callback dialing via OpenScape Business is available for calls initiated by the mobile device.
- Seamless hand over of the call from the mobile device to the desk phone and vice versa.
- UC features are available at the mobile device and / or at the user´s desktop
- Optional use of the VoIP (HFA) client for telephony functions at the mobile device.

Licensing

Following licenses are required for this scenario

- IP User license (for integration of the mobile device and use of the One Number Service)
- IP or TDM User license (for use of the desk phone)
- UC User license (for use of the UC features)

Optional:

- Other user related licenses e.g. Voicemail User license

1.4.13.5.2 myPortal to go scenario 2: Mobile device only (Nomadic mode)

Within this scenario a user has number configured within OpenScape Business (land line number) but he has no desk phone. He uses only his mobile device. The scenario offers:

- One Number Service
  - Incoming calls are signaled at the mobile device. Caller will get only the office number even if the call is answered on the mobile device.
  - Outgoing calls from mobile device are signaled to the called destination always with the office number in case that Call through or Callback dialing via OpenScape Business is used by the mobile device.
- UC features are available at the mobile device and / or at the user´s desktop
- Optional use of the VoIP (HFA) client for telephony functions at the mobile device.

Licensing:

Following licenses are required for this scenario:

- IP User license (for integration of the mobile device and use of the One Number Service)
- UC User license (for use of the UC features)

Optional

- Other user related licenses e.g. Voicemail User license

1.4.13.5.3 myPortal to go scenario 3 Desk phone control

This scenario is characterized by:

- User in the office and has a mobile device with myPortal to go installed
- User wants to utilize the desk phone for telephony
- UC features are available at the mobile device
- Desk phone can be controlled by myPortal to go at the mobile device via associated dialing
- No support of One Number Service

Licensing:

Following licenses are required for this scenario:

- IP or TDM User license (for use of the desk phone)
- UC User license (for use of the UC features)

Optional

- Other user related licenses e.g. Voicemail User license

1.4.13.6 Integrated Cordless Solution (not for U.S.)

In the integrated cordless solution, the cordless phones are set up and operated as system devices / system subscribers. This enables the cordless phones to use the system features.

The cordless phones are connected to the cordless base stations using the DECT radio standard.

The entire radio area managed by the OpenScape Business System consists of one or more base stations, which either form a seamless network of overlapping radio cells or individual radio islands. The size of a radio cell depends on the local / structural conditions.

The specifications for the configuration of a cordless solution, which are described in Chapter 6 of the OpenScape Business Service Manual, must be taken into account in order to ensure trouble-free operation.

The base stations are connected to the OpenScape Business X models via $U_{P0/E}$ system interfaces.

The scope of the integrated cordless solution with regard to:

- Ringing in parallel
- Roaming
- Handover

depends on the module in the OpenScape Business X model. A historical distinction is made here:

- Cordless direct connection on the X1 / X3 / X5 models
- Cordless boards connection on the X8 model

Functional boundary conditions and restrictions

The integrated Cordless solution supports GAP-enabled mobile telephones from third-party manufacturers. The full scope of services can, however, only be used with approved DECT phones.

OpenScape Business S does not offer an integrated cordless solution.

1.4.13.6.1 Cordless Direct Connections (DECT Light)

In the case of Direct Connections, the base stations are connected either directly to the $U_{P0/E}$ interfaces of the mainboard or to the $U_{P0/E}$ interfaces of one SLU8N / SLU8NR board of OpenScape Business X1 /X3/X5.

The following conditions have to be observed for the connectivity of base stations to $U_{P0/E}$ ports:

- The $U_{P0/E}$ ports of the mainboard or SLU8N(R) module can be operated in a mixed mode with base stations and system telephones.
- Base stations can only be connected to one SLU8N(R) module within OpenScape Business X3/X5.

Information on the expansion limits of the direct connection can be found in chapter "1.4.13.6.3 Expansion limits of the integrated cordless solution".

Further information on the integrated cordless solution can be found in chapter 6 of the service manual.

Functional boundary conditions and restrictions for direct connection

In the case of Direct Connections, a CMAe module is mandatory for the following functions:

- Echo compensation
- Connection of more than 7 base stations
- Max. 4 simultaneous calls per base station

The Cordless roaming feature is not supported by OpenScape Business X1 systems in the network.

1.4.13.6.2 Connecting Cordless Boards

With the OpenScape Business Model X8, the base stations are connected to the $U_{P0/E}$ interfaces of the SLMUC cordless modules. The SLMUC module is the combination of an SLMU module and an attached CMAe module.

Up to four SLMUC cordless modules can be installed in OpenScape Business X8. All four cordless boards provide full cordless functionality (roaming and seamless connection handover) because the radio fields on the cordless boards are synchronized within the communication system. Network-wide handover is not supported.

1.4.13.6.3 Expansion limits of the integrated cordless solution

Depending on the communication system, up to 64 base stations can be connected, and up to 250 DECT phones can be used.

The following table shows the maximum possible system configuration for the integrated cordless

	Maximum number of boards	Clock Module	Max. number of Base Station when connected via 1xUP0	Ports / Simultaneous calls per BS	Max. number of registered devices	Max. number of simultaneous calls

OpenScape Business	SLUN	SLMUC					
X1	–		–	7	1/2	16	14
	–		CMAe	7	1/4	16	16
X3	–		–	7	1/2	32	14
Onboard $U_{P0/E}$ (SLUC)	–		CMAe	7	1/4	64	28
	1		CMAe	15	1/4	64	48
X5	–		–	7	1/2	32	14
Onboard $U_{P0/E}$ (SLUC)	–		CMAe	7	1/4	64	28
	1		CMAe	15	1/4	64	48
X8		4	CMAe	64	3/12	250 (128 per SLMUC)	192***

Table 37 Expansion Level of the integrated Cordless Solution

*** The max. value per SLMUC is 48. Depending on the location of the cordless telephones in case of roaming, all devices that are registered (250) could be active if 4 SLMUC are available.

The designation SLUC in the table refers to the UP0 / E interfaces of the mainboard.
SLUN generally refers to the SLU8N or SLU8NR modules.

1.4.13.7 Cordless IP (not for U.S.)

Cordless IP is the cordless solution for OpenScape Business S. Optionally, it can also be used as an alternative to the integrated cordless solution on the X1/X3/X5/X8 models.

With the cordless IP solution, the DECT telephones are connected to OpenScape Business via IP-compatible base stations (BSIP) with SIP protocol. The required DECT Manager and Integrator SW is integrated in the BSIP base stations. From a certain size, the DECT Integrator SW must be operated on a physical or virtual server.

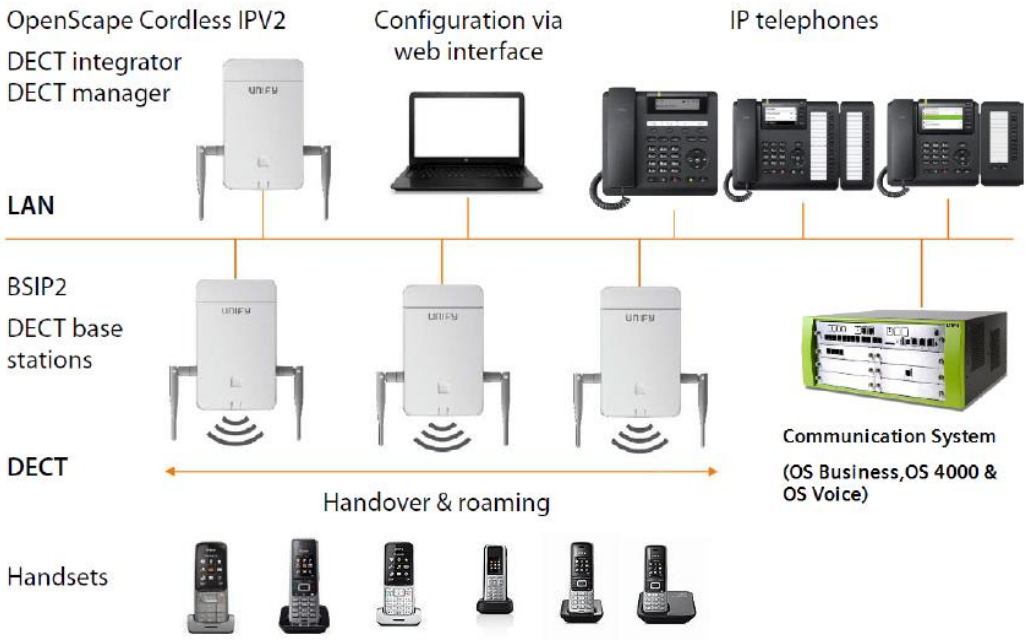

Figure 17 Cordless IP – Connection overview

The wireless technology in the Cordless IP solution corresponds to the DECT standard. The same cordless phones can be used as with the cordless solution integrated in OpenScape Business X. The scope of services on the cordless devices differs, however, since the OpenScape Business base stations / cordless devices connected to Cordless IP are treated as SIP subscribers.

Details on the supported functions on the cordless IP phones can be found at:

https://wiki.unify.com/wiki/OpenScape_Cordless_IP_V2_Call_Features_with_different_platforms

For more information, see the Cordless IP sales information.

Licensing.

With Cordless IP solutions, the number of DECT managers is licensed. These can be managed via the OpenScape Business license file.

You find details about the Cordless IP licenses managed by OpenScape Business in section “1.8.4.1 Cordless IP License”.

For handsets operated on DECT IP, an IP user license is required in OpenScape Business and optional voicemail user licenses, etc.

System requirements

The OpenScape Cordless IP software version V2R1 or higher is required to support OpenScape Business Cordless IP V2 DECT Manager licenses.

1.4.14 Attendant

Depending on the selected UC solution, different attendant clients are available (as an Attendant Console).

- OpenScape Business Attendant is the attendant client for systems without UC functions and for systems with UC Smart functions. Optionally, it can also be connected to systems with UC Suite.
- myAttendant is the recommended client for UC Suite.

1.4.14.1 OpenScape Business Attendant

Business Attendant is the classic Attendant Console. Pending calls, active calls, calls on hold and parked calls are always visible at a glance. In addition, information is available on the busy status of the extensions as well the presence status of the subscribers. The status of a subscriber can be changed via the Business Attendant. All functions can be performed via the keyboard of the PC or with mouse clicks. The busy lamp fields for subscribers can be individually customized and thus used to optimize the workflow.

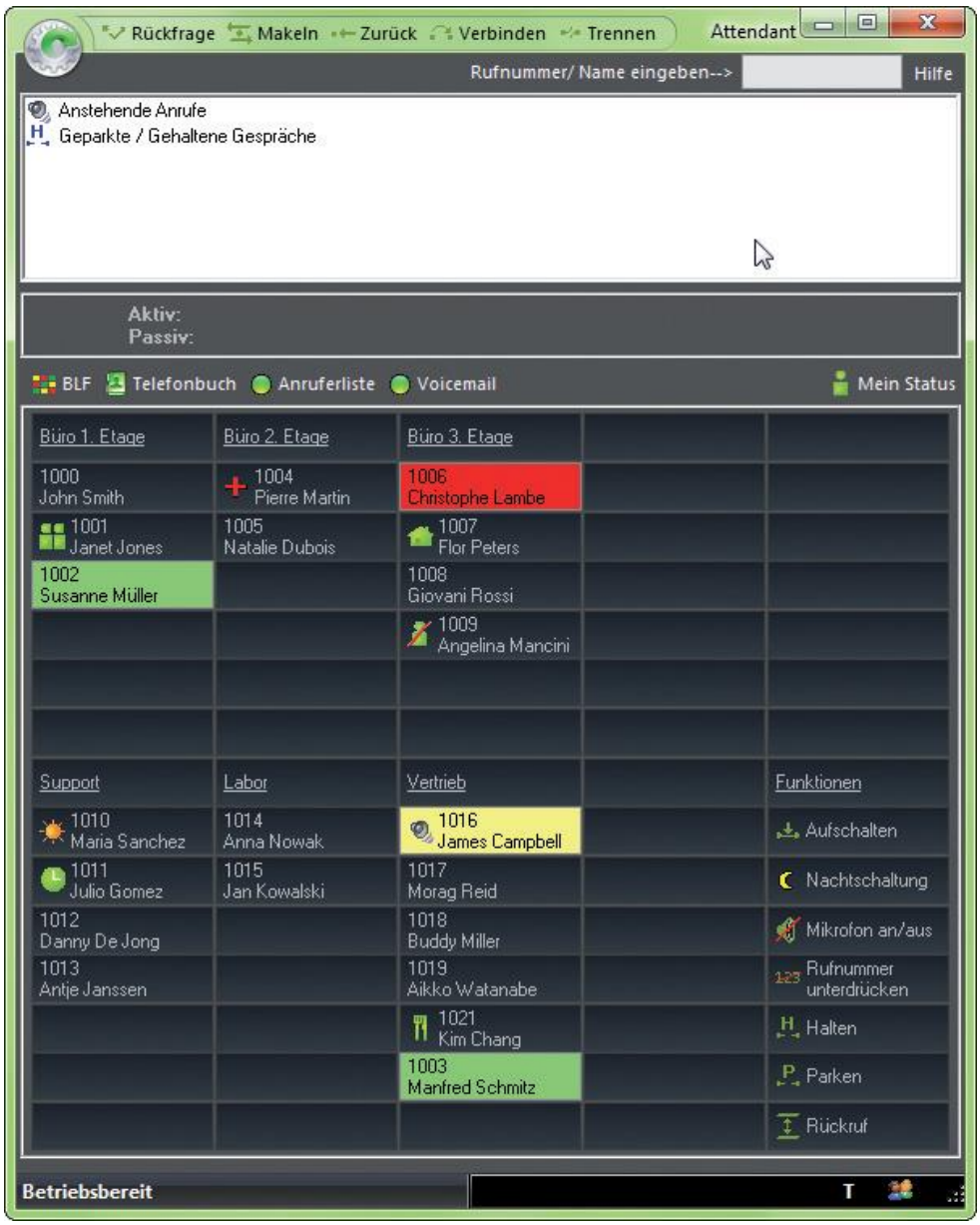

Figure 18 OpenScape Business Attendant User Interface – Main Window

The OpenScape Business Attendant Client is operated on a Microsoft Windows PC, connected to a corresponding OpenScape Business system telephone via a LAN or USB connection and offers the user:

- Display of incoming calls with call data
- Display of parked, held calls with call data
- Display of the data of the active call
- Busy lamp field with programmable keys for displaying:
  - Phone status: free, busy, ringing, forwarded
  - Attendance status *: display the status of all internal participants *
  - Change your own and the status of other internal participants (local) *
- Directories with search function
- Call journal with answered, missed and outgoing calls *
- Call control via an associated terminal
- Voicemail Journal **
- Voicemail Control **
- Microsoft Windows-based user interface with different designs

- Multi language support

*) These functions require an additional UC User license.

**) These functions require an additional Voicemail license

A detailed overview of the functions is given in chapter 1.4.14.3 “Attendant Console Functions in Comparison”

Supported devices

- OpenScape Deskphone CP 200/205/400/600 / 600E (HFA)
- OpenScape Deskphone CP TDM family
- OpenStage 40/60 HFA
- OpenStage 30T / 40T / 60T / 80T

Licensing

A corresponding user license per attendant is required to use the OpenScape Business Attendant.

An IP or TDM user license is also required for the subscriber to whose telephone device the PC is connected. Optionally, a UC user license or voicemail license is required for the subscriber if the UC and voicemail functions are to be used in the Business Attendant.

Within an OpenScape Business Network the Business Attendant can also display network-wide BLF and presence information. Up to 8 OpenScape Business Attendants can be licensed per node.

Further information on licensing OpenScape Business can be found in chapter 1.8 "Licensing".

SW deployment

The software is supplied on CD and can be installed on a client PC under Microsoft Windows.

System Requirements

The HW / SW requirements for the OpenScape Business Attendant Client PC are described in chapter 1.7.4".

Functional boundary conditions

The connection of the client PC to OpenScape Business is function dependent.
Either a USB or LAN / IP connection from the PC to a system telephone is required for the pure operator console and telephone function. A LAN / IP connection from the PC to the OpenScape Business System is required in addition for the optional UC functions.

For OpenScape Business Attendant, a UC license is generally recommended in order to be able to use the full range of services. The supported UC functions of the Business Attendant differ depending on the UC solution used in OpenScape Business. Details can be found in chapter 1.4.14.3 “Attendant Console Functions in Comparison".

No name information is displayed on an OpenScape Deskphone CP200 device if the Business Attendant makes an external call.

1.4.14.2 myAttendant

myAttendant is a user-friendly Attendant Console that optimally combines phone functions with the UC features of OpenScape Business.

In addition to convenient switching functions, dialing aids via directories and information about the presence status of subscribers, there is e.g. also access to voice and fax messages. Instant messaging supports communication with internal participants.

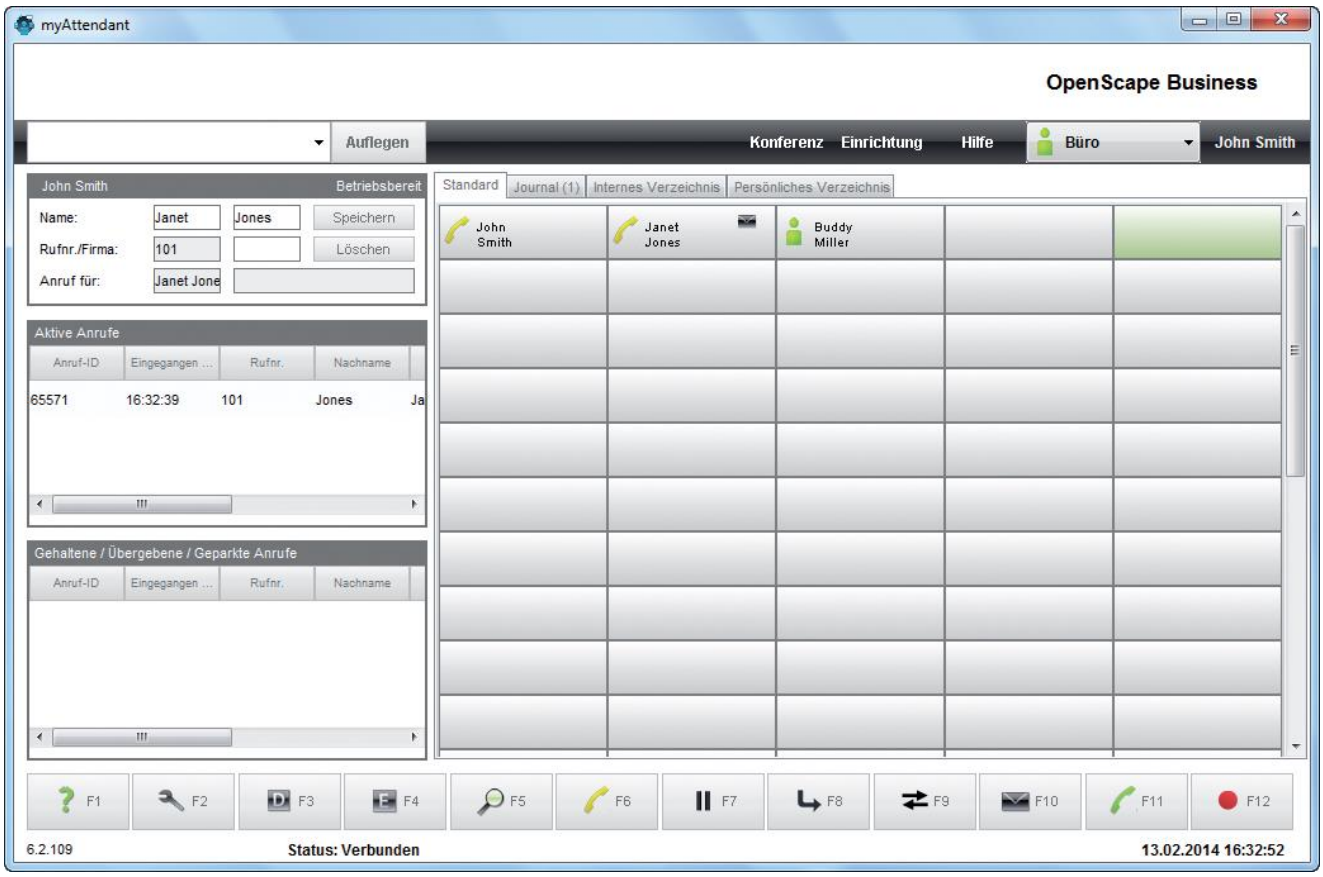

Figure 19 my Attendant

The Java-based myAttendant Client SW is operated on a Microsoft Windows PC. myAttendant offers the user the following functions:

- Display of incoming calls with call data
- Display of parked, held calls with call data
- Display of the data of the active call
- Busy lamp field with programmable keys for displaying
  - subscriber data
  - Call status: free, busy, ringing, forwarded
  - Attendance status of internal participants
- Presence Status
  - Change your own status including CallMe service and status-based call forwarding
  - Change the status of other internal participants
- Personal AutoAttendant
- Directories: Personal, internal and external directories
  - Entry in personal or external directory possible from journal
- Journals for calls, voicemail and fax
  - Send callback request as e-mail from journal
- Voicemail message center for controlling the voicemail box of other subscribers
- Control your own voicemail
  - Send callback request as email from Voicemail Dialog
- Search in directories
- Send / forward fax
- Instant messaging

- Call control via an associated telephone device
- Conference server control
- Record calls and conferences
- Note function: note for other participants as well as for other Attendant users
- Multi language support

A detailed overview of the functions is given in chapter 1.4.14.3 “Attendant Console Functions in Comparison”.

Licensing

In addition to the IP or TDM User license, a UC Suite myAttendant User license must be set up in OpenScape Business to use myAttendant. Optionally, the user of the myAttendant can be assigned a voicemail user license and a conference license for using the system voicemail or the conference server.

Further information on licensing OpenScape Business can be found in chapter 1.8 "Licensing".

SW deployment

The myAttendant application is part of the myPortal for Desktop SW and included in the OpenScape Business SW image. The myPortal for Desktop SW can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client. After installing myPortal for Desktop, the myAttendant operating mode can be selected when the software is started.

System Requirements

The HW / SW requirements required for the myAttendant PC Client are described in chapter 1.7.4.

Functional boundary conditions and restrictions

Generally:

The functions of myAttendant can only be used under Microsoft Windows.

A web browser on the client PC is required for key programming of the system telephone devices via the myAttendant Client.

Java:

32-bit / 64-bit version:

In order to keep the workstation memory allocation low, the use of the 32-bit Java variant is generally recommended.

The 64-bit Java variant is mandatory to use the following functions:

- "Import Outlook contacts at startup" in connection with Microsoft Office in the 64 bit variant.

JRE / JDK

The JRE can be used under Microsoft Windows

Oracle Java / OpenJDK

When using Oracle Java on the client PC, the license terms of Oracle regarding Java support must be observed. Alternatively, the OpenJDK Java variant can also be used.

OpenJDK 8 can be used as a free, open source alternative to the Oracle Java Runtime Environment. Recommended installers: https://www.azul.com/downloads/zulu/

1.4.14.3 Attendant Console Functions in Comparison

Function	Business Attendant	myAttendant
Attendant console functions	✓	✓
Display of incoming calls with call data	✓	✓
Display of parked, held calls with call data	✓	✓
Display of the data of the active call	✓	✓
Busy lamp field with freely programmable keys for displaying	✓	✓
subscriber data	✓	✓
Call status: Free, Busy, Ringing, Forwarded	✓	✓
Presence status of internal participants	✓1	✓
Call status	✓	✓
Free, Busy, Ringing, Forwarded	✓	✓
Presence status	✓1	✓
Display of the status of all internal users	✓1	✓
Change your own status	✓1	✓
CallMe service	✗	✓
Status-based call forwarding	✗	✓
Change the status of other internal users	✓1	✓
Personal AutoAttendant	✗	✓
Directories	✓	✓
Personal directory	✓	✓
Internal user directory	✓	✓
Speed dials *	✗	✓
External directory incl edit function for single entries	✗	✓
Outlook-Contacts (local. Read only)	✓	✓
LDAP directory access	✓	✓
Search in directories	✓	✓
Call journal	✓1	✓
Answered calls	✓1	✓
Missed calls	✓1	✓
Outgoing calls	✓1	✓
Scheduled calls	✗	✓
Create a new entry in the external directory from Call Journal	✗	✓

Function	Business Attendant	myAttendant
Callback request via e-mail from Call Journal	✗	✓
Voicemail Journal*	✓2	✓2
Own Voicemails	✓2	✓2
Voicemail Control		
Own Voicemail box	✓2	✓2
Callback request via e-mail from Voicemail dialog	✗	✓2
Voicemail Message Center	✗	✓2
Display Voicemails / Fax of other users	✗	✓2
Voicemail- or Fax box control for other users	✗	✓2
Fax journal	✗	✓
Send / forward faxes	✗	✓
Instant Messaging	✗	✓
Call Control via associated telephone device	✓	✓
Initiate / Make call	✓	✓
Answer a call	✓	✓
Disconnect	✓	✓
Consultation call	✓	✓
Consultation hold / retrieve	✓	✓
Toggle / Alternate	✓	✓
Park	✓	✓
Retrieve Call	✓	✓
Call Transfer	✓	✓
Callback	✓	✓
Override	✓	✓
Conference (Telephone controlled)	✓	✓
Suppress call number	✓	✗
Click to Dial	✗	✓
Conference server control	✗	✓3
Call recording	✗	✓
Voice call recording	✗	✓
Conference recording	✗	✓

Function	Business Attendant	myAttendant
Note function	✗	✓
Note for other participants	✗	✓
Note for other Attendant participants	✗	✓
User Interface	✓	✓
Pop-Up Window	✓	✓
Different designs	✗	✓
Multi language support	✓	✓

Table 38 Attendant Functions

1 UC license required for the function

2 Voicemail license required for function

3 Conference license required

Business Attendant - UC Functions	With UC Smart	With UC Suite
Display of the presence status of all internal users	✓	✓
Change the status of other internal users	✓	✓
Voicemail journal	✓	✗
Voicemail control	✓	✗
Directories: System Phonebook (Speed Dial Destinations)	✓	✓
Display caller name from system phonebook	✓	✓
Missed call notification	✓	✗
Call journal display	✓	✓
Delete call journal	✓	✗
Redirect calls	✓	✗
Netwide presence status and call status	✓	✗

Table 39 OpenScape Business Attendant – UC Functions

1.4.15 Company AutoAttendant

Forward incoming calls to the central company number automatically. Use the possibilities of informational announcements combined with an automatic transfer after entering the number by the caller.

On the one hand, OpenScape Business offers System Company AutoAttendant functions for systems without UC functions or with UC Smart, and on the other hand Extended Auto Attendant functions for systems with UC Suite.

1.4.15.1 System Company AutoAttendant

The Company AutoAttendant for systems with and without UC Smart can be used as a personal AutoAttendant and as a central AutoAttendant. The initial setup takes place via the OpenScape Business Assistant (WBM), afterwards it can be controlled and configured via the phone.

Licensing:

The Company AutoAttendant is subject to license (Company AutoAttendant license). If there is no license, the "rules" of Company AutoAttendant are ignored, calls are forwarded to the central intercept position.

1.4.15.2 UC Suite Company AutoAttendant

The UC Suite Company AutoAttendant enables you to customize the workflow in your company, whether for advertising messages or through use of the individual announcement tree (press 1 for Sales or 2 for Service...). The available schedules expand the possible use cases, since the workflows for incoming calls can be automatically switched, depending on the day of the week and the time of day. For example, outside business hours, incoming calls can be automatically routed to the night station.

Based on the incoming call number, an individual announcement, e.g., in a country-specific language, can be played. Existing announcements or professionally recorded announcements in WAV format can also be imported, of course.

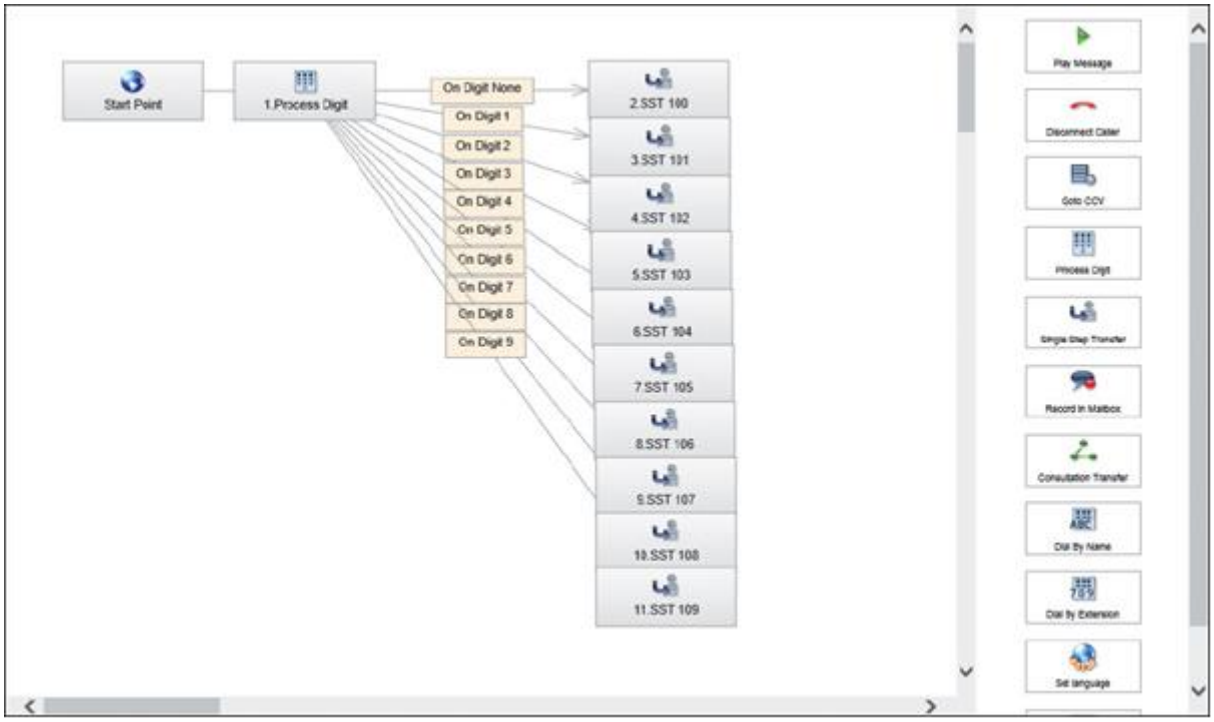

Figure 20 UC Suite – Auto Attendant Setup

The Company AutoAttendant is a UC Suite system function. It can be used as soon as UC Suite has been configured and licensed in the system.

Licensing:

To use the company attendant, the corresponding UC Suite system license must be set up in OpenScape Business. Further information on licensing OpenScape Business can be found in chapter 1.8 “Licensing“

SW deployment

The UC Suite SW is part of the OpenScape Business System SW image.

Functional boundary conditions

The Company AutoAttendant should not be confused with the personal AutoAttendant of a UC Smart or UC Suite user. The personal Auto Attendant is set up by the UC user in his UC client settings. Depending on the current presence status, it only influences the incoming calls for the UC user. The Company AutoAttendant is set up by the system administrator for all incoming calls to the system.

1.4.15.3 Functions of the Company Attendants compared

Function	System Company Attendant	UC Suite Company Attendant
Schedules	Day and Night service	Schedule with rules (Call Control Vector, CCV)

Function	System Company Attendant	UC Suite Company Attendant
Templates	Individual AutoAttendant voice prompts can be disabled	5 customizable templates
Graphical rule editor (CCV editor)	□	■
AutoAttendant mailboxes	■	■
Concatenation of mailboxes	■	□
Dial by Name	□	■
Dial by Extension	□	■

Table 40 Company Attendant - Functions

1.4.16 Device @Home - Direct connection of system / SIP phones for teleworkers

With the OpenScape Business function Device@Home, the subscriber can use an OpenScape Business system telephone, e.g. Use OpenScape Desk-Phone CP in the home office and thus fully integrate into corporate communication. Furthermore, the VoIP-capable UC clients myPortal @ work and myPortal to go can be switched on via Wi-Fi.

The connection of a terminal device via the Internet must not be unsecured. OpenScape Business provides the following technical mechanisms to secure the connection:

- Encryption of signaling and speech
- Different registration ports for Device @Home
- Authentication for the System- / SIP-device

The security aspects regarding the system access, the encryption and the authentication of the telephone devices have to be agreed with the customer. If the previously mentioned mechanisms are not sufficient for the customer, the connection must be made via a VPN.

Further technical information can be found in the Administration Manual and in the OpenScape Business Security Checklist.

Functional boundary conditions and restrictions

An external router is required on the system side.

The STUN protocol is used for connection. Due to the technology, it cannot be used in conjunction with symmetrical NAT / firewalls.

STUN must always be active in OpenScape Business. When connecting SIP devices, it must also be activated in the SIP device.

A consistent Quality of Service (QoS) and enough bandwidth for simultaneous connections must be ensured for the connection.

The SIP devices used must support at least TLS1.2.

1.4.17 Accounting and Accounting Manager

Accounting in OpenScape Business includes the acquisition of call connection data and project key figures, the transmission and display of connection data as well as an accounting tool for external evaluation.

1.4.17.1 Connection Data

OpenScape Business can record connection data for trunk lines and optionally assigned account codes. A connection data record (CDR) is created for each answered outgoing connection, each incoming connection or a blocked incoming call. No connection data is stored for internal connections, aborted outgoing call attempts (ringing only) and outgoing call attempts rejected via LRC rules.

Connection data can be shown by the system on the display of the system telephones with costs, tariff units or call duration.

For further processing, the connection data records (CDR) can either be transmitted individually online or cumulatively over a period as a file to an external computer.

OpenScape Business supports data protection issues by:

- Suppression of call detail recording system-wide
- Suppression of call detail recording for specific subscribers
- Suppression of the last digits of recorded phone numbers

1.4.17.2 Accounting Manager

The Accounting Manager is a Microsoft Windows-based application for retrieving connection data records (CDR) from OpenScape Business systems and for their evaluation. The application offers the user:

- Retrieval of call detail records from OpenScape Business and storage for further processing in a separate database.
- Creation of call detail reports about all records stored in the local database of the Accounting Manager
- Evaluation of filtering criteria when creating reports, for example:
  - Calls with a certain account code:
  - Data associated with a particular device in the last three days.
- Export of generated report data to a "CSV" file

Licensing

No licenses are required to use Accounting and Accounting Manager.

SW Deployment

The OpenScape Business Accounting software is part of the OpenScape Business SW image and can be downloaded from the Service Center in the OpenScape Business Assistant (WBM) and installed on a PC client.

System Requirements

The HW / SW requirements required for the OpenScape Business Accounting Manager PC are described in chapter 1.7.4.

Functional boundary conditions and restrictions

If the functionality of the supplied Accounting Manager is not sufficient, other certified accounting applications can also be used, e.g. OpenScape Accounting.

1.4.18 Phonebooks and Directories

For historical reasons, OpenScape Business offers users various phone books and internal directories as well as various connection options to external directories. The availability of the individual directories depends on the configuration of the system.

OpenScape Business basic system

- Internal subscriber directory
- Speed dials
- Global directory
- Central connection option to an external LDAP directory for searching from the phone.

OpenScape Business with UC Smart

Systems with UC Smart offer in addition to the basic system

- Personal directory for every UC user

OpenScape Business with UC Suite

Systems with UC Suite offer in addition to the basic system

- Personal directory for every UC user
- External directory for all UC users instead of the global directory.
- External offline directory
  (Connection to external LDAP directories for searching from the UC-Suite client)
- "Public Contacts"
  (Connection to Microsoft Exchange Server for searching from the UC client)

OpenScape Business with embedded Open Directory Service

OpenDirectory Service offers an LDAP connection for searching in:

- External ODBC or SQL directory via special connectors
- Internal subscriber / user directory
- Speed dial destinations
- External directory of UC Suite

OpenScape Business combines the contents of the different directories internally into a uniform structure. In the course of caller identification for incoming / outgoing calls or searching for subscribers from the phone / client, the system transmits the information to the telephone devices and clients for display. The transferred content is adapted to the display options of the different system telephones and PC clients.

This **Unified Directory View** is active in the factory default settings. It can be switched off system-wide for the system telephones by the system administrator if a customer wants to stay on the phone with his usual display.

Details of the function are described in chapter “1.4.18.4 Unified Directory View”.

1.4.18.1 Global Directory

With the Global Directory, OpenScape Business offers the possibility to manage contact details of communication partners in the system and to provide them for the search function of telephone devices and clients as well as for caller identification. The Global Directory is available in every system without UC and in systems with UC Smart. For systems with UC Suite, the external directory of the UC Suite is used instead of the Global Directory.

Each contact entry can contain the following information:

- Title
- Surname
- First name
- Company
- Department
- Business telephone number
- Mobile number
- E-mail address
- Zip Code
- City
- Street

With OpenScape Business X systems with V3 mainboard and with OpenScape Business S systems up to 100,000 entries can be stored.

For OpenScape X systems with V2 mainboard without UC Booster HW, a maximum of 30,000 entries, with UC Booster HW up to 100,000 entries can be stored.

The system administrator manages the Global Directory using the OpenScape Business Assistant (WBM) and records the entries either individually or using a CSV file import.

1.4.18.2 Active Directory Connection

OpenScape Business can connect to Microsoft Active Directory (AD) using the LDAP protocol and use its content in the following scenarios:

- Caller identification and subscriber search in the AD at UC Suite
- Transfer of the users set up in the AD to the OpenScape Business subscribers / users configuration.

Requirements for the AD connection:

Access to the Microsoft Active Directory Server is provided by the customer.

The connection is made via the secured LDAPS protocol.

1.4.18.2.1 AD connection for caller identification with UC Suite

UC Suite optionally uses the user information stored in the AD for caller identification and for the search function. The connection and the field assignment to the LDAP output scheme are set up within the UC Suite configuration by the OpenScape Business Administrator.

Functional boundary conditions and restrictions.

UC Suite connects to the AD via LDAP at the time of writing this documentation.
Microsoft plans a general changeover of AD access to the encrypted LDAPS protocol in 2020.

Please check the availability of LDAPS in UC Suite (not in the basic system) before marketing the UC Suite - AD connection.

The OpenScape Business connection to the AD is read only.

1.4.18.2.2 AD connection to simplify the system configuration

OpenScape Business simplifies system administration and reduces the time required by an optional connection to the Microsoft Active Directory.

User data that are added, removed or changed in the Active Directory are automatically synchronized with the OpenScape Business. The synchronization takes place from the Active Directory towards OpenScape Business. The extension number (DID) is used as the synchronization indicator. Max. 10,000 Active Directory entries are synchronized

The following fields are transferred to the OpenScape Business participant configuration during synchronization

- First name
- Surname
- Display name

The system administrator has a separate setup wizard in the OpenScape Business Assistant (WBM) for easy setup of the Active Directory connection.

Functional boundary conditions and restrictions.

OpenScape Business connects to the AD via LDAP at the time of writing this documentation. Microsoft plans a general changeover of AD access to the encrypted LDAPS protocol in 2020.

Before marketing subscriber synchronization with the AD connection, please check the availability of LDAPS in the OpenScape Business basic system. (not in UC Suite).

The Active Directory must be used as a central configuration point for employee data.

Only the Active Directory connected to OpenScape Business may be used to add, change or delete employee data.

The OpenScape Business connection to the AD is read only.

1.4.18.3 Open Directory Service

With the OpenDirectory Service, OpenScape Business offers an integrated meta directory service that can be accessed by a wide variety of clients, applications and communication devices in an enterprise via LDAP.

Open Directory Service enables the integration of contact data from various internal and external data sources / databases such as

- Internal data sources
  - Central speed dial list entries
  - Global directory
  - Internal UC Suite directory
  - External UC Suite directory
- External data sources *
  - Relational databases
    - Microsoft SQL Server
    - PostgreSQL Server
    - Sybase SQL Server
  - Non-relational databases
    - Via database specific ODBC driver and ODBC - ODBC Bridge

*) The above list of external data sources is merely a general overview and does not constitute a commitment to connect a customer-specific database. In case of doubt, the connection must be checked in a test environment before the contract is concluded. For this purpose, the demo SW of an OpenScape Business S system can be used in a virtualized environment.

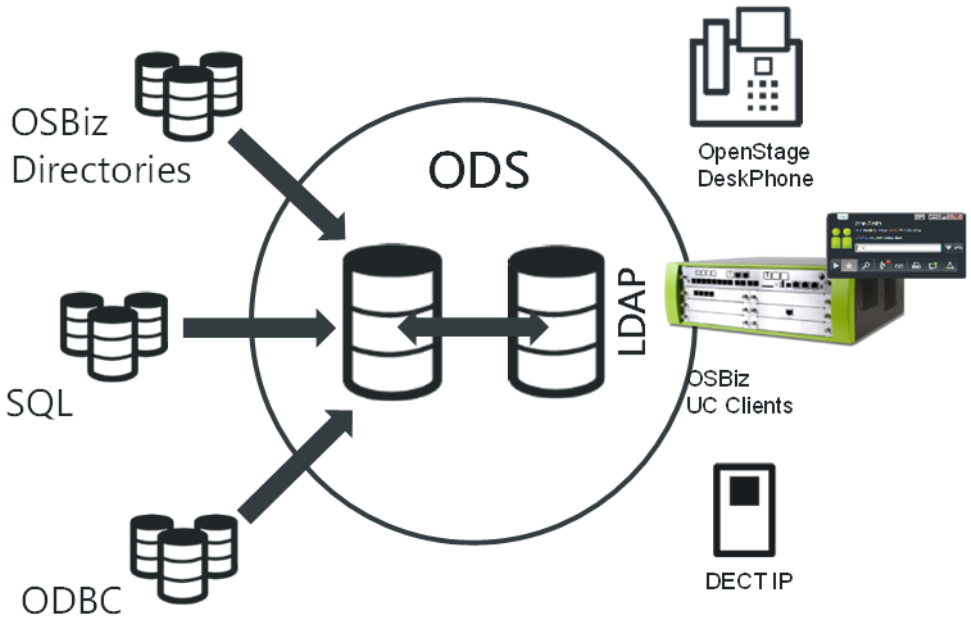

Figure 21 OpenDirectory Service Connection Overview

Via the standardized LDAP interface, the OpenDirectory Service can serve search queries of any LDAP-capable clients and applications, e.g.:

- UC clients
- Application launcher
- System directory
- OpenStage phones with local LDAP support
- OpenScape Deskphone CP Phones with local LDAP support
- DECT IP telephones (via LDAP)
- SIP telephones (via LDAP)
- Applications, e.g. CRM suites like Microsoft Dynamics CRM (via LDAP)

The OpenDirectory Service also offers the possibility to adapt the LDAP output scheme to the field structures of the connected database. Furthermore, it can convert phone numbers from the connected databases into the canonical format before the LDAP transfer.

Licensing:

To use the Open Directory Service an OpenDirectory Base license is required. This is included in the OpenScape Business Base License scope of delivery.

The OpenDirectory Base license allows the use of all internal directories. If an external database is to be connected, an OpenDirectory Connector license is additionally required for each connected database. The Connector License is independent of the database type.

Further information about licensing OpenScape Business is contained in the "1.8 Licensing" chapter.

SW Deployment

The OpenDirectory Service SW is an integral part of the OpenScape Business SW image.

System Requirements

n/a

Functional boundary conditions

- When connecting external databases, it must always be ensured that the Open Directory Service is authorized to access the data source. The customer's database administrator must be involved for this purpose. Under certain circumstances, the database administrator may have to set up a separate account for access.
- Call number normalization requires that the source call number is available in a format that can be uniquely converted in consideration of the system's location parameters.
- When using the ODBC-ODBC bridge connector, certain restrictions must be taken into account. This is necessary because the different ODBC / SQL database servers / data sources support different sets of ODBC functions and have different database structures, table syntax and content encoding.
- Before connecting / integrating a customer database, the database administrator must check whether the provided functionality of the ODBC Connector is sufficient for connecting the database. In case of doubt, this must be checked in a test environment before the contract is concluded. For this purpose the demo SW of an OpenScape Business S system can be used in a virtualized environment.
- The functions, SQL implementations and the character set supported by the ODBC Connector are described in the document "OpenScape Business Directory Service ODBC-ODBC Bridge" under the link https://wiki.unify.com/wiki/OpenScape_Business#Access_to_external_directories_and_data_sources

1.4.18.4 Unified Directory View

OpenScape Business combines the contents of the different directories internally to a uniform structure. In the course of the caller identification for incoming / outgoing calls or the subscriber search from the telephone/client, the system transmits the information to the terminals for display. Here the transmitted contents are adapted to the display options of the different system phones and PC clients.

This unified directory view is active in the delivery state. It can be deactivated system-wide for the system telephones by the system administrator if a customer wishes to retain his or her usual display on the telephone.

Caller identification for incoming and outgoing calls

Caller identification is triggered for incoming or outgoing calls. The transmitted caller ID is prioritized and searched for in the following data sources.

1. CO ITSP name (as sent by the provider)
2. speed dial list
3. personal contacts
4. User directory

Searches are only carried out in the following telephone number fields, if they are available:

- Office phone number
- Mobile phone number
- Private telephone number

Depending on the data source, the search result will contain either the last name only, the first name, the display name or, if available, the complete contact data.

Search from the phone or client PC:

The search is always carried out using the specific telephone/PC client input interface in the following directories, if available in the system.

- Internal user directory
- Speed-dial lists
- Global Directory
- UC Smart Personal Directory
- UC Suite External directory
- Personal Outlook contacts (only if imported)

All matches within the above directories are displayed as search results together with their origin. The matches contain either the complete contact record or only parts of it. The information depth of the results depends on the data source.

	Internal User Directory	Speed Dial Lists	Global Directory	UC Smart Personal Directory	UC Suite External Directory
Last name	✓	✓1	✓	✓	✓
First name	✓	✓1	✓	✓	✓
Display name	✓	✓	✓	✓	✓
Office phone number	✓	✓	✓	✓	✓
Private / External telephone number	✓2	×	✓	✓	✓
Mobile phone number	✓2	×	✓	✓	✓
E-mail address	✓2	×	✓	✓	✓
Company name	×	×	✓	✓	✓
City	×	×	✓	×	×
contact picture	✓2	×	×	✓	×
Contact picture preview	✓2	×	×	✓	×

Table 41 Depth of information of the supported data sources

1 Comma-separated name format required in the destinations

2 available for UC users

Supported telephone devices / clients

OpenScape Business supports the Unified Directory View feature for the following devices and clients.

- OpenStage Deskphone CP HFA Family
- OpenStage Deskphone CP TDM family
- OpenStage Deskphone IP 35/55 HFA

- DECT mobile phones via integrated cordless solution
- myPortal @work
- myPortal to go
- OpenScape Business Attendant

Licensing:

No license is required to use the Unified Directory function.

SW deployment

The feature is part of the OpenScape Business SW Image and is installed with it.

System Requirements

The function is firmly anchored in the system and does not require any additional requirements

Functional boundary conditions

- OpenScape Business Network
  - In an OpenScape Business network, telephones and PC clients always use the function of their own node.
  - A node in an OpenScape Business network always uses its own local data sources.
- Supported call number format
  All external telephone numbers within the data sources must be entered in canonical format, including country and area codes, e.g. +4989700712345, but the speed-dial list only supports the format that can be dialed by the system (e.g. 0089700712345 or 0004989700712345)
- Supported name formats
  The name search within the speed-dial lists only supported in combination with certain configuration rules. First and last name must be entered in the existing name field according to the following pattern: <Surname>, <First Name> (comma separated).
- Availability of directory entry changes
  After creating, updating or deleting contacts in the various data sources, it can take up to 10 minutes before all changes are visible in the search results.
- Character set
  On most phones the user can only search for the standard characters "a-z". It is not possible to enter (diacritical) special characters (such as the German umlauts Ää, Öö, Üü or ß) via the user interface of the telephone device.
  Therefore, a search result with simple characters also includes the special characters. A search with the characters "acdegilnorstuyz" also includes the corresponding special characters:
  "àáâãåäąăçćčďđèéêëęě#ìíîïĺľłñńňòóôõöøřśšşťùúûůűüýÿžźż"
- The UC Suite myPortal, myAttendant and myAgent clients use their own mechanisms for directory search and name resolution.

1.4.19 TAPI Service Provider

Many CTI and CRM applications on the market use the Microsoft TAPI interface for the connection to the telephone system. For OpenScape Business there are a total of 3 powerful TAPI Service Providers (TSP) available that are optimized for the system architecture and network topology of OpenScape Business

- CallBridge Collection
- OpenScape Business TAPI 120 V1
- OpenScape Business TAPI 170 V1

The choice of the appropriate TAPI Service Provider essentially depends on the number of client PCs to be connected with TAPI applications as well as the existing IT infrastructure and the phone devices used.

1.4.19.1 Callbridge Collection

Callbridge Collection is used as a traditional first-party TAPI Service Provider on system phones that have a LAN or USB interface. It is suitable for installations with just a few PCs. A LAN is not absolutely necessary for the operation of the CallBridge Collection. The CallBridge Collection is installed on each PC that is running a TAPI application. Analog, Cordless and system devices without USB/IP interfaces are not supported.

Licensing

No additional license is required to use the Callbridge Collection, other than the IP or TDM user license.

SW deployment

The Callbridge Collection SW is delivered on CD as a data carrier and can be installed from there on a PC client.

System requirements

The HW/SW prerequisites required for the Callbridge Collection desktop PC are contained in section 1.7.4.

Functional boundary conditions

The Callbridge Collection is approved exclusively for the combination of system software, phone devices and PC operating systems specified in the Callbridge Collection Technical Release Note.

There are separate releases for the Callbridge Collection SW and the optionally required USB driver SW of the TDM end devices. These may differ with regard to the HW / SW requirements of the PC.

1.4.19.2 OpenScape Business TAPI 120

TAPI 120 is preferably used as First Party TAPI Service Provider in Microsoft networks with or without domain controller, if also analog, cordless or system terminals without IP / USB interfaces are to be operated in connection with the TAPI applications. The TAPI 120 Service Provider is installed on each PC Client on which a TAPI application is operated.

OpenScape Business TAPI 120 is alternatively connected to OpenScape Business via the CSTA interface (CSTA mode) or via the WebServices Interface (WSI). A mixed operation in the connection to one system is not possible.

- In systems with V3 mainboard the connection must always be performed via the CSTA interface.
- For systems with V2 mainboard and UC booster card / server, the connection via the CSTA interface is recommended. The connection via the WSI interface is only possible up to 30 TAPI participants.
- For systems with V2 mainboard without UC Booster HW, the connection is generally made via the WSI interface. (max. 30 TAPI participants)

The supported TAPI functions depend on the type of connection. The following table gives an overview.

Function	**TAPI 120 CSTA**	**TAPI 120 WSI**
Centrally via LAN connected first party TAPI Service Provider	✓	✓
Compatible with Microsoft TAPI 2.1 standard	✓	✓
TAPI supported functionality		
• Signaling of incoming and outgoing calls with CLI and the origin of the call	✓	✓
• Additional information in the call signaling with diverted calls	✓	✓
• Call answer of internal and external calls	✓	✓
• Controlled call set up to internal and external targets	✓	✓
• Manual dialing / DTMF dialing	✓	✓
• Cleardown of existing calls	✓	✓
• Recall to internal and external parties	✓	✓
• Toggle	✓	✓

Function	TAPI 120 CSTA	TAPI 120 WSI
• Supervised Call Transfer	✓	✓
• Supervised Call Transfer with subsequent dialing of the query target (one-step transfer)	✓	✓
• Unsupervised Call Transfer (Blind Transfer)	✓	×
• Activation and deactivation of call forwarding	✓	✓
• Activation and deactivation of DND	✓	✓
• Set up a conference	✓	×
• Expanding the conference	✓	×
• Forward incoming call	✓	×
• Directed pickup (Call Pickup)	✓	×
• Group call signaling and acquisition group call (Group pickup	✓	×
• Call park	✓	×
• Call park retrieval	✓	×
• Call hold	✓	×
• Call hold retrieval	✓	×
• Set callback	✓	×
• Support for code-controlled functions	✓	×
• exchange of call relevant data between TAPI applications	✓	×
• Activation of programmable keys at system terminals (HFA)	✓	×
• Control the microphone gain in system terminals (HFA)	✓	×
• Control / selection of the use of Handset / loudspeaker / headset with system terminals (HFA)	✓	×
• volume control of handset / speaker / headset keyboard with system terminals (HFA)	✓	×
• Access to optiPoint / OpenStage display and the LEDs (with limitation to 50 active displays per system)	✓	×
• connection to OpenScape Business Single systems	✓	✓
• Support for OpenScape Business CTI Firewall	✓	×

Table 42 Overview of TAPI 120 functions

TAPI 120 CSTA	TAPI 120 WSI
Supported are: The same terminals which are supported with the OpenScape Business CSTA Interface, which are described in chapter 1.4.20 „CSTA-Interface	Supported are: • OpenScape Desk Phone CP (HFA/TDM) • OpenScape Desk Phone IP (HFA) • OpenStage (HFA / TDM) • OpenScape Cordless devices (CMI) • Analogue telephone Incoming calls to analogue devices and, OpenScape Cordless terminals must be manually answered
	Not supported are: • SIP - phones

	• ISDN - phones • Subscriber with Mobility / Deskshare functionality • Team/Top groups • UCD groups

Table 43 Overview of devices supported by TAPI 120

The TAPI 120 SW is installed on a Microsoft Windows Client PC. The connection to the OpenScape Business System is via LAN. A physical connection between the Windows PC and the telephone is not required.

Licensing:

For using TAPI 120 a TAPI user license must be configured in OpenScape Business in addition to the IP or TDM user license. When using the "MULAP" feature, a TAPI license is required for each subscriber within the MULAP.

For the TAPI 120 in the connection via WSI no additional UC license is required if the TAPI user does not use UC features.

Further information on licensing OpenScape Business is contained in Section 1.8 Licensing.

SW Deployment

The TAPI 120 SW is delivered on CD as a data medium and can be installed on a PC client from there.

System requirements

The HW/SW prerequisites required for the TAPI 120 PC are contained in section 1.7.4 Requirements for other PC Clients".

Functional boundary conditions

Only Microsoft Windows operating systems can be used in combination with TAPI 120.

For installations on terminal servers, OpenScape Business TAPI 170 must be used instead of TAPI 120.

1.4.19.3 OpenScape Business TAPI 170

TAPI 170 is a traditional "Third Party" TAPI Service Provider it is installed on a server in the LAN and centrally connected to the OpenScape Business System. TAPI 170 can be used alternatively to TAPI 120 if a domain controller is available in the Microsoft network. When using the so-called Remote TAPI feature, the installation of the TAPI Service Provider on the client PCs is not required. This offers significant time advantages for installations with many client PCs. In the following constellations OpenScape Business TAPI 170 must be used, however.

- Connection of TAPI subscribers to networked OpenScape Business systems, if the TAPI subscribers are located in different nodes.
- Connection of TAPI applications that are operated on a terminal server
- Connection of server based TAPI application

A CSTA link is required for connecting to OpenScape Business, regardless of how many TAPI 170 subscribers are operated.

TAPI 170 supports the Microsoft TAPI V2.1 Features

Function
Centrally connected third-party TAPI Service Provider.
Compatible with the Microsoft TAPI 2.1 Standard
Telephony functions are available on each connected PC client via the TAPI 2.1 client/server architecture.
No additional TSP client software is required
Supported telephony features
• Selection or dialing of incoming/outgoing calls from the PC
• Transmission of incoming call number, if signaled

Function
• Consultation and transfer
• Toggle/Connect
• Conferencing
• Call forwarding
• Forwarding callers
• Answering a call through the application
• Initiating a call through the application
• Blind/Supervised transfer (also called "transfer before answer / consultation transfer")
• Transmission of feature codes
• Monitoring of the phone (call states, failure, etc.)
• Provision of an ACD interface
• Monitoring / access to keypad for system telephones (HFA)
• Control of display/LED for system telephones (HFA)
Connection to standalone and networked OpenScape Business systems
Support for MULAP members / station numbers

Table 44 Overview of functions supported by TAPI 170

TAPI 170 supports the same devices as the OpenScape Business CSTA interface. These are described in Section 1.4.20 CSTA Interface.

The OpenScape Business TAPI 170 SW is installed on a Microsoft Windows server in the network. The connection to OpenScape Business is performed via a CSTA link. A physical connection between the Windows PC and the telephone is not required.

In networked OpenScape Business systems the TAPI 170 SW is installed on a server that is connected via LAN to the CSTA interface of the master node. Via the Master Node the TAPI 170 gets access to all subscribers in the network. If the TAPI 170 is connected to a Slave Node instead of the Master Node, TAPI 170 can only access the participants of the Slave Node.

Licensing:

For using TAPI 170 an OpenScape Business TAPI User License must be configured in addition to the IP or TDM user license. When using the "MULAP" feature, a TAPI license is required for each subscriber within the MULAP.

Further information on licensing OpenScape Business is contained in Section “1.8 Licensing”.

SW Deployment

The TAPI 170 SW is delivered on CD as a data medium and can be installed on a PC client from there.

System requirements

The HW/SW prerequisites required for the TAPI 170 Server are contained in chapter 1.6.2.

Functional boundary conditions

Only Microsoft Windows operating systems can be used in combination with TAPI 170.

TAPI server and clients must be managed by the same network domain controller.

For a terminal server environment applies:

- OpenScape Business TAPI 170 must be installed on the same server HW as the terminal server.
- When using a terminal server cluster architecture, the TAPI 170 SW must be installed on each terminal server in the cluster.
- The maximum possible number of OpenScape Business TAPI 170 servers in connection with OpenScape Business must not be exceeded. The maximum number of possible connections is reduced if the CSTA links of OpenScape Business are seized by other CSTA applications.

1.4.20 CSTA Interface

The CSTA interface enables the connection of high-performance CTI, contact center and unified communications applications etc. to OpenScape Business.

Scope of functions:

- Access via Ethernet LAN (TCP/IP)
- CSTA Phase III, ASN.1 coded after:
  - ECMA-269 Services for Computer Supported Telecommunications Applications (CSTA) Phase III
  - Standard ECMA-285ASN.1 for Computer Supported Telecommunications Applications (CSTA) Phase III
  - Support of the CSTA XML protocol for certified applications
- Support for a wide range of system phones
- support of
  - System telephones
  - CO trunks
  - virtual stations
  - UCD groups
  - MULAPs
- Network-wide monitoring and control of all resources
- Multiplexing of monitor points:

The detailed functionality of the CSTA implementation is available in the "CSTA Interface Manual" in the Unify Expert Wiki under the link:

https://wiki.unify.com/wiki/OpenScape_Business#Open_Interfaces

After a registration in the Unify Technology Partner Program

https://unify.com/en/partners/technology-partners

application developers can receive technical support for the development or connection of their application.

Unify provides technical support for the CSTA interface in conjunction with enabled applications in customer installations for certified applications only. The certification of an application is done within the framework of the technology partnership. Applications certified through the Technology Partner Program are available on the Internet under the link:

http://partnerdialog.unify.com/portal/tecpartner/

listed. Section “1.5 Certified Products and Applications " also contains an overview of certified solutions in connection with OpenScape Business.

Licensing

The connection of external CSTA applications to OpenScape Business is licensed.

In principle, however, the following applications can be operated to OpenScape Business without CSTA license:

- UC Suite
- OpenScape Business TAPI 170
- CSTA Message Dispatcher (CMD) for TAPI 120
- Direct Station Signaling Server (DSS)

CSTA licensing is dependent on System HW expansion:

- OpenScape Business X systems with V3 mainboards always require a CSTA license
- OpenScape Business X systems with V2 mainboard and UC Booster Card do not require a CSTA license.
- OpenScape Business X systems with V2 mainboard without UC Booster Card require a CSTA license.
- OpenScape Business X systems with V2 mainboard and UC Booster Server require a CSTA license.

- OpenScape Business S systems require a CSTA license

CSTA Licensing in an OpenScape Business Network

In an OpenScape Business network, a CSTA license is always required in the node to which the CSTA application is connected. Functionally it is distinguished whether the CSTA connections are made at the Master node or at a Slave node:

- When connected to the master node the information from all nodes of the network is available even if no CSTA licenses are available in the slave nodes.
- When connecting to a slave node, only the information of this node is available via CSTA.

SW Deployment

The CSTA implementation is an integral part of the System SW image.

System requirements

For OpenScape Business X models the following HW prerequisites are alternatively required for the CSTA interface:

- V3 mainboards as described in Section 1.3.13.1.1V3 Mainboards
- V2 Mainboard with UC Booster Card or UC Booster Server

OpenScape Business S systems always offer a CSTA interface

Functional boundary conditions

- **Supported end devices**
  The terminal devices listed in section “1.3.14 Supported Phones / Key Modules and Telephony Clients" can be controlled via the CSTA protocol. However, the range of functions made available via the CSTA protocol depends heavily on the respective terminal equipment and the terminal interface. System terminals with TDM or IP / HFA interfaces offer the largest and ISDN terminals the smallest scope of functions. SIP and DECT based terminals take a special position with regard to the available functions. Details about the supported terminals and the supported functions are described in the "CSTA Interface Manual" for OpenScape Business.
- **CSTA XML Protocol**
  The functionality of the CSTA XML protocol differs in some points from the functionality of the CSTA Phase III, ASN.1 protocol. For more details, see the "CSTA Interface Manual".
- **Connections to the CSTA interface**
  The OpenScape Business CSTA interface supports a maximum of 4 CSTA links for connecting external and internal (running within OpenScape Business) CSTA applications. These must share the available CSTA links. In the delivery state of OpenScape Business the following CSTA links are preconfigured, which is sufficient for most applications.
    - 1 CSTA link available for connecting an external CSTA application
    - 1 CSTA link preset for the internal connection of the OpenScape Business UC Suite.
      If the OpenScape Business UC Suite is not required, e.g. by using UC Smart, the CSTA link occupied by it can be used otherwise.
    - 1 CSTA link preset for the internal connection of the CSTA Message Dispatcher (CMD).
      If no TAPI 120 service providers are used on the system, this CSTA link can be used to connect additional external applications.
    - 1 CSTA link preassigned for the internal connection of the Direct Station (DSS) server.
      The DSS server is only used for networked OpenScape Business systems. In single systems the CSTA link preassigned by it can be used otherwise.

If several external CSTA applications must be activated, check which of the internal applications are not required. The CSTA links used by these applications can then be used to connect the external CSTA applications.

1.4.21 System Administration

Via OpenScape Business Assistant (WBM) you administrate the OpenScape Business X and S systems. The user administration of the OpenScape Business Assistant provides a role-based administration. Some special administration tasks for OpenScape Business X additionally require the administration tool Manager E. Manager E is not supported for OpenScape Business S.

1.4.21.1 OpenScape Business Assistant

The OpenScape Business Assistant is the web-based application for the system administration. Via the Service Center within the OpenScape Business Assistant you can download:

- Operating instructions and administration documents
- Installation files for the OpenScape Business Clients and further optional SW components
- Templates for the import of mass data, e.g. subscriber data or directories

Furthermore, the Service Center contains current links to optionally required 3rd party SW that is not included in the OpenScape Business SW Image scope of delivery.

User interface language

When logging on you can select one of the following languages for the OpenScape Business Assistant user interfaces:

- German
- English
- French
- Italian
- Dutch (online help available in English only)
- Portuguese
- Spanish

Licensing:

No license is required for using OpenScape Business Assistant.

SW deployment

The OpenScape Business Assistant SW is integrated in OpenScape Business.

System requirements

The HW/SW prerequisites required for the OpenScape Business Assistant are contained in section “1.7.4 Requirements for other PC Clients”.

Functional boundary conditions

Some settings in OpenScape Business X systems cannot be administered via the OpenScape Business Assistant. For this purpose, the administration tool Manager E on a Windows client PC or the Assistant T on one of the first two system terminals must be used. Details are described in the OpenScape Business Administration manual.

1.5 Certified Products and Applications

OpenScape Business can be connected to a variety of systems or work with external applications. The following is an overview sorted by Unify products and 3rd party products. Unify products are tested by Unify in the course of its own quality assurance on OpenScape Business. 3rd party products are certified by Unify as part of the Technology Partner Program.

1.5.1 Certified Unify Systems and Applications

The following products from the Unify portfolio have been tested in conjunction with OpenScape Business and are approved for connection.

System / Application	Version	OpenScape Business Product Version / Remark
OpenScape 4000 (HiPath 4000)	V8 R2	≥ V3R0

OpenScape Voice	V10R0	≥ V3R0
Callbridge Collection	V2R3.14	≥ V3R0
OpenScape Deployment Service	V10R0	≥ V3R0
OpenScape Fault Management	V9R1 V10R0 V11R0	≥ V3R0
OpenScape Alarm Response Economy	V1 R1.1.1	≥ V3R0
OpenScape Alarm Response Professional	V3 R2.60.4	≥ V3R0
OpenScape Contact Center	V9 R3.1.4 V10.R1.1.2	≥ V3R0
OpenScape Xpressions	≥ V7 R1.5.28	Connection via CorNet NQ, S0 or S2M. CTI/CSTA on OpenScape Business single systems and networked systems
OpenScape Cordless IP	V2R1.23.0	≥ V3R0
OpenScape Accounting	V3R0	≥ V3R0
OpenScape Business Attendant	V2R3.1.0	≥ V3R0
OpenScape Business TAPI 120/170	V1R1.11.0	≥ V3R0

Table 45 Certified Unify Systems and Application

1.5.2 Certified Technology Partner Products and Applications

OpenScape Business can also be expanded with certified products and applications from partners.

The certification of an application is done as part of the technology partnership. Information about the Technology Partner Program and certified applications is available on the Internet at the link:

http://partnerdialog.unify.com/portal/tecpartner/

Unify provides technical support for powered-on applications in customer installations for certified applications only.

1.5.3 Connection of OpenScape Contact Center

OpenScape Contact Center Agile / Enterprise V9.R0.3 or higher can be connected to OpenScape Business Systems.

Release comprises OpenScape Business X3, X5 or X8 in single or multi node environment with max. 100 simultaneously active agents. OpenScape Business S can be connected as single node only.

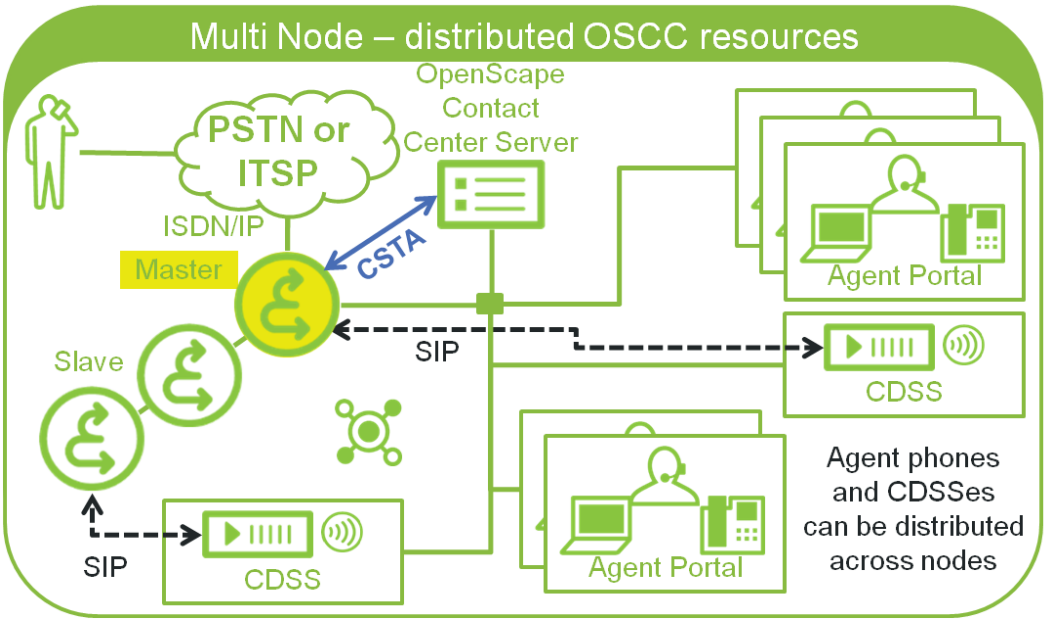

Figure 22 Example: OSCC connected to master node with distributed resources

This configuration uses a multi-node deployment of the OpenScape Business, which is connected to the public telephone network via ISDN, to the Internet or uses a mixture of both connection types on one or multiple nodes.

Internal networking between the OpenScape Business X nodes is done via SIP-Q.

OpenScape Contact Center uses a CSTA connection to the master node of this OpenScape Business network.

As IVR Voice Processors for the OpenScape Contact Center Call Director up to 10 CDSS (Call Director SIP Service) can be used. These Voice Processors can be distributed across the OpenScape Business network.

Agents normally work with HFA IP-phones, but also TDM phones can still be used. Agents cannot use SIP or CMI phones. Agents can use analogue phones on a project specific basis. Agent Phones can be distributed across the OpenScape Business network.

1.5.4 Connection to Unify Circuit

With Circuit, Unify offers a SaaS (Software as a Service) solution that goes beyond unified communications and meets the changing demands of the working world in terms of mobility, work location, working hours, end devices used and cross-border collaboration of specialists in changing teams.

Circuit offers an OpenScape Business Telephony Connector for the connection of OpenScape Business Systems. Via this connector, OpenScape Business Systems and Circuit work hand in hand and complement each other's scope of services.

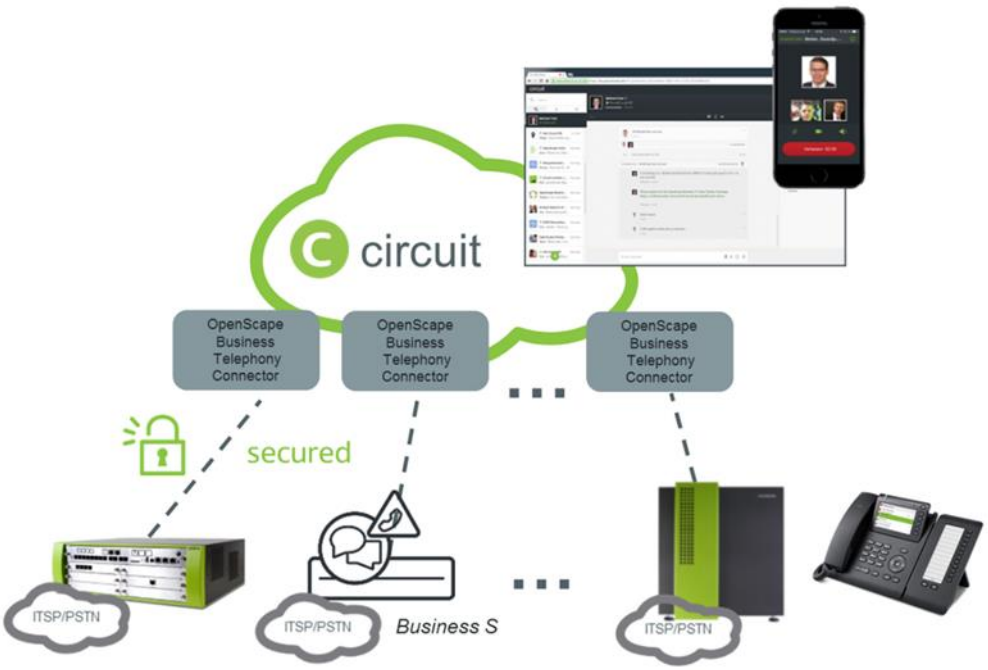

Figure 23 OpenScape Business Connection to Circuit

Features of the OpenScape Business Connector

The OpenScape Business Telephony Connector enables collaboration between circuit and OpenScape Business single and network systems via SIP trunk connections.

OpenScape Business provides a separate extension number for each connected user of the Circuit Tenant and offers the following call control features for the Circuit Desktop App, the Web Client or the Circuit Mobile App.

- Make call
- Answering call
- Hanh up / Disconnect call
- Reject call
- DTMF support
- Hold / Retrieve call
- Consultation transfer
- Blind transfer
- Call forwarding to "Alternative telephone number”
- Call forwarding to Circuit / OpenScape Business Voicemail
- Consultation call
- Conference call
- Toggle / Alternate call
- Call waiting
- Do not disturb

With the above features of the OpenScape Business Telephony Connector the following scenarios can be performed for or by an OpenScape Business Circuit User:

- **Calls between OpenScape Business & Circuit**
  Internal calls between OpenScape Business and Circuit Users are possible. The Circuit User can be reached via his assigned OpenScape Business extension number. He can choose between different Circuit Devices to answer the call.

- **Incoming call to a Circuit User**
  External (incoming) call via OpenScape Business ITSP / ISDN / BRI / PRI to a circuit user
- **Outgoing call via OpenScape Business**
  Outgoing circuit call via OpenScape Business as gateway to an external subscriber. Here the OpenScape Business extension number is displayed to the external subscriber as CLIP information.
- **"Twinning" with system phone - Incoming call with One Number Service**
  An incoming call can be answered via the Circuit Client or the OpenScape Business system telephone. The user can be reached under a phone number on his preferred device.
  INFO: In this case an IP / TDM user license is required for the OpenScape Business user (system phone)
- **Outgoing call via Circuit Client with One Number Service**
  A circuit user can call an external subscriber either from his Circuit Client or his OpenScape Business terminal. The phone number assigned in OpenScape Business is displayed to the external subscriber independently of the Circuit Client or telephone used.
  Prerequisite: A corresponding MULAP group with the One Number Service phone number is configured in OpenScape Business.
  INFO: In this case an IP / TDM user license is required for the OpenScape Business user (system phone)
- **Uninterrupted call transfer between Circuit Client and OpenScape Business phones.**
  An existing phone call can be transferred without interruption between all Circuit Clients and the assigned phone of the Circuit User.
  Prerequisite: Circuit User must be configured in a MULAP group with the OpenScape Business User.
- **Busy display for circuit calls in OpenScape Business**
  A call from the Circuit Client via OpenScape Business as gateway is displayed in the busy display on a system terminal and in the UC Smart / UC Suite Client.
- **Local OpenScape Business dial-in for using circuit conference services**
  OpenScape Business can be used as gateway for the local dial-in of circuit conferences. Thus, it is possible to offer extended conference services in addition to the known OpenScape Business conferences. For the use of circuit conferences corresponding circuit user licenses are required. Besides the local telephone dial-in for up to 50 users via OpenScape Business, dial-in can also be performed directly via Circuit to use additional services such as video or screenshare for conferences.
- **Display of presence and call status**
  The Circuit Connector also enables you to display the busy status of an OpenScape Business Circuit user in the OpenScape Business UC Clients and on the system phones as well as the OpenScape Business.
- **Mutual voicemail integration**
  - Call forwarding of OpenScape Business calls to Circuit Voicemail.
  - Forwarding calls from Circuit Calls to OpenScape Business Voicemail

  New messages are displayed in the native clients of Circuit or OpenScape Business.

  The voicemail messages can be queried from the Circuit Client via DTMF control.

You find further information about the OpenScape Business Circuit Connector feature scope under
OpenScape Business Circuit Connector

Connection

OpenScape Business is connected to Circuit's OpenScape Business Telephony Connector via SIP trunks.

Networking

Networked OpenScape Business systems can be connected via a Circuit Tenant.

Licensing

To connect a Circuit User via the OpenScape Business Telephony Connector, a Circuit Team, Professional or Enterprise license in Circuit and a valid SW Support in OpenScape Business is always required. SIP Trunk or Networking licenses are not required for the circuit connection.

With this license combination the Circuit User can use the following functions.

- Internal calls (incoming, outgoing) between Circuit User and OpenScape Business phone user

- External calls from the circuit user via OpenScape Business to the public network.
- Externally incoming calls from the public network via OpenScape Business to the Circuit User
- Using the Circuit Voicemail feature for incoming calls via OpenScape Business
- Use of Circuit Conferences with call integration via OpenScape Business

To use additional functions, the Circuit User requires further OpenScape Business licenses.

An overview of the additional licenses is shown in the following table. Each row describes additive functions to the previous row and the licenses additively required for these functions.

Column 1 of the table shows the desired function, columns 2 and 3 contain the required licenses if the respective user is operated alone. Some functions, such as One Number Service or Twinning, require the telephone and circuit users to be integrated into a team (MULAP). Column 4 shows the licenses required per user for the function.

			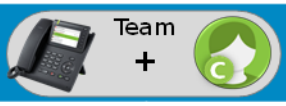	
Basic Call intern / extern	■ IP User	■ Circuit Team, Prof., Enterprise	■ IP User	■ Circuit Team, Prof., Enterprise
+ One Number Service	n.a.	n.a.	✓ included	
+ Circuit Conferences	--	✓ included	--	✓ included
+ Circuit Voicemail	--	✓ included	--	✓ included
+ OSBiz Voicemail	+ OSBiz VM	+ IP User + OSBiz VM	+ OSBiz VM #1	
+ TAPI	+ TAPI	+ IP User + TAPI	+ TAPI #1	+ IP User + TAPI #2
+ OSBiz UC	+ UC Deskt./Groupware		+ UC Deskt./Groupware	
+ UC Managed Conferences	+OSBiz Conf.		+OSBiz Conf.	
+ UC Fax	+Fax		+Fax	

Table 46 Function-dependent additive licenses for a circuit user in OpenScape Business

Requirements

The OpenScape Business Telephony Connector always requires a system with valid software support. (At least one OpenScape Business User must be licensed for this).

For an internal call between Circuit and OpenScape Business a DSP channel is required. For an external call via the ITSP provider another DSP channel is required.

The number of required DSP channels depends on the desired number of simultaneous internal and external connections. Depending on the number determined, a Voice Channel Booster Card (OCCB) must also be used in the system.

Functional boundary conditions

For the connection of and use of the OpenScape Business Circuit Connector the following model-dependent maximum values must be considered:

- Max number of Circuit Users:
- Max. number of simultaneous calls between Circuit and OpenScape Business:
- Max number of supported Circuit Tenants:

The values are listed in section “1.3.11 Expansion capabilities”.

Further Information

Further information, application examples and setup guide for the circuit connection via the OpenScape Business Connector can be found under the following link

https://wiki.unify.com/wiki/OpenScape_Business%23Circuit

1.5.5 Skype for Business connection (on a project specific basis)

OpenScape Business, in conjunction with Skype for Business, provides extensive telephony interworking features.

- Connection to existing or new Skype for Business environments
- Connection to also Office 365 + Skype for Business "online" infrastructures via the Microsoft Skype for Business Cloud Connector
- "Addition" of important telephony functions to the Skype for Business solution, which focuses purely on "collaboration
- Skype for Business Client can be used like a mobile phone connection from the OpenScape Business S biz perspective.

Figure 24 Connection of Skype for Business

The following features are supported in interaction with OpenScape Business and Microsoft Skype for Business:

- Internal calls from OpenScape Business users to Skype for Business users and vice versa
- Outgoing / External calls from Skype for Business users
- Outgoing / External calls via One Number Service (group includes skype for Business participants)
- Incoming calls OpenScape Business and Skype for Business users ring in parallel.

Skype for Business subscribers will have the following features:

- Consultation
- Connect
- Call Forwarding

is made available.

Licensing

In the OpenScape Business IP User + IP Trunk licenses are required for the users.

- The connection of Skype for Business is only possible with active OpenScape Business Software Support.
- An IP User license in OpenScape Business is required for each connected Skype for Business user. (new Profile: SfB User Template)
- IP Trunk licenses (ITSP-B channel) for connecting Skype for Business to OpenScape Business. Depending on the required number of parallel calls, the number of IP Trunk licenses is to be calculated. It must be taken into account that each consultation call requires an additional IP Trunk license and that these must be considered in the total number of licenses.

Requirements

The Microsoft Skype for Business Cloud Connector is provided by Microsoft or their system integration partners.

Functional boundary conditions

The connection is valid for Skype for Business Server 2015 (Mediation Server + Standard Edition Server "on-premise")

The Microsoft licenses required for Microsoft Skype for Business (Server and CAL-Plus Licenses) must be activated. Please coordinate this with the customer's SfB Integration Partner.

Further information

More information, usage examples and setup guide for the Skype for Business connection can be found in the Unify WIKI:

https://wiki.unify.com/wiki/OpenScape_Business#MS_Skype_for_Business_Interworking

1.5.6 Microsoft Teams

OpenScape Business supports the connection of Microsoft Teams. Unlike Skype for Business, the connection is made via a Microsoft certified SBC using a "Direct Routing Plan".

Based on customer experience it is thus possible to make voice calls with basic telephony functionality via a SIP connection from OpenScape Business to MS Teams.

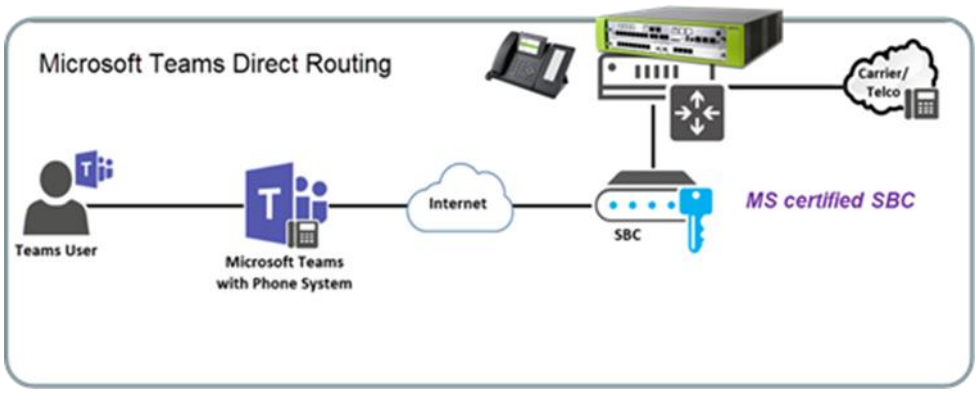

Figure 25 Connection of Microsoft Teams

Certification

The certification of the Microsoft Teams solution in combination with OpenScape Business is planned by Unify with the release of OpenScape Business V3.

Licensing

An OpenScape Business Networking license is required for interworking with Microsoft Teams.

S2M/SIP/T1 trunk licenses are required for connecting the trunk line to OpenScape Business.

Further Information

For further information see Unify Experts Wiki:
https://wiki.unify.com/wiki/OpenScape_Business#MS_Teams_Interworking

Learn more about Microsoft Direct Routing Plan:

https://docs.microsoft.com/en-us/microsoftteams/direct-routing-plan

1.5.7 OpenScape Accounting and OpenScape Accounting Welcome

With OpenScape Accounting Version 4, the solution delivers a hotel/hospitality/guest solution - OpenScape Accounting Welcome - in addition to the familiar powerful call charge reporting and reporting features such as call statistics.

OpenScape Accounting Welcome provides special features for smaller hotels in the range of up to 50 rooms. Licensing is on a user basis (per room) in OpenScape Business. In addition to the extended scope of services and the customized user-based marketing model, OpenScape Accounting and Welcome is therefore also very interesting for small and medium-sized companies.

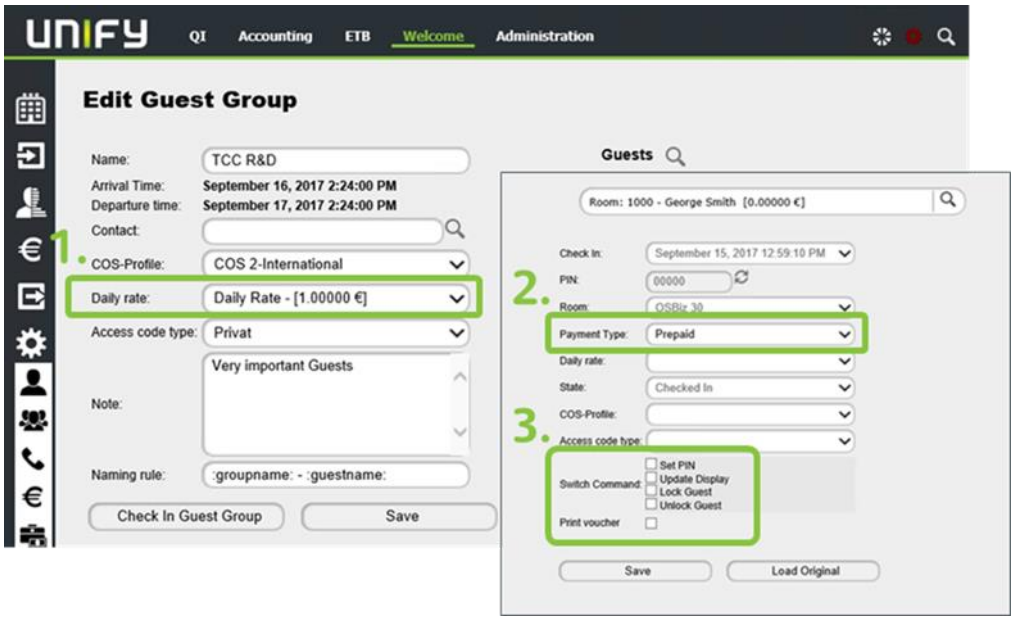

Figure 26 OpenScape Accounting and Welcome

OpenScape Accounting "Welcome" features in detail:

- Check In / Out , also for groups
- Personal data, including changes
- Individual "daily rates"
- Room / Room - Reservation
- Booking Journal / Reservation
- Payment (prepaid/postpaid)
- Lock phone / Change name
- Set authorization (COS)
- Invoice incl. automatic printout
- Individual invoice (language, etc.)

Licensing

OpenScape Business Accounting / Welcome is licensed per port. Up to 120 port licenses can be managed via the OpenScape Business license file. For 120 ports and more the native licensing of OpenScape Accounting must be used. This also applies to the connection of OpenScape Accounting / Welcome in OpenScape Business networks.

You find further information on OpenScape Business Accounting / Welcome licenses in Section 1.8.4.2.

SW Deployment

OpenScape Accounting and Welcome SW can only be obtained via the Unify SW download server. Delivery on data medium is not intended.

System requirements

The HW/SW prerequisites for OpenScape Accounting and Welcome are described in section 1.6.3.

Functional boundary conditions and restrictions

OpenScape Accounting and Welcome applications are integrated in one SW application and can be installed on only one client or server operating system.

Further Information

For further information see Sales Information on OpenScape Accounting.

1.5.8 Open Scape WebCollaboration

OpenScape Web Collaboration is a scalable and secure multimedia web conferencing solution that integrates seamlessly with the OpenScape Business interface. It can be started context-related from:

- Application-controlled conferences,
- System conferences over the telephone
- 2-party conversations via pop-up windows.

Licensing

OpenScape Web Collaboration has its own licensing independent of OpenScape Business. However, to be able to control the features from OpenScape Business, a Web Collaboration Connector license is required in OpenScape Business, which is included in each OpenScape Business X3/X5/X8/S basic license package and does not need to be marketed separately.

You find further information about the OpenScape Web Collaboration Connector License in Chapter 1.8.4.3.

1.5.9 OpenScape Business Hosting / Multi Site

OpenScape Business S and OpenScape Business X systems can be hosted in a data center. Here OpenScape Business S systems can either be operated on a dedicated server hardware or on virtualized hardware.

With hosted OpenScape Business S and OpenScape Business X Systemin you can realize multi-site configurations via VPN or MPLS networks (cross-location or cross-country).

Every OpenScape Business S or OpenScape X system supports this:

- Up to 8 ITSPs, MSN or extension providers per system and country
- Up to 8 area codes per system and country, which can be assigned to up to 8 customer locations

Requirements:

A VPN- or MPLS network infrastructure is required between sites, especially if there are multiple customer sites. Location-specific routers with Network Address Translation (NAT) cannot be used for Internet access at multi-site.

Functional constraints and restrictions

OpenScape Business S can be run on dedicated server hardware or virtualized

Multisite configurations can be combined with classic voice and UC networking.

Multisite configurations with more than 8 sites can be realized by means of "several multi-site "cells" consisting of max 8 systems, which are networked with each other

Networking scenarios with ISDN gateways can be fully integrated in multi-site installations

Further information

More information about the theme hosting and multisite can be found in the Unify Wiki under the links:

https://wiki.unify.com/wiki/OpenScape_Business#SIP_.2F_ITSP_Connectivity

in the section Data Center and Cloud deployments

Examples for multi-site installations

Below are two examples of hosting / multi-site installations. Please note that a product-specific release is required for scenario 2.

Scenario 1: One OpenScape Business S system per site

In this scenario one OpenScape Business S is used per site. It is characterized by:

- All systems / phone devices are located in a VPN or MPLS network
- The systems are distributed over several locations in different countries.
- Each system has its own local connections to the public telephone network either via ITSP or PST.
- Up to 1000 users and 180 SIP trunks are possible per OpenScape Business S system.
- Optionally, the local systems can be networked with other OpenScape Business S or X systems with up to 1500 users with voice and UC functionality.

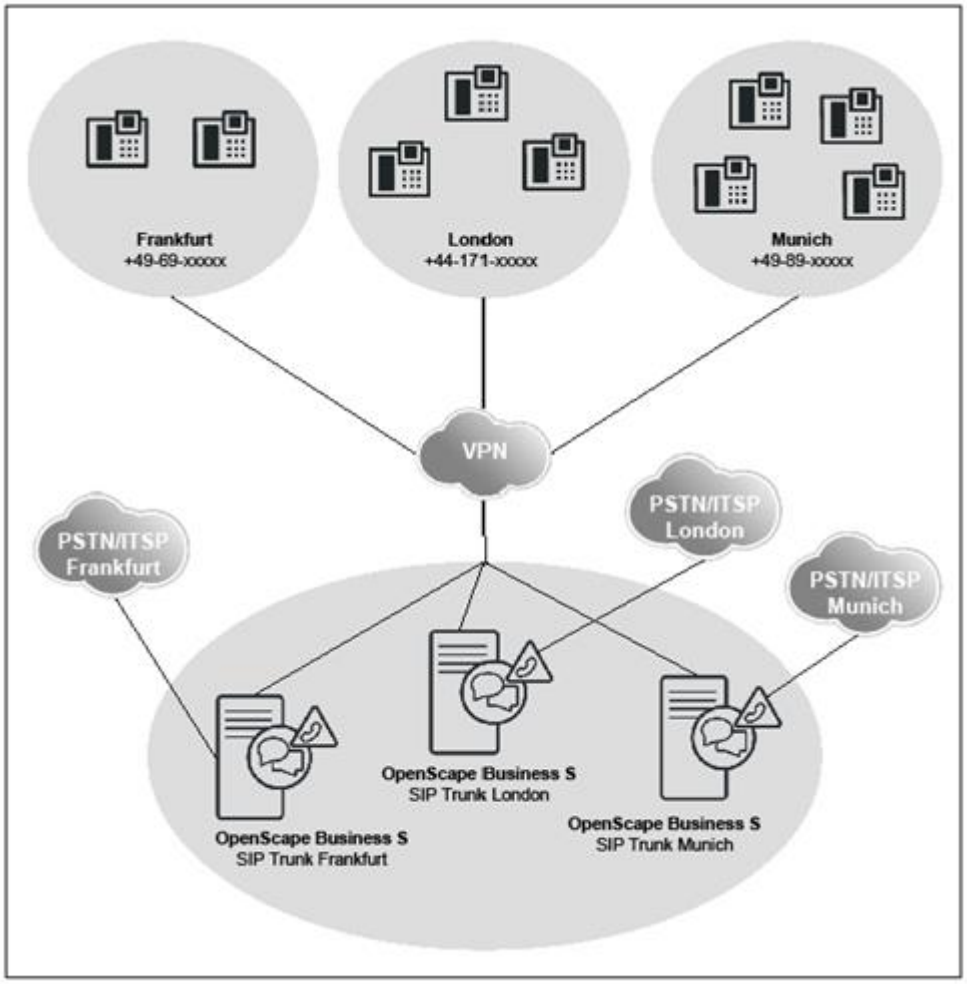

Figure 27 Hosting / Multi-site with one OpenScape Business S per site

Scenario 2: One OpenScape Business S system for multiple sites

This scenario requires a project-specific release.

It is characterized by:

- The OpenScape Business S System and the terminals are located in a VPN or MPLS network.
- The OpenScape Business S system and the phone devices are distributed over several locations in a country.
- The OpenScape Business S system is connected to the public telephone network via different ITSP connections with the phone numbers of the respective locations.

- Up to 1000 users and 180 SIP trunks are possible per OpenScape Business S system.
- Optionally, a networking of the local systems with further OpenScape Business S or X systems up to 1500 users with voice and UC functionality is possible.

Within the scope of the project-specific release it must be checked individually whether the location-specific requirements can be realized with the technical features of the system or with the service provider. The following information is required for the check:

- The locations
- The public telephone numbers per location,
- Name of the (certified) SIP provider per site.
- Bandwidths per site
- The number of IP devices per site

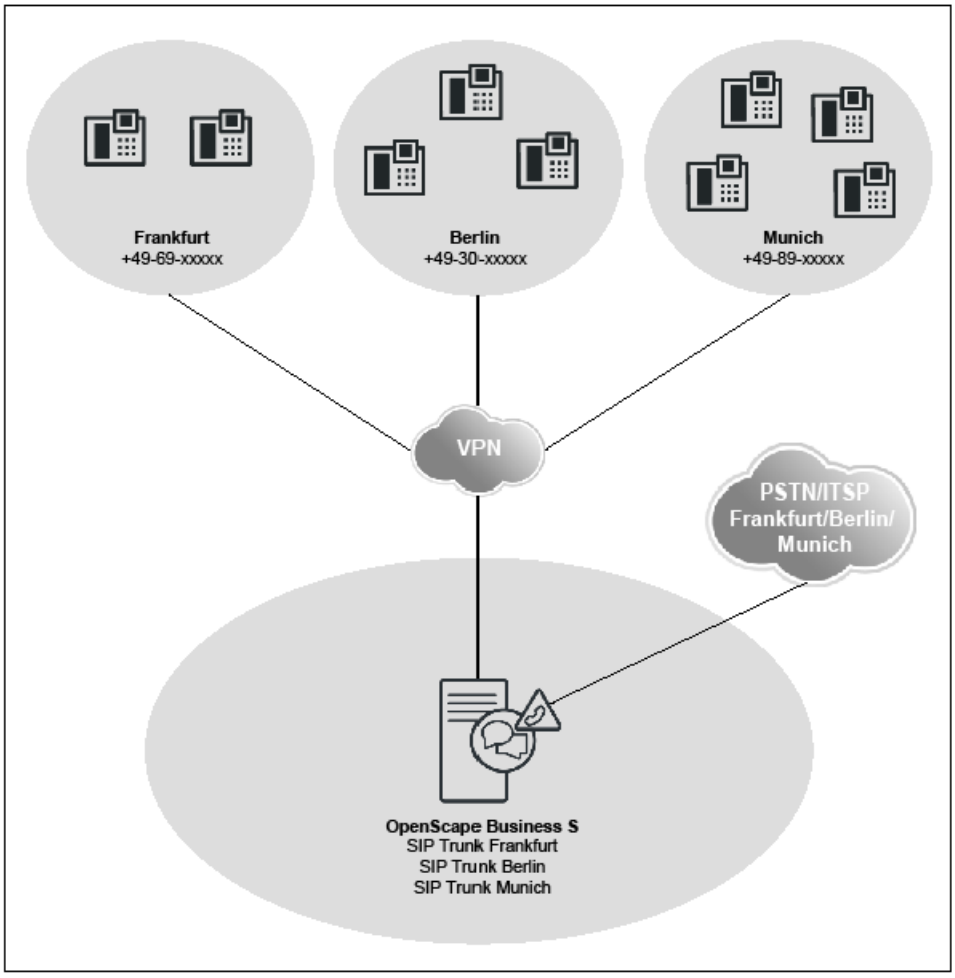

Figure 28 Multi-site with one OpenScape Business S for multiple sites (PSF required)

1.5.10 Other functions

1.5.10.1.1 Integrated and external announcements

OpenScape Business supports not only the connection of external announcement devices or the recording of announcements via telephone but also the import of audio files for use as announcements. The imported audio files must meet the following requirements.

- File format: WAV PCM encoded with 16 bit.
- Supported sample rates: 8 / 22.05 / 24 / 32 / 40 / 44.1 and 48 kHz mono or stereo.

The preferred format is: PCM, 16-bit, 8 kHz, mono.

It is recommended to use the preferred input format and limit the length of WAV files to about 2 minutes. The "AudioWizard" tool can be used to create the WAV file. This is a component of the OpenScape Business System software and can be downloaded via the Service Center in the OpenScape Business Assistant and installed on a PC with Microsoft Windows.

Legal notes

Before using announcements or music, make sure that you are not committing any copyright infringement.

Unify holds all rights for the music on hold contained in the delivery status of OpenScape Business. This ensures that they are free from all rights of domestic and foreign collecting societies without any time limit. E.g. the Gesellschaft für Musikalische Aufführungs- und mechanische Vervielfältigungsrechte (GEMA) and similar organizations worldwide.

Therefore, no claims can be made by these collecting societies and organizations to sales partners, customers or other third parties.

1.6 Requirements for the OpenScape Business Servers

The following overviews show the main requirements for the servers HW/SW and important boundary conditions.

Please note that in the course of technical progress changes regarding the HW/SW requirements may occur. In the following chapters, only those operating systems and application programs are listed under SW requirements for which the respective manufacturer still provides SW support. (based on the time of creation of this document).

Important Note

Unify SW products or product versions that are installed / operated in conjunction with SW components that the respective manufacturer no longer supports within the standard / basic SW support time, can no longer be supported by Unify in the event of a problem.

For current information on supported HW / SW components please refer to the technical release information of the respective OpenScape Business SW version.

1.6.1 HW / SW Requirements for OpenScape Business S / UC Booster Server

1.6.1.1 HW Requirements for OpenScape Business S / UC Booster Server

To use the OpenScape Business servers, the respective server PC must have suitable hardware equipment. In general, the following applies to the server hardware:

- Designed for 24/7 operation
- Certified for the operating system SW used.

For Novell SLES, the company Novell offers PC manufacturers a certification program called "YES". The results are available on the Internet at:

https://www.suse.com/yessearch/Search.jsp

The values specified below only apply under the prerequisite that the OpenScape Business S / UC Booster Server and the recommended virus scanner are the only applications on the server PC. They also apply to the configuration of servers in virtual environments, unless explicitly stated otherwise for a server.

HW minimum requirements:

The minimum requirements depend on the desired number of users. However, when using certain features such as Multimedia Contact Center or Fax, some minimum requirements are dictated by the feature and not necessarily by the number of users. Table 47 provides an overview.

- Processor: Depends on number of users and features, see Table 47

- RAM: Depending on number of participants and scope of functions, see Table 47

- HDD/SSD: Depends on the number of subscribers and range of functions, see Table 47
- DVD drive, keyboard, mouse
- Screen resolution: 1024x768 or higher

	Up to 50 User	**Uo to 100 User**	**Up to 500 User**	**More than 500 User**	**Contact Center**	**Fax**
Processor cores / clock per core	2 / 2,5 GHz	2 / 2,5 GHz	2 / 3,0 GHz	4 / 3,5 GHz	4 / 3,5 GHz	User-dependent
RAM	2 GB min. 4 GB recom.	2 GB min. 4 GB recom.	4 GB	8 GB	4 GB min	4 GB min
HDD/SSD	60 GB	100 GB	200 GB	500 GB	200 GB or more	User-dependent

Table 47 Min Processor, RAM, HDD/SSD Requirements for Server PC

Example:
The Multimedia Contact Center requires: 4 core processor with 3.5 GHz per core, 200GB HDD and 4 GB RAM even with only 50 users. These values increase to: 4 core processor with 3.5 GHz per core, 500GB HDD and 8 GB RAM even with more than 500 users.

1.6.1.2 SW Requirements for OpenScape Business S / UC Booster Server

The operating system used for OpenScape Business S and UC Booster Server is the Suse Linux Enterprise Server (SLES) operating system in the 64 bit variant. Depending on the OpenScape Business S / UC Booser SW version, different versions of the SLES can be used.

Please note that changes may occur in the course of technical progress. For current information please refer to the technical release information of the respective OpenScape Business SW version.

OpenScape Business S / UC Booster Server	**SW Description / Version**
Operating system	SLES 12 SP5 64 Bit New installations SLES 12 SP3 64 Bit (only for existing installation) SLES 11 SP4 64 Bit (only for existing installation)
Virus scanner	McAfee Agent V5.5 or above

Table 48 Min Processor, RAM, HDD/SSD Requirements for Server PC

1.6.1.2.1 SW Provision

Software on DVD

When you purchase the OpenScape Business S communications software on DVD, an additional DVD with the appropriate SLES version is supplied. This SLES version (DVD) may only be used together with the communications software.

Some PC manufacturers offer their own Linux installation disks optimized for their server PC models. These can be used if the SLES version corresponds to the version released for OpenScape Business.

Software deployment as OVA image

The OpenScape Business S SW including the SLES is also provided via the Software Download Server as a so-called "OVA Image" for quick and easy installation in a virtual VmWare environment.

The OVA image is delivered with a default partitioning of the file system:

The swap and Linux partitions are located on the first hard disk and the home partition on the second hard disk.

Depending on the number of users and the functions used, the "home" partition may have to be adjusted after installation in the virtual environment under the system settings according to Table 49. After the adjustment, the virtual machine must be restarted.

	Up to 50 User	**Up to 100 User**	**Up to 500 User**	**More than 500 User**	**Contact Center**	**Fax**
Home Partition	40 GB	80 GB	80	180 GB	180 GB	User-dependent

Table 49 Min size of the Home partition in virtual environment

1.6.1.2.2 SW Support for Novell SLES

Although SLES can be installed and operated without registering with Novell, registration with Novell is required to obtain security patches and software updates. You will need to create a customer account with Novell using the SLES Upgrade Key, also known as the Activation Key. It is recommended that you create the customer account before installing Linux.

The required "SLES Upgrade Key" can be purchased from Unify using a separate order item. It may only be used in connection with the SLES version provided by Unify for OpenScape Business S. The key is independent of a SLES version and grants 3 years of SW support after registration. After this period, a new key must be ordered and registered with Novell.

The SLES Upgrade Key is provided via the Unify License Server (CLS). To do this, the Licence Activation Code (LAC) specified on the delivery note is first entered on the CLS and the associated licence activated. The SLES Upgrade Key can then be downloaded from the CLS.

1.6.1.3 LAN requirements and prerequisites

OpenScape Business S systems and UC Booster Servers require a LAN connection and optional Internet access for:

- OpenScape Business features such as Internet telephony
- Access to the Unify License Server (CLS)
- Remote Service Platform (RSP)
- OpenScape Business Software Updates
- Registration with Novell
- Security patches and general Linux software updates

Requirements for the LAN

The LAN connected to OpenScape Business must meet the following minimum requirements:

- LAN with at least 100 Mbps and IPv4
- uniform time base (e.g. via NTP server)
- fixed IP address of the server PC

1.6.1.4 Requirements for virtual environments

OpenScape Business S and UC Booster Server can be operated in the following virtual environments.

- VMware vSphere 5/6 including the latest patches
- Microsoft Hyper V based on Microsoft Windows Server 2016 or Server 2019
- Kernel-based Virtual Machine (KVM) (project-specific release required)

Please note that in the course of technical progress changes regarding the HW/SW requirements may occur. For current information please refer to the technical release information of the respective OpenScape Business SW version

SW provision

The virtualization SW is not part of the OpenScape Business S / UC Booster Server SW deliveries. The procurement and operation of the virtualization environment is the responsibility of the customer.

1.6.1.4.1 General Requirements for the Virtual Environment

For the virtualization environments listed above, the following minimum requirements apply for OpenScape Business S and UC Booster Server in conjunction with SLES 64-bit:

Parameter	Value / Settings
Guest Operating System:	SLES 64 Bit
Virtual Disk Mode:	Standard / Default
Virtual Disk Format Type:	Thin Provisioning (dynamic HD Capacity) or Thick Provisioning (fixed HD Capacity)
vCPUs:	Depending on number of participants and scope of functions, see Table 29
vCPUs Shares (High/Normal):	High
vCPU Reservation:	Depending on number of participants and scope of functions, see Table 29
vCPU Limit:	Unlimited
VM Memory (RAM):	Depending on number of participants and scope of functions, see Table 29
VM Memory Shares (High/Normal):	Normal
VM Memory Reservation:	Depending on number of participants and scope of functions, see Table 29
VM Memory Limit:	Unlimited
Number of l vNICs:	1
VMware Manual MAC Used:	NO
Virtual Network Adapter Support:	YES, vmxnet3-Treiber
VMware Tools Installation:	YES
General requirement:	The VM (virtual machine) may use the CPU up to 70% of its capacity, values above this may cause malfunction

Table 50 Requirements for virtual environments

1.6.1.4.2 Specific notes / requirements for Microsoft Hype V

The Hyper V specific scope of services, e.g. snapshots, live migration, failover clustering is independent of the operation of the OpenScape Business S / UC booster servers.

Please refer to the Microsoft specification for requirements on the server infrastructure.

The following Microsoft Hyper-V features are supported by OpenScape Business S / UC-Booster Server:

- Thin Provisioning
- High Availability (HA)
- Live migration
- Data recovery

1.6.1.4.3 Specific notes / requirements for VMware vSphere

For hardware requirements for the physical server PC, see the "VMware Compatibility Guide" and "VMware Resource Management Guide" at:

https://www.vmware.com/

To find already certified and tested hardware, VMware offers an online search function on the Internet homepage under "Compatibility Guides".

https://www.vmware.com/guides.html

The following VMware vSphere features are supported by OpenScape Business S / UC Booster Server:

- Thin provisioning
- High Availability (HA)
- VMotion
- Data recovery (VDR)
- DRS (VMotion automated)
- Storage VMotion
- The following VMware vSphere features are not supported:
- Fault Tolerance

1.6.1.4.4 Specific Notes / Requirements for Kernel-based Virtual Machine (KVM)

The Linux-based KVM virtualization platform can be used as a virtual machine for OpenScape Business S. A project-specific release is required for this.

1.6.2 HW / SW Requirements for OpenScape Business TAPI 170 Server

Please note that changes may occur in the course of technical progress. For current information please refer to the technical release information of the respective OpenScape Business TAPI 170 SW version.

1.6.2.1 HW Requirements for OpenScape Business TAPI 170 Server

The Server HW must be designed for 24/7 operation and meet the respective requirements of the Windows Server SW used.

OpenScape Business TAPI 170 does not require any additional hardware resources.

1.6.2.2 SW Requirements for OpenScape Business TAPI 170 Server

With the SW prerequisites it must be distinguished between operation modes of the TAPI 170 TSP.

OpenScape Business TAPI 170 V1	**SW component**	**Designation, Version**
TSP auf Server	Microsoft operating system	*Windows 2008 R2 Server 64 Bit**(*1*** *Windows 2012 Server 64 Bit **(*1*** *Windows 2012/R2 Server 64 Bit **(*1*** *Small Business Server 2011 64 Bit* *Small Business Server 2012 (Windows 2012 Essential) **(*1*** Windows 2016 Server
Remote TAPI auf Server	Microsoft operating system	*Windows 2008 R2 Server 64 Bit **(*1*** *Windows 2012 Server 64 Bit **(*1*** *Windows 2012 R2 Server 64 Bit **(*1*** Windows 2016 Server 64 Bit
Remote TAPI auf Client PC (no SW installation on the PC)	Microsoft operating system	*Windows 7 (Ultimate & Professional) 32 & 64 Bit **(*1*** *Windows 8/8.1 (Pro & Enterprise) 32 & 64 Bit **(*1*** Windows 10 Enterprise / Pro32 & 64 Bit

Table 51 Requirements for virtual environments

1) Microsoft no longer offers basic support for this operating system.

OpenScape Business TAPI 170 can also be used in terminal server or virtualized environments:

- Virtualization SW:
  - VMware (ESXi V6.0)
- Terminal Server SW:
  - Citrix Xen App V6.5

1.6.3 HW / SW Requirements for OpenScape Accounting / Welcome V4

Please note that changes may occur in the course of technical progress. For current information please refer to the OpenScape Accounting / Welcome sales information.

1.6.3.1 HW Requirements for OpenScape Accounting / Welcome

The Server HW must at least meet the respective requirements of the Microsoft Windows operating system used.

OpenScape Business Accounting Server components	**SW components**	**Designation, Version**
	Microsoft operating system	*Windows Server 2008 32/64 Bit* ***(*1*** *Windows Server 2008R2 64 Bit* ***(*1*** *Windows Server 2012 64 Bit* ***(*1*** *Windows Server 2012R2 64 Bit* ***(*1*** *Windows Server 2016 Essentials* ***(*1*** *Windows Server 2016 Standard* ***(*1*** *Windows 7 32/64 Bit Professional* *Windows 7 32/64 Bit Enterprise* ***(*1*** Windows 8 32/64 Bit ***(*1*** Windows 10 64 Bit Professional Windows 10 64 Bit Enterprise
OpenScape Business Accounting Client components	**SW components**	**Designation Version**
	Microsoft operating system	*Windows 7 32/64 Bit Professional* ***(*1*** *Windows 7 32/64 Bit Enterprise* ***(*1*** Windows 8 32/64 Bit Windows 10 64 Bit Professional Windows 10 64 Bit Enterprise
	Oracle	Oracle 32 bit Client libraries

Table 52 SW Prerequisites for OpenScape Accounting / Welcome

***1)** Microsoft no longer offers basic support for this operating system.

1.7 Requirements for the OpenScape Business Clients

The following overviews show the main requirements for the Client HW/SW and the most important boundary conditions.

Please note that in the course of technical progress changes regarding the HW/SW requirements may occur. In the following chapters, only those operating systems and application programs are listed under SW requirements for which the respective manufacturer still provides SW updates. (based on the time of writing this document).

Important note: Unify SW products or product versions that are installed / operated in conjunction with SW components that the respective manufacturer no longer provides as a standard support can no longer be supported by Unify in the event of problems. For current information on supported HW / SW components please refer to the technical release information of the respective OpenScape Business SW.

1.7.1 HW Requirements for UC, Contact Center and Attendant Clients

To use the OpenScape Business Clients, the respective client PC must have suitable hardware equipment. Unless otherwise specified for a client, these hardware requirements also apply to the configuration of the clients in virtual or terminal server environments.

PC Client Hardware (Minimum Requirements)	myPortal @work	myPortal for Desktop	myPortal for Outlook	myAgent	myReports	myAttendant	Business Attendant	Fax Printer
Microsoft Windows Client PC	■	■	■	■	■	■	■	■
Processor	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz
Memory (RAM)	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB
Mass data storage (HD/SSD) (1	20 GB	20 GB	20 GB	20 GB	20 GB	20 GB	20 GB	20 GB
LAN	100 Mbit/s	100 Mbit/s	100 Mbit/s	100 Mbit/s	100 Mbit/s	100 Mbit/s	100 Mbit/s	100 Mbit/s
USB	n/a	n/a	n/a	n/a	n/a	n/a	USB2	n/a
Display resolution	1024x768	1024x768	1024x768	1024x768	1024x768	1024x768	1024x768	1024x768
Apple Mac Client PC	■	■	□	□	□	□	□	□
Processor	2 x 2Ghz	2 x 2Ghz	□	□	□	□	□	□
Memory	2 GB	2 GB	□	□	□	□	□	□
Mass data storage (HD / SSD) (1	20 GB	20 GB	□	□	□	□	□	□
LAN	100 Mbit/s	100 Mbit/s	□	□	□	□	□	□
Display resolution	1024x768	1024x768	□	□	□	□	□	□

Table 53 HW requirements for UC clients

(1 For the client only in addition tot he operating system
■ supported
□ not supported

1.7.2 SW Requirements for UC, Contact Center und Attendant Clients

PC Client Sofware	myPortal @work	myPortal for Desktop	myPortal for Outlook	myAgent	myReports	myAttendant	Business Attendant	Fax Printer
Client Operating System								
Microsoft Windows 10 (64 Bit) all versions	■	■	■	■	■	■	■	■
Microsoft Windows 8/8.1 (32 / 64 Bit) all versions	■	■	■	■	■	■	■	■
Apple MAC OS X 10.15.x	■	■	□	□	□	□	□	□
Apple MAC OS X 10.14.x	■	■	□	□	□	□	□	□
Terminal Server for Clients								
Microsoft Windows 2019 Server 64 Bit	■	■	■	■	■	■	□	■
MS Terminal Server 2019	■	■	■	■	■	■	□	■
Microsoft Windows 2016 Server 64 Bit	■	■	■	■	■	■	□	■
MS Terminal Server 2016	■	■	■	■	■	■	□	■
Citrix XenApp 7.17 (Desktop Mode)	□	■	■	■	■	■	□	■
Citrix XenDesktop 7.17 Server (64 Bit)	□	■	■	■	■	■	□	■
SW Components in general								
Microsoft Outlook / Office incl. .NET (lokal)	□	□	■	□	□	□	□	■
2019 (32 / 64 Bit) + Office 365	□	□	■	□	□	□	□	■
2016 (32 / 64 Bit) + Office 365	□	□	■	□	□	□	□	■
.NET Framework	n/a	n/a	>= 4.5	>= 4.5	>= 4.5	n/a	n/a	>= 4.5
Webbrowser								
Microsoft EDGE	□	■	■	■	■	□	□	□
Microsoft Internet Explorer Version 11 or higher	□	■	■	■	■	□	□	□
Mozilla Firefox V68.0 or higher	□	■	■	■	■	□	□	□
Google Chrome V53 or higher	□	■	■	■	■	□	□	□
Java								
Oracle Java SE >= 1.8.x (32 Bit or 64 Bit)	□	■	□	□	□	■	□	□
Open JDK V8 (32 Bit or 64 Bit)	□	■	□	□	□	■	□	□
Apple Java >= 1.6.x	□	■	□	□	□	□	□	□
SW Components for specific functions								
Microsoft Exchange (Kalender und Kontakte)	n/a	■	■	n/a	n/a	■	n/a	n/a
Exchange Server with Office 365 (Cloud)	n/a	■	■	n/a	n/a	■	n/a	n/a
Exchange 2019 (64 bit)	n/a	■	■	n/a	n/a	■	n/a	n/a
Exchange 2016 (64 bit)	n/a	■	■	n/a	n/a	■	n/a	n/a
Adobe Reader (Berichtsausgabe)	n/a	n/a	n/a	>= V9.3	>= V9.3	n/a	n/a	n/a

Table 54 SW requirements for UC clients

■ supported
⊡ supported with restrictions (see release note)
☐ not supported
n/a not applicable

Functional boundary conditions and restrictions

Terminal server and Citrix server hardware environments

The number of installable clients depends on the server performance and the available memory. If other applications are used on the server, their memory requirements must be taken into account.

Java

32-bit / 64-bit version:

To keep the workstation memory usage low, the use of the 32-bit Java version is generally recommended.

The 64-bit Java version is mandatory for using the following functions:

- "Import Outlook contacts on startup" in connection with Microsoft Office in the 64-bit version.

JRE / JDK

Under Microsoft Windows the JRE can be used

Under Apple MAC OS, JDK is required to support TLS 1.2.

Oracle Java:

When using Oracle Java on the client PC, the Oracle license terms regarding Java support must be observed.

Alternatively the OpenJDK Java variant can be used.

OpenJDK

OpenJDK 8 can be used as a free open source alternative to Oracle Java Runtime Environment. Recommended installation programs: https://www.azul.com/downloads/zulu/

Other requirements

Depending on the configuration, administration rights are required for installation and automatic updates.

Installation of the UC Clients requires local administration rights on the client PC, but automatic updates do not. (exception: Apple MAC OS X for UC Suite, myPortal work

1.7.3 Requirements of the Mobility Clients

In order to use myPortal to go, the mobile phone/smartphone or tablet must have suitable hardware and software equipment. Information on devices, browsers and operating systems can be found in the Unify Expert Wiki under the link: https://wiki.unify.com/wiki/myPortal_to_go

1.7.3.1 HW / SW requirements for the Mobility Clients

Client **On mobile device**	**myPortal to go (App)**	**myPortal to go (Web)**
Mobile Device Hardware		
Smartphones	■	■
Touchscreen	■	■
Display Resolution	>= 320x480	>= 320x480
Tablet PC	■	■
Touchscreen	■	■
Display Resolution	>= 800x480	>= 800x480
Mobile Device Software		
Smartphones / Tablets	■	n/a
Android	>= 5.0	n/a
Apple iOS	>= 12.2	n/a
SW componenten in general		
Webbrowser	n/a	■

Table 55 HW/SW requirements for Mobility Clients

■ supported
□ not supported

Functional boundary conditions and restrictions

myPortal for Mobile works with numerous mobile phones and tablet PCs. Information on devices, browsers and operating systems can be found in the Unify expert wiki:

https://wiki.unify.com/wiki/myPortal_to_go

1.7.4 Requirements for other PC Clients

1.7.4.1 HW Requirements of the other PC Clients

PC Client Hardware (Minimum Requirements)	Application Launcher	CallBridge Collection	TAPI 120 TSP SW	ODBC-Bridge Server	myContacts	Accounting Manager	OSBiz (WBM)	Manager E
Microsoft Windows Client PC	■	■	■	■	■	■	n/a	■
Processor	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz	2 x 2 Ghz
Memory (RAM)	2 GB	2 GB	2 GB	2 GB	2 GB	2 GB	OS	2 GB
Mass data storage (HD / SSD) (1	20 GB	20 GB	20 GB	20 GB	20 GB	20 GB	OS	OS
LAN	100 Mb/s	100 Mb/s	100 Mb/s	100 Mb/s	100 Mb/s	100 Mb/s	100 Mb/s	OS
Display resolution	1024x768	1024x768	1024x768	1024x768	1024x768	1024x768	1024x768	1024x768

Table 56 HW requirements for other PC clients

(1 For the client only in addition tot he operating system
■ supported
□ not supported
OS same as for OS

SW Requirements of other PC Clients

PC Client	Application Launcher	CallBridge Collection	TAPI 120 TSP SW	ODBC-Bridge Server	myContacts	Accounting Manager	OSBiz (WBM)	Manager E
Client Operating System							n/a	
Microsoft Windows 10 (32/ 64 Bit)	■	■	■	■	■	■	n/a	■
Enterprise (32/ 64 Bit)	■	■	■	■	■	■	n/a	■
Pro (32 / 64 Bit)	■	■	■	■	■	■	n/a	■
Microsoft Windows 8/8.1 (32 / 64 Bit	■	■	■	■	■	■	n/a	■
Enterprise (32/ 64 Bit)	■	■	■	■	■	■	n/a	■
Pro (32 / 64 Bit)	■	■	■	■	■	■	n/a	■
Server Operating System								
Microsoft Windows Server 2019 (64 Bit)	□	□	□	■	□	□	n/a	□
Microsoft Windows Server 2016 (64 Bit)	□	□	□	■	□	□	n/a	□
SW components								
Microsoft Outlook / Office incl. .NET (lokal)	□	□	□	□	■	□	□	□
2019 (32 / 64 Bit) + Office 365	□	□	□	□	■	□	□	□

PC Client	Application Launcher	CallBridge Collection	TAPI 120 TSP SW	ODBC-Bridge Server	myContacts	Accounting Manager	OSBiz (WBM)	Manager E
2016 (32 / 64 Bit) + Office 365	□	□	□	□	■	□	□	□
.NET Framewo	n/a	n/a	n/a	>= 4.5	>= 4.5	n/a	n/a	n/a
Webbrowser	□	□	□	□	□	□	■	□
Microsoft EDGE	□	□	□	□	□	□	■	□
Microsoft Internet Explorer Version 11 or higher	□	□	□	□	□	□	■	□
Mozilla Firefox V68.0 or higher	□	□	□	□	□	□	■	□
Google Chrome V53 or higher	□	□	□	□	□	□	■	□
Java	■	□	□	□	□	□	■	□
Oracle Java SE >= 1.8.x (32 Bit or 64 Bit)	■	□	□	□	□	□	□	□
Open JDK V8 (32 Bit or 64 Bit)	■	□	□	□	□	□	□	□
SW Components for specific functions								
ODBC 3.5 comliant database driver	n/a	n/a	n/a	■	n/a	n/a	n/a	n/a

Table 57 SW requirements for other PC clients

■ supported
□ not supported
OS same as for OS
n/a not applicable

1.7.5 Supported Languages of the OpenScape Business Clients

Different languages are available for the different OpenScape Business Clients.

Client Languages	myPortal @work	myPortal to go (App)	myPortal to go (Web)	myPortal for Desktop	myPortal for Outlook	myAgent	myReports	myAttendant	Business Attendant	Application Launcher	Accounting Manager	Smart VM TUI	Smart VM TUI (UC Suite)	UC Suite VM TUI	WBM	Manager E
German	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
English	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Czech	■	■	■	■	■	■	■	■	■	□	□	■	■	■	□	■
Danish	■	■	■	■	■	■	□	■	□	□	□	■	■	■	□	■
Spanish	■	■	■	■	■	■	■	■	□	□	□	■	■	■	■	■
Finnish	■	■	■	■	■	■	■	■	□	□	□	■	□	■	□	■
French	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	□
Croatian	□	■	■	■	■	■	□	■	□	□	□	■	■	■	□	□
Hungarian	□	■	■	■	■	■	□	■	□	□	□	■	□	■	□	■
Italian	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	■
Dutch	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	■
Norwegian	■	■	■	■	■	■	□	■	□	□	□	■	■	■	□	■
Polish	■	■	■	■	■	■	■	■	□	□	□	■	□	■	□	■
portuguese	■	■	■	■	■	■	■	■	■	□	□	■	■	■	■	■
Russian	■	■	■	■	■	■	■	■	□	□	□	■	■	■	□	■
Swedish	■	■	■	■	■	■	□	■	□	□	□	■	■	■	□	■
Turkish	□	■	■	■	■	■	□	■	□	□	□	■	■	■	□	□
Chinese	□	□	□	■	■	■	■	■	□	□	□	■	■	■	□	□

Table 58 Supported languages of the OpenScape Business Clients

Functional boundary conditions

A Russian or Chinese Windows operating system is required to use the Russian or Chinese user interface.

Voicemail outputs of UC Smart and UC Suite are also available in Belgian (Flemish) and Greek.

1.7.6 Supported End Devices of the OpenScape Business PC Clients

The OpenScape Business Clients can be used in connection with the following telephones:

Supported associated Telephone devices / Clients	myPortal @work	myPortal to go (Web)	myPortal for Desktop	myPortal for Outlook	myAgent	myReports	myAttendant	Business Attendant	Application Launcher	CallBridge Collection	TAPI 120 TSP SW	TAPI 170 TSP SW	TAPI 170 Remote	Smart VM TUI	Smart VM TUI (UC Suite)
OpenScape Desk Phone CP HFA	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
OpenStage HFA	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
OpenScape Desk Phone IP 35G/55G HFA	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
OpenScape Personal Edition HFA	■	■	■	■	■	■	■	■	■	□	■	■	■	■	■
OpenStage T	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
OpenScape Business Cordless	■	■	■	■	■	■	■	⊡	⊡	□	■	■	■	■	■
Analog Telephone	■	■	■	■	□	■	■	⊡	⊡	□	■	■	■	■	■
OpenScape Desk Phone CP (SIP)	■	■	■	■	□	■	■	□	□	□	■	□	□	■	■
OpenStage SIP	■	■	■	■	□	■	■	□	□	□	■	□	□	■	■
OpenScape Desk Phone IP 35G/55G SIP	■	■	■	■	□	■	■	□	□	□	■	□	□	■	■
OpenScape Personal Edition SIP	■	■	■	■	□	■	■	□	□	□	■	□	□	■	■
OpenScape Cordless IP	■	■	■	■	□	■	■	□	□	□	■	□	□	■	■
SIP-Telephone with 3PCC support	■	■	■	■	□	■	■	□	□	□	■	□	□	■	■

Table 59 Supported associated telephone devices and of the OpenScape Business Clients

■ supported
⊡ supported with restrictions
□ not supported

1.8 Licensing

The flexible licensing concept of OpenScape Business allows customers to adapt the functional scope to their own requirements through licenses. All OpenScape Business X communication systems and OpenScape Business S) are subject to this licensing concept. Phones, UC clients, UC functions and system-wide features can thus be unlocked according to individual customer needs. Uniform licenses are used for all OpenScape Business communication systems.

OpenScape Business can be expanded or equipped with additional features at a later date by purchasing additional licenses.

In order to make special features available to the customer for testing or getting to know, evaluation licenses with a term of 90 days can be ordered.

1.8.1 Licensing Procedure

For licensing OpenScape Business systems, Unify's Central License Server (CLS) provides a centralized approach to license management and activation. This ensures that a customer can use exactly the system configuration or those features for which he/she has acquired the corresponding licenses (usage rights).

The license server generates order-related licenses that are bound to the OpenScape Business customer system. For this purpose a system-specific license file is created that is imported into the customer system either online or offline. Subsequently, the licenses can be assigned to the system resources or the participants via the OpenScape Business Assistant, (WBM).

Please note the CLS guidelines for maintaining partner and customer accounts. You find additional information also in the Unify Partner Portal at https://www.unify.com/partnerportal

1.8.1.1 License Marketing Models

When licensing the OpenScape Business System, you can choose between different commercial marketing models for billing.

1.8.1.1.1 Permanent Licensing

With permanent licensing, the customer invests once in the purchase of the licenses, which he can then use within the framework of the transfer conditions (EULA).

1.8.1.1.2 Pay as you go licensing (Software Subscription Licensing)

Pay As You Go (also known as Software Subscription Licensing (SSL)) is a monthly, on-demand billing for OpenScape Business licenses.

Usage billing:

- The customer receives a monthly invoice from his Unify Partner only for the licenses activated in the OpenScape Business Assistant (WBM). As minimum, 5 OpenScape Business "PAYG VoiceUser" licenses are billed, regardless of the configuration.
- The Unify Partner receives a monthly invoice from his distribution partner.
- The distribution partner receives a monthly invoice from Unify.

The OpenScape Business "PAYG Base License" includes for the system's period of use:

- Software support for the entire system
- Licensing of the AutoAttendant system function
- Licensing of the networking function
- Licensing of S2M/SIP/T1 lines for connection to the public telephone network

Specific order items are available for the use of Pay as you go:

Requirements for the Pay as you go licensing

Pay as you go license positions can only be ordered if the directly connected distribution partner has concluded an additional contract with Unify. (Supplementary Agreement to Partner Agreement for Distributor for Software Subscription Licensing).

License provisioning

Pay as you go licenses are provided by the Unify License Server (CLS) as license file.

After importing the license file in OpenScape Business, the system is switched to the Pay as you go license mode. In this case, all license types are provided in maximum extension and can be assigned to the desired functions / users via the OpenScape Business Assistant (WBM).

License accounting

Depending on the licenses assigned via OpenScape Business Assistant, Unify creates an invoice with the following billing items for the distribution partner:

L30250-U622-B708 OpenScape Business PAYG Voice User
(includes: IP user license + voicemail)

L30250-U622-B702 OpenScape Business PAYG UC Smart
(includes: IP-User + Voicemail + UC Smart)

L30250-U622-B695 OpenScape Business PAYG UC Suite
(includes: IP user + voicemail + groupware or UC user

L30250-U622-B701 OpenScape Business PAYG Application Launcher

L30250-U622-B703 OpenScape Business PAYG Fax

L30250-U622-B704 OpenScape Business PAYG Conference

L30250-U622-B705 OpenScape Business PAYG TAPI

L30250-U622-B706 OpenScape Business PAYG Contact Center Email

L30250-U622-B707 OpenScape Business PAYG Contact Center Fax

L30250-U622-B710 OpenScape Business PAYG myAttendant

L30250-U622-B711 OpenScape Business PAYG myAgent

L30250-U622-B712 OpenScape Business PAYG myReports

L30250-U622-B713 OpenScape Business PAYG OpenDirectory Connector

The maximum number of used licenses per license type in the billing period is always billed.

Functional boundary conditions and restrictions

To use Pay as you go, ports 7780 and 7790 must be opened in the Internet router of the customer installation (in the firewalls) for the communication of OpenScape Business with the Unify license server.

Pay as you go licensing can be used for all OpenScape Business models, whereas the use of a central network license file is not supported in OpenScape Business networks.

The licenses for

- OpenScape Business Attendant
- OpenScape Personal Edition
- OpenScape Business Accounting / Welcome
- OpenScape Business Cordless IP

cannot be used in combination with Pay as you go licensing in OpenScape Business.

The OpenScape Business Pay as you go licensing model cannot be combined with products from the "Large Portfolio" of Unify e.g. with the OpenScape Contact Center.

Further information:

Detailed information on Pay as you go is available in the Unify Partner Portal on the OpenScape Business Product homepage.

1.8.2 Licensing Types

Regardless of the billing model selected, different technical licensing types are available in conjunction with the Unify Central License Server.

- Offline licensing via license file
- Online Licensing
- Online licensing with CLS Connect.

1.8.2.1 Offline Licensing License File

With offline licensing, authorized partners generate a customer-specific license file on the Central License Server (CLS). The generated license file must then be manually downloaded from the license server and imported and activated in the customer system via the OpenScape Business Assistant.

In case of "offline" licensing, the OpenScape Business System does not need its own access to the license server via the Internet.

1.8.2.2 Online Licensing

With online licensing, the licenses purchased by the customer are assigned to the customer at the Central License Server (CLS) by authorized partners and a so-called License Access Code (LAC) is created.

When licensing online, only the LAC generated at the license server needs to be entered at the OpenScape Business System. The system connects to the Central License Server and imports the license file. The licenses are then automatically activated.

In case of "online" licensing, the OpenScape Business system requires access to the license server via the Internet. The connection is always established from the OpenScape Business System to the license server.

1.8.2.3 Licensing via CLS Connect

CLS Connect simplifies the licensing of OpenScape Business X systems and features and the re-generation of the license key in the event of a mainboard replacement.

CLS Connect is optionally available for OpenScape Business X systems. In OpenScape Business S Systems it is mandatory for licensing the system.

License modifications

After the initial licensing of a system and the activation of CLS Connect, changes regarding the required licenses need only be made on the Central License Server (CLS). The modified license information (license file) is automatically transferred from the license server to the OpenScape Business System.

Regeneration of the license key

With CLS Connect activated, the number of permitted license transfers (regenerations) is not limited and can be carried out at any time without the involvement of the CLS support team. A Regeneration is carried out exclusively via the license server, whereby the Regeneration handling on the license server does not differ from systems without CLS Connect.

Once the "Regeneration" function has been executed on the Central License Server (CLS), the system from which the licenses were transferred changes to the status "unlicensed". The Central License Server (CLS) generates a new license file for the new system. This is imported into the new system and then activated. Activation of the license file again requires the activated CLS Connect function.

Failover period / emergency operation

If a system with activated CLS Connect cannot reach the Central License Server (CLS), the 30-day failover period begin. During this period the system is fully functional. If the connection to the license server is re-established during this period, the failover state is terminated. If the connection cannot be re-established within 30 days, the system switches to emergency mode.

Requirements

To use CLS Connect, OpenScape Business must be permanently connected to the Central License Server (CLS) via the Internet.

Technical boundary conditions and restrictions

OpenScape Business requires an Internet connection to the Unify license server. The connection via the Internet is always established from the OpenScape Business system to the license server.

The activation of CLS Connect is permanent. The feature cannot be undone or deactivated.

After a modification at the license server the time span until the new license file is transferred to the OpenScape Business System can be up to 3 hours.

CLS Connect can be used both for individually licensed systems and for systems with a central network license file.

1.8.3 OpenScape Business Licenses

All licenses are always bound to the basic license of the communications system and allow the use of the purchased features for the assigned version of OpenScape Business.

The licenses are thematically grouped into license groups. The following license groups are available:

- The **basic license** permanently activates the software of the communication system and is a prerequisite for the activation of all other licenses.
- **User Licenses** for activating the telephones for external voice communication. They are permanently assigned to the subscribers (users).
- **User-oriented licences** for activating specific features for the users.
- **System licenses** for activating general features system-wide.

The above licenses can be used for all OpenScape Business X and OpenScape Business S models. The licenses cover all features and can be combined according to the customer's requirements.

Functional boundary conditions

The OpenScape Business single licenses mentioned above can also be bundled in different combinations and numbers in sales marketing packages.

These license packages must always be assigned to an OpenScape Business System. It is not possible to unbundle the licenses and distribute them to different systems for one or more customers.

1.8.3.1 Basic License

The basic license allows general use of the communications system. It is the prerequisite for all other licenses. Internal telephony and emergency operation of the communications system are possible without a basic license.

In principle, there are different Base License marketing positions for OpenScape Business X1 and for OpenScape Business X3/X5/X8/S.

The Base License for OpenScape Business X3/X5/X8/S also covers the operation of UC Booster HW in connection with the previously mentioned systems and the operation of OpenScape Business S.

The basic license for OpenScape Business X1 cannot be used in the models X3/X5/X8 and OpenScape Business S and vice versa.

The basic license packages always include 3 years SW support and the Web Collaboration Connector license. The Basic License Package for OpenScape Business X3/X5/X8/S always additionally includes the OpenDirectory Basic License for the use of Open Directory Service (ODS).

Based on these basic license packages, further license packages consisting of the basic license package plus additional licenses are offered for marketing.

1.8.3.2 Basic License Packages

Basic license package	Description
OpenScape Business X1 Base	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base license • 3 years SW support • Web Collaboration Connector license.
OpenScape Business Base (X3/X5/X8/S)	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base License • 3 years SW Support

Basic license package	Description
	• OpenDirectory Base license • Web Collaboration Connector license

Table 60 Basic license packages incl. 3 years SW support

Functional boundary condition

For activating the 3-year SW support via this basic license, it is required that the "OpenScape Business IP User" or the "OpenScape Business TDM User" position is additionally marketed for each user of the system.

1.8.3.3 Basic License Packages Bundled with Further Licenses

The OpenScape Business basic license packages are also available bundled with other licenses as a marketing item.

1.8.3.3.1 Bundling with 5 years SW support

Basic license package	Description
OpenScape Business X1 Base w/5y	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base license • 5 years SW support (Constraint: Order of 5 years SW support for all users) • Web Collaboration Connector license
OpenScape Business Base w/5y SW-Support (X3/X5/X8/S)	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base License • 5 years SW Support (Constraint: Order of 5 years SW support for all users) • OpenDirectory Base License • Web Collaboration Connector license

Table 61 Basic license packages incl. 5 years SW support

Functional boundary condition

For activating the 5-year SW support via this basic license, it is required that the "OpenScape Business User 5y SSP" or the "OpenScape Business TDM User 5y SSP" position is additionally marketed for all users of the system.

1.8.3.3.2 Bundling with SIP Trunks

Basic license package	Description
OpenScape Business X1 Base incl SIP Trunks	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base license • 3 years SW support • 2 x OpenScape Business S2M/SIP/T1 Trunk • Web Collaboration Connector license
OpenScape Business Base incl SIP Trunk (X3/X5/X8/S)	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base License • 3 years SW support • 2 x OpenScape Business S2M/SIP/T1 Trunk • OpenDirectory Base License • Web Collaboration Connector license

Table 62 Basic license packages bundled with SIP trunks

1.8.3.4 User licenses

Each participant connected to the communications system requires a user license. This license is permanently assigned to the subscriber's phone number via the OpenScape Business Assistant (WBM).

The user licenses contain the extensive voice functionality of OpenScape Business. For using the UC solutions UC Suite or UC Smart further user-oriented licenses are required.

The following user licenses are available:

User Licenses	Description
OpenScape Business IP User	for the use of • IP system telephones (HFA) and SIP telephones IP User licenses can also be used to license: • TDM users • mobility user (GSM/mobile telephones as extensions of the communication system as well as the voice functionality for myPortal to go) • Desk Sharing User • Fallback User See also the notes in chapter 1.8.3.4
OpenScape Business User 5y SSP	Like OpenScape Business IP User but with 5 years SW support (Only in connection with the basic license for 5 years SW support)
OpenScape Business TDM User	For the use of • UP0 system telephones • analog phones, analogue FAX • ISDN telephones, ISDN fax • DECT telephones
OpenScape Business TDM User 5y SSP	Like OpenScape Business TDM User but with 5 years SW support (Only in connection with the basic license for 5 years SW support)

Table 63 User Licenses

1.8.3.4.1 Flexible User Licensing for IP, TDM, Mobility and Deskshare Users

IP User licenses can also be used to license TDM users, Mobility users and Deskshare users who normally require a TDM user license.

The licensing dialogs in OpenScape Business Assistant remain unchanged, however.

1.8.3.5 User-oriented Licenses

User-oriented licenses entitle the participant to use the Unified Communications features and data integration applications. A user-oriented license always requires a User License and is permanently assigned to the user's telephone number.

The following user-oriented licenses are available:

User oriented license	Description
OpenScape Business Voicemail	For use of: • a UC Smart or UC Suite based voicemail box (voicemail). • the voicemail to e-mail feature if no UC user license is available
OpenScape Business UC User	UC User licenses can be used to license: • myPortal for Desktop and for the licensing of:

	• myPortal @work • myPortal to go • Extended UC functionality at the CP 400/600 • Application Launcher (in conjunction with additional licenses) • Further Web Services clients
OpenScape Business Groupware User	Groupware User licenses can be used to license: • myPortal for Outlook and for the licensing of: • myPortal @work • myPortal for Desktop • myPortal to go • Extended UC functionality at the CP 400/600 • Application Launcher (in conjunction with additional licenses) • Further Web Services clients See also the notes in chapter 1.8.3.5.1
OpenScape Business Fax	For use: • a fax box within the UC Suite An additional prerequisite is a UC User or a Groupware User license for the user.
OpenScape Business Conference	for the use • conference management within UC Suite/ UC Smart, such as managing and initiating permanent and recurring conferences. An additional requirement is a myPortal Smart / UC User or a Groupware User license for the user, depending on the UC application. No license is required for participation in conferences.
OpenScape Business myAttendant	For use: • the myAttendant (UC Suite attendant console functions)
OpenScape Business myAgent	For use: • of the myAgent Client and Contact Center functions.
OpenScape Business Application Launcher	For use: • of the Application Launcher client An additional requirement is either a myPortal Smart / UC User / Groupware User license or a myAgent license for the user, depending on the UC application.
OpenScape Business TAPI	for the use of • TAPI 120 • TAPI 170 For the connection of TAPI-compliant applications for the user

Table 64 User oriented licenses

1.8.3.5.1 Flexible UC Suite User Licensing for Groupware User and UC User

With Groupware User Licenses, applications that require a myPortal for Desktop User License can also be licensed for a user, such as: myPortal @work, myPortal to go, myPortal for Desktop, Extended UC Functionality on the CP 400/600, Application Launcher, additional Web Services Clients.

The licensing dialogs in OpenScape Business Assistant remain unchanged, however.

1.8.3.6 System licenses

System licenses are not subscriber-related and activate system-wide features. These features can be used by all subscribers of the communications system. The following system licenses are available:

System License	Description
System resources	
OpenScape Business S2M/SIP/T1 Trunks (WBM: OpenScape Business S2M/SIP Trunks)	For the use of; • S_{2M-} channels • T1- channels • ITSP – simultaneous connections • SIP Trunk – simultaneous connections For primary multiplex connections and T1, the individual voice channels are licensed (one license per B channel). For SIP trunk and ITSP connections, the number of simultaneous connections to one or more ITSP providers (SIP providers) is licensed (one license per active connection). S0- B-channels do not need to be licensed, this includes connections to S0 fax servers in point-to-point mode.
OpenScape Business Networking	For using the • IP networking via SIP-Q • IP networking via native SIP * • TDM networking via CorNet-NQ • TDM networking via QSIG. • Networking of UC Suite Applications. The Networking License enables the lines for voice networking and UC Suite networking for one node. One license is required per node. *) For the use of native SIP trunks a valid SW support is always required. No S2m/SIP/T1 trunk licenses are required for networking lines.
Contact Center Options	
OpenScape Business Contact Center E-Mail	For the use of: • One or more e-mail boxes for receiving and sending e-mails for contact center agents A IP or TDM User license and a myAgent license are required.
OpenScape Business Contact Center Fax	For the use of: • One or more e-mail boxes for receiving and sending e-mails for contact center agents Prerequisite is an IP / TDM user and a myAgent license.
OpenScape Business myReports	For using the: • myReports clients for creating statistics on contact center resources according to different criteria
UC Client Options	
OpenScape Business OpenDirectory Connector	For using a: • external database or an external directory on the Open Directory Service (ODS) via SQL Connector. • External database or an external directory on the Open Directory Service (ODS) via the ODBC Connector. A license is required for each connected database.

	Up to four external databases can be connected per system. A "OpenDirectory Base" license is required. This is included in each OpenScape Business Base license and does not need to be ordered separately
OpenScape Business AutoAttendant (WBM: OpenScape Business Company AutoAttendant)	for using a: • central Company AutoAttendant per system for automatic call transfer with UC Smart and UC Suite. • Announcement and simultaneous signaling on the telephone (in conjunction with Smart Voicemail or UC Suite Voicemail). In OpenScape Business networks one Company Auto Attendant license is required per node.
OpenScape Business Attendant	for using the: • OpenScape Business Attendant Clients In networks with UC Smart, OpenScape Business Attendant requires a UC user license. In networks with UC Suite, the myAttendant Client must be used.
OpenScape Business CSTA	OpenScape Business CSTA The CSTA license is required for connecting external CSTA applications: • OpenScape Business X with V3 mainboard • OpenScape Business X with V2 mainboard without UC Booster Card • OpenScape Business X with V2 Mainboard and UC Booster Server • OpenScape Business S Exceptions: OpenScape Business TAPI 170 / 120 do not require a CSTA license. The CSTA license is always required in the system (also in a network) to which the CSTA application is connected.

Table 65 System licenses

1.8.3.7 Licenses for specific use cases

The following licenses or license packages are offered for special use cases of Open Scape Business Systems. An unbundling of the licenses contained in a license package for distribution to other systems is not possible.

1.8.3.7.1 Gateway License

The cost-effective gateway license packages are optimized for use as a voice gateway in conjunction with OpenScape Business S in the network. They are available separately for Open Scape Business X1 and OpenScape Business X3/X5/X8 systems

Gateway Licenses	Description
OpenScape Business X1 Gateway	Consisting of: • Base license • 3 years SW support • 1 x Networking license • 4 x TDM user licenses e.g. for analogue fax (not expansible) • Web Collaboration Connector license.
OpenScape Business X3/X5/X8 Gateway	For activating the OpenScape Business X1 features. The sales order item of this license contains the following licenses: • Base License • 3 years SW Support • 1 x Networking license • 4 x TDM user licenses e.g. for analogue fax (not expansible)

	• OpenDirectory Base License • Web Collaboration Connector license

Table 66 Gateway Licenses

Functional boundary conditions:

- Only S2M/SIP trunk licenses can be added to the public network. (no further user,- user oriented,- system,- or evaluation licenses).
- In the OpenScape Business S system a networking license is also required.
- For an OpenScape Business network with a system with gateway license applies:
  - The central administration of the systems from the master node is supported
  - However, central licensing (network license file) is not supported. Each node in the network has its own license file.
  - The gateway system is connected to the OpenScape Business S system via the SIP-Q protocol. All networking scenarios of the system based on the SIP-Q protocol are released.

1.8.3.7.2 Functional Upgrade Licenses

Functional Upgrade Licenses are used to rewrite certain features of an already licensed system and then provide the system with the changed license data.

Upgrade Licenses	Description
OpenScape Business Upgrade TDM User to IP User	License to upgrade a TDM User License to an IP User License
OpenScape Business Upgr. myPortal Smart to myPortal for Desktop	License for the Upgrade of a myPortal Smart User License to a myPortal for Desktop User License
OpenScape Business Upgr. myPortal Desktop to myPortal for Outlook	License for the upgrade of a myPortal for Desktop User License to a myPortal for Outlook User License

Table 67 Functional Upgrade Licenses

1.8.3.7.3 License for reducing TDM / IP subscribers

The license for reducing TDM / IP users serves to remove unused or surplus user licenses from an active OpenScape Business System. The licenses removed from a system are subsequently no longer available for further use.

The reduction licenses are activated at the central license server (CLS), which then creates a new license file that must be activated in the OpenScape Business System.

The license can be used to optimize the costs for the SW support of a system.

Reduction Licenses	Description
OpenScape Business Reduction of TDM user	License to reduce the number of TDM users in the license file by one TDM user license.
OpenScape Business Reduction of IP user	License for reducing the number of TDM users in the license file by one TDM user license.

Table 68 User Reduction Licenses

1.8.3.7.4 Redundancy User Licenses

This special license enables the operation of OpenScape Business System /IP (HFA) Client User as fallback user at another system (secondary system) in an OpenScape Business Network in case of a failure of the own system. Redundancy licenses are not counted when determining the user-related SW support for a system.

Redundancy User License	Description
OpenScape Business Redundancy User	This license enables the operation of an OpenScape Business System IP (HFA) client as fallback user in a secondary system in the OpenScape Business network in case of a failure of the own system.

Table 69 Redundancy User License

Functional boundary conditions

- Redundancy licenses require an OpenScape Business System with active SW support. When using an OpenScape Business System without own user as secondary system, at least one active IP/TDM user license with software support in the system is required in addition to the redundancy licenses.
- The redundancy user license can only be used with permanently licensed OpenScape Business systems.
- The secondary system must be licensed locally in the OpenScape Business network.
- User operation on the redundancy system is limited to a maximum of 3 days per failure. If a longer redundancy period is desired, IP user licenses are required instead of the redundancy user licenses. A mixed licensing of fallback users with redundancy and IP user licenses is not possible.
- Using the Redundancy User License requires a permanent Internet connection between the OpenScape Business Systems and the Unify License Server (CLS). If an OpenScape Business system loses its connection to the CLS, the Redundancy User Licenses are deactivated after 3 days.
- All times specified in this chapter are subject to change. They can be adjusted by Unify at any time.

1.8.3.7.5 Software support licenses

Each newly ordered OpenScape Business System is delivered with 3 or 5 years of software support, depending on the basic license ordered.

The software support must be extended before expiration per user by one user-related SW support license per user.

After expiration of the SW support the system can only be brought back into SW support by a reinstatement license.

The software support for a system is managed by the Central License Server (CLS). The CLS writes the current end date of the software support and number of users into the license file of the system. The system evaluates this information automatically.

Details on SW support (services / handling) are described in chapter “1.9 SW Support”.

Software Support Licenses	Description
Software Support V2 OS Biz renewal for 12 months per user (TDM or IP)	This license extends the software support for one IP or TDM user for 12 months
Software Support V2 OS Biz renewal for 24 months per user (TDM or IP)	This license extends the software support for one IP or TDM user for 24 months
OpenScape Business Reinstatement per User	This license reactivates expired SW support per IP, TDM user if software support has expired. Software support for 12 months is included in the reinstatement.
OpenScape Business Reinstatement 4 weeks per user	This license reactivates expired SW support per IP, TDM user if the software support has expired. Software support for 4 weeks is included in the reinstatement.

Table 70 SW support licenses

1.8.3.8 Evaluation licenses free of charge

An evaluation license can be used to test special features with full functionality over a fixed time period free of charge. If a regular license for the feature is activated during the evaluation period, the evaluation license will be disabled.

Evaluation Licenses	Description
OpenScape Business UC Evaluation	This evaluation license is intended for customers who wish to evaluate the UC features of OpenScape Business and allows you to take advantage of all UC features. If voicemail licenses already exist, they are used in combination with the new UC evaluation licenses.
OpenScape Business UC Suite Contact Center Evaluation	This evaluation license is intended for customers who want to test the Multimedia Contact Center. With this evaluation license, all features of the Multimedia Contact Center can be used. **Functional Constraint:** The system administrator must undo all contact center settings **before** the evaluation license expires. Otherwise the system may malfunction. This condition does not apply if the Contact Center is permanently licensed during the evaluation period.
OpenScape Business CRM Evaluation	This evaluation license is intended for customers who want to evaluate Application Launcher, Open Directory Service or TAPI.
OpenScape Business Attendant Evaluation	This evaluation license is intended for customers who wish to evaluate the OpenScape Business Attendant.
OpenScape Business SIP-Trunk Evaluation	This evaluation license is intended for customers who want to evaluate SIP trunks, e.g. for Internet telephony. **Functional constraint:** This evaluation license cannot be used in systems with active S2M/SIP/T1 trunk licenses
OpenScape Business Service Evaluation	With the Service Evaluation License, a partner can prepare a customer system in the company and, after installation at the customer's site, restart the 30-day Activation Period for the customer. **Functional constraint:** The activation is possible once per system and only within the Activation Period. If the Activation Period has expired, the system must be licensed with permanent licenses.

Table 71 Evaluation licenses

General functional boundary conditions

- The activation of an evaluation license takes place at the license server (CLS) and is only possible once.
- The evaluation period is 90 days. After 60 days the remaining time is counted backwards in days on the display of the system phones.
- At the end of the evaluation period the feature is automatically deactivated.
- Different evaluation licenses can be active in the system at the same time, but then end at different times.
- If an unlimited license is active, the evaluation license is not started or, if it already exists, is deactivated.
- Evaluation licenses cannot be used in OpenScape Business networks (Networking License activated).

1.8.4 Licenses for externally connected applications

OpenScape Business offers the possibility to manage licenses for specific connected applications via the integrated license management.

In these cases, the Unify Central License Server writes the license information for the enabled applications to the OpenScape Business license file. After the license file has been imported and activated in OpenScape Business, the license information is displayed in the license overview and made available to the enabled application. The licenses are assigned in the enabled application.

1.8.4.1 Cordless IP License

With the Cordless IP solution, the number of DECT managers is licensed. These can be managed via the OpenScape Business license file. For the DECT Manager licenses managed by OpenScape Business, separate items have been created in the OpenScape Business order structure.

Cordless IP License	Description
OpenScape Business Cordless IP V2 DECT Base Manager	First Cordless IP DECT Manager license as part of the OS Business solution. The license supports up to three DECT Manager
OpenScape Business Cordless IP V2 each additional DECT Manager	Can only be used if the "DECT Manager" license has already been activated on the system

Table 72 Cordless IP licenses managed by OpenScape Business

Functional boundary conditions

In OpenScape Business an IP user license is required for a handset operated on the DECT IP application and optionally further licenses such as a voicemail user license are required.

1.8.4.2 OpenScape Accounting / Welcome License

OpenScape Business Accounting / Welcome is licensed per port. Up to 250 port licenses can be managed via the OpenScape Business license file. From 250 ports on, the native licensing of OpenScape Accounting must be used. This also applies to the connection of OpenScape Accounting / Welcome in OpenScape Business networks.

For the OpenScape Business Accounting / Welcome licenses managed by OpenScape Business, separate items have been created in the OpenScape Business order structure.

Accounting / Welcome License	Description
OpenScape Business Accounting Port License	This license allows the use of an OpenScape Accounting port
OpenScape Business Accounting Welcome License	This license enables the use of the hospitality function for OpenScape Accounting. An OpenScape Business Accounting Port License is required as basis for using the "Welcome" license.

Table 73 OpenScape Accounting / Welcome Licenses managed by OpenScape Business

1.8.4.3 Web Collaboration Connector License

The OpenScape Web Collaboration Connector license serves for integrating the OpenScape Web Collaboration feature in UC Suite or UC Smart. It is included in each OpenScape Business X3/X5/X8/S basic license package and does not need to be marketed separately. This license is not available as separate order item.

Functional Constraint

A fully licensed OpenScape Web Collaboration solution is required to use the Connector License.

1.8.5 System Migration and System Upgrade Licenses

Migration / Upgrade Licenses	Description
OpenScape Business V3 HW Migration License	This HW Migration License prepares existing OpenScape Business V2 licenses in the license server for use in OpenScape Business X V3 systems with V3 mainboard.

Migration / Upgrade Licenses	Description
	This license is only required if the OpenScape Business V2 system to be migrated is to be migrated without CLS Connect. The license must be activated on the license server before a hardware migration from OpenScape Business X V2 to V3 with mainboard exchange.
OpenScape Business V3 SW Upgrade License	This SW Upgrade License prepares existing OpenScape Business V2 licenses in the license server for use in OpenScape Business X V3 systems with V2 mainboard. This license is only required if the OpenScape Business V2 system to be migrated is to be migrated without CLS Connect. The license must be activated on the license server before a SW upgrade of OpenScape Business X systems from V2 to V3 without mainboard exchange.
OpenScape Business Upgrade HiPath 3000 V9	This upgrade license transfers the following licenses from the existing HiPath 3000 license file to OpenScape Business licenses: • Base license incl. 3 years SW support • OpenDirectory Base License • Web Collaboration Connector license. • IP subscriber (ComScendo) → 100% →IP User Licenses • TDM subscribers → **100%** →TDM user licenses (1 • S2M channels → 100% → IP/S2M/TI Trunk licenses • Mobility Entry → 100% → Mobility User licenses • Xpressions Compact → 100% → Xpressions Compact (2 1) For a one step migration from V9 to Open Scape Business V2. During the technical conversion of the system configuration, the number of TDM subscribers active in the HiPath 3000 system is automatically determined. 2) Xpressions Compact licenses can no longer be used in SW version V3.
OpenScape Business Upgrade HiPath 3000 V8	This upgrade license transfers the following licenses from the existing HiPath 3000 license file to OpenScape Business licenses: • Base license incl. 3 years SW support • OpenDirectory Base License • Web Collaboration Connector license. • IP subscriber (ComScendo) → 100% →IP User Licenses • TDM subscribers → **80%** →TDM user licenses (1 • S2M channels → 100% → IP/S2M/TI Trunk licenses • Mobility Entry → 100% → Mobility User licenses • Xpressions Compact → 100% → Xpressions Compact (2 1) For a one step migration from V9 to Open Scape Business V2. During the technical conversion of the system configuration, the number of TDM subscribers active in the HiPath 3000 system is automatically determined. 2) Xpressions Compact licenses can no longer be used in SW version V3.
OpenScape Business Upgrade HiPath 3000 V7	This upgrade license transfers the following licenses from the existing HiPath 3000 license file to OpenScape Business licenses: • Base license incl. 3 years SW support • OpenDirectory Base License • Web Collaboration Connector license.

Migration / Upgrade Licenses	Description
	• IP subscriber (ComScendo) → 100% →IP User Licenses • TDM subscribers → **70%** →TDM user licenses (1 • S2M channels → 100% → IP/S2M/TI Trunk licenses • Mobility Entry → 100% → Mobility User licenses • Xpressions Compact → 100% → Xpressions Compact (2 1) For a one step migration from V9 to Open Scape Business V2. During the technical conversion of the system configuration, the number of TDM subscribers active in the HiPath 3000 system is automatically determined. 2) Xpressions Compact licenses can no longer be used in SW version V3.
OpenScape Business Upgrade HiPath 500 V9	OpenScape Business Upgrade HiPath 500 V9 With this upgrade license the following licenses are transferred from the existing HiPath 3000 license file to OpenScape Business licenses • TDM-user → **100%** → TDM user Licenses (1 1) During the technical conversion of the system configuration, the number of TDM subscribers active in the HiPath 500 system is automatically determined.
OpenScape Business Upgrade Hipath 3000 with OSO V3 HX	No separate license position exists for license migration of HiPath 3000 systems with activated OpenScape Office HX Server. The HiPath 3000 Upgrade licenses are used for this purpose. Using the HiPath 3000 Upgrade License the following licenses are transferred from the existing OpenScape Office HX license file to OpenScape Business licenses: • Per System o → 1x Auto Attendant • Per OpenScape Office Standard User: o → 1x UC User o → 1x Voicemail o → 1x Fax • Voicemail License → 500 x Voicemail User License • 1 x myPortal for Outlook → 1 x Groupware User License • 1 x myAttendant → 1 x myAttendant User License • 1 x myAgent→ 1 x myAgent User License • 1 x Contact Center Fax→ 1 x Contact Center Fax License • 1 x Contact Center E-Mail, → 1 x Contact Center E-Mail License • 1 x myReports→ 1 x myReports License • 1 x Application Launcher→ 1 x Application Launcher License • 1 x OpenDirectory Connector→ 1 x OpenDirectory Connector License • 1 x Gate View Camera→ 1 x Gate view Camera License (1 1) Gate view licenses can no longer be used in the SW version V3
OpenScape Business Upgrade OSO V3 LX	With this upgrade license the following licenses are transferred from the existing OpenScape Office MX/ LX license file to OpenScape Business licenses or newly generated: • Base License incl. 3 years SW Support • OpenDirectory Base License • Web Collaboration Connector License. • 1x Company AutoAttendant

Migration / Upgrade Licenses	Description
	• Per OpenScape Office V3 LX Basic 5/10/20 Comfort Plus User or OpenScape Office MX Basic 10/20 Comfort Plus User o → 5/10/20 x IP User License o → 5/10/20 x UC User License o → 5/10/20 x Voicemail User License o → 5/10/20 x Fax User License o → 5/10/20 x Conference user License • Per OpenScape Office Comfort User o 1x IP User License o 1x UC User License o 1x Voicemail User License • Per OpenScape Office Comfort Plus User: o 1x IP User License o 1x UC User License o 1x Voicemail User License o 1x Fax User License o 1x Conference User License • 1 x myPortal for Outlook → 1 x Groupware User License • 1 x myAttendant → 1 x myAttendant User License • 1 x myAgent→ 1 x myAgent User License • 1 x Contact Center Fax→ 1 x Contact Center Fax License • 1 x Contact Center E-Mail, → 1 x Contact Center E-Mail License • 1 x myReports→ 1 x myReports License • 1 x Application Launcher→ 1 x Application Launcher License • 1 x OpenDirectory Connector→ 1 x OpenDirectory Connector License • 1 x Gate View Camera→ 1 x Gate View Camera License (1 1) Gate view licenses can no longer be used in the SW version V3

Table 74 OpenScape Business System Migration Upgrade Licenses

1.8.6 Licenses phased out for distribution

The Unify Central License Server manages all ordered licenses for OpenScape Business systems. Licenses remain valid for an unlimited period of time unless they are provided with an expiration date.

It is therefore possible that certain licenses for OpenScape Business System can still be activated on the Central License server, which are no longer included in the current sales portfolio and cannot be reordered.

With these licenses, in connection with SW version 3, a distinction must be made between in:

- Licenses that can still be used
- Licenses no longer functional.

1.8.6.1 Licenses still usable

Subsequent licenses are still accepted by OpenScape Business for feature activation. However, it may happen that they are automatically converted to another license in the course of a migration from the Central License Server or that they must be assigned to another license type in the license assignment dialog of OpenScape Business to enable the desired feature.

1.8.6.1.1 Basic License Packages

The following basic license packages can still be used for licensing OpenScape Business systems. However, the contained licenses cannot be unbundled and used otherwise.

Basic License Package	Description
OpenScape Business X1 Package IP (8 IP User)	The sales order item contains the following licenses: 1 x OpenScape Business X1 Base license incl. 2 SIP Trunks 8 x OpenScape Business IP User 3 years SW Support 1 x OpenScape Business UC Smart Evaluation 1 x OpenScape Business Attendant Evaluation
OpenScape Business X1 Package TDM (8 TDM User)	The sales order item contains the following licenses: 1 x OpenScape Business X1 Base license incl. 2 SIP Trunks 8 x OpenScape Business TDM User 3 years SW Support 1 x OpenScape Business UC Smart Evaluation 1 x OpenScape Business Attendant Evaluation
OpenScape Business Package 16 User IP	The sales order item contains the following licenses: 1 x OpenScape Business Base license 2 x OpenScape Business S2M/SIP/T1 Trunks 16 x OpenScape Business IP User 3 years SW Support 1 x OpenScape Business UC Smart Evaluation 1 x OpenScape Business Attendant Evaluation
OpenScape Business Package 32 User IP	The sales order item contains the following licenses:: 1 x OpenScape Business Base license 4 x OpenScape Business S2M/SIP/T1 Trunks 32 x OpenScape Business IP User 3 years SW Support 1 x OpenScape Business UC Smart Evaluation 1 x OpenScape Business Attendant Evaluation
OpenScape Business SW Package 1 (Base)	The sales order item contains the following licenses: 1 x OpenScape Business Base license 30 x OpenScape Business S2M/SIP/T1 Trunks 1x OpenScape Business AutoAttendant

Table 75 Basic License Packages

1.8.6.1.2 User licenses

Mobility User Licenses

Existing OpenScape Business V1 Mobility User licenses are automatically converted into IP user licenses by the central license server in the course of the migration from OpenScape Business V1 to Open Scape Business V2. IP user licenses can be used in OpenScape Business V3 for licensing Mobility Users.

Deskshare User Licenses

Existing OpenScape Business V1 Deskshare User licenses are automatically converted into IP user licenses by the central license server in the course of the migration from OpenScape Business V1 to Open Scape Business V2. IP user licenses can be used in OpenScape Business V3 for licensing Deskshare Users.

IP User Packages

The following IP user license packages can still be used for licensing IP users in OpenScape Business systems. However, the contained licenses cannot be unbundled and used otherwise.

IP User License Packages	Description
OpenScape Business SW Packet 2 (IP)	The sales order item contains the following licenses: 40x OpenScape Business IP User
OpenScape Business SW Packet 3 (IP)	The sales order item contains the following licenses: 10x OpenScape Business IP User

Table 76 IP User License Packages

TDM User Packages

The following TDM user license packages can still be used for licensing TDM users in OpenScape Business systems. However, the contained licenses cannot be unbundled and used otherwise.

TDM User License Packages	Description
OpenScape Business SW Packet 2 (TDM)	The sales order item contains the following licenses: 40x OpenScape Business TDM User
OpenScape Business SW Packet 3 (TDM)	The sales order item contains the following licenses: 10x OpenScape Business TDM User

Table 77 TDM User License Packages

1.8.6.1.3 User oriented licenses

My Portal Smart:

myPortal Smart licenses are accepted by an OpenScape Business V3 system as UC User licenses for licensing all clients connected to it.

1.8.6.1.4 System Licenses

OpenScape Business BLF

For using the OpenScape Business BLF Client.

The OpenScape Business BLF Client is no longer marketed individually. It is a fixed component of the OpenScape Business Attendant. However, the license can still be used for licensing the (phased out) OpenScape Business BLF Client. A licensing of the OpenScape Business Attendant is not possible with this license.

OpenScape Business Gate View Cameras

For video surveillance that provides real-time video images on your OpenStage phone, PC or smartphone. A separate license is required for each of the 8 possible cameras within a system.

1.8.6.1.5 System migration / upgrade licenses

OpenScape Business System Upgrade V1

This license serves to transfer the license from version V1 to version V2. This license cannot be ordered.

For all installed OpenScape Business V1 systems that had a valid SW Assurance at the time the V2 was released, a permanent System Upgrade License to V2 was automatically booked to the end customer account at the CLS by Unify.

This license must be used for migrations from OpenScape Business V1 to V2.

1.8.6.2 Licenses that no longer work

Xpressions Compact licenses

Xpressions Compact licenses that may be included in the license files in the course of HiPath 3000 buw. OpenScape Business V1 migrations are no longer accepted by OpenScape Business V3.

1.8.7 License Assignment in OpenScape Business

The OpenScape Business Administration (OpenScape Business Assistant, WBM) offers wizard-driven features for customer registration, license activation and license assignment for individual systems and systems in an OpenScape Business network.

After the initial setup of an Open Scape Business System via the OpenScape Business Assistant (WBM), the 30-day Activation Period starts during which the license activation must be performed. During the Activation Period the system is fully functional, and the maximum number of licenses is available for use. If no license has been issued after the Activation Period has expired, the communication system can only be used to a very limited extent.

1.8.7.1 Assignment of User Licenses

In the user licensing, a distinction is made between different user types.

- IP user
- TDM user
- Mobility users
- Deskshare user
- Fallback user

In order to operate a user in the system, a corresponding user license must be assigned to him. The IP user license has a special position in this respect. It can be used to license IP, TDM, mobility, Deskshare or fallback users.

For newly marketed systems, only IP and TDM users are available for licensing.

1.8.7.2 Allocation of user-oriented licenses

When assigning the user-oriented licenses, please note that the corresponding user has previously been assigned an IP, TDM user license.

The UC-Suite Groupware User License plays a special role in the licensing of user-oriented services.

UC users can also be licensed with the groupware user license. Please note the following:

- The UC user licenses available in the license file are assigned with priority by OpenScape Business Assistant during the license assignment.
- Only after all UC user licenses have been assigned can groupware user licenses be used for licensing further UC users.

1.8.7.3 Licensing in the Network

For an OpenScape Business network, a network-wide license file is generated by an authorized partner at the central license server (CLS). This network-wide license file is managed by the central license agent (CLA) of the master node and provides the licenses to the individual nodes. The licenses are assigned via the OpenScape Business Assistant (WBM) of each individual node. Within a network group the licenses can be shifted via the WMB as desired.

When licensing a network group, an online activation is not possible.

1.8.7.4 Licensing of Lines

Different licenses are available for the licensing of lines depending on the type and use of the line. Table 78 shows what type of license is required for each function.

Line Type	No license required	Trunk License per channel required	Networking License per system required
S0 – Trunk lines			
Euro CO PP	■	□	□
Euro CO PMP	■	□	□
S2M – Trunk lines			

Euro-CO PP	☐	■	☐
ITSP - Provider			
ITSP 1 bis 4	☐	■	☐
S0-Networking			
QSIG	☐	☐	■
CorNet-NQ	☐	☐	■
S2M - Netweorking			
QSIG	☐	☐	■
CorNet-NQ	☐	☐	■
SIP - Networking			
SIP-Q	☐	☐	■
native SIP	☐	☐	■

Table 78 Overview licensing of lines

■ License required

☐ No License required

1.9 SW Support

OpenScape Business SW Support keeps your system up to date. With SW Support, you benefit from both performance improvements and ongoing SW maintenance to address identified security vulnerabilities. In addition, you will receive individual support from Unify in the event of problems that arise.

Software support for OpenScape Business essentially comprises

- Provision of software updates / upgrades for:
  - OpenScape Business X SW Appliance *
    - including the SW Clients contained in the SW Image **
    - exclusive support for operating systems ***, 3rd party Addon SW components, terminal server and virtualization SW.
  - OpenScape Business S SW application *,
    - including the SW Clients** contained in the SW Image,
    - exclusive support for SLES*** and virtualization SW.
- Activation of the software update / upgrade function in OpenScape Business
- Enabling the use of remote access via the Remote Service Platform (RSP) in OpenScape Business
- Support from Unify for problems by providing access to the:
  - Incident / Problem handling system
  - Call Desk for partners
  - SW download server for SW patches, updates and upgrades

The services associated with the SW Support are limited in time and end automatically if the SW Support is not extended within the support period. If no extension is made, the above-mentioned services will no longer be available.

In the OpenScape Business System the software maintenance feature and the remote access to the service platform are blocked in this case. All other system features are retained.

The SW Support can be ordered again after the expiration, in this case, however, a reinstatement fee is charged.

Boundary conditions:

*) With each new released OpenScape Business Software many software solutions are provided and therefore only tickets that reference the last 2 released software versions are accepted.

**) The OpenScape Business SW clients are operated and tested on specific operating systems or in defined 3rd party SW environments. If the manufacturer of an operating system or an SW component discontinues the

standard support for the OS or SW component, the Unify SW support for the client in this SW environment automatically ends. In these cases the client must then be switched to a released, newer SW environment.

***) SW support for the used operating systems terminal server and virtualization environments is the responsibility of the customer. The support is to be ordered by the customer from the respective manufacturer or one of its partners. For the SW support of the Novell SLES a so-called SW support key can be purchased via Unify.

When adding subscribers/users to a system, the license server automatically generates SW Support licenses for the corresponding user licenses, which receive the expiration date of the SW Support for the system. This ensures that a system always has a defined SW Support period. Therefore, in this case no separate order of SW Support licenses for the newly added participants, which are within the activation tolerance, is necessary.

Further information:

You find further general information about OpenScape SW Support within the Partner Portal under the link:

https://enterprise-businessarea.unify.com/

1.9.1 SW Support Handling for OpenScape Business

With OpenScape Business, SW support is managed by the Central License Server (CLS).

Within the scope of the basic license for newly ordered OpenScape Business systems, a 3 or 5-year SW support is delivered for all marketed (IP/TDM) user licenses.

https://unify.com/en/support/portfolio-lifecycle-policy

SW support is always charged on a user basis for OpenScape Business systems. All IP/TDM users of a system must be equipped with SW support to receive SW support for this system. The license server checks the number of users before generating the SW support.

Fallback users do not require separate software support licenses. If fallback users have been assigned redundancy licenses, they are not included in the Software Support Renewal / Reinstatment.

Start of the SW Support

The SW Support period starts with the first license of the OpenScape Business System. The expiration date of the SW Support is written by the CLS to the system-specific license file and displayed on the Business Assistant homepage after importing the license file to OpenScape Business.

When licensing for the first time, all marketed license-requiring users and components of the system must be licensed. In case of a step-by-step licensing, no SW support may be granted for subsequent licenses.

Extension of the SW support

An extension of the SW Support must always be carried out within the SW Support period before the SW Support expires.

90 days before the expiration of the SW Support period, the central license server sends a corresponding e-mail notification to the primary contact entered in the license server for the corresponding licenses.

For the extension of the SW Support, so-called "SW Support Renewal" marketing positions are available for a further year or for 2 further years. A renewal is possible at any time within the SW Support period. For example, the SW Support can be extended with the initial licensing of the system by co-marketing a 2-year support renewal.

For a renewal, the SW Support Renewal Position must be marketed for all IP/TDM participants. This is checked by the license server. Generation for a subset of participants is not permitted by the license server. A mixture of 1-year and 2-year renewals within one system is also rejected by the license server.

Reinstatement after expiration of the SW support

After expiration of the SW Support Period, the "SW Support Renewal" marketing positions can no longer be used to extend the SW Support Period!

In this case, SW Support must first be reactivated via the "SW Support Renewal Reinstatement" marketing position per IP/TDM participant. The "SW Support Renewal Reinstatement" position " contains the SW support for

one year or 4 weeks. Afterwards, the "SW Support Renewal Positions" can be marketed again to extend the SW Support period.

Subsequent extension of the system

When adding participants to a system with valid SW support, the license server automatically generates SW support licenses for the corresponding user licenses, which receive the expiration date of the SW support for the system. This ensures that a system always has a defined SW support period. Therefore, in this case, no separate order of SW Support Renewal licenses for the newly added participants that are within the activation tolerance is necessary.

SW Support for networked systems

In OpenScape Business networks each system (local licensing) has its individual SW Support expiration date, depending on the date of its initial licensing, which can also be extended system-specifically.

If an OpenScape Business network is combined to a central network license, the expiration date of the master system applies to all systems in the network. If a system is removed from the network, it is assigned the original Software Support date again.

Gateways without IP/TDM subscribers (without gateway license) can only be operated via central network license.

1.9.2 SW Support Handling for Novell SLES

For Novell SLES SW support, a corresponding SW Subscription Code (also called SLES Upgrade Key) can be ordered via Unify.

The SW Subscription Code is provided via the UNIFY Central License Server (CLS). The corresponding License Activation Code (LAC) is provided on the delivery note. After activating the license for the SLES Upgrade Key, a button for downloading the SLES Upgrade Key (Novell Server) is offered at the CLS.

After SLES registration of the Upgrade Key with Novell, updates can be obtained for a period of 3 years. The Upgrade Key is independent of the SLES version. After three years a new Upgrade Key must be ordered and registered with Novell. Novell is responsible for providing updates and the duration of general SLES support.

1.10 Maintenance

The OpenScape Business System offers a variety of maintenance options. These include changing telephony settings, saving and restoring configuration data, updating the software by means of update and upgrade and restart/reload features. In addition, functions for status determination, monitoring and maintenance are available. Remote access to the system is possible through various remote services.

1.10.1 Remote Servicelink Platform (RSP)

The Remote Servicelink platform of Unify (RSP) offers you the possibility to administrate OpenScape Business Systems incl. Booster Card or connected Booster Server comfortably and securely from a distance via encrypted connections. All you need is a browser and an Internet connection.

The SW plug-in required for remote access and encrypted data transmission is a fixed component of the OpenScape Business software. OpenScape Business systems can therefore be connected to the Remote Servicelink platform without further HW/SW.

Functional boundary conditions

If no valid SW support is available in an OpenScape Business System, no connection from the Remote Servicelink platform to the OpenScape Business System is possible. In case of an expired SW Support contract the RSP.servicelink access to the system is blocked.

Further Information

Please also note the RSP.servicelink release information.

1.10.1.1 Maintenance Tools

Open Scape Business offers a range of integrated maintenance and diagnostic tools for service purposes.

1.10.1.1.1 OpenScape Business Assistant

OpenScape Business Assistant (WBM) provides beside backup / restore functions also following maintenance features:

- Status outputs for HW / SW components
- Event logs
- Trap functions with notification options via e-mail / SNMP
- Individually activatable trace functions for specific system components

1.10.1.1.2 Manager E Tool

In addition to the OpenScape Business Assistant features, the Manager E Tool and the Online Subscriber feature it contains can also be used for diagnostic calls.

1.10.1.1.3 Cardmanager Tool

The Cardmanager tool, which can be obtained via the Software Download Server, enables the installation of OpenScape Business SW images on SDHC, M.2 SSD or hard disk data carriers for use in OpenScape Business.

1.11 Security and Data Protection

1.11.1 Security

Security includes the protection of the communication system and the stored and transmitted data against unauthorized access. Among other things, this can be achieved by access protection for the IP network (firewall) and encrypted transmission (SSL, VPN).

1.11.1.1 Open Scape Business Security Updates

OpenScape Business SW support includes both continuous adaptation to current security standards and measures against current threats. These improvements protect the system against unauthorized access and toll fraud.

1.11.1.2 OpenScape Business Security Checklist

The communication system considers secured communications in the default settings. During first installation, functions must be adapted to the customer's individual situation and further precautions must be taken in the customer's environment. To raise awareness of security risks and implement appropriate measures, a security checklist is provided with the product documentation. It is strongly recommended to discuss this with the customer during first installation and to document the measures.

The Security Checklist can be found in the Unify Partner Portal under Portfolio Information.

1.11.1.3 Unify Security Advisories

Current threats to Unify products are identified and communicated by Unify through general or product-specific security advisories at the link.

https://unify.com/en/support/security-advisories

In addition to the description of the threat, the Security Advisories also contain the recommended measures for protecting the products.

1.11.2 Data protection

The handling of personal data is partly regulated by international laws such as the General Data Protection Regulation (EU-GDPR) and national legislation such as the “Bundesdatenschutzgesetz” (BDSG) in Germany.

Data protection in a company also includes the processing of personal data by the communication system.

1.11.2.1 Processing Personal Data in the OpenScape Business System

The "OpenScape Business Whitepaper - Processing of Personal Data" describes in detail which personal data are collected, processed, displayed and transmitted in OpenScape Business and how their processing can be configured by the system administrator or by the users.

The document can be used by customers to integrate OpenScape Business in their data protection management system. It is available for download on the Internet under the following link.

https://unify.com/de/datenschutz-grundverordnung.

1.11.2.2 Processing personal data in the Unify Central License Server (CLS)

As part of the license generation and license management process, Unify collects customer data during the registration process on the Central License Server. This is necessary to provide the customer with the services purchased with the licenses.

Unify also uses this data to inform you quickly in case of security-relevant facts. In addition, we inform you about license abuse by third parties, e.g. about the re-linking of license information.

Further information on data protection and the handling of personal data can be found on the Internet at

https://unify.com/de/datenschutz

and

https://unify.com/de/datenschutz-grundverordnung

1.11.2.3 Evaluation of the use of redundant user licenses in the Central License Server

The use of the redundancy is recorded per system per deployment in an internal reporting in the Unify License Server. Unify reserves the right to contact the respective sales partners in case of anomalies in the use of the redundancy user licenses in order to inquire details about the use cases.

1.12 Networking OpenScape Business

OpenScape Business enables networking with each other as well as with OpenScape 4000 and OpenScape Voice. The network-wide voice and UC features provide mid-sized businesses with a solution that offers a wide range of capabilities.

The network wide functions depend on the systems networked with each other and the type of connection between them. The networking of OpenScape Business systems with each other offers the greatest range of functions. Here, subscribers can use features such as presence status, voicemail, conferences and much more in the same way as in a single OpenScape Business System.

Table 79 shows the possible OpenScape Business connections and the basic feature range. In case of a connection the technical prerequisites are decisive for the functionality. These must therefore be checked before setting up the networking.

In general, however, the numbering plan of the systems as well as the network parameters and bandwidth of the used IP connections must always be considered. These requirements are described in section 1.12.1.

System 1	System 2	Function
OpenScape Business X1/X3/X5/X8	OpenScape Business X1/X3/X5/X8	Voice networking Optionally also with UC networking
OpenScape Business X1/X3/X5/X8	OpenScape Business S	Voice networking Optionally also with UC networking
OpenScape Business X1/X3/X5/X8	OpenScape 4000	voice networking (UC for OpenScape Business only under certain conditions)

OpenScape Business X1/X3/X5/X8	OpenScape Voice	voice networking (without UC functionality with OpenScape Business
OpenScape Business X1/X3/X5/X8	certified third-party applications and third-party systems	Scope of services depends on the application switched on. Connection via SIP-Q or native SIP Trunks.
OpenScape Business X1/X3/X5/X8	OpenScape Office MX or OpenScape Office LX	Scenario is not supported

Table 79 Possible Networks

A detailed description of the supported scenarios, the supported functional scope and notes on specific conditions can be found in the chapter 1.12.2.

1.12.1 General requirements and prerequisites

Planning and setting up an OpenScape Business IP network is a complex issue and should be carried out by experienced service engineers.

1.12.1.1 Numbering Plan, Requirements for Internal Subscriber Numbers

When networking systems, it is essential that the numbering plans of the networked systems are compatible with each other. A distinction is made here between:

- Open numbering:
  Here, internal subscriber numbers can be assigned multiple times across all systems.
- Closed numbering:
  Here, each internal subscriber number may only be assigned once across all systems (also called homogeneous numbering).

In a network with pure voice connection, i.e. without Unified Communications, both closed and open numbering can be used.

In all the described networking scenarios based on UC Suite or UC Smart, closed numbering is required, i.e. the numbering plan of the internal numbers is unique. If, for example, a change from open to closed numbering should become necessary in the course of the extension to network-wide UC functionality, the internal numbers must be adapted.
Technical procedure:
Deactivate the open numbering, delete the node number, and then use the previously used node number as prefix. (extended internal call number, e.g. 87100 instead of 100 and 88100 instead of 100)
Difference to before:

- The dialing of subscribers in your own node is done with the extended internal call number.
- Internal call number and extension number may differ, but extension numbers do not change.

When creating a new network, closed numbering should therefore always be selected in order to be able to react as flexibly as possible to customer expansion requests.

1.12.1.2 Network Parameters, Requirements for LAN and WAN

The voice quality and reliability of voice communication depends on the network technology used. To ensure the quality of voice transmission, the IP networks used and the communication system must meet the following requirements.

Parameter	Minimum requirement	Comment
Delay (one way)	50 ms	Higher values degrade the voice quality
Roundtrip delay	100 ms	Higher values degrade the voice quality
Jitter	20ms	Higher values degrade the voice quality
Packet Loss	3 %	For fax or modem transmissions using G.711, the packet loss should not

		exceed 0.05% (in the event that no T.38 is possible)
Consecutive Packet Loss	3 for G.711	Higher values degrade the voice quality

Table 80 Minimum network parameter requirements for LAN and WAN

1.12.1.3 Required bandwidth in LAN and WAN

For the transmission of data and voice, a corresponding bandwidth in the LAN / WAN is required. To determine the required bandwidth the following applies:

- A bandwidth of at least 256 kBit/s is required in the network connection (in both send and receive directions).
- The bandwidth calculation should be based on a maximum of 50 % for the voice portion of the total bandwidth, i.e. for a 1 Mbit/s WAN, for example, a maximum of 500 KBit/s for voice should be calculated. With a G.711 codec, for example, this is a maximum of 5 IP trunks.
- Regardless of this, the network characteristics with regard to QoS, delay, packet loss etc. must be taken into account.

1.12.1.4 Specific Requirements for the LAN

In order to ensure the quality of voice and data transmission, the IP networks used and the communication system must meet certain LAN requirements.

- The data network must be of the Ethernet type.
- At least Cat.5 cables are recommended (shielded/unshielded multi-core cables from 100 MHz for the horizontal and ascending range according to EN 50288).
- Support for QoS: IEEE 802.1p, DiffServ (RFC 2474).
- All active LAN ports must support 100 / 1000 MBit/s and full duplex communication.

1.12.1.5 Specific requirements for the WAN

In order to ensure the quality of voice and data transmission, the IP networks used and the communication system must meet certain requirements for the WAN.

- The internal IP networks (LAN) must each be connected to the Internet via a WAN connection with a fixed IP address.
- The bandwidth required for the calls must be available at all times for both upload and download.
- The number of simultaneous IP telephone connections over WAN is limited by the bandwidth and the audio codec used.
- No modem is integrated at the WAN port of the OpenScape Business, i.e. an external modem may be required. (for example, a DSL modem or cable modem).
- For connections that are not QoS-capable (usually ADSL connections), voice quality may be limited.
- An external router must be provided to ensure voice quality QoS capabilities and bandwidth control mechanisms.

1.12.2 Networking scenarios

A distinction is made between five main scenarios for a network connection.

Scenario	Description	Chapter
1	Networking Several OpenScape Business	1.12.2.2
2	Networking OpenScape Business X and OpenScape Business S (Single Gateway	1.12.2.3
3	Networking OpenScape Business X and OpenScape Business S (Multi Gateway	1.12.2.4
4	Networking OpenScape Business and OpenScape 4000	1.12.2.5

5	Networking OpenScape Business and OpenScape Voice	1.12.2.6
6	Networking OpenScape Business with external Server / Applications via SIP	1.12.2.7
7	Open Numbering in OpenScape Business X1/X3/X5/X8 Networks	1.12.2.8
8	Networking via ISDN	1.12.2.9

Table 81 Networking scenarios

1.12.2.1 General notes

This section provides information on general requirements and helpful tips on possible networking scenarios.

Functional boundary conditions and restrictions

- A master system is required in every OpenScape Business network.
- OpenScape Business X1 systems cannot be used as master system for technical reasons.
- All networked OpenScape Business systems must use the same system software version.
- OpenScape Business S multi-gateway networks are only released within a country with the same time zone and the same trunk code.
- The OpenScape Business network is generally configured via the networking wizard in the Assistant (WBM). The integration of OpenScape Voice and OpenScape 4000 systems into the network must be configured in each OpenScape Business system via the expert mode.
- The SIP-Q lines with direction 16 are used to configure homogeneous OpenScape Business systems (systems with closed numbering plan) via the Networking Wizard. External SIP lines (SIP interconnection) are used for networking OpenScape 4000, OpenScape Voice or other communication systems; the configuration is performed via the expert mode.
- DSS Server Functionality
  The Presence Manager (network-wide display of busy states on DSS keys + call pickup) is available in OpenScape Business networks. For this purpose, a system must be configured as so-called CSP master.
  - For systems with V3 mainboards or OpenScape Business S no further HW and no CSTA license is required.
  - For systems with V2 mainboard a UC booster card or booster server but no CSTA license is required

  In principle, slave systems do not require a CSTA license or UC Booster Card or UC Booster Server for this application.
- Smart Voicemail
  The functionality of the Company AutoAttendant and the voicemail box are node-specific. Only ONE voicemail system can be used in each node. In general, different voicemail systems are permitted in an OpenScape Business network.
- UC Suite Voicemail
  If UC Suite is used as a voicemail system, other voicemail systems in the network must be deactivated by the administrator.
- Call data can only be retrieved per network node, not across nodes.
- A mixed network connection of OpenScape Business and OpenScape Office is not supported.

1.12.2.2 Scenario 1: Networking several OpenScape Business X1/X3/X5/X8

Up to 32 OpenScape Business communications systems can be networked together.

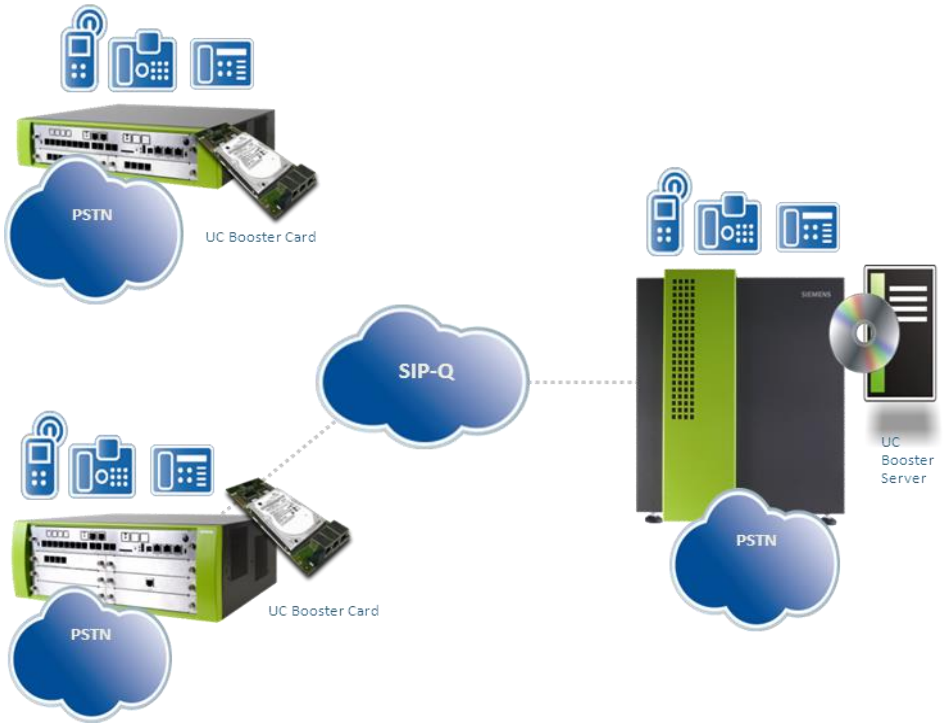

Figure 29 Networking several OpenScape Business X1/X3/X5/X8

Network data

- Closed numbering when using UC Suite or UC Smart
- Open numbering for use without UC.
- Network-wide voice and UC functionality with UC Suite or UC Smart
  Recommendation: Operate all nodes of a network either with UC Smart or with UC Suite, since there is no interoperability between UC Smart and UC Suite. Configuration via OpenScape Business Assistant (WBM) Wizard with closed numbering.
- UC Suite functionality is based on:
  - OpenScape Business X with V3 mainboard (Basic/ Advanced)
  - OpenScape Business X with V2 Mainboard
    - and UC Booster Card
    - With UC Booster Server
- UC Smart functionality is based on
  - OpenScape Business X with V3 mainboard (Basic/ Advanced)
  - OpenScape Business X with V2 Mainboard
    - Without UC Booster
    - With Booster Cards Card
    - With UC Booster Server
- Up to 32 networked systems, 1500 users without UC (> 32/1500 project-specific)
- Up to 8 networked systems, 1500 users with UC Suite or UC Smart (> 8/1500 project-specific)

The expansion limits of the UC Smart and UC Suite application can be found in sections 1.3.11.4 and 1.3.11.5.

1.12.2.3 Scenario 2: Networking OpenScape Business X1/X3/X5/X8 with OpenScape Business S (Single Gateway)

Up to 32 OpenScape Business X1 X3/X5/X8/S communications systems can be networked with each other. Several OpenScape Business S are permitted in a network.

Single Gateway means that all IP users registered with OpenScape Business S use only one gateway to the PSTN.

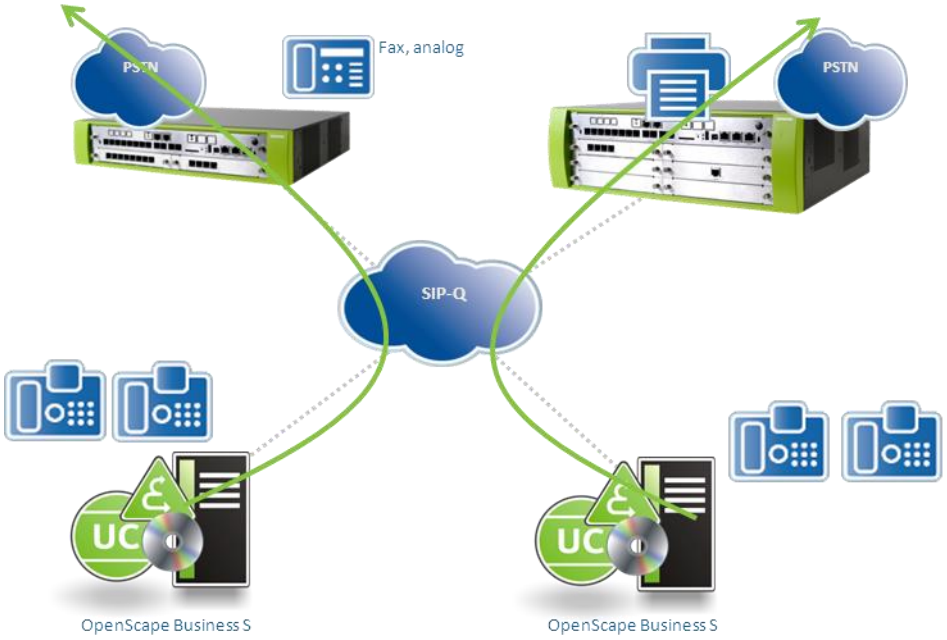

Figure 30 Networking OpenScape Business X1/X3/X5/X8 with OpenScape Business S (single gateway)

Network data

- Closed numbering when using UC Suite or UC Smart
- Open numbering for use without UC.
- Network-wide voice and UC functionality with UC Suite or UC Smart
  Recommendation: Operate all nodes of a network either with UC Smart or with UC Suite, since there is no interoperability between UC Smart and UC Suite.
- Configuration via OpenScape Business Assistant (WBM) Wizard with closed numbering
- UC Suite functionality is based on:
  - OpenScape Business X with V3 mainboard (Basic/ Advanced)
  - OpenScape Business X with V2 Mainboard
    - and UC Booster Card
    - With UC Booster Server
- UC Smart functionality is based on
  - OpenScape Business X with V3 mainboard (Basic/ Advanced)
  - OpenScape Business X with V2 Mainboard
    - Without UC Booster
    - With Booster Cards Card
    - With UC Booster Server
- Up to 32 networked systems, 1500 users without UC (> 32/1500 project-specific)
- Up to 8 networked systems, 1500 users with UC Suite or UC Smart (> 8/1500 project-specific)

The expansion limits of the UC Smart and UC Suite application can be found in sections 1.3.11.4 and 1.3.11.5.

1.12.2.4 Scenario 3: Networking Open Scape Business X1/X3/X5/X8 and OpenScape Business S (Multi Gateway)

Up to 32 OpenScape Business X1,X3,X5,X8,S communications systems can be networked with each other.

Multi Gateway means that each IP User registered with OpenScape Business S is assigned to exactly one specific gateway.

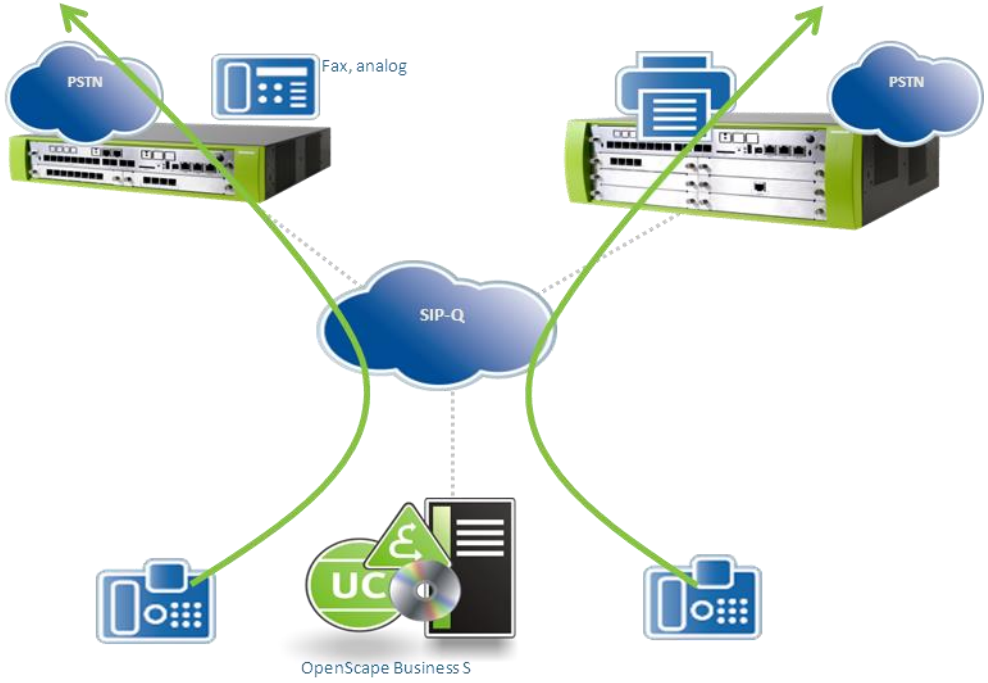

Figure 31 Networking OpenScape Business X1/X3/X5/X8 with OpenScape Business S (multi gateway)

Network data

- Only one OpenScape Business S is allowed in the network.
- All systems must use the same country code
- All systems must be in the same time zone
- There may only be one single exchange access code (e.g. 0) in the network.
- Closed numbering when using UC Suite or UC Smart
- Open numbering for use without UC.
- Network-wide voice and UC functionality with UC Suite or UC Smart
  Recommendation: Operate all nodes of a network either with UC Smart or with UC Suite, since there is no interoperability between UC Smart and UC Suite.
- Configuration via OpenScape Business Assistant (WBM) Wizard with closed numbering
- UC Suite functionality is based on:
  - OpenScape Business X with V3 mainboard (Basic/ Advanced)
  - OpenScape Business X with V2 Mainboard
    - and UC Booster Card
    - With UC Booster Server
  - OpenScape Business S
- UC Smart functionality is based on
  - OpenScape Business X with V3 mainboard (Basic/ Advanced)
  - OpenScape Business X with V2 Mainboard
    - Without UC Booster
    - With Booster Cards Card
  - OpenScape Business S
- Up to 32 networked systems, 1500 users without UC (> 32/1500 project-specific)

- Up to 8 networked systems, 1500 users with UC Suite or UC Smart (> 8/1500 project-specific)

The expansion limits of the UC Smart and UC Suite application can be found in sections 1.3.11.4 and 1.3.11.5.

1.12.2.5 Scenario 4: Networking OpenScape Business and OpenScape 4000

A networking of OpenScape Business X1/X3/X5/X8 with OpenScape 4000 can have different specifications, one with direct addressing between the OpenScape Business nodes (example 4a) and the other example (4b), all connections are routed via OpenScape 4000.

For release please note the notes in Chapter 1.5.1 “Certified Unify Systems and Applications” .

Scenario 4a: Network connection with OpenScape 4000 and direct addressing between the OpenScape Business nodes

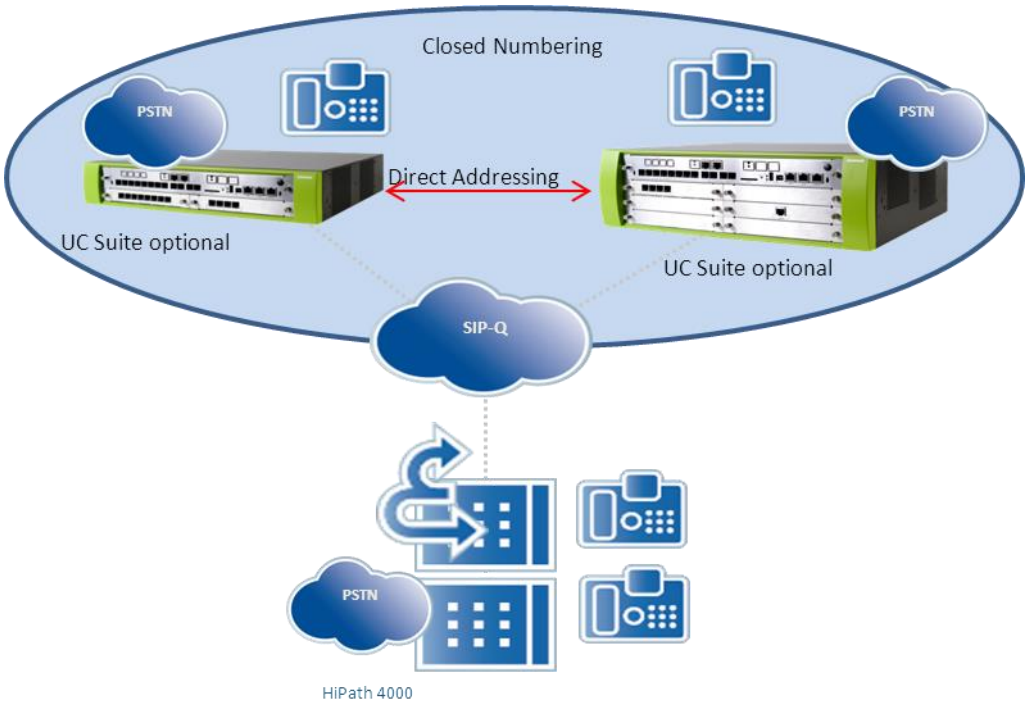

Figure 32 Network connection with OpenScape 4000 and direct addressing

Network data:

- Closed numbering within the OpenScape Business networking
- Network-wide voice and UC functionality within OpenScape Business networking (UC Suite or UC Smart)
- Configuration via the networking wizard for OpenScape Business networking
- Configuration of the OpenScape 4000 network nodes in expert mode
- Small Remote Site Concept SRS is not supported
- UC functionality within the OpenScape Business Systems is optional, either via V4 Mainboards or V2 Mainboard with UC Booster Server or via UC Booster Card.
- OpenScape Business S can be integrated in single or multi gateway mode.

Scenario 4b: Network connection with OpenScape 4000 (all connections are routed via OpenScape 4000)

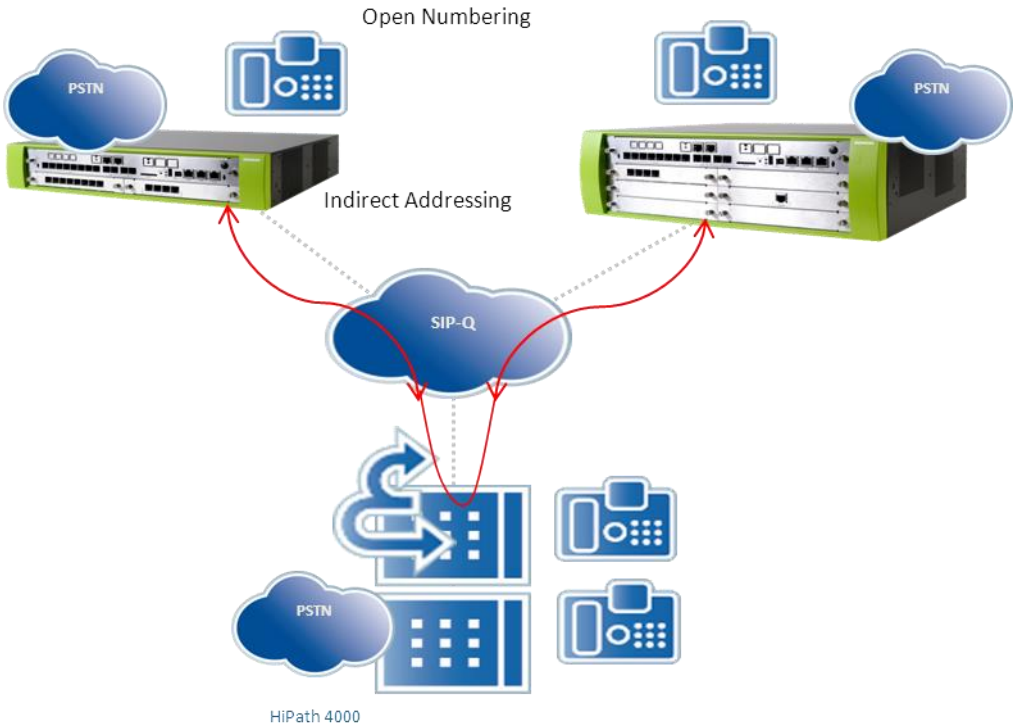

Figure 33 Network Connection with OpenScape 4000 (all connections are routed via OpenScape 4000)

Network data

- Open numbering
- Network-wide voice functionality
- Every call to another node is routed via OpenScape 4000
- No UC-Suite/UC Smart at OpenScape Business due to open numbering in the network
- Small Remote Site Concept SRS is not supported
- The configuration must be done for each node in Expert Mode

1.12.2.6 Scenario 5: Networking OpenScape Business and OpenScape Voice

OpenScape Business can be networked with OpenScape Voice.

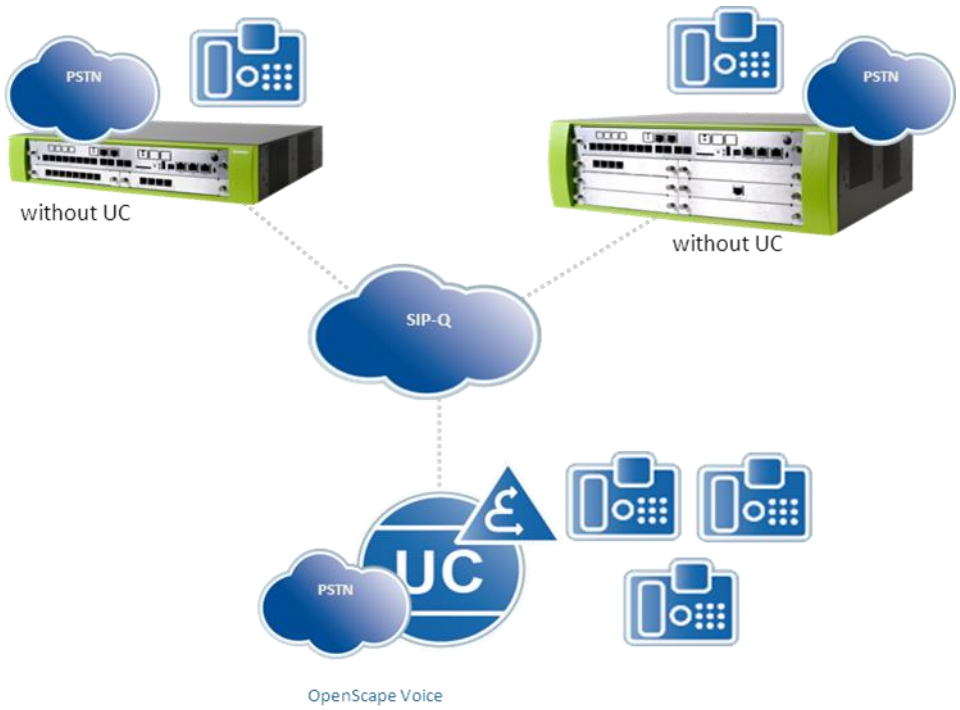

Figure 34 Networking OpenScape Business and OpenScape Voice

Network data

- OpenScape Business provides network-wide voice and gateway functionality for OpenScape Voice
- UC is generally not supported by OpenScape Business in this networking.
- Every call from one node to another is routed via OpenScape Voice.
- Each node is configured via the expert mode.
- The OpenScape Voice numbering plan is based on E.164, therefore there is no open or closed numbering.

Supported scenarios

- One or more OpenScape Business as gateway via TDM trunk lines (ISDN, T1, CAS) to Central Offices
- The connection of OpenScape Business Gateways with analog trunk lines is only enabled for Brazil (due to the support of line reversal and reverse triggering of analog trunk lines in Brazilian offices).
- The following devices can be operated at OpenScape Business Gateways:
  - Analog and digital devices
  - DECT devices
  - IP system phones with the HFA protocol

Supported features

The supported features are described in the Administration Manual.

Technical Boundary Conditions and Restrictions

- The connection of analog trunk lines to the OpenScape Business Gateway is not released (exception: Brazil).
- A networking of OpenScape Business Gateways among each other or with systems other than OpenScape Voice is not supported. The OpenScape Business Gateways must be networked to OpenScape Voice via star layout network structure.
- Path Replacement (path optimization) via SIP-Q is not supported for the devices connected to an OpenScape Business Gateway.

- To avoid poor voice quality in transit line connections it is recommended to use the G.711 voice codec. It is not recommended to use Codec G.729, since features such as conference or call forwarding may result in transit line connections, since path replacement is not supported.
- No cross-system support of features such as call pickup groups, group calls and hunt groups between OpenScape Voice and OpenScape Business Gateways. The groups must contain either only OpenScape Voice or only OpenScape Business subscribers.
- Encryption (SPE) between OpenScape Voice and OpenScape Business Gateways is supported. The connection between OpenScape Voice and OpenScape Business must be established via the encryption protocol TLS.
- Only networking with E.164 numbering plan is supported.

Additional information for IP system devices (HFA) connected to the OpenScape Business gateway:

The necessity of the following additional DSP resources should be checked and considered:

- For each active OpenScape Business / OSV connection 2 B channels per system IP(HFA) phone are required (1x B channel per system phone)

1.12.2.7 Scenario 6: Connecting External Server / Applications to OpenScape Business via SIP Interconnection

External servers or applications can be connected to OpenScape Business via SIP interconnection, for example, to use applications such as OpenScape Alarm Response Server, OpenScape 4000, OpenScape Voice or other certified SIP servers.

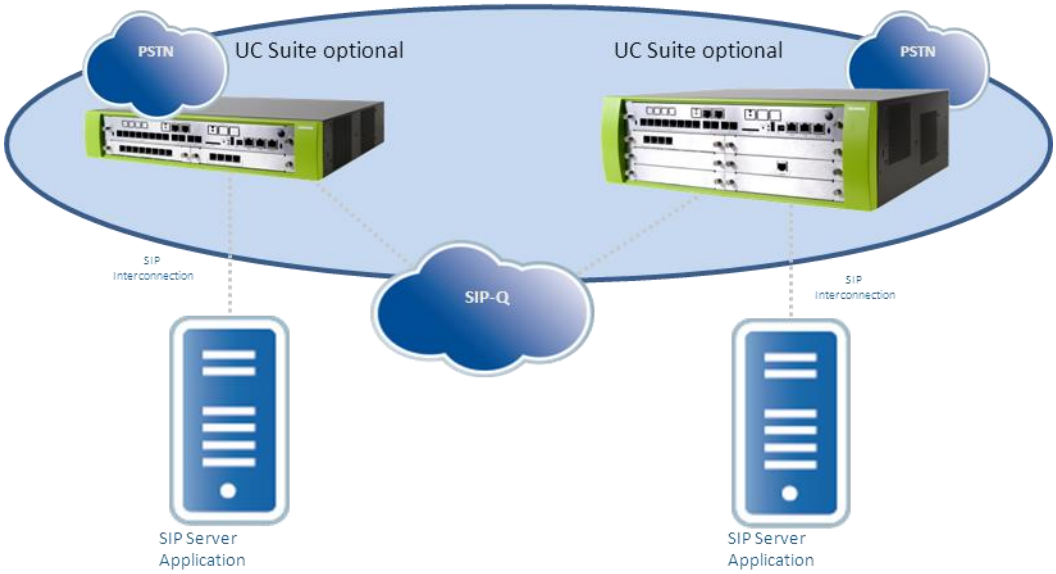

Figure 35 Connection of external auxiliary equipment to OpenScape Business via SIP interconnection

Requirements

- Only certified servers or applications may be connected, e.g., OpenScape Alarm Response Server.
- The external SIP server can be connected via native SIP or SIP-Q protocol.
- Native SIP protocol only supports Basic Call
- Two directions are available for SIP-Q. From a total of 10 SIP directions, up to 8 directions can be used for ITSPn. The remaining number of directions is available for native SIP trunks.

1.12.2.8 Scenario 7: Open Numbering in OpenScape Business X1/X3/X5/X8 Networks

An internetwork with open numbering can be set up by networking two (or more) communication systems whose internal numbering schemes overlap one another (i.e., not unique throughout the internetwork).

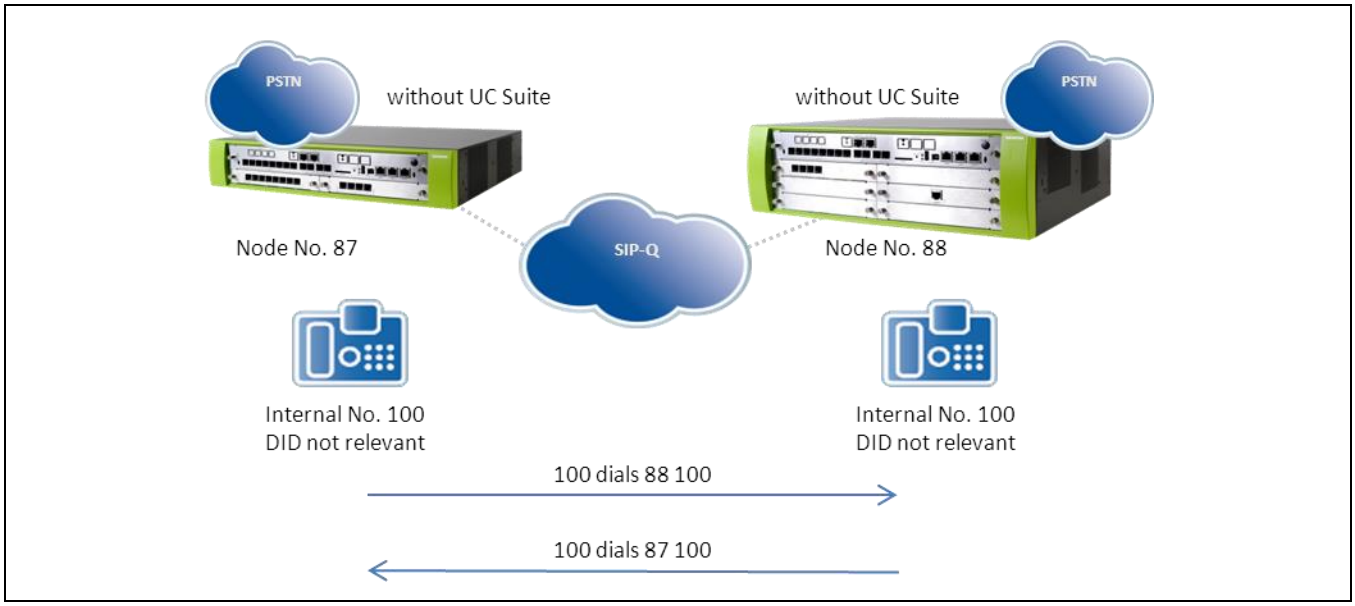

Figure 36 Open Numbering in OpenScape Business X1/X3/X5/X8 Networks

Network Data

- Network-wide voice networking via OpenScape Business
- UC is not supported.
- Every call within a node occurs with an internal call number
- Every call to another node occurs with a node number (plus an internal number)
- Each node must be configured in Expert mode. The Networking wizard is disabled once a node number for open numbering has been configured.
- Local access to PSTN at each node

Technical boundaries

If due to an expansion of the network wide UC functionality a change from an open numbering scheme to a closed numbering scheme should be necessary, then the internet call numbers have to be adjusted accordingly. For this the open numbering is deactivated, the node number is deleted and used as prefix to the internal station number (for example 87 used to be the node number, which is now used as prefix. The extended internal numbers would then be 87100, 87101, … up to now used node number

The difference to the previous configuration:

- Dialing subscribers in the own node requires the new longer station numbers.
- Internal station numbers and indial numbers may differ. Indial numbers are however not affected by this change.

1.12.2.9 Scenario 9: Networking via ISDN

OpenScape Business systems can be networked with each other and with HiPath 4000 systems via digital TDM trunks. They can be connected via S0 and S2M lines.

Networking to telecommunication systems of other manufacturers is possible with the manufacturer-independent protocol QSIG. When connecting third-party systems using the QSIG protocol, the following must be observed:

- Testing the QSIG variants of the systems concerned for compatibility (QSIG V1 also called QSIG according to ECMA standard, or QSIG V2 also called QSIG according to ISO standard)

- Comparison of the feature sets of the affected systems. This shows the extent to which the theoretically expected scope of services, i.e. the congruent share of both feature sets, corresponds to customer requirements.
- To further secure the expected functionality, an on-site connection test is recommended. In particular, interworking with other networking protocols or official protocols should be taken into account.

1.13 Reliability

For OpenScape Business Systems, various measures can be taken to increase reliability or to mitigate the effects of component failure.

1.13.1 IP Telephony Redundancy

IP telephony redundancy is a feature within an OpenScape Business network. If one system (primary system) fails, the IP system phones (HFA phones) registered on this system can automatically register on another, previously defined system (secondary system) in the network. As soon as the failed primary system is operational again, the IP/HFA terminals register there again.

IP telephony redundancy is possible in an OpenScape Business network in the combination of all OpenScape Business models.

Technical configuration

IP system phones of a primary system, who can register on the secondary system in case of failure, are set up as fallback users in the secondary system.

Requirements

For the secondary and primary systems involved:

- Permanent Internet connection to the Central License Server (CLS)
- Valid SW Support status

Licensing

For each fallback user, a so-called Redundancy User license is required in the secondary system.

The Redundancy User license offers a maximum continuous redundancy period of up to 3 days per failure. If a higher redundancy period is required, IP User licenses must be used to license the fallback user.

A mixed licensing of fallback users with Redundancy User and IP User licenses is not possible.

Further information on the Redundancy User license is contained in chapter 1.8.3.7.4 Redundancy User Licenses.

Technical boundary conditions and restrictions

- The call numbers of the system phones are kept after the change of registration.
- Only IP telephony is switched over. UC functions of UC Smart / UC Suite, voicemail and CTI are temporarily suspended.
- Deskshare User and Device @home User are not supported within the IP phone redundancy.
- It can take between 10 and 20 minutes until the users are active in the redundancy system.
- All times mentioned in this chapter are subject to change and can be adjusted by Unify at any time based on user behavior.

Some possible IP telephony redundancy scenarios with their specific requirements and boundary conditions are described as examples in the following.

1.13.1.1 Scenario 1: Exchange Liny only in the Secondary System

The primary system does not have its own connection to the public grid. Only the secondary system has a corresponding service provider connection.

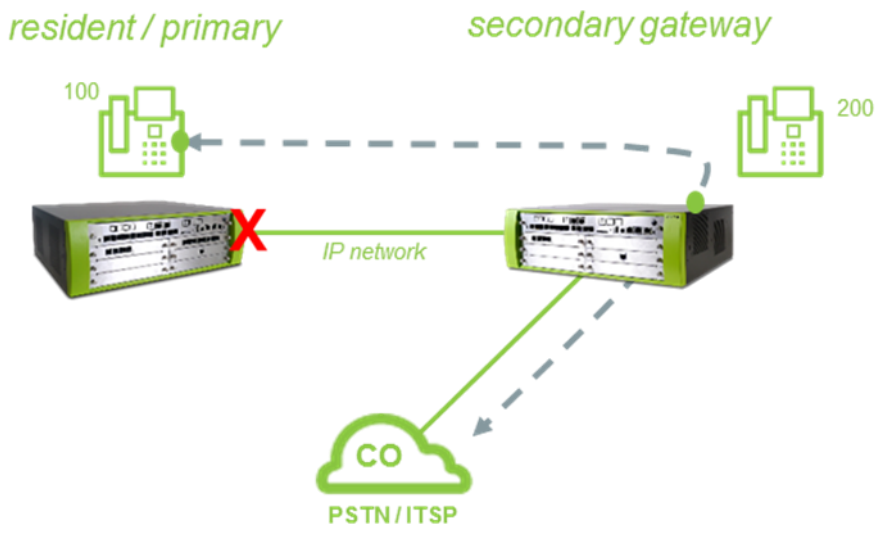

Figure 37 IP Telephony Redundancy – Trunk Line Connection in the Secondary System

Procedure in case of failure of the primary system:

- User 100 registers with the same number on the secondary system during the failure
- External incoming / outgoing calls are possible via the PSTN/ITSP lines of the secondary system

Requirements

The secondary system requires redundancy or IP user license (in the number of required redundancy users).

Technical boundary conditions

In principle, the secondary system can be used in the network as fully-fledged OpenScape Business System. (corresponding licensing assumed).

1.13.1.2 Scenario 2: Exchange Line in the Primary and Secondary System

The primary and secondary systems have a connection to the public network with the same settings. The primary system fails.

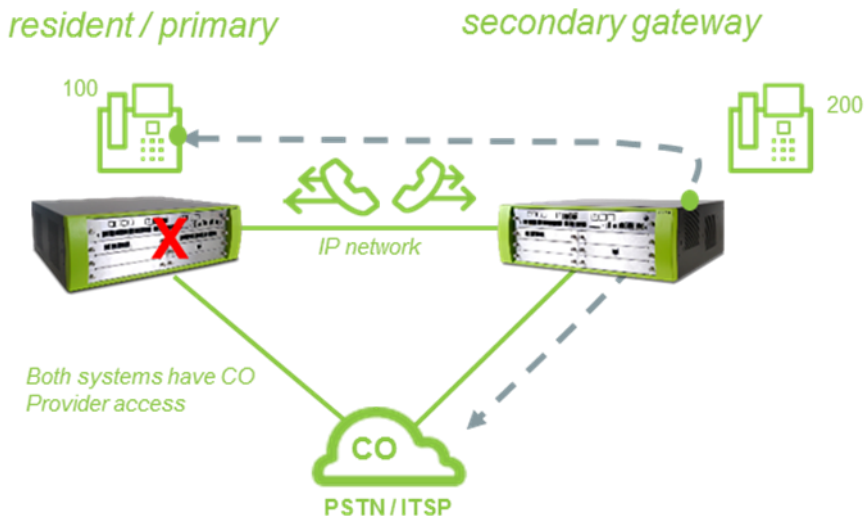

Figure 38 IP Telephony Redundancy – Trunk Line Connection in Primary and Secondary System

Procedure in case of failure of the primary system:

- User 100 registers with the secondary gateway system with the same number
- External incoming / outgoing calls are possible via the PSTN/ITSP lines of the secondary system

Requirements

The PSTN / ITSP service provider must provide "dual mode" functionality, e.g. route incoming calls and accept outgoing calls on the 2nd line.

Technical boundary conditions

In this constellation, the systems can also be set up mutually as a secondary system to further increase reliability.

1.13.1.3 Scenario 3: Multiple primary systems trunk line connection in the secondary system

There are several primary systems and one secondary system in the network. The primary systems have no own connection to the public network. Only the secondary system has a corresponding service provider connection.

Two primary systems fail.

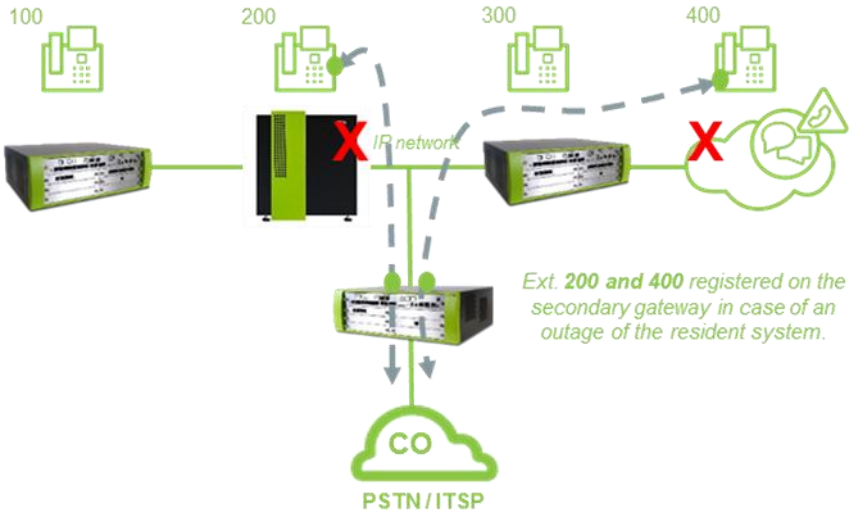

Figure 39 Multiple primary systems, trunk line connection only in the secondary system

Procedure in case of failure of the primary systems:

- If the systems fail, their users (200 and 400) can register with the secondary system
- Incoming / outgoing (PSTN/ITSP) calls for 200 and 400 are possible via the secondary system

Requirements

Primary and secondary systems:

- Are members of an OpenScape Business network.
- Have valid SW Support Status
- Are licensed locally, i.e. a local license file is available.
- Are permanently connected to the Unify license server via Internet connection.

Technical boundary conditions

In this constellation each OpenScape Business System can also have a local provider connection

1.13.2 ISDN Gateway Redundancy for OpenScape Business S

By integrating a further OpenScape Business X System in an OpenScape Business S environment, it is possible to create gateway redundancy to the public network.

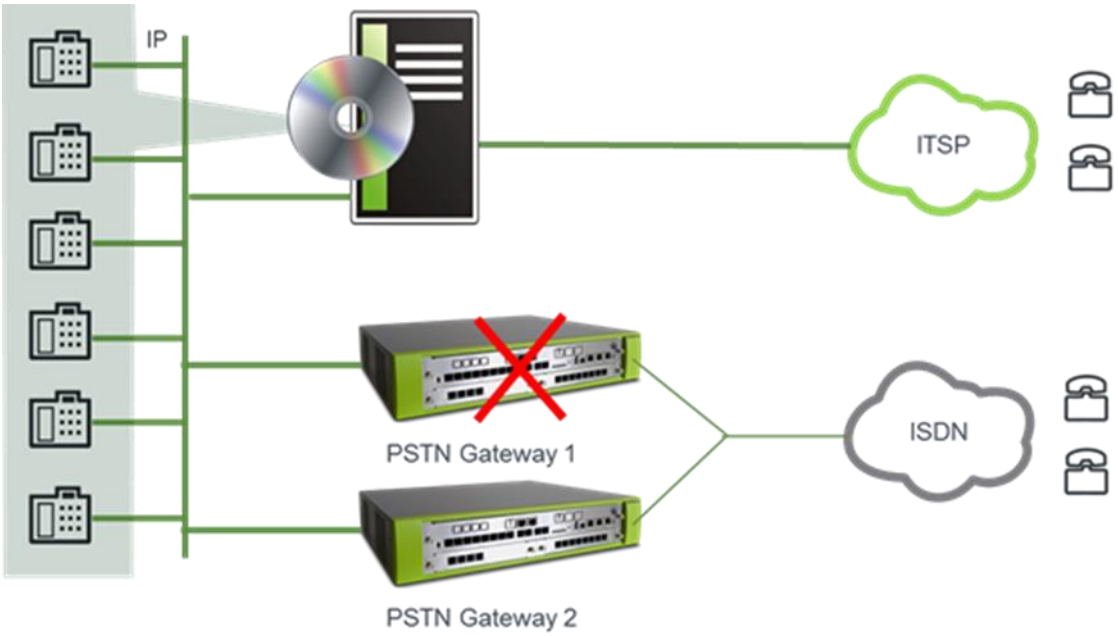

Figure 40 ISDN Gateway Redundancy

Procedure in case of failure of a gateway system

- If one of the two gateways fails, the other gateway with the reduced number of lines remains.
- If one of the two gateways fails, the other gateway with the reduced number of lines also remains.

Technical requirements:

- The IP users are registered on the OpenScape Business S system.
- two or more extension ISDN lines are connected to 2 gateways
- The ISDN lines have identical ISDN call numbers, e.g. Munich, 089 7007-xxxx
- The customer's complete extension block is used on all lines. (to be agreed with the ISDN provider)
- Both incoming and outgoing connections between OpenScape Business S and ISDN are normally made via both gateways.

1.13.3 OpenScape Business S Reliability

For the OpenScape Business S system, various measures can be taken to cushion the negative effects of a HW / SW component failure.

1.13.3.1 HW Measures for Increased Failure Safety

1.13.3.1.1 Power supply failure protection

Recommendations:

- second power supply for the Linux server
- uninterruptible power supply

When using IP telephones, make sure that the LAN switches and IP telephones are also routed via an uninterruptible power supply.

1.13.3.1.2 Fail-safe hard disks in a RAID array

Recommendations for increasing the reliability:

- two hard drives in the RAID1 array.

In a RAID1 group, the contents of the first hard disk are mirrored to the second hard disk. If one hard disk fails, the system continues to run on the second hard disk. A RAID group is possible as software RAID or as hardware RAID (BIOS RAID or HW RAID controller).

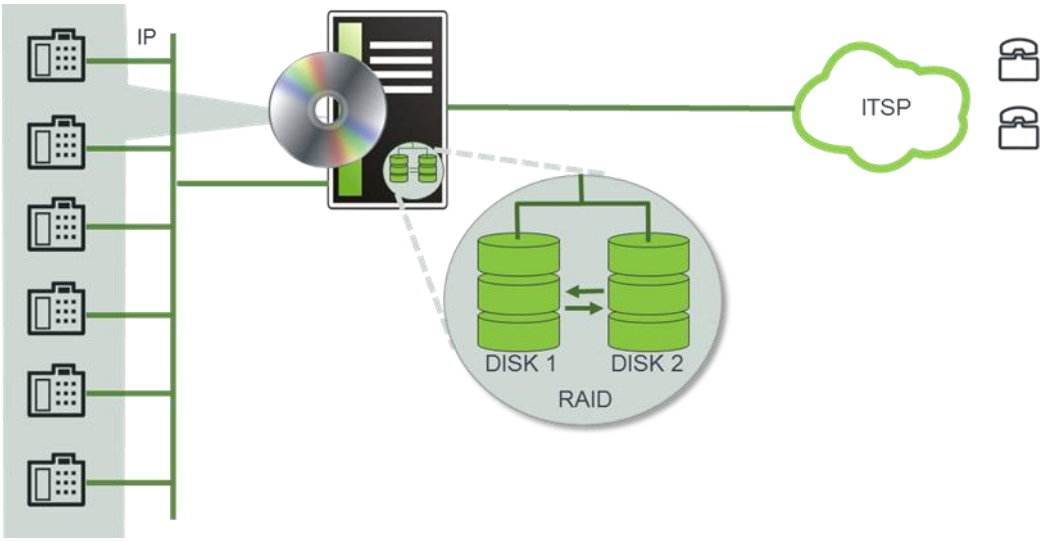

Figure 41 Hard drives in a RAID1 array

For the special features when installing with a software RAID, please refer to the information in the OpenScape Business V2 Installation Linux Server manual.

Technical boundary conditions

In many cases, a hardware RAID requires a separate driver that is not included in the Linux operating system. This driver is provided by the manufacturer and must be installed according to the manufacturer's specifications. If the driver is not compatible with the Linux version or if no Linux driver is available, the hardware RAID cannot be used. In this case, contact the manufacturer for Linux drivers and configuration.

1.13.3.2 SW measures for increased reliability

When using vSphere Virtualization SW, the High Availability features available in vShpere can be leveraged for increased resilience.

Figure 42 vSphere High Availability

The following VMware vSphere features are supported by OpenScape Business S:

- Thin provisioning

- High Availability (HA)
- VMotion
- data recovery (VDR)
- DRS (VMotion automated)
- Storage VMotion

The following VMware vSphere features are not supported:

- Fault Tolerance

1.14 Project specific Releases

Project-specific releases are required for the following scenarios:

- OpenScape Business S systems with more than 1000 subscribers
- Networked systems with more than 8 nodes or more than 1500 participants (when using integrated UC applications).
- Networked systems with more than 32 nodes or more than 1500 nodes (without UC applications)
- Connection of Skype for Business (including Office 365 with SfB "online").
- Multi site and multi gateway scenarios, see "OpenScape Business Hosting" section 1.5.9 “OpenScape Business Hosting / Multi Site”
- Using the Linux-based KVM virtualization platform as a virtual machine for OpenScape Business S.

Requirements

For project-specific releases, remote access via RSP.servicelink must be set up.

1.15 Positioning within the Unify Product Portfolio

OpenScape Business is the "all-in-one" solution for telephony and unified communication. As part of the extensive Unify portfolio, OpenScape Business is the SMB solution for sales via indirect channel partners and specifically addresses the needs of small and medium sized businesses from 5 to 500 subscribers, or 2000 subscribers in a network.

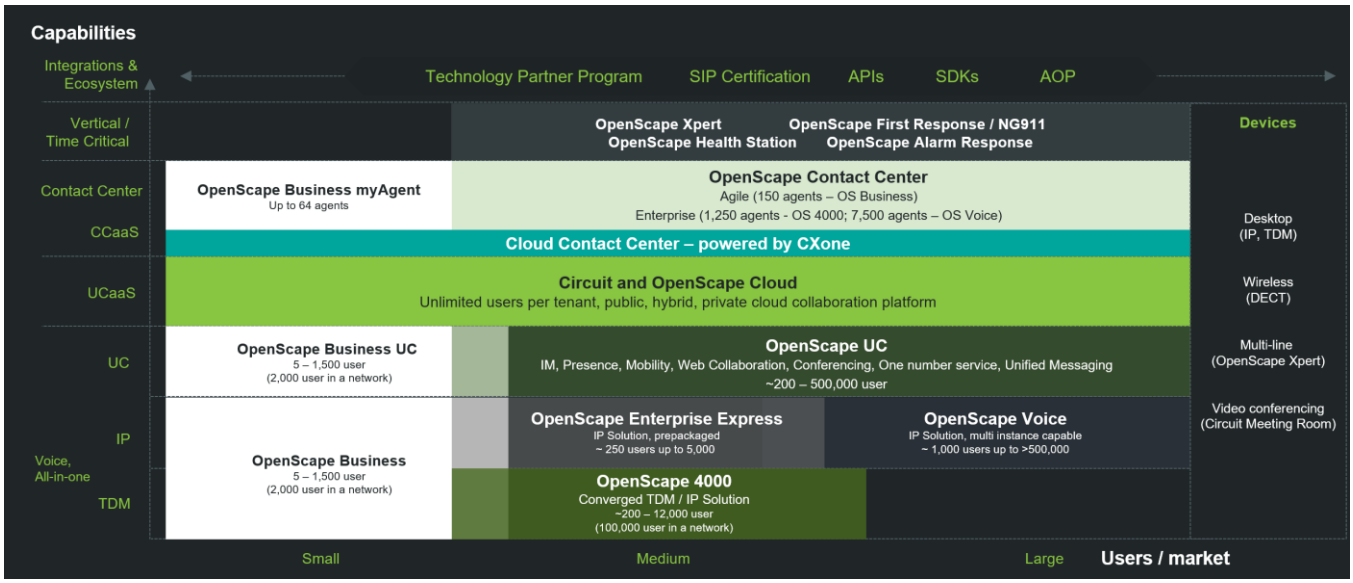

Figure 43 OpenScape Business Positioning

OpenScape Business can be extended with other communication systems and applications from the Unify portfolio or with third-party solutions from a Unify technology partner.

2 Migration and Upgrade

OpenScape Business V1 and V2 systems and HiPath 3000 systems can be migrated to OpenScape Business V3 or a pure SW upgrade from SW version V2 to V3 can be performed.

, it is recommended that the existing mainboard is always replaced with a current "V3 mainboard", so that the upgraded OpenScape Business X systems can also benefit from all future SW developments.

The following order items are available for the sales-related hardware migration or the software upgrade of OpenScape Business V2 or HiPath 3000. You find details about the order items in chapter 5.1.1.10 Upgrades and System Software.

Designation	Order Number
OpenScape Business	
OpenScape Business X8 Mainboard OCCLA	L30251-U600-G664
OpenScape Business V3 HW Migration License	L30250-U622-B783
OpenScape Business V3 SW Upgrade License	L30250-U622-B784
OpenScape Business V3 SW on M2. SSD	L30251-U600-G668
HiPath 3000	
OpenScape Business Upgrade from HiPath 3800 V9 to OSBiz X8	L30251-U600-G652
OpenScape Business Upgrade HiPath for 3000 V9	L30250-U622-B684
OpenScape Business Upgrade HiPath for 3000 V8	L30250-U622-B683
OpenScape Business Upgrade HiPath for 3000 V7	L30250-U622-B682
OpenScape Business Upgrade for HiPath 500 V9	L30250-U622-B694
OpenScape MX/LX	
OpenScape Business Upgrade OpenScape V3 MX/LX	L30250-U622-B681

Table 82 Migration / Upgrade Order Positions

This allows the following migration / upgrade scenarios to be covered:

OpenScape Business X Systems incl. UC Booster Card or Booster Server			
	SW Upgrade		
		Upgrade from OpenScape Business X V2 to V3 with „V2 Mainboard “	2.1.1
	HW Migration		
		Migration from OpenScape Business X V2 to V3 with “V3 Mainboard”	2.2.1
		Migration from OpenScape Business X V1 to V3 with “V3 Mainboard”	2.2.2
		Migration from OpenScape Business X V3 with “V2 Mainboard” to V3 with “V3 Mainboard”	2.2.3
OpenScape Business S System			
	SW Upgrade		
		Upgrade from OpenScape Business S V2 to V3	2.3.1
OpenScape Business Network			
		Migration / Upgrade of an OpenScape Business network from V2 to V3	2.4

HiPath 3000			
	HW Migration HiPath 3000 incl. OpenScape Office HX		
		HiPath 3000 to OpenScape Business X V3 with V3 Mainboard	2.5.1
		HiPath 3000 with OpenScape Office HX to OpenScape Business X V3 with V3 Mainboard	
HiPath 500			
	License Migration HiPath 500		
		HiPath 500 to OpenScape Business X1 V3 with V3 Mainboard	**Fehler! Verweisquelle konnte nicht gefunden werden.**
OpenScape Office MX/LX			
	HW Migration OpenScape Office MX/LX		
		Migration from OpenScape Office MX /LX V3 to OpenScape Business X V3 with V3 Mainboard	2.7

Table 83 Migration / Upgrade Scenarios

Depending on the source system, existing licenses can be transferred completely or partially. The same applies to the further use of peripheral modules and connected terminal devices.

Existing software support for OpenScape Business Systems will stay unchanged after the migration.

The migration / upgrade costs for the continued use of existing licenses can be significantly reduced by connecting the OpenScape Business System to the Unify Central License Server and using the "CLS Connect" feature compared to an "offline" license transfer.

You find further information on "CLS Connect" in Section 1.8.2.3 “Licensing via CLS Connect”.

The following chapters describe the sales-related aspects to be considered for each scenario listed with regard to software, hardware, licensing and the necessary requirements.

2.1 SW Upgrade for OpenScape Business X Systems

A SW upgrade of OpenScape Business X systems essentially involves replacing some of the SW components.

Before an OpenScape Business X system is SW upgraded, the current system configuration and the HW / SW and license components to be replaced, if applicable, must be determined.

Components	**Replaced by**
Hardware Components	
Xpressions Compact card	Smart VM or UC Suite Voicemail
Software Components	
V2 System SW on SDHC card	V3 System SW (Image from Software Download Server)
Gateview	SW solution on OpenScape Deskphone CP600/CP600E
VPN on WAN in the system terminated	VPN in external router terminated
XMPP	No follow-on solution

myPortal Smart	myPortal @work
License Components	
Licenses in license file	Transfer of the licenses into a new license file

Table 84 OpenScape Business X SW Upgrade - HW/SW Checklist

2.1.1 SW Upgrade from OpenScape Business X V2 to OpenScape Business X V3

When you SW upgrade an OpenScape Business X model from SW version V2 to V3, only the system SW is replaced - the V2 mainboard and any existing UC booster card or booster server are retained.

Existing licenses and the customer configuration are maintained. The existing software support will continue unchanged after the migration.

Before the SW upgrade from version V2 to V3, if not already existing, a permanent access to the Unify License Server (via Internet) should be set up in the system and the function "CLS Connect" should be activated. This simplifies the license transfer and shortens the migration time considerably. The customer must be informed about the required access from the OpenScape Business System to the CLS.

Required order items

For the system SW upgrade from V2 to V3, the following order item is required, depending on whether CLS Connect is used or not

- OpenScape Business V3 SW Upgrade License (only if CLS Connect is not used)

Please note that the SW version V3 no longer supports certain functions and hardware components. In Table 84 you will find information about which components are substituted in version V3 and which components are no longer supported. This depends on the expansion of the customer system.

Prerequisites:

For the SW upgrade and the transfer of the existing customer configuration, the system must be operated with the last released SW version V2R7 before the upgrade. If necessary, the system must be upgraded to the latest SW version. To do this, the system must have a valid Software Support status.

Functional boundary conditions and restrictions

Existing licenses can be completely transferred from the existing V2 mainboard to the V3 mainboard in the course of the migration. License transfer without activating the CLS Connect function requires the "SW Upgrade" license and a much more complex handling and time expenditure than using the CLS Connect function.

The customer configuration and customer data are automatically transferred from SW version V2 to V3 during the SW upgrade process.

Technical handling of the SW upgrade

The main technical steps of the SW upgrade are described below. A distinction is made between:

- SW Upgrade for permanent licensing
  - SW upgrade with activated CLS Connect function and connection to the central license server
  - SW upgrade without CLS Connect function and without connection to the central license server
- SW Upgrade with PayGo licensing

Further details on the technical handling of the SW upgrade are contained in the OpenScape Business Administrations manual.

SW upgrade for permanent licensing with CLS Connect

1. preparing the OpenScape Business System
   a. Upgrade the existing system to SW version V2R7

   b. Set up access to the Unify Central License Server (CLS) in the system and test the connection.
   c. Activate CLS Connect in the system
2. Perform SW upgrade
   a. Perform SW Upgrade to V3 via the OpenScape Business Assistant.
   b. System configuration is automatically transferred to V3
   c. Existing licenses are taken over after V3
3. automatic generation of the license file by the central license server
   a. After restarting the system, the system transfers the information that the existing licenses are operated with SW version 3 to the CLS.
   b. The license server automatically generates a new license file and transfers it to the system.

SW Upgrade for permanent licensing without CLS Connect:

1. prepare the OpenScape Business System
   a. Upgrade the existing system to SW version V2R7
2. Create "Upgrade License File" for the V2 system at the Central License Server (CLS)
   a. Activation of the "SW Upgrade License" for the existing system
   b. Generate a new license file for the MAC address of the V2 mainboard
   c. Downloading the license file from CLS
3. Import and activate the license file in the OpenScape Business V2 system
4. Perform SW upgrade
   a. Perform SW Upgrade to V3 via the OpenScape Business Assistant.
   b. System configuration is automatically transferred to V3
   c. Licenses existing in the system are transferred to V3
5. Reboot the system after SW upgrade.

SW Upgrade for PayGo licensing:

1. Prepare OpenScape Business System
   a. Upgrade the existing system to SW version V2R7
2. Regenerate the license file on the central license server (CLS)
   a. Regenerate a new license file for the MAC address of the V2 mainboard
   b. Downloading the license file from CLS

   Import and activate the new license file in the OpenScape Business V2 system
3. SW Upgrade OpenScape Business SW
   a. Performing a SW upgrade to V3 via the OpenScape Business Assistant
   b. System configuration is automatically transferred to V3
   c. The system is ready for operation after restart

2.2 Migration from OpenScape Business X Systems to V3

When migrating OpenScape Business X systems, both HW, SW and license components are exchanged.

Before migrating a Business X system, the current system configuration and the HW / SW as well as license components to be possibly replaced must be determined.

Component	Replaced by
Hardware Components	
Existing “V2 Mainboard”	V3 mainboards (basic or advanced, depending on configuration

UC Booster card / server (with UC Suite)	Additional M.2 SSD
Optipoint 500 phones	OpenScape Deskphone CP phones
Optipoint 400 phones	OpenScape Deskphone CP phones
Xpressions Compact card	Smart VM or UC Suite Voicemail
SLCN16 card	Cordless direct connect
S0 interfaces on the V2 Mainboard	S0 terminal of S0 peripheral card
EXMR module for external announcement devices	V3 Mainboard (Audio In jack on the front panel)
Software Components	
V2 System SW on SDHC card	V3 System SW (Image from Software Download Server)
Gateview	SW solution on OpenScape Deskphone CP600/CP600E
VPN on WAN in the system terminated	VPN in external router terminated
XMPP	No follow-on solution
myPortal Smart	myPortal @work
License Components	
Licenses in license file	Transfer of the licenses into a new license file
CSTA application (via UC Booster card / server)	CSTA license for connecting external solutions (not required for UC Suite, TAPI 170 and TAPI 120)

Table 85 OpenScape Business X Migration - HW/SW Checklist

2.2.1 Migration from OpenScape Business X V2 to OpenScape Business X V3

When migrating an OpenScape Business X model from V2 to V3, the mainboard and the system software are replaced.

Existing licenses and the customer configuration can be transferred. The existing software support is continued unchanged after the migration.

Before the migration, if not already existing, a permanent access to the Unify License Server (via Internet) should be configured in the system and the "CLS Connect" feature should be activated. This simplifies the license transfer and shortens the migration time considerably. The customer must be informed about the required access from the OpenScape Business System to the CLS.

Required order items

For the migration from V2 to V3, the following order items are required, depending on whether CLS Connect, UC Suite or external CSTA applications are used:

- V3 Mainboard
- V3 SW on M.2 SATA SSD data storage
- M2 SSD 256 GB mass data storage (optional with UC Suite application)
- OpenScape Business V3 HW Migration License (if CLS Connect is not used)
- OpenScape Business CSTA License (optional)

If necessary, further hardware components and licenses must be ordered in addition. This depends on the expansion of the customer system.

Table 85 contains information on which components are substituted in Version V3 or are omitted without substitution. Please note that a CSTA license is required for an existing connection of external CSTA applications. This does not apply to the connection of OpenScape TAPI 170 or TAPI 120.

Requirements

For the technical HW/SW migration and the adoption of the existing customer configuration, it is necessary that the system is operated with the last released SW version V2R7 before the migration. If necessary, the system must be upgraded to the latest SW version. To do this, the system must have a valid Software Support status.

Functional boundary conditions

Existing licenses can be completely transferred from the existing V2 mainboard to the V3 mainboard in the course of the migration. The license transfer without activating the CLS Connect function requires the "HW Migration" license and a much more complex handling and time expenditure than using the CLS Connect function.

The customer configuration and customer data are migrated from SW version V2 to V3 via a backup / restore process.

Technical handling of the migration

The main technical steps of the migration are described below. A distinction is made between:

- Migration with permanent licensing
  - Migration with activated CLS Connect function and connection to the central license server
  - Migration without CLS Connect function and without connection to the central license server
- Migration with PayGo licensing

Further details about the technical handling of the migration are contained in the OpenScape Business Administrations manual.

Migration for permanent licensing with CLS Connect

1. Prepare the OpenScape Business System
   a. Upgrade the existing system to SW version V2R7
   b. Set up access to the Central License Server (CLS) in the system and test the connection.
   c. Activate CLS Connect in the system
2. Generate license file at the central license server (CLS)
   a. Transfer the existing licenses from the MAC address of the V2 mainboard to the MAC address of the V3 mainboard using the "Regenerate" function.
   b. Generation of a new license file for the MAC address of the V3 mainboard
3. Backup the V2 system configuration and customer data.
4. Mainboard exchange
   a. Shut down the system and switch off all supply voltages
   b. Use V3 data carrier and if necessary optional mass data storage on the V3 mainboard
   c. Remove the OCCB Voice Channel Booster card from the V2 mainboard and plug it into the V3 mainboard.
   d. Replace V2 Mainboard by V3 Mainboard in the system
   e. Switch on supply voltages again, system boots automatically.
5. Set Basic System Parameters within WBM after startup
   a. Set system date and time
   b. Set application package
      i. UC Smart for system without UC or with UC Smart
      ii. UC Suite for systems with UC Suite
6. Restore the system configuration
   a. Restoring the backup using the restore function
   b. Importing the newly created license file

Migration for permanent licensing without CLS Connect:

1. Prepare OpenScape Business System
    a. Upgrade the existing system to SW version V2R7
2. Create "migration license file" for the V2 system at the central license server (CLS)
    a. Activation of the "HW Migration License" for the existing system
    b. Generate the new license file for the MAC address of the V2 mainboard.
    For this the MAC address of the V3 mainboard must be entered at the CLS.
    c. Downloading the license file from CLS
3. Import the license file into the OpenScape Business V2 system
4. Note the "Confirmation Code" displayed in OpenScape Business Assistant
5. Generate a new license file for the V3 mainboard at the central license server (CLS)
    a. Create a new license file for the MAC address of the V3 mainboard at the CLS by regenerating the Mac address of the V2 mainboard and the previously noted confirmation code.
        i. Search for the OpenScape Business System with the MAC address of the V3 mainboard in the CLS.
        ii. Unlocking the OpenScape Business System by entering and activating the Confirmation Code
        iii. Regenerate the license file
    b. Download the newly generated license file from CLS
6. Backup the V2 system configuration and customer data.
7. Mainboard exchange
    a. Shut down the system and switch off all supply voltages
    b. Use V3 data carrier and if necessary optional mass data storage on the V3 mainboard
    c. Remove the OCCB Voice Channel Booster card from the V2 mainboard and plug it into the V3 mainboard.
    d. Replace the V2 mainboard with the V3 mainboard in the system.
    e. Switch on the power supply again, the system boots automatically.
8. Set Basic System Parameters within WBM after startup
    a. Set system date and time
    b. Set application package
        i. UC Smart for system without UC or with UC Smart
        ii. UC Suite for systems with UC Suite
9. Restore the system configuration
    a. Restore the backup using the restore function
10. Manual import of the new license file into the V3 system after system startup

Migration for PayGo licensing:

1. Preparing the OpenScape Business System
    a. Upgrade the existing system to SW version V2R7
2. Backup the V2 system configuration and customer data.
3. Regenerate the license file on the central license server (CLS)
    a. Regenerate a new license file for the MAC address of the V3 mainboard
    (Transfer of the existing licenses from the MAC address of the V2 mainboard to the MAC address of the V3 mainboard)
    b. Downloading the new license file from the CLS
4. Mainboard replacement
    a. Shut down the system and switch off all supply voltages
    b. Use V3 data carrier and if necessary optional mass data storage on the V3 mainboard

c. Remove the OCCB Voice Channel Booster card from the V2 mainboard and plug it into the V3 mainboard.
d. Replace V2 Mainboard by V3 Mainboard in the system.
e. Switch on supply voltages again, system boots automatically.

5. Set Basic System Parameters within WBM after startup
   a. Set system date and time
   b. Set application package
      i. UC Smart for system without UC or with UC Smart
      ii. UC Suite for systems with UC Suite
6. Restore the system configuration
   a. Restore the backup using the restore function
   b. Manual import of the new license file into the V3 system and subsequent activation of the license file

2.2.2 Migration from OpenScape Business X V1 to OpenScape Business X V3

When migrating an OpenScape Business X model from V1 to V3, the mainboard as well as the system software is exchanged. The migration must be performed in two steps.

- SW Upgrade of the SW version V1R3 to the last released SW version V2R7.
- Migration of the V2 system to the V3 system

With this procedure existing licenses and the customer configuration can be taken over. After the migration in step 2, it must be ensured that the system has SW support.

2.2.2.1 Step 1: SW Upgrade of SW version V1R3 to the last released SW version V2R7

The upgrade of OpenScape Business X Systems with SW version V1R3.3 to SW version V2 technically consists of the SW upgrade from SW version 1R3.3 to version 2R7.x and a license migration from V1 licenses to V2 licenses. The SW must always be upgraded to the last released SW version V2R7, otherwise the system cannot be migrated to SW version 3 afterwards.

With the SW upgrade, the existing OpenScape Business Hardware can be used completely. A software upgrade to V2 is also required for any existing UC Booster Server.

For the license migration from V1 licenses to V2 licenses a corresponding upgrade license is required.

For all installed OpenScape Business V1 systems that had a valid SW Assurance at the time of the release of V2, a permanent System Upgrade License to V2 was automatically booked to the end customer account at the CLS by Unify (no separate order required). This license must be activated at the central license server (CLS) in order to migrate existing V1 licenses to V2.

If the licenses on the CLS have been migrated from version V1 to version V2, the SW support for the OpenScape Business V2 system has expired. To bring the system back into software support for the subsequent migration to V3, a reinstatement license and, if necessary, additional SW support must be purchased.

Further Information

For technical details on the procedure for the upgrade from V1 to V2 please refer to the OpenScape Business Administrator manual.

2.2.2.2 Step 2: Migration of the V2 System to the V3 System

For the subsequent migration of the system from V2 to V3 the procedure described in Section 2.1.1 "Migration from OpenScape Business X V2 to OpenScape Business X V3" applies. Please note that for this step you need to order additional HW / SW components and possibly also licenses.

2.2.3 Migration from OpenScape Business X V3 to OpenScape Business X V3

In this scenario, the existing V2 mainboard of the OpenScape Business System and any UC Booster HW that may be present are replaced with a V3 mainboard. The system was previously upgraded to SW version V3. (e.g. in the course of the SW support).

Existing licenses and the customer configuration can be transferred. The existing software support will continue unchanged after the migration.

A possibly existing UC Booster Card or a UC Booster Server is no longer necessary in connection with the V3 mainboard. An additional mass data storage is used on the V3 mainboard for this purpose. In principle the following order items are required:

- V3 Mainboard
- V3 SW on SSD data carrier
- M2 SSD 256 GB mass data storage (optional with UC Suite application)
- OpenScape Business V3 HW Migration License (optional)
- OpenScape Business CSTA License (optional)

In Table 85 you can find information which components are substituted by using the V3 mainboard or are omitted without substitution. Please note that a CSTA license is required for an existing connection of external CSTA applications. This does not apply to the connection of OpenScape TAPI 170 or TAPI 120.

Before the migration, if not already existing, a permanent access to the Unify License Server (via Internet) should be configured in the system and the "CLS Connect" feature should be activated. This simplifies the license transfer and shortens the migration time considerably. The customer must be informed about the required access from the OpenScape Business System to the CLS.

Functional boundary conditions and restrictions

Existing licenses can be completely transferred from the existing V2 mainboard to the new V3 mainboard during the migration.

The license transfer without activating the CLS Connect function requires the "HW Migration" license and a much more complex handling and time expenditure than using the CLS Connect function.

The customer configuration and customer data are transferred via a backup / restore process.

Technical handling of the migration

The main technical steps of the migration are described below. A distinction is made between:

- Migration with permanent licensing
  - Migration with activated CLS Connect function and connection to the central license server
  - Migration without CLS Connect function and without connection to the central license server
- Migration with PayGo licensing

Further details about the technical handling of the migration are contained in the OpenScape Business Administrations manual.

Migration for permanent licensing with CLS Connect

1. Preparing the OpenScape Business System
   a. Set up access to the Central License Server (CLS) in the system and test the connection.
   b. Activate CLS Connect in the system
2. Generate license file at the central license server (CLS)
   a. Transfer the existing licenses from the MAC address of the V2 mainboard to the MAC address of the V3 mainboard using the "Regenerate" function.
   b. Generation of a new license file for the MAC address of the V3 mainboard
3. Create a backup of the V3 system configuration and customer data
4. Create a backup of the Booster Server configuration if necessary
5. Mainboard replacement
   a. Shut down the system and switch off all supply voltages
   b. Use V3 data carrier and if necessary optional mass data storage on the V3 mainboard

c. Remove any existing OCCB Voice Channel Booster card from the V2 mainboard and plug it onto the V3 mainboard.
d. Replace the V2 mainboard with the V3 mainboard in the system.
e. Switch on the power supply again, the system boots automatically.

6. Set Basic System Parameters within WBM after startup
   a. Set system date and time
   b. Set application package
      i. UC Smart for system without UC or with UC Smart
      ii. UC Suite for systems with UC Suite
7. Restore the customer configuration
   a. Import the newly created license file
   b. Restore the System Backup and, if necessary, the Booster Server Backup the Restore Function

Migration for permanent licensing without CLS Connect

1. Create "migration license file" for the existing V2 mainboard at the Central License Server (CLS)
   a. Activation of the "HW Migration License" for the existing system
   b. Generate the new license file for the MAC address of the V2 mainboard.
   For this the MAC address of the V3 mainboard must be entered at the CLS.
   c. Downloading the license file from CLS
2. Import the license file into the OpenScape Business System with V2 mainboard
3. Note the "Confirmation Code" displayed in the OpenScape Business Assistant
4. Generate a new license file at the central license server (CLS) for the V3 mainboard
   a. Create a new license file for the MAC address of the V3 mainboard at the CLS by regenerating using the Mac address of the V2 mainboard and the previously noted Confirmation Code
      i. Search for the OpenScape Business System with the MAC address of the V3 mainboard in the CLS.
      ii. Unlocking the OpenScape Business System by entering and activating the Confirmation Code
      iii. Regenerate the license file
   b. Downloading the newly generated license file from CLS
5. Backup the V2 system configuration and customer data.
6. Mainboard exchange
   a. Shut down the system and switch off all supply voltages
   b. Use V3 data carrier and if necessary optional mass data storage on the V3 mainboard
   c. Remove the OCCB Voice Channel Booster card from the V2 mainboard and plug it into the V3 mainboard.
   d. Replace the V2 mainboard with the V3 mainboard in the system.
   e. Switch on the power supply again, the system boots independently.
7. Set Basic System Parameters within WBM after startup
   a. Set system date and time
   b. Set application package
      i. UC Smart for system without UC or with UC Smart
      ii. UC Suite for systems with UC Suite
8. Restore the customer configuration after system startup
   a. Restoring the backup using the restore function
9. Manual import and activation of the new license file into the V3 system after system startup

Migration for PayGo licensing:

1. Backup of the V2 system configuration and customer data.
2. Regenerate the license file at the central license server (CLS)
    a. Regenerate a new license file for the MAC address of the V3 mainboard
    (Transfer of the existing licenses from the MAC address of the V2 mainboard to the MAC address of the V3 mainboard)
    b. Downloading the new license file from the CLS
3. Mainboard replacement
    a. Shut down the system and switch off all supply voltages
    b. Use V3 data carrier and if necessary optional mass data storage on the V3 mainboard
    c. Remove the OCCB Voice Channel Booster card from the V2 mainboard and plug it into the V3 mainboard.
    d. Replace the V2 mainboard with the V3 mainboard in the system
    e. Switch on supply voltages again, system boots automatically.
4. Set Basic System Parameters within WBM after startup
    a. Set system date and time
    b. Set application package
        i. UC Smart for system without UC or with UC Smart
        ii. UC Suite for systems with UC Suite
5. Restore the system configuration
    a. Restoring the backup using the restore function
6. Manual import of the new license file into the V3 system and subsequent activation of the license file

2.3 OpenScape Business S / UC Booster Server

Before an OpenScape Business S / UC Booster Server System SW upgrade, the current system configuration and the HW / SW and license components that may need to be replaced must be determined.

Components	**Replaced by**
Hardware Components	
Server PC	Reuse is possible. HW Requirements must be checked for OpenScape Business S extensions. **(*1**
Optipoint 400 phones	OpenScape Deskphone CP phones
Software Components	
SLES 11 or SLES12 Operating System	Reuse is possible. Eventually upgrade of service pack required **(*2**
V2 System SW on SDHC card	V3 System SW (Image from Software Download Server)
Gateview	SW solution on OpenScape Deskphone CP600/CP600E
XMPP	No follow-on solution
myPortal Smart	myPortal @work
License Components	
Licenses in license file	Transfer of the licenses into a new license file
CSTA application (via UC Booster card / server)	CSTA license for connecting external solutions (not required for UC Suite, TAPI 170 and TAPI 120)

Table 86 OpenScape Business S Migration - HW/SW Checklist

(*1 The existing server PC HW can be used if the configuration of the OpenScape Business System S / UC Booster Server System remains unchanged after the SW upgrade. If expansions are planned after the SW upgrade, the hardware requirements may need to be adapted according to the specifications in Section 1.6.1 “HW / SW Requirements for OpenScape Business S / UC Booster Server”

(*2 The SLES operating system installed on the server PC can be adopted in case of an OpenScape Business S / UC Booster Server SW upgrade. However, it should be upgraded to the last released service pack before the SW upgrade.

If Novell has discontinued SW support for the SLES version used, the customer must be informed and, if necessary, a SLES upgrade must be marketed.

The SLES upgrade may have to be performed in several steps to take over existing OpenScape Business S installations including the customer configuration and customer data. An existing SLES Update Key remains valid with a SLES Upgrade. However, it may have to be de-registered with Novell before the SLES upgrade and then re-registered for the new system.

The following describes the OpenScape Business SW Upgrade while keeping the SLES operating system.

2.3.1 SW Upgrade from OpenScape Business S V2 to OpenScape Business S V3

When upgrading an OpenScape Business S model from SW version V2 to V3, only the system SW is exchanged.

Existing licenses and the customer configuration are taken over. The existing software support will continue unchanged after the migration.

In this case, no separate order items are required for the System SW upgrade from V2 to V3.

Please note that the SW version V3 no longer supports certain functions and hardware components. In Table 86 you will find information about which components are substituted in version V3 and which components are omitted without substitution. This depends on the expansion of the customer system.

Requirements

Before the SW upgrade from version V2 to V3, a permanent access to the Unify license server (via the Internet) must be set up in the system and the "CLS Connect" function must be activated. The customer must be informed about the required access from the OpenScape Business System to the CLS.

For the SW Upgrade and the transfer of the existing customer configuration it is required that the system is operated with the last released SW version V2R7 before the migration. If necessary, the system must be upgraded to the latest SW version. For this, the system must have a valid Software Support Status.

Functional Boundary Conditions and Restrictions

Existing licenses can only be taken over in the course of the SW upgrade if the CLS Connect function is activated.

The customer configuration and customer data are automatically transferred from SW version V2 to V3 during the SW upgrade process.

Technical handling of the migration

The main technical steps of the migration are described below. A distinction is made between:

- Migration for permanent licensing with CLS Connect
- Migration with PayGo licensing

Further details about the technical handling of the migration are contained in the OpenScape Business Administrations manual.

SW upgrade for permanent licensing with CLS Connect

1. Prepare the OpenScape Business V2 system
    a. Upgrade the existing system to SW version V2R7
    b. Set up access to the Unify Central License Server (CLS) in the system and test the connection.

   c. Activate CLS Connect in the V2 system.
2. Prepare SLES operating system
   a. Operating System Upgrade to the service pack last released for the SLES version used in connection with OpenScape Business S.
3. SW Upgrade Open Scape Business SW.
   a. Execute SW Upgrade to V3 via OpenScape Business Assistant.
   b. System configuration is automatically transferred to V3.
   c. Existing licenses are transferred to V3.
4. Automatic generation of the license file by the central license server
   a. After restarting the system, the system transfers the information that the existing licenses are operated with SW version 3.
   b. The license server automatically generates a new license file with the V3 info and transfers it back to the system.

SW Upgrade for PayGo licensing

1. Preparing the OpenScape Business System
   a. Upgrade the existing system to SW version V2R7
2. Prepare SLES operating system
   a. Operating System Upgrade to the last service pack released for the SLES version used in connection with OpenScape Business S
3. Regenerate the license file on the central license server (CLS)
   a. Regenerate a new license file for the V2 system
   b. Downloading the new license file
4. Import and activate the new license file in the OpenScape Business V2 system.
5. SW Upgrade Open Scape Business SW.
   a. Performing the SW Upgrade to V3 via the OpenScape Business Assistant.
   b. System configuration is automatically transferred to V3
   c. The system is ready for operation after reboot.

2.4 OpenScape Business Network Migration / Upgrade to V3

When migrating or upgrading an OpenScape Business network, all nodes in the network must be upgraded to SW version V3. For the networking functions it is irrelevant whether the SW version V3 is operated on a OpenScape Business X system in the network with a V2 mainboard or with a V3 mainboard.

The upgrade must be performed separately for each OpenScape Business node of the network. The components required for an upgrade are to be determined per node depending on the individual systems according to the descriptions in chapters 2.1, 2.2 and 2.3.

The licenses for the nodes in the V2 network can be transferred to the V3 systems via the Central License Server. There are different procedures for systems with or without “CLS Connect” function. The "Pay as you go" licensing procedure is not supported in the OpenScape Business network.

The effort required for transferring licenses with “CLS Connect” is significantly lower in a network than without the CLS Connect function.

Important note

The upgrade of the nodes in a network must be performed in the sequence as described for each scenario. It is essential, that all slave nodes are in operation with the software version V3 before the master node can be migrated or upgraded to software version V3.

During the network upgrade an inhomogeneous network with V2 and V3 software will occur for a transitional period. During this time, the full functionality of the network's performance range cannot be guaranteed. In some

scenarios the upgraded / migrated systems will operate in emergency mode only until the license file is updated by the master node.

OpenScape Business networks can be realized in various constellations regarding the use of OpenScape Business X and S systems and the licensing of the systems in the network. In the following the most important steps for the migration or upgrade of an OpenScape Business network and their sequence are shown by means of typical constellations.

The description always assumes that a network license file exists in the Central License Server for the network, by means of which the master node supplies all slave nodes with license information.

- **Network consisting of OpenScape Business X Systems only**
  - Scenario 1: HW migration only in the master node, SW upgrade in all slave nodes
  - Scenario 2: SW upgrade for all OpenScape Business X nodes in the network
- **Network consisting of OpenScape Business S and OpenScape Business X systems**
  - Scenario 3: OpenScape Business S is master node and OpenScape Business X systems are slave nodes
    - Scenario 3a: SW upgrade in all OpenScape Business nodes of the network
    - Scenario 3b: SW Update in the OpenScape Business S master node, migration of the slave nodes

2.4.1 Network with OpenScape Business X Systems

2.4.1.1 Scenario 1: HW Migration Master node, SW Upgrade Slave nodes

When upgrading the network HW/SW, a distinction must be made between the “CLS Connect” function and the license transfer procedure.

2.4.1.1.1 Migration / Upgrade with CLS Connect in the Master Node

Prerequisites:

- All nodes in the network are operated with the last released SW version V2R7.x.
- At the Central License Server (CLS) there is a central network license file for the Master Node of the network.
- The CLS Connect function is activated in the Master Node. CLS Connect needs not to be activated in the slave nodes.

Actions for Migration / Upgrade

1. Upgrade all slave nodes to SW version V3 (details see chapter 2.1.1)
   a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
   b. Configuration and license information are kept.
   c. System is not ready for operation after startup due to an invalid license file.
2. Generate a new network license file on the license server.
   a. Regenerate the network license file for the Master Node to the MAC address of the V3 mainboard
   b. Download new network license file from CLS
3. Migrate Master Node to V3 mainboards (details see chapter 2.2.1)
   a. Backup System Configuration via WBM
   b. Mainboard exchange
   c. Set date/time and application package via WBM
   d. Import and activate the new network license file via WBM.
   e. Restore the system configuration via WBM (license file is not overwritten in this case)
4. Master node automatically transfers the new license information to the slave nodes.

2.4.1.1.2 Migration / Upgrade without CLS Connect in Master Node

Prerequisites:

- All nodes in the network are operated with the last released SW V2R7.x SW version.
- On the Central License Server (CLS) there is a network license file for the Master Node of the network.
- HW Migration license for Master Node is available
- SW Upgrade licenses are available for each Slave Node

Actions for Migration / Upgrade

1. Generate new network license file on the license server
    a. Break down the network file at the CLS into individual license files
    b. Generate license file for master node
        i. Activate the HW Migration License for the Master Node
    c. Generate license file slave nodes
        i. Activating the SW Upgrade License for each individual slave node
    d. Merge the individual nodes license files to a new network license file
    e. Download new network license file from CLS
2. Upgrade slave node to V3 (for details see chapter 2.1.1)
    a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
    b. Configuration and license information are automatically transferred
    c. System is not ready for operation after startup due to invalid license file.
3. Migrate Master Node to V3 mainboard (details see chapter 2.2.1)
    a. Backup system configuration via WBM
    b. Mainboard exchange
    c. Set date/time and application package via WBM
    d. Import and activate the new network license file via WBM.
    e. Restore the system configuration via WBM (license file is not overwritten in this case)
4. Master node automatically transfers the new license information to the slave nodes.

2.4.1.2 Scenario 2: SW upgrade of all systems in the network to V3

When upgrading the network software, the CLS Connect function must be distinguished in the procedure for transferring the license.

2.4.1.2.1 SW Upgrade with CLS Connect in the Master Node

Requirements:

- All nodes in the network are operated with the last released SW version V2R7.x.
- At the Central License Server (CLS) there is a central network license file for the master node of the network.
- The CLS Connect function is activated in the Master Node. CLS Connect needs not to be activated in the slave nodes.

Actions for Migration / Upgrade

1. Upgrade all Slave Nodes to SW Version V3 (details see chapter 2.1.1)
    a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
    b. Configuration and license information are kept
    c. System is not ready for operation after startup due to invalid license file.
2. Upgrade Master Node to V3 (details see chapter 2.1.1)
    a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.

b. Configuration and license information are kept.
c. Restart the system

3. Automatic steps after start-up (no manual intervention required)
    a. Master node reports to CLS after startup with SW version 3
    b. CLS generates a new network license file.
    c. CLS transfers the new network license file to the master node
    d. Master Node automatically transmits the new license information to the Slave Nodes.

2.4.1.2.2 SW Upgrade without CLS Connect in Master Node:

Requirements:

- All nodes in the network are operated with the last released SW version V2R7.x.
- At the Central License Server (CLS) there is a central network license file for the Master Node of the network.
- SW Upgrade licenses are available for each node

Actions for Migration / Upgrade

1. Generate new license files on the license server
    a. Break down the network file at the CLS into individual license files
    b. Generate license file for master node
        i. Activate the SW Upgrade License for the Master Node
    c. Generate license file for slave node
        i. Activate the SW Upgrade License for each individual slave node
    d. Merge the individual nodes license files to a new network license file
    e. Download new network license file from CLS
2. Upgrade slave node to V3 (for details see chapter 2.1.1)
    a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
    b. Configuration and license information are kept
    c. System is not ready for operation after startup due to invalid license file.
3. Upgrade Master Node to V3 (details see chapter 2.1.1)
    a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
    b. Configuration and license information are kept
    c. Import the network license file into the master and activate the license file
4. Master node automatically transfers the new license information to the slave nodes.

2.4.2 Network with OpenScape Business S and OpenScape Business X Systems

In the following scenarios the OpenScape Business S system is always the master node.

2.4.2.1 Scenario 3a: SW upgrade in all nodes

This scenario is identical to scenario 2 (see chapter2.4.1.2)

2.4.2.2 Scenario 3b: SW Update in the Master Node, HW Migration of the Slave Nodes

In this scenario the slave nodes are migrated to the V3 mainboard and SW version 3 by a HW/SW exchange. In the OpenScape Business S master system the SW is upgraded from V2 to V3.

For the HW/SW upgrade of the network, the CLS Connect function must be distinguished in the license transfer procedure.

2.4.2.2.1 Migration / Upgrade with CLS Connect in the Master Node

Requirements:

- All nodes in the network are operated with the last released SW version V2R7.x.
- At the Central License Server (CLS) there is a central network license file for the master node of the network.
- The CLS Connect function is activated in the Master Node. CLS Connect does not have to be switched on in the Slave Nodes.
- V3 Mainboards incl. V3 SW are available

Actions for Migration / Upgrade

1. Migrate all slave nodes to the V3 mainboard (for details see chapter 2.2.1)
    a. Backup system configuration via WBM
    b. Mainboard replacement
    c. Set date/time and application package via WBM
    d. Restore the system configuration via WBM
    e. System is not operational after startup due to invalid license file.
2. Upgrade Master Node to V3 (details see chapter 2.3.1)
    a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
    b. Configuration and license information are retained
    c. Restart the system
3. Automatic steps after start-up (no manual intervention required)
    a. Master node reports to CLS after startup with SW version 3
    b. CLS generates a new network license file.
    c. CLS transfers the new network license file to the master node
    d. Master Node automatically transmits the new license information to the Slave Node.

2.4.2.2.2 Migration / Upgrade without CLS Connect in Master Node

Requirements:

- All nodes in the network are operated with the last released SW V2R7.x SW version.
- A network license file for the Master Node of the network is available on the Central License Server (CLS).
- SW Upgrade license for the Master Node is available
- HW Migration licenses are available for each slave node
- V3 Mainboards incl. V3 SW are available

Actions for Migration / Upgrade

1. Generate new network license file on the license server
    a. Break down the network file at the CLS into individual license files
    b. Generate license file for master node
        i. Activating the SW Upgrade License for the Master Node
    c. Generate license file for slave nodes
        i. Activating the HW Migration License for each Slave Node
    d. Merge the individual nodes license files to a new network license file
    e. Download new network license file from CLS
2. Migrate all slave nodes to the V3 mainboard (for details see chapter 2.2.1)
    a. Backup system configuration via WBM
    b. Mainboard replacement

c. Set date/time and application package via WBM
d. Restore the system configuration via WBM
e. System is not operational after startup due to invalid license file.

3. Upgrade Master Node to V3 (details see chapter 2.3.1)
   a. Import V3 SW via OpenScape Business Assistant (WBM) and upgrade the system.
   b. Configuration and license information are retained
   c. Import the network license file into the master and activate the license file
4. Master node automatically transfers the new license information to the slave nodes.

2.5 HiPath 3000 / HiPath 500 Migration to OpenScape Business

When migrating from HiPath 3000 systems to OpenScape Business X V3 with V3 mainboards, depending on the hardware configuration, part of the hardware equipment of the system and the connected terminals / clients can be transferred.

When migrating from HiPath 500, the HW system is replaced by an OpenScape Business X1 system and a license migration is performed for the TDM subscribers of the HiPath 500 system.

Before migrating a HiPath 3000 / HiPath 500 system, the current system configuration and the HW / SW as well as license components to be replaced, if any, must be determined by subsequent checks.

Depending on the expected migration effort, it may be cheaper to order a new basic system with V3 mainboard and V3 SW and to perform a license migration only.

General Checks

- **Functional compatibility check**
  Please find out which functions are no longer supported or have changed since HiPath 3000 V9. Chapter 8.2 lists the HiPath 3000 features that are no longer supported in OpenScape Business or have been replaced by newer features.
- **SW version check**
  The system must be operated under SW version V9 before migration. Systems with SW version smaller than V9 must be upgraded to SW version V9 and put into operation before migration.
- **Check protective earthing**
  For all OpenScape Business X communications systems, protective grounding via an additional grounding conductor is mandatory!

Hardware compatibility check
For technical reasons, some modules and devices cannot be used in the OpenScape Business X systems. When migrating from HiPath 3000 V9 to OpenScape Business V3 these modules and terminals must be removed. If required, use the respective successor types instead. The list of no longer supported modules and their successors can be found in Chapter 3.3 .

- **Power Supply**
  OpenScape Business 33xx / 35xx can be operated with UPSC-D / DR or OCPSM power supply. Any remaining PSU power supplies must be replaced with OCPSM. Suitable PSU upgrade kits are available.
- **Peripheral components**
  Please check whether the existing hardware can still be used. No longer supported modules or end devices must be removed and replaced by successors if necessary.
- **Phone device check**
  OpenScape Business V3 systems with V3 mainboards support analog, ISDN, SIP and OpenStage or OpenScape Deskphone IP / CP devices. Existing Optiset E, Optipoint 4xx and Optipoint 5xx devices must be replaced.
- **Housing check**
  In migrated HiPath 33xx/35xx systems, the housing caps may have to be replaced and fan units installed if necessary.
  Corresponding delivery items are available.

Other Checks

- **Call number plan for networked systems**
  With pure voice networking, open and closed numbering is possible. When using UC Suite, closed numbering is required in the network (network-wide UC functionality).

2.5.1 Migration HiPath 3800 to OpenScape Business X8 V3

When migrating a HiPath 3800 system to OpenScape Business X V3, the mainboard, the determined peripheral cards and end devices as well as the system SW are replaced. Existing licenses can be migrated with an Upgrade License. The system configuration can be transferred. After migration, the OpenScape Business V3 system has a software support of 3 years.

For the migration from HiPath 3000 V9 to OpenScape Business V3 the following order items are required in principle:

- V3 Mainboard
- V3 SW on SSD data storage
- M2 SSD 256 GB mass data storage (optional with UC Suite application)
- OpenScape Business Upgrade HiPath 3000 V9 (license migration), or
- OpenScape Business Upgrade HiPath 3000 V8 (license migration), or
- OpenScape Business Upgrade HiPath 3000 V7 (license migration)
- OpenScape Business CSTA License (optional)

If necessary, further hardware components and licenses must be ordered in addition. This depends on the configuration of the customer system.

In chapter 8.2 you will find information on which components are substituted in version V3 or are omitted without substitution. Please note that a CSTA license is required for an existing connection of external CSTA applications. This does not apply to the connection of OpenScape Business TAPI 170 or TAPI 120.

Requirements

All HW / SW components have been tested for reusability.

All new HW / SW components are available

An upgrade license for upgrading from HiPath 3000 to OpenScape Business V3 has been ordered and the LAC of the upgrade license is available to retrieve the new license from the license server.

For the technical SW migration and the transfer of the existing customer configuration and for determining the TDM subscribers, it is necessary that the system is operated with the last released HiPath 3000 SW version V9 before the migration. If necessary, the system must be upgraded to the latest SW version.

Technical handling

The actions to be performed for the technical HiPath 3000 HW/SW and license migration to OpenScape Business are described in the administration manual.

Determining the OpenScape Business licenses during the migration:

The licenses existing in HiPath 3000 systems can be transferred to the OpenScape Business V3 system by activating the "OpenScape Business Upgrade HiPath 3000" license in the central license server. During the license transfer a new license file for the OpenScape Business V3 system is created with the following licenses.

HP 3000 License	OpenScape Business License	Remark
	Basic license	Newly created incl. 3 years SW support
	OpenDirectory Base license	Newly created
	Web Collaboration Connector license	Newly created

	TDM user license	Number calculated from system configuration*
IP-Subscriber (ComScendo)	IP User License	1:1 transfer from HP 3000 license file
	TDM User Licenser	calculated from system configuration*
S2M Channels	IP/S2M/TI Trunk licenses	1:1 transfer from HP 3000 license file
Mobility Entry	Mobility User licenses	1:1 transfer from HP 3000 license file
Xpressions Compact	Xpressions Compact licenses **	1:1 transfer from HP 3000 license file **

Table 87 HiPath 3000 License Migration

*) Determined in the course of the technical conversion description see below.

**) The Xpressions Compact licenses are included in the license file but cannot be used in SW version V3.

Determination of the TDM user licenses

During the technical conversion of the HiPath 3000 system configuration, the number of active TDM subscribers is determined and written to an "inventory (XML) file". During license migration, the central license server checks whether a license file exists for the MAC address of the HiPath 3000 mainboard.

If a license file is available, the license migration is performed on the basis of this license file and the information in the "inventory file".

If no license file is available, the OpenScape Business upgrade is performed on the basis of the information in the "Inventory (XML) file

In both cases the TDM user licenses are determined according to the following rules:

- 1x TDM user license per active UP0 port - phone (master/slave) ready, phone number available
- 1x TDM User License per registered DECT phone - phone number available
- 1x TDM user license per active a/b port (phone number) for plugged modules
- 1x TDM user license per active S0 port (MSN phone number) for active modules

Functional boundary conditions and restrictions

The license migration of a HiPath 3000 system (mainboard) can only be performed once, and the mainboard is blocked for further actions at the CLS after the migration.

To migrate S2M lines and ComScendo subscribers, a HiPath 3000 license file must be available on the central license server.

The TDM user licenses generated during the migration cannot be transferred to other systems or to a CLS account.

User licenses and UC user-oriented licenses are permanently assigned to the subscribers in OpenScape Business. Please note that for myAgent and myAttendant users the sufficient number of licenses is available. In OpenScape Business, changes of the presence status for other users by myAgent users are bound to the myAttendant license. These must be ordered separately.

2.5.2 Migration HiPath 3800 with OpenScape Office HX to OpenScape Business X8 V3

When migrating HiPath 3000 systems with a connected OpenScape Office HX Server, the external server is not required. Its function is taken over by the corresponding V3 mainboard of the OpenScape Business X System.

The HiPath 3000 system is migrated as described in Section 2.5.1 “Migration HiPath 3800 to OpenScape Business X8 V3”

OpenScape Office HX licenses are part of the HiPath 3000 license file. Therefore, they are also transferred to OpenScape Business licenses in the course of the HiPath 3000 license migration.

Requirements:

To migrate OpenScape Business HX licenses, a HiPath 3000 license file must be available on the central license server.

For the HiPath 3000 licenses the license migration is performed as shown in Table 79. The following applies to the OpenScape Office HX license migration:

OpenScape Office HX License	OpenScape Business License	Remark
Per Basic license	1x AutoAttendant license	
Per OpenScape Office Standard User:	1x UC User 1x Voicemail User 1x Fax User	Applies to Standard User Licenses in the HX Basic Licenses 5/10 as well as to Single User Licenses
OpenScape Office HX Voicemail License	500 x Voicemail User	
myPortal for Outlook	Groupware User	Number as in the license file
myAttendant	myAttendant	Number as in the license file
myAgent	myAgent User	Number as in the license file
Contact Center Fax	Contact Center Fax User	Number as in the license file
Contact Center E-Mail	Contact Center E-Mail User	Number as in the license file
myReports	myReports	Number as in the license file
Application Launcher	Application Launcher	Number as in the license file
OpenDirectory Connector	OpenDirectory Connector	Number as in the license file
Gate View Cameras	Gate View Cameras	Can no longer be used in OpenScape Business V3

Table 88 OpenScape Office HX License Migration

Functional boundary conditions and restrictions

The license migration can only be performed once.

User licenses and UC user-oriented licenses are permanently assigned to the users in OpenScape Business. Please note that for myAgent and myAttendant users the sufficient number of licenses is available.

In OpenScape Business, changes of the presence status for other users by myAgent users are bound to the myAttendant license. These must be ordered separately.

It is not possible to transfer announcements, pictures, voicemails, fax, journal, contact center data, subscriber configuration, profiles, external directory, schedules from OpenScape Office HX to OpenScape Business V3 with V3 mainboard.

2.6 HiPath 3000 Network Migration

2.6.1 Migration of HiPath 3000/5000 network

An existing HiPath 3000/5000 network with a common network license file can be broken down into standalone systems with individual license files via the Central License Server (CLS). Each standalone system is now upgraded and licensed separately.

If required, the OpenScape Business systems can be merged to a network group with a single network license file at the CLS.

For networking the OpenScape Business systems OpenScape Business Networking licenses must be ordered additionally per node.

For Internet telephony and T1 trunks additional trunk licenses are required.

2.6.2 Migration OpenScape Office LX with HiPath 3000 Gateways

OpenScape Office LX with HiPath 3000 gateways are upgraded and licensed like standalone systems. If required, the OpenScape Business systems can subsequently be merged back into a network at the CLS with a single network license file.

For networking the OpenScape Business systems, OpenScape Business Networking licenses must be ordered additionally per node.

For Internet telephony and T1 trunks additional trunk licenses are required.

2.7 OpenScape Office MX/LX Migration to OpenScape Business V3

When migrating OpenScape Office MX/LX systems, a new installation of the OpenScape Business hardware or the Linux server, the OpenScape Business SW and the customer configuration is required.

Migration supports the transfer of existing licenses.

The registration key used with OpenScape Office V3 LX (hosting via the Unify Server) is no longer required. Instead, a SLES Upgrade Key must be ordered for SLES SW support.

Prerequisite

All new HW / SW components are available

To transfer the OpenScape Office MX/LX licenses, a license file for the system must exist on the central license server.

The upgrade license for upgrading OpenScape Office MX/LX to OpenScape Business has been ordered and the LAC of the upgrade license is available.

For the OpenScape Office MX/LX licenses the license migration is performed as shown in Table 89. After the license migration the new OpenScape Business System SW has support for 3 years.

OpenScape Office MX / LX License	OpenScape Business License	Remark
Per basic license	Basic license incl. 3 years SW support OpenDirectory Base license Web Collaboration Connector license. 1x Company AutoAttendant	
Per OpenScape Office V3 LX Basic 5/10/20 Comfort Plus User	5/10/20 x IP User 5/10/20 x UC User 5/10/20 x Voicemail User 5/10/20 x Fax User 5/10/20 x Conference User	Applies to Comfort plus user in the respective basic package
Per OpenScape Office MX Basic 10/20 Comfort Plus User	10/20 x IP User 10/20 x UC User 10/20 x Voicemail User 10/20 x Fax User 10/20 x Conference User	Applies to Comfort plus user in the respective basic package
Per OpenScape Office Comfort User	1x UC User 1x Voicemail User 1x Fax User	Applies to a single Comfort User license outside the basic package

Per OpenScape Office Comfort Plus User	1x IP User 1x UC User 1x Voicemail User 1x Fax User 1x Conference User	Valid for a single Comfort Plus User license outside the basic package
myPortal for Outlook	Groupware User License	Number as in the license file
myAttendant	myAttendant	Number as in the license file
myAgent	myAgent User	Number as in the license file
Contact Center Fax	Contact Center Fax User	Number as in the license file
Contact Center E-Mail	Contact Center E-Mail User	Number as in the license file
myReports	myReports	Number as in the license file
Application Launcher	Application Launcher	Number as in the license file
OpenDirectory Connector	OpenDirectory Connector	Number as in the license file
Gate View Camera	Gate View Camera	Can no longer be used in OpenScape Business V3

Table 89 OpenScape Office MX/LX License Migration

Functional boundary conditions and restrictions

The license migration can only be performed once.

User licenses and UC user-oriented licenses are permanently assigned to the subscribers in OpenScape Business. Please make sure that a sufficient number of licenses is available for myAgent and myAttendant subscribers.

For using the mobility functions additional user licenses may have to be purchased.

In OpenScape Business, changes of the presence status for other users by myAgent users are bound to the myAttendant license. These must be ordered separately.

It is not possible to transfer announcements, pictures, voicemails, fax, journal, contact center data, subscriber configuration, profiles, external directory, schedules from OpenScape Office MX/LX to OpenScape Business V3.

3 Boards and Modules

The OpenScape Business V3 SW supports a wide range of mainboards, peripheral boards, modules and devices. These include modules / devices that are in the product phase-out phase or modules / devices that are no longer in production and have already been replaced by successor modules/devices.

Technical support is provided by Unify exclusively for modules / devices of the current product portfolio and discontinued module / devices that have not yet reached the end of HW/SW support.

In case of software malfunctions in connection with modules / devices that have reached the end of the HW/SW support or modules / devices that are no longer built, the affected modules / devices must be replaced by the successor components from the current portfolio or by an adequate software solution.

In the case of hardware malfunctions of an module / device that is no longer built or a discontinued assembly / device, it may happen that the affected module / device is no longer available as a spare part or is no longer repaired. In these cases, the successor components from the current product portfolio should also be used as a replacement.

The following provides an overview of the module / devices currently in the portfolio and supported by System SW V3, as well as modules / devices that are being discontinued and are no longer supported. Detailed descriptions of the modules are contained in the OpenScape Business Service Manual.

Changes in the course of the product further development are possible at any time. These are communicated via sales circulars.

3.1 Current Boards and Modules

3.1.1 Central boards and modules

The central boards include the mainboards, the power supplies and the central option modules of the systems

Board	Part Number	Used in	Function
V3 Mainboards			
OCCLA	S30810-K2966-X200	X8	Advanced Mainboard with one WAN- and two LAN- interfaces
V2 Mainboards			
OCCL	S30810-Q2962-X	X8	Mainboard (central control board) with one WAN and two LAN interfaces
OCCM	S30810-Q2959-X	X3W; X5W	Mainboard (central control board) with one WAN and two LAN interfaces, 8 $U_{P0/E}$ and 4 a/b subscriber line interfaces and 2 S_0 trunk/subscriber line interfaces
OCCMR	S30810-K2959-Z	X3R; X5R	Mainboard (central control board) with one WAN and two LAN interfaces, 8 $U_{P0/E}$ and 4 a/b subscriber line interfaces and 2 S_0 trunk/subscriber line interfaces
OCCS	S30810-Q2958-X	X1	Mainboard (central control) with a WAN and two LAN interfaces, 8 UP0/E- and 4 a / b subscriber interfaces and two S0-ISDN BRIs-/subscriber interfaces

Board	Part Number	Used in	Function
Central Options			
CMAe	S30807-Q6957-X	X1 X3R; X3W X5R; X5W	Provisioning of ADPCM conversion and echo cancellation for DECT Light (integrated cordless solution)
OCAB	S30807-Q6950-X	X3; X5; X8	Provisioning of Unified Communications and Collaboration for the UC Suite and ensuring that the requirements for the Open Directory Service, OpenStage Gate View (with up to two cameras) and the connection of external applications to the CSTA are met
OCCBL	S30807-Q6956-X1	X3R; X3W X5R; X5W X8	Provision of up to 40 additional DSP channels
OCCB1	S30807-Q6949-X100	X3R; X3W X5R; X5W X8	Provision of up to 40 additional DSP channels
OCCBH	S30807-Q6956-X2	X3R; X3W X5R; X5W X8	Provision of up to 120 additional DSP channels
OCCB3	S30807-Q6949-X	X3R; X3W X5R; X5W X8	Provision of up to 120 additional DSP channels
Power Supply modules			
LUNA2	S30122-H7686-M1	X8	Power supply
LUNA2	S30122-H7686-A1	X8	Power supply
OCPSM	S30122-H7757-H	X3W X5W	Power supply
OCPSM	S30122-H7757-Z	X3R X5R	Power supply

Table 90 Central boards and modules

3.1.2 Peripheral Boards

Boards that are used for connection of trunks (BRI (S0), PRI(S2m)) subscribers (a/b, BRI, UP0E) and for cordless devices (DECT) are referred as peripheral boards.

Board	Part Number	Used in	Function
DIUT2	S30810-Q2226-X100	X8	Digital trunk/tie-traffic board with two S_{M2} interfaces
SLAV4	S30810-H2963-X100	X3W X5W	Analog subscriber line module with 4 a/b interfaces, supports CLIP
SLAV8	S30810-H2963-X200	X3W X5W	Analog subscriber line module with 8 a/b interfaces, supports CLIP
SLAV8R	S30810-H2963-Z200	X3R X5R	Analog subscriber line module with 8 a/b interfaces, supports CLIP
SLAV16	S30810-H2963-X	X3W X5W	Analog subscriber line module with 16 a/b interfaces, supports CLIP
SLAV16R	S30810-H2963-Z	X3R X5R	Analog subscriber line module with 16 a/b interfaces, supports CLIP
SLMAV8N	S30810-Q2227-X300	X8	Analog subscriber line module with 8 a/b interfaces, supports CLIP
SLMAV24N	S30810-Q2227-X400	X8	Analog subscriber line module with 24 a/b interfaces, supports CLIP
SLU8N	S30817-H922-A401	X3W X5W	Digital subscriber line module with 8 $U_{P0/E}$ interfaces
SLU8NR	S30817-K922-Z401	X3R X5R	Digital subscriber line module with 8 $U_{P0/E}$ interfaces
SLMU	S30810-Q2344-X100	X8	Digital subscriber line module with 24 $U_{P0/E}$ interfaces
STLSX2	S30810-H2944-X100	X3W X5W	Digital trunk or tie-traffic board/subscriber line module with two S_0 interfaces
STLSX4	S30810-H2944-X	X3W X5W	Digital trunk or tie-traffic board/subscriber line module with two S_0 interfaces
STLSX4R	S30810-K2944-Z	X3R X5R	Digital trunk or tie-traffic board/subscriber line module with two S_0 interfaces
STMD3	S30810-Q2217-X10	X8	Digital trunk or tie-traffic board/subscriber line module with eight S_0 interfaces
TCAS-2 For selected countries only	S30810-Q2945-X	X3W X5W	Digital trunk board with 2 CAS (Channel Associated Signaling) interfaces

Board	Part Number	Used in	Function
TCASR-2 For selected countries only	S30810-K2945-X	X3R X5R	Digital trunk board with 2 CAS (Channel Associated Signaling) interfaces
TLANI2	S30810-Q2953-X100	X3W X5W	Analog trunk board with 2 a/b interfaces; supports CLIP and call detail recording with 12/16 kHz pulses
TLANI2 For Brazil only	S30810-Q2953-X182	X3W X5W	Analog trunk board with 2 a/b interfaces, supports CLIP
TLANI4	S30810-Q2953-X	X3W X5W	Analog trunk board with 4 a/b interfaces; supports CLIP and call detail recording with 12/16 kHz pulses
TLANI4 For Brazil only	S30810-Q2953-X82	X3W X5W	Analog trunk board with 4 a/b interfaces, supports CLIP
TLANI4R	S30810-K2953-X200	X3R X5R	Analog trunk board with 4 a/b interfaces; supports CLIP and call detail recording with 12/16 kHz pulses
TLANI4R For Brazil only	S30810-K2953-X282	X3R X5R	Analog trunk board with 4 a/b interfaces, supports CLIP
TLANI8	S30810-Q2954-X100	X3W X5W	Analog trunk board with 8 a/b interfaces; supports CLIP and call detail recording with 12/16 kHz pulses
TLANI8 For international markets only	S30810-Q2954-X101	X3W X5W	Analog trunk board with 8 a/b interfaces, supports CLIP
TLANI8 For Brazil only	S30810-Q2954-X182	X3W X5W	Analog trunk board with 8 a/b interfaces, supports CLIP
TMANI	S30810-Q2327-X	X8	Analog trunk board with 8 a/b interfaces; supports CLIP and call detail recording with 12/16 kHz pulses
TMANI For international markets only	S30810-Q2327-X1	X8	Analog trunk board with 8 a/b interfaces, supports CLIP
TMANI For Brazil only	S30810-Q2327-X82	X8	Analog trunk board with 8 a/b interfaces, supports CLIP

Board	Part Number	Used in	Function
TMCAS2 For selected countries only	S30810-Q2946-X	X8	Digital trunk board with 2 CAS (Channel Associated Signaling) interfaces
TMDID For selected countries only	S30810-Q2197-T	X8	Analog trunk board with 8 a/b interfaces, supports direct inward dialing from the central office (CO)
TMEW2	S30810-Q2292-X100	X8	Analog tie-traffic board with 4 E&M interfaces
TS2N Not for U.S.:	S30810-H2913-X300	X3W X5W	Digital trunk/tie-traffic board with one S_{2M} interface
TS2RN Not for U.S.:	S30810-K2913-Z300	X3R X5R	Digital trunk/tie-traffic board with one S_{2M} interface
TST1 For selected countries only	S30810-Q2919-X	X5W	Digital trunk board with 1 T1 interface
TST1R For selected countries only	S30810-K2919-Z	X5R	Digital trunk board with 1 T1 interface

Table 91 Peripheral boards

3.1.2.1 Options

Some features of OpenScape Business require special HW extensions of the system. These extensions are referred to as HW options. Subsequent HW options are currently available.

Option	Part Number	Used in	Function
PFT4	S30777-Q540-X	X8	Switching of up to 4 analog CO trunks to up to 4 analog phones in the event of a power failure
REALS	S30807-Q6629-X	X8	Switchover from an analog trunk to an analog phone in the event of a power failure Four relays (actuators) for special connections, such as door openers
STRB	S30817-H932-M	X3W; X5W	Four double-pin, double-throw relays (actuators) are available for special connections, such as door openers 4 control inputs (sensors) for monitoring the status of connected equipment such as motion detectors, for example

Option	Part Number	Used in	Function
STRBR	S30817-K932-Z	X3R; X5R	Four double-pin, double-throw relays (actuators) are available for special connections, such as door openers 4 control inputs (sensors) for monitoring the status of connected equipment such as motion detectors, for example
TFE-S	S30122-K7696-T313	X1 X3R; X3W X5R; X5W X8	Adapter box with amplifier for connecting an entrance telephone (external box)

Table 92 Options

3.1.2.2 Special kits and other

For special extensions of OpenScape Business certain hardware components must be replaced or additionally installed in the system. The hardware components required for certain tasks have been combined in kits.

Currently the following kits are available for OpenScape Business extensions:

Board	Feature / Part Number	Used in	Function
Housing cover	L30251-U600-A917 (C39165-A7021-B305)	X3W X5W	X3W/X5W housing cover Required when using the OCAB board with the X3W system
Adapter Kit	L30251-U600-A919 (C39165-A7021-B313)	X3W	Adapter Kit Required when using the OCAB board with the X3W system
Fan kit	L30251-U600-A716 L30251-U600-A849 (C39165-A7021-B46)	X5W	Required once if 3 or more SLAxx16 line cards are installed. See service manual for country-specific exceptions.
Fan kit	L30251-U600-A918 (C39165-A7021-B310)	X3W X5W	X3W/X5W fan kit Required when using the OCAB board with the X3W/X5W system with old Backplanes
Fan kit	L30251-U600-A985 (C39165-A7021-B320)	X3W X5W	X3W/X5W fan kit Required when using the OCAB board with the X3W/X5W system with new Backplanes
Fan kit	L30251-U600-A923 L30251-U600-A925 (C39117-A7003-B611)	X3R	X3R fan kit Required when using the OCAB board with the X3R system
Fan kit	L30251-U600-A924 L30251-U600-A926 (C39117-A7003-B612)	X5R	X5R fan kit Required when using the OCAB board with the X3W/X5W system with new Backplanes Also required once if 3 or more SLAxx16R line cards are installed. See service manual for country-specific exceptions.

Fan kit	L30251-U600-A927 (C39117-A7003-B613)	X8	X8 fan kit Required when using the OCAB board with the X8 system with V2 mainboard. Required when using analog subscriber card in slot 5 and/or slot 7 with X8 systems with V3 mainboard
OpenScape Business Rack PSU Upgrade	L30251-U600-A986 (C39165-A7021-D6)	X3R X5R	OCPSM for replacement of UPSC-DR in Open Scape Business X3R/X5R
OpenScape Business Wall PSU Upgrade	L30251-U600-A987 (C39165-A7021-D7)	X3W X5W	OCPSM for replacement of UPSC-D in Open Scape Business X3W/X5W

Table 93 Special kits and other

3.2 Phased Out Cards and Modules

Cards that are in the product phase out or have already been phased out can no longer be ordered.

The operation of phased out cards in the OpenScape Business communication platform is technically not actively prevented and is still possible in many cases.

Technical support is no longer provided for these cards in case of problems. The cards have to be replaced by successor modules from the current product portfolio.

When the OpenScape Business SW and HW are technically enhanced, the phased-out cards are no longer considered. This can mean that they can no longer be operated from a certain HW or SW version on. No further information is provided in these cases. The cards must then be exchanged against the successor of the current portfolio.

Board	Part Number	Phased Out	Used In	Function	Notes / Successor
16SLA	S30810-Q2923-X	x	X3W X5W	Analog subscriber line module with 16 a/b interfaces	SLAV16 (S30810-H2963-X)
4SLA	S30810-Q2925-X100	x	X3W X5W	Analog subscriber line module with 4 a/b interfaces	SLAV4 (S30810-H2963-X100)
4SLA	S30810-Q2923-X200	x	X3W X5W	Analog subscriber line module with 4 a/b interfaces	SLAV4 (S30810-H2963-X100)
8SLA	S30810-Q2925-X	x	X3W X5W	Analog subscriber line module with 8 a/b interfaces	SLAV8 (S30810-H2963-X200)
8SLA	S30810-Q2923-X100	x	X3W X5W	Analog subscriber line module with 8 a/b interfaces	SLAV8 (S30810-H2963-X200)
8SLAR	S30810-K2925-Z	x	X3R X5R	Analog subscriber line module with 8 a/b interfaces	SLAV8R (S30810-H2963-Z200)
BS3/1	S30807-H5482-X	x	X3R X3W X5R X5W X8	Base station for the integrated Cordless solution	BS5 (S30807-U5497-X)
BS3/3	S30807-H5485-X	x	X5W X8	Base station for the integrated Cordless solution	BS5 (S30807-U5497-X)

BS3/S	X30807-X5482-X100	x	X3R X3W X5R X5W	Base station for the integrated Cordless solution	BS5 (S30807-U5497-X)
BS4	S30807-U5491-X	x	X3R X3W X5R X5W X8	Base station for the integrated Cordless solution	BS5 (S30807-U5497-X)
CMA	S30807-Q6931-X	x	X3R X3W X5R X5W	Submodule for DECT Light	CMAe (S30807-Q6957-X)
DIU2U	S30810-Q2216-X	x	X8	Digital trunk/tie-traffic board with two T1 interfaces	DIUT2 (S30810-Q2226-X100)
DIUN2	S30810-Q2196-X	x	X8	Digital trunk/tie-traffic board with two S2M interfaces	DIUT2 (S30810-Q2226-X100)
MMP3R	S30122-K7731-Z	x	X3R X5R	MP3 player for Music On Hold, A-law version	–
MPPI-USB EXM	S30122-X8005-X11	x	X3R X3W X5R X5W	Provision of MoH (music on hold) and announcements, with audio input for external devices	–
MUSIC plugin module	S30122-K7275-T	x	X3R X3W X5R X5W X8	Provision of MOH (Music On Hold)	–
RGMOD	S30124-X5109-X	x	X8	Ring voltage generator	No follow-up board
SLA16N	S30810-Q2929-X100	x	X5W	Analog subscriber line module with 16 a/b interfaces	No follow-up board
SLA24N	S30810-Q2929-X	x	X5W	Analog subscriber line module with 24 a/b interfaces	No follow-up board
SLAD16	S30810-Q2957-X	x	X3W X5W	Analog subscriber line module with 16 a/b interfaces, supports CLIP	SLAV16 (S30810-H2963-X)
SLAD4	S30810-Q2956-X100	x	X3W X5W	Analog subscriber line module with 4 a/b interfaces, supports CLIP	SLAV4 (S30810-H2963-X100)
SLAD8	S30810-Q2956-X200	x	X3W X5W	Analog subscriber line module with 8 a/b interfaces, supports CLIP	SLAV8 (S30810-H2963-X200)
SLAD8R	S30810-K2956-X300	x	X3R X5R	Analog subscriber line module with 8 a/b interfaces, supports CLIP	SLAV8R (S30810-H2963-Z200)
SLC16N Not for U.S.	S30810-Q2193-X100	x	X5W	Cordless board with 16 ports for connecting base stations for the integrated Cordless solution	No follow-up board Successor solution: Mainboard plus CMAe module.
SLCN Not for U.S.	S30810-Q2193-X300	x	X8	Cordless board with 16 ports for connecting base stations for the integrated Cordless solution	SLMUC (SLMU plus CMAe)
SLMA	S30810-Q2191-C300	x	X8	Analog subscriber line module with 24 a/b interfaces	SLMAV24N (S30810-Q2227- X400)

SLMA2	S30810-Q2246-X	x	X8	Analog subscriber line module with 24 a/b interfaces (requires RGMOD)	SLMAV24N (S30810-Q2227- X400)
SLMA8	S30810-Q2191-C100	x	X8	Analog subscriber line module with 8 a/b interfaces	SLMAV8N (S30810-Q2227- X300)
SLMAE24	S30810-Q2225-X200	x	X8	Analog subscriber line module with 24 a/b interfaces	SLMAV24N (S30810-Q2227- X400)
SLMAE8	S30810-Q2225-X100	x	X8	Analog subscriber line module with 8 a/b interfaces	SLMAV8N (S30810-Q2227- X300)
SLMAV24	S30810-Q2227-X200	x	X8	Analog subscriber line module with 24 a/b interfaces, supports CLIP	SLMAV24N (S30810-Q2227- X400)
SLMAV8	S30810-Q2227-X100	x	X8	Analog subscriber line module with 8 a/b interfaces, supports CLIP	SLMAV8N (S30810-Q2227- X300)
SLMO2	S30810-Q2168-X10	x	X8	Digital subscriber line module with 24 $U_{P0/E}$ interfaces	SLMO24N (S30810-Q2168- X400)
SLMO24	S30810-Q2901-X	x	X5W	Digital subscriber line module with 24 $U_{P0/E}$ interfaces	No follow-up board
SLMO8	S30810-Q2168-X100	x	X8	Digital subscriber line module with 8 $U_{P0/E}$ interfaces	SLMO8N (S30810-Q2168- X300)
SLMO24N	S30810-Q2168- X400	x	X8	Digital subscriber line module with 24 $U_{P0/E}$ interfaces	SLMU (S30810-Q2344-X100)
SLU8	S30817-Q922-A301	x	X3W X5W	Digital subscriber line module with 8 $U_{P0/E}$ interfaces	SLU8N (S30817-Q922-A401)
SLU8R	S30817-K922-Z301	x	X3R X5R	Digital subscriber line module with 8 $U_{P0/E}$ interfaces	SLU8NR (S30817-K922-Z401)
STLS2	S30817-Q924-B313	x	X3W X5W	Digital trunk or tie-traffic board/ subscriber line module with two S_0 interfaces	STLSX2 (S30810-H2944-X100)
STLS4	S30817-Q924-A313	x	X3W X5W	Digital trunk or tie-traffic board/ subscriber line module with two S_0 interfaces	STLSX4 (S30810-H2944-X)
STLS4R	S30817-Q924-Z313	x	X3R X5R	Digital trunk or tie-traffic board/ subscriber line module with two S_0 interfaces	STLSX4R (S30810-K2944-Z)
TM2LP	S30810-Q2159-Xxxx	x	X8	Analog trunk board with 8 a/b interfaces	TMANI (S30810-Q2327-Xxxx)
TMC16	S30810-Q2485-X	x	X8	Analog trunk board with 16 a/b interfaces	TMANI (S30810-Q2327-Xxxx)
TMCAS	S30810-Q2938-X	x	X8	Digital trunk board with 1 CAS (Channel Associated Signaling) interface	TMCAS2 (S30810-Q2946-X)
UPSC-D	S30122-K5660-M321 South Africa only	x	X3W X5W	Power supply unit	OCPSM (S30122-H7757-X)

UPSC-DR	S30122-K7373-M921 South Africa only	x	X3R X5R	Power supply unit	OCPSM (S30122-H7757-X)
UPSC-D	S30122-H5660-X301	x	X3W X5W	Power supply unit	OCPSM (S30122-H7757-X)
UPSC-DR	S30122-H7373-X901	x	X3R X5R	Power supply unit	OCPSM (S30122-H7757-X)
Powerbox	S30777-U780-X	x	X3R X3W X5R X5W	Uninterruptable Power Supply	No follow up

Table 94 Phased out Cards and Modules

3.3 Unsupported Boards

The following modules cannot be used in the OpenScape Business communication systems for technical reasons. Within the scope of a migration from HiPath 3000 / OpenScape Business V1, V2 to OpenScape Business V3 these modules must be removed. If required, the respective successor module must be used instead.

Board	Part Number	Used in	Function	Notes / Successor
ALUM4	S30817-Q935-A	X3W X5W	Switching of up to 4 analog CO trunks to up to 4 analog phones in the event of a power failure	ALUM4 must be removed. TLANI4 (S30810-Q2953-xxxx) to provide 2 trunk switches each. Note: TLANI2 (S30810-Q2953-Xxxx) does not provide trunk switches
ANI	S30807-Q6917-A103	X3W X5W	Provision of CLIP for up to 4 CO trunks	ANI must be removed. CLIP function integrated on TLANI2 (S30810-Q2953-xxxx), TLANI4 (S30810-Q2953-xxxx) and TLANI8 (S30810-Q2954-xxxx)
ANIR	S30807-Q6917-Z103	X3R X5R	Provision of CLIP for up to 4 CO trunks	ANIR must be removed. CLIP function integrated on TLANI4R (S30810-K2953-xxxx)
CBCC	S30810-Q2935-Axxx	X3W X5W	Mainboard (central control)	CBCC must be removed. OCCM (S30810-Q2959-X)
CBRC	S30810-Q2935-Zxxx	X3R X5R	Mainboard (central control)	CBRC must be removed. OCCMR (S30810-K2959-Z)
CBSAP	S30810-Q2314-X	X8	Mainboard (central control)	CBSAP must be removed. OCCL (S30810-Q2962-X) or OCCLA (S30810-Q2966-X200)
CMS	S30807-Q6928-X	X3R / X3W X5R / X5W X8	Provision of a high-precision clock	CMS must be removed. Functionality integrated on OCCL/OCCLA OCCM/OCCMR

Board	Part Number	Used in	Function	Notes / Successor
EVM	S30807-Q6945-X	X3R / X3W X5R / X5W	Provision of Voicemail	EVM must be removed. Functionality integrated on OCCL/ OCCLA OCCM/OCCMR
EXMNA	S30807-Q6923-X	X3W X5W	Enables the connection of an external music source	EXMNA must be removed. Use of EXMR on OCCM/OCCMR for the connection of an external music source
GEE12, GEE16, GEE50	S30817-Q951-Axxx	X3W X5W	Call detail recording with 12 kHz/16 kHz/50 Hz pulses for up to 4 CO trunks	GEE12, GEE16 and GEE50 must be removed. Call detail recording integrated on TLANI2 (S30810-Q2953-xxxx), TLANI4 (S30810-Q2953-xxxx), TLANI8 (S30810-Q2954-xxxx)
HOPE	S30122-Q7078-X S30122-Q7079-X	X3W X5W	Provision of Hicom Office PhoneMail Entry	HOPE must be removed. Use of a different VoiceMail required.
HXGR3	S30810-K2943-Z1	X3R X5R	HG1500 Board	HXGR3 must be removed. Functionality integrated on OCCMR
HXGS3	S30810-Q2943-X1	X3W X5W	HG1500 Board	HXGS3 must be removed. Functionality integrated on OCCM
IMODN	S30807-Q6932-X100	X3R / X3W X5R / X5W X8	Analog modem	IMODN must be removed. Functionality is no longer available.
IVMN8	S30122-H7688-X200	X8	Provisioning of HiPath Xpressions Compact, 8 ports	Replaced by UC-Suite application
IVMNL	S30122-H7688-X	X8	Provisioning of HiPath Xpressions Compact, 24 ports	Replaced by UC-Suite application
IVMP4	S30122-Q7721-X X3W	X5W	Provisioning of HiPath Xpressions Compact, 4 ports	Replaced by UC-Suite application
IVMP4R	S30122-K7721-X	X3R / X5R	Provisioning of HiPath Xpressions Compact, 4 ports	Replaced by UC-Suite application

Board	Part Number	Used in	Function	Notes / Successor
IVMS8N	S30122-Q7379-X200	X3W / X5W	Provisioning of HiPath Xpressions Compact, 8 ports	Replaced by UC-Suite application
IVMS8NR	S30122-K7379-Z200	X3R / X5R	Provisioning of HiPath Xpressions Compact, 8 ports	Replaced by UC-Suite application
LIM	S30807-Q6930-X	X3R / X3W X5R / X5W	Provision a LAN interface, 10 Mbit/s	LIM must be removed. Functionality integrated on OCCM/OCCMR
LIMS	S30807-Q6721-X	X8	Provision of two LAN interfaces, 10/100 Mbit/s	LIMS must be removed. Functionality integrated on OCCL
LUNA2	S30122-K7686-A1-3 or lower S30122-K7686-A1-B1 or lower S30122-K7686-M1-9 or lower	X8	Power supply	Version and issue of the LUNA 2 power supply must be checked. Old versions must be exchanged for subsequent versions. S30122-K7686-A1-4 or higher S30122-K7686-A1-C1 or higher S30122-K7686-M1-10 or higher
MMP3	S30122-K7730-X	X3W X5W	MP3 player for Music On Hold, A-law version	MMP3 must be removed. Use of a different MP3 player for music on hold required
MUSIC module	S30122-K5380-T200	X3W X5W	Provision of MOH (Music On Hold)	MUSIC plugin module must be removed. Use a different option for the provision of Music On Hold required
PBXXX	S30810-Q6401-X	X8	CAS protocol converter for 1 S_{2M} interface	PBXXX must be removed. CAS protocol converter integrated on TMCAS2 (S30810-Q2946-X)
PDM1	S30807-Q5692-X100	X3R / X3W X5R / X5W	Provision of a DSP (digital signal processor)	PDM1 must be removed. OCCB1 (S30807-Q6949-X 100) or OCCB3 (S30807-Q6949-X)
PSU	S30122-X5658-W S30122-X5661-W	X3W / X5W X3R / X5R	Power supply	PSU must be removed. OCPSM Upgrade Wall (C39165-A7021-D7) OCPSM Upgrade Rack (C39165-A7021-D6)

Board	Part Number	Used in	Function	Notes / Successor
PSUI	S30122-X5083-X	X3W / X5W X3R / X5R	Power supply	PSU must be removed. OCPSM Upgrade Wall (C39165-A7021-D7) OCPSM Upgrade Rack (C39165-A7021-D6)
PSUP	S30122-K5658-M	X3W / X5W X3R / X5R	Power supply	PSU must be removed. OCPSM Upgrade Wall (C39165-A7021-D7) OCPSM Upgrade Rack (C39165-A7021-D6)
STBG	S30817-Q934-A	X3W X5W	Current limitation for up to 4 CO trunks	STBG must be removed. No follow-up board
STMI2	S30810-Q2316-X100	X8	HG1500 Board	STMI2 must be removed. Functionality integrated on OCCL/OCCLA
TLA2	S30817-Q923-Bxxx	X3W X5W	Analog trunk board with 2 a/b interfaces	TLA2 must be removed. TLANI2 (S30810-Q2953-Xxxx)
TLA4	S30817-Q923-Axxx	X3W X5W	Analog trunk board with 4 a/b interfaces	TLA4 must be removed. TLANI4 (S30810-Q2953-Xxxx)
TLA4R	S30817-K923-Zxxx	X3R X5R	Analog trunk board with 4 a/b interfaces	TLA4R must be removed. TLANI4R (S30810-K2953-Xxxx)
TLA8	S30817-Q926-Axxx	X3W X5W	Analog trunk board with 8 a/b interfaces	TLA8 must be removed. TLANI8 (S30810-Q2954-Xxxx)
TMDID	S30810-Q2452-X	X8	Analog trunk board with 8 a/b interfaces	TMDID must be removed. TMDID2 (S30810-Q2197-T)
TMGL2	S30810-Q2918-X100	X3W X5W	Analog trunk board with 2 a/b interfaces	TMGL2 must be removed. TLANI2 (S30810-Q2953-Xxxx)
TMGL4	S30810-Q2918-X	X3W X5W	Analog trunk board with 4 a/b interfaces	TMGL4 must be removed. TLANI4 (S30810-Q2953-Xxxx)
TMGL4R	S30810-Q2918-Z	X3R X5R	Analog trunk board with 4 a/b interfaces	TMGL4R must be removed. TLANI4R (S30810-K2953-Xxxx)
TMQ4	S30810-Q2917-X	X3W X5W	Digital trunk board with 4 S_0 interfaces	TMQ4 must be removed. No follow-up board

Board	Part Number	Used in	Function	Notes / Successor
TS2	S30810-Q2913-X100	X5W	Digital trunk/tie-traffic board with one S_{2M} interface	TS2 must be removed. TS2 (S30810-Q2913-X300)
TS2R	S30810-K2913-Z100	X5R	Digital trunk/tie-traffic board with one S_{2M} interface	TS2 must be removed. TS2 (S30810-K2913-Z300)
UAM	S30122-K7217-T	X3W X5W	Provision of Music On Hold (MOH)	UAM must be removed. The functionality is Software-based.
UAMR	S30122-K7402-T	X3R X5R	Provision of Music On Hold (MOH)	UAMR must be removed. The functionality is Software-based.
V24/1	S30807-Q6916-X100	X3W X5W	Provision of a V.24 interface	V24/1 must be removed. No follow-up board

Table 95 No longer usable boards

4 Sales Information

4.1 Area of Application, Commencement of Marketing and Delivery

4.1.1 Information on Commencement of Marketing and Delivery

As a Unify customer, you can obtain further information about this from your country-specific Unify organization.

The following countries are planned for marketing. Whether a final release will take place depends in individual cases on the local regulatory authorities. In such cases, the local Unify organization must apply to the regulatory authorities for approval and control.

OpenScape Business V3 will be released for marketing in stages.

Table 96 contains the countries for which the SW version V3 for OpenScape Business X3, X5 and X8 in combination with the V2 mainboards and OpenScape Business S V3 is released.

Country		OpenScape Business X V3 Systems with V2 Mainboards		OpenScape Business X V3 Systems with V3 Mainboards		OpenScape Business S V3
		X3,X5,X8	X1	X8	X1 ,X3,X5	S
Angola	AO	✓	×	×	×	✓
Argentina	AR	✓	✓	×	×	✓
Australia	AU	✓	×	×	×	✓
Austria	AT	✓	✓	✓	×	✓
Bahrain	BH	✓	×	×	×	✓
Bangladesh	BD	✓	×	×	×	✓
Belarus*	BY	✓	×	×	×	✓
Belgium	BE	✓	✓	✓	×	✓
Bolivia	BO	✓	×	×	×	✓
Bosnia-Herzegovina	BA	✓	×	×	×	✓
Botswana	BW	✓	×	×	×	✓
Brazil	BR	✓	×	×	×	✓
Bulgaria	BG	✓	✓	✓	×	✓
Burkina Faso	BF	✓	×	×	×	✓
Cameroon	CM	✓	×	×	×	✓
Canada	CA	✓	×	×	×	✓
Chile	CL	✓	✓	×	×	✓
China	CN	✓	×	×	×	✓
Colombia	CO	✓	×	×	×	✓
Costa Rica	CR	✓	×	×	×	✓
Cote d'Ivoire*	CI	✓	×	×	×	✓
Croatia	HR	✓	✓	✓	×	✓
Cyprus	CY	✓	×	✓	×	✓

Country		OpenScape Business X V3 Systems with V2 Mainboards		OpenScape Business X V3 Systems with V3 Mainboards		OpenScape Business S V3
		X3,X5,X8	X1	X8	X1 ,X3,X5	S
Czech Republic	CZ	✓	✓	✓	×	✓
Denmark	DK	✓	✓	✓	×	✓
Dominican Rep.	DO	✓	×	×	×	✓
Ecuador	EC	✓	×	×	×	✓
Egypt	EG	✓	×	×	×	✓
El Salvador	SV	✓	×	×	×	✓
Eritrea*	ER	✓	×	×	×	✓
Estonia	EE	✓	✓	✓	×	✓
Finland	FI	✓	✓	✓	×	✓
France	FR	✓	✓	✓	×	✓
Gabon	GA	✓	×	×	×	✓
Gambia	GM	✓	×	×	×	✓
Georgia	GE	✓	×	×	×	✓
Germany	DE	✓	✓	✓	×	✓
Ghana	DH	✓	×	×	×	✓
Greece	GR	✓	✓	✓	×	✓
Guatemala	GT	✓	×	×	×	✓
Honduras	HN	✓	×	×	×	✓
Hong-Kong	HK	✓	×	×	×	✓
Hungary	HU	✓	✓	✓	×	✓
Iceland	IS	✓	✓	✓	×	✓
India	IN	✓	×	×	×	✓
Indonesia	ID	✓	×	×	×	✓
Ireland	IE	✓	✓	✓	×	✓
Israel	IL	✓	×	×	×	✓
Italy	IT	✓	✓	✓	×	✓
Jordan	JO	✓	×	×	×	✓
Kazakhstan	KZ	✓	×	×	×	✓
Kenya	KE	✓	×	×	×	✓
Kuwait	KW	✓	×	×	×	✓
Latvia	LV	✓	✓	✓	×	✓
Lebanon*	LB	✓	×	×	×	✓
Lithuania	LT	✓	✓	✓	×	✓
Luxembourg	LU	✓	✓	✓	×	✓
Macedonia FYRM	MK	✓	✓	×	×	✓
Madagascar	MG	✓	×	×	×	✓

Country		OpenScape Business X V3 Systems with V2 Mainboards		OpenScape Business X V3 Systems with V3 Mainboards		OpenScape Business S V3
		X3,X5,X8	X1	X8	X1 ,X3,X5	S
Malawi	MW	✓	×	×	×	✓
Malaysia	MY	✓	✓	×	×	✓
Malta	MT	✓	✓	✓	×	✓
Mexico	MX	✓	×	×	×	✓
Morocco	MA	✓	×	×	×	✓
Mozambique*	MZ	✓	×	×	×	✓
Namibia	NA	✓	×	×	×	✓
Nepal	NP	✓	×	×	×	✓
Netherlands	NL	✓	✓	✓	×	✓
New Zealand	NZ	✓	×	×	×	✓
Nicaragua	NI	✓	×	×	×	✓
Niger	NE	✓	×	×	×	✓
Norway	NO	✓	✓	✓	×	✓
Oman	OM	✓	×	×	×	✓
Pakistan*	PK	✓	×	×	×	✓
Panama	PA	✓	×	×	×	✓
Paraguay	PY	✓	×	×	×	✓
Peru	PE	✓	×	×	×	✓
Philippines	PH	✓	×	×	×	✓
Poland	PL	✓	✓	✓	×	✓
Portugal	PT	✓	✓	✓	×	✓
Qatar	QA	✓	×	×	×	✓
Romania	RO	✓	✓	✓	×	✓
Russia	RU	✓	×	×	×	✓
Saudi Arabia	SA	✓	×	×	×	✓
Senegal	SN	✓	×	×	×	✓
Serbia-Montenegro	RS	✓	✓	×	×	✓
Singapore	SG	✓	×	×	×	✓
Slovakia	SK	✓	✓	✓	×	✓
Slovenia	SI	✓	✓	✓	×	✓
Somalia*	SO	✓	×	×	×	✓
South Africa	ZA	✓	×	×	×	✓
South Korea	KR	✓	×	×	×	✓
Spain	ES	✓	✓	✓	×	✓
Sri Lanka	LK	✓	×	×	×	✓
Sweden	SE	✓	✓	✓	×	✓

Country		OpenScape Business X V3 Systems with V2 Mainboards		OpenScape Business X V3 Systems with V3 Mainboards		OpenScape Business S V3
		X3,X5,X8	X1	X8	X1 ,X3,X5	S
Switzerland	CH	✓	✓	✓	×	✓
Taiwan	TW	✓	×	×	×	✓
Tanzania*	TZ	✓	×	×	×	✓
Thailand	TH	✓	×	×	×	✓
Tunisia	TN	✓	×	×	×	✓
Turkey	TR	✓	✓	×	×	✓
Turkmenistan	TM	✓	×	×	×	✓
Uganda*	UG	✓	×	×	×	✓
Ukraine	UA	✓	×	×	×	✓
United Arab Emirates	AE	✓	×	×	×	✓
United Kingdom	GB	✓	✓	✓	×	✓
USA	US	✓	✓	×	×	✓
Uruguay	UY	✓	×	×	×	✓
Venezuela	VE	✓	×	×	×	✓
Vietnam	VN	✓	×	×	×	✓
Zambia	ZM	✓	×	×	×	✓
Zimbabwe*	ZW	✓	×	×	×	✓

Table 96 Released Countries

* Individual export authorization (Individual Validation License, IVL) required

4.2 Sales Objectives and Target Groups

4.2.1 Target Group

OpenScape Business is the "All-In-One" solution for Voice and UC specifically designed for SMB's and channel partner business. The communication system is based on future-proof technologies and offers small to medium-sized enterprises across the different industries everything they need for their individual and diverse communication requirements, unified in a single flexible, scalable and secure solution with various deployment (on-premise, hosted, cloud based or combined) and purchase models (CAPEX and OPEX). The OpenScape Business architecture allows use independently of the existing telephony infrastructure – regardless of whether this is classic telephony, IP or DECT.

From powerful telephony to a feature-rich set Unified Communication (UC) solution, OpenScape Business is easily scalable and adapts if business grows and the telephony and communications needs change. It provides enterprises from 5 to 1500 Users, or up to 2000 subscribers in one network, with the right solution.

Current customer references and examples from the different use cases and industries can be found here:

https://unify.com/en/success-stories?lrdp-filter=small-and-medium-businesses#lrdp

4.3 Marketing Structure

OpenScape Business V3 is marketed via licenses and hardware and software order items.

4.3.1.1 Licenses

OpenScape Business has a user and feature-oriented system-based licensing with uniform licenses across all models (X1/X3/X5/X8 and S).

For software migrations from OpenScape Business V1,V2, from HiPath 3000 and OpenScape Office LX, the appropriate upgrade licenses and possibly other licenses are required. Please read the corresponding notes in section 2 " Migration and Upgrade".

Several evaluation licenses are available for evaluating UC features such as UC Smart / UC Suite or the Contact Center.

4.3.1.2 Hardware and Software

The hardware items include OpenScape Business X1/X3/X5/X8 models with their associated boards, optional modules and accessories

Upgrade positions are offered for hardware migrations from OpenScape Business V1, V2 or HiPath 3000 systems

The OpenScape Business S / Booster Server software, OpenScape Business Attendant software and the OpenScape Business TAPI software are each delivered on separate DVDs.

4.3.1.3 Software for OpenScape Business Live Demonstration

The server-based unified communications solution OpenScape Business S is available as a demo version for trainings, demonstrations and customer presentations as a UC Smart and a UC Suite version (each as an own OpenScape Business S image)

The complete IP communication platform is executable on a virtual machine, even on a notebook. The OpenScape Business Clients and the system administration can be presented on the same machine. Together with OpenScape Desk Phone CP phones, telephone calls and especially the visual presentation of the different UC Clients are possible.

The following OpenScape Business licenses have been enabled:

- 1 x OpenScape Business Base license
- 3 x IP User
- 3 x Voicemail
- 1x UC User
- 2 x Groupware User
- 2 x UC Fax
- 2 x UC Conference
- 1 x myAttendant
- 2 x myAgent
- 1 x AutoAttendant
- 1 x Contact Center Fax
- 1 x Contact Center email
- 1 x Application Launcher

Recommended Presentation Scenarios that are Possible with the Demo Version

The demo configuration makes it possible to illustrate the highlights of OpenScape Business UC Suite live, e.g.:

- Display the presence status in the myPortal client
- Change own presence status and forwarding options
- Call pop-up for incoming calls, forwarding to voicemail
- Call journal and visible voice messages

- Dialing with a mouse click from any document (principle / user interface)
- Ad-hoc conference using drag & drop (principle / user interface)
- Instant Messaging (principle / user interface)
- Personal AutoAttendant
- Call Center with myAgent and standard reports
- myAttendant – Attendant Console
- Application Launcher
- myPortal to go with integrated VoIP (HFA) client
- myPortal @work with the full functional range (Telephony and UC)

OpenScape Business S is preconfigured with 3 subscribers and the UC clients are also preconfigured with favorites and voicemail announcements. Via the administration you should adjust country/language, names, voicemail and auto-attendant greetings and possibly pictures of the subscribers according to the presentation scenario.

Procurement and Notes

The OpenScape Business Demo can be downloaded as a software image via the Software Supply Server in Unify Partner Portal alternatively please contact your responsible Unify partner manager or distributor For more information on the installation, prerequisites, recommended presentation scenarios and legal notices, please make sure that you carefully read all the installation instructions of OpenScape Business S Demo, which are included as part of the OpenScape Business S Demo images.

The OpenScape Business S V3 Demo is updatable and can be updated to new software versions within V3.

4.4 Supporting Sales Information

4.4.1 Supporting Sales Information on the Internet

Documentation	Language	Medium	Source of supply	Order number
Data Sheet	German English French*	E-Doku Paper		German: A31002-P3030-D100-*-29 English: A31002-P3030-D100-*-7629

* Only electronically via the Unify Partner Portal

The complete product documentation can be found on the intranet on the portfolio home pages at:

https://unify.com/en/partners/partner-portal

For other language versions, please contact your country-specific Unify organization.

4.5 Competitor Analysis

Information about competitors and argumentation aids can be found on the intranet under:

https://unify.com/en/partners/partner-portal

5 Pricing and Commercial Handling

As a customer of Unify GmbH & Co. KG, you can obtain further information about this from your country-specific Unify organization.

5.1 Ordering Structure

5.1.1 Order Items

5.1.1.1 Licenses

Order structure	PST-NR:	LM-NR:
Base licenses		
OpenScape Business Base incl. 5 Jahre SSP	CUB726	L30250-U622-B726
OpenScape Business X1 Base incl. 5 Jahre SSP	CUB727	L30250-U622-B727
OpenScape Business Base incl.3-year SSP	CUB640	L30250-U622-B640
OpenScape Business X1 Base incl. 3-year SSP	CUB641	L30250-U622-B641
OpenScape Business Base incl. 2 SIP Trunks	CUB689	L30250-U622-B689
OpenScape Business X1 Base incl. 2 SIP Trunks	CUB690	L30250-U622-B690
Subscriber licenses		
OpenScape Business IP/TDM User incl. 5-year SSP	CUB728	L30250-U622-B728
OpenScape Business IP User incl. 3-year SSP	CUB642	L30250-U622-B642
OpenScape Business TDM User incl. 3-year SSP	CUB643	L30250-U622-B643
OpenScape Business TDM User incl. 5-year SSP	CUB742	L30250-U622-B742
OpenScape Business Circuit User	CUB738	L30250-U622-B738
OpenScape Business Upgr. TDM User to IP User	CUB645	L30250-U622-B645
OpenScape Business Reduction of TDM user licenses per TDM user	CUB720	L30250-U622-B720
OpenScape Business Reduction of IP user licenses per IP user	CUB721	L30250-U622-B721
OpenScape Business Redundancy User License	CUB735	L30250-U622-B735
User-oriented licenses		
OpenScape Business Voicemail	CUB652	L30250-U622-B652
OpenScape Business Application Launcher	CUB657	L30250-U622-B657
OpenScape Business UC User	CUB665	L30250-U622-B665
OpenScape Business Groupware User	CUB666	L30250-U622-B666

Order structure	PST-NR:	LM-NR:
OpenScape Business Fax	CUB660	L30250-U622-B660
OpenScape Business Conference	CUB661	L30250-U622-B661
OpenScape Business myAttendant	CUB667	L30250-U622-B667
OpenScape Business myAgent	CUB668	L30250-U622-B668
OpenScape Business TAPI	CUB662	L30250-U622-B662
System-licenses		
OpenScape Business S2M/SIP/T1 Trunks	CUB646	L30250-U622-B646
OpenScape Business AutoAttendant	CUB647	L30250-U622-B647
OpenScape Business Attendant	CUB648	L30250-U622-B648
OpenScape Business Networking	CUB656	L30250-U622-B656
OpenScape Business Contact Center E-Mail	CUB663	L30250-U622-B663
OpenScape Business Contact Center Fax	CUB664	L30250-U622-B664
OpenScape Business myReports	CUB669	L30250-U622-B669
OpenScape Business OpenDirectory Connector	CUB670	L30250-U622-B670
OpenScape Business CSTA	CUB741	L30250-U622-B741
Upgrade-licenses		
OpenScape Business V3 HW Migration	CUB739	L30250-U622-B739
OpenScape Business V3 SW Upgrade	CUB740	L30250-U622-B740
OpenScape Business V2 Upgrade HiPath 3000 V9	CUB684	L30250-U622-B684
OpenScape Business Upgrade HiPath 3000 V8	CUB683	L30250-U622-B683
OpenScape Business Upgrade HiPath 3000 V7	CUB682	L30250-U622-B682
OpenScape Business Upgrade OpenScape V3 MX/LX	CUB681	L30250-U622-B681
OpenScape Business Upgrade HiPath 500 V9	CUB694	L30250-U622-B694
OpenScape Business Upgr. myPortal Desktop auf myPortal for Outlook	CUB676	L30250-U622-B676
Evaluation licenses		
OpenScape Business Attendant Evaluation	CUB649	L30250-U622-B649
OpenScape Business UC Suite System Evaluation UC Suite	CUB677	L30250-U622-B677
OpenScape Business CRM Evaluation Appl. Launcher, TAPI	CUB674	L30250-U622-B674
OpenScape Business UC Suite Contact Center Evaluation	CUB673	L30250-U622-B673
OpenScape Business Service Evaluation	CUB685	L30250-U622-B685
OpenScape Business SIP Trunk Evaluation	CUB688	L30250-U622-B688

5.1.1.2 Software Support

Ordering structure	PST-NR:	LM-NR:
OpenScape Business SW Support Renewal 1 year per user	YCUB642	L30240-U622-B642
OpenScape Business SW Support Renewal 2 years per user	YCUB645	L30240-U622-B645
OpenScape Business SW Support Renewal Reinstatement per user	CUB691	L30250-U622-B691

5.1.1.3 Pay as you go Licenses

Ordering structure	PST-NR:	LM-NR:
OpenScape Business PAYG X1 Base	CUB714	L30250-U622-B714
OpenScape Business Base PAYG X3/X5/X8/S	CUB695	L30250-U622-B695
OpenScape Business PAYG Voice User	CUB708	L30250-U622-B708
OpenScape Business PAYG UC Smart	CUB702	L30250-U622-B702
OpenScape Business PAYG UC Suite	CUB695	L30250-U622-B695
OpenScape Business PAYG Application Launcher	CUB701	L30250-U622-B701
OpenScape Business PAYG Fax	CUB707	L30250-U622-B703
OpenScape Business PAYG Conference	CUB704	L30250-U622-B704
OpenScape Business PAYG TAPI	CUB705	L30250-U622-B705
OpenScape Business Contact Center E-Mail	CUB706	L30250-U622-B706
OpenScape Business Contact Center Fax	CUB707	L30250-U622-B707
OpenScape Business myAttendant	CUB710	L30250-U622-B710
OpenScape Business myAgent	CUB711	L30250-U622-B711
OpenScape Business myReports	CUB712	L30250-U622-B712
OpenScape Business OpenDirectory Connector	CUB713	L30250-U622-B713

5.1.1.4 License Bundles

Order structure	PST-NR:	LM-NR:
OpenScape Business X1 Gateway	CUB687	L30250-U622-B687
OpenScape Business X3/X5/X8 Gateway	CUB686	L30250-U622-B686

5.1.1.5 OpenScape Business Attendant

Order structure	PST-NR:	LM-NR:
OpenScape Business Attendant Software	DUA836	L30251-U600-A836

5.1.1.6 Hardware Models

Order structure	PST-NR:	LM-NR:
OpenScape Business X1		

OpenScape Business X1 System Box Wall-Mount Design	DUG640	L30251-U600-G640
OpenScape Business X3R / X5R		
OpenScape Business X3R System Box, Rack-Mount Design,	DUG653	L30251-U600-G653
OpenScape Business X5R System Box, Rack-Mount Design	DUG654	L30251-U600-G654
Wall bracket	DUA170	L30251-U600-A170
Options Adapter (OPALR)	DU156	L30251-C600-A156
Floating Contacts (STRBR Actuators/Sensors)	DU377	L30251-C600-A377
19-inch mounting kit	DUA172	L30251-U600-A172
Mains power cord, EU variant, 2.5m	DUA389	L30251-U600-A389
Mains power cord, UK variant, 2.5m	DUA390	L30251-U600-A390
Mains power cord, SWZ variant, 2.5m	DUA391	L30251-U600-A391
Cold-device power cable US	BZF101	L30280-Z600-F101
Cold-device power cable AUS	BZF104	L30280-Z600-F104
Mains power cord, BRA variant, 2.5m right-angled	DUA718	L30251-U600-A718
OpenScape Business X3W / X5W		
OpenScape Business X3W System unit for wall mount installation)	DUG656	L30251-U600-656
OpenScape Business X5W system unit for wall mount installation	DUG657	L30251-U600-G657
OpenScape Business X5W Case Lid**NEW**	DUA917	L30251-U600-A917
Fan Kit for OSBiz X3W/X5W old Backplane	DUA918	L30251-U600-A918
Fan Kit for OSBiz X3W/X5W new Backplane	DUA985	L30251-U600-A985
OpenScape Business X3W Adapter Kit	DUA919	L30251-U600-A919
Options Adapter Long (OPAL)	DU128	L30251-C600-A128
Floating Contacts (STRB Actuators/Sensors)	DU372	L30251-C600-A372
Ferrite kit (5 units)	DUA229	L30251-U600-A229
Mains power cord, EU variant, 2.5m	DUA102	L30251-U600-A102
Mains power cord, UK variant, 2.5m	DUA235	L30251-U600-A235
Mains power cord, SWZ variant, 2.5m	DUA391	L30251-U600-A391
Mains power cord, US variant, 2.5m	DUA238	L30251-U600-A238
Mains power cord, BRA variant, 2.5m right-angled	DUA718	L30251-U600-A718
OpenScape Business X8		
OpenScape Business X8 System Box, Stackable, without mainboard and SW	DUG661	L30251-U600-G661
Expansion Box for OpenScape Business X8 Stand and 19" Rack Mount	DUG615	L30251-U600-G615

OpenScape Business X8 Mainboard OCCL	DUG662	L30251-U600-G662
OpenScape Business X8 Mainboard OCCLA	DUG664	L30251-U600-G664
LUNA2 power supply unit	DUA85	L30251-U600-A85
19-inch Rack Mount Kit	DUA82	L30251-U600-A82
First power failure transfer relay (1 ALUM) and 4 floating contacts (REALS)	DUA426	L30251-U600-A426
Power failure transfer relay (ALUM) for 4 exchange trunks (PFT 4)	DU373	L30251-U600-A373
Front cover panel for peripheral slots in base/expansion box	DUA436	L30251-U600-A436
Rear cover panel for peripheral slots in base/expansion box	DUA437	L30251-U600-A437
Design Kit (Unify Logo) for OpenScape Business (Plastic Front/Rear Cover)	DUA813	L30251-U600-A813
Mains power cord, EU variant, 2.5m	DUA102	L30251-U600-A102
Mains power cord, UK variant, 2.5m	DUA235	L30251-U600-A235
Mains power cord, SWZ variant, 2.5m	DUA391	L30251-U600-A391
Mains power cord, US variant, 2.5m	DUA238	L30251-U600-A238
Mains power cord, BRA variant, 2.5m right-angled	DUA718	L30251-U600-A718

5.1.1.7 OpenScape Business S/Booster Server and TAPI

Order Structure	**PST No:**	**LM-No:**
OpenScape Business S/Booster Server Software auf DVD (SLES 64 Bit)	DUA932	L30251-U600-A932
OpenScape Business SLES Upgrade key (for 3 years)	CUB692	L30250-U622-B692
OpenScape Business TAPI Software	DUA838	L30251-U600-A838

5.1.1.8 Additional Memory (SSD)

Storage medium for OpenScape Business V3 UC data (only for V3 mainboards).

Order structure	**PST-NR:**	**LM-NR:**
M.2 NVMe SSD Storage media 256 GB	DUG667	L30251-U600-G667

5.1.1.9 UC Booster Card

The OpenScape Business Booster Card (OCAB) has been released for use with the X3R/X5R, X3W/X5W, and X8 systems.

Order Structure	**PST No:**	**LM-No:**
UC Booster Card, OCAB	DUA841	L30251-U600-A841
Fan kit OSBiz X3R for OCAB	DUA843	L30251-U600-A843
Fan Kit for OSBiz X3W/X5W	DUA918	L30251-U600-A918
OpenScape Business X3W Adapter Kit	DUA919	L30251-U600-A919
OpenScape Business X3W/X5WHousing cover	DUA917	L30251-U600-A917

Fan kit OSBiz X5R for OCAB	DUA851	L30251-U600-A851
Fan kit OSBiz X8 for OCAB	DUA852	L30251-U600-A852
OCAB fan kit for HiPath 3300 upgrade	DUA853	L30251-U600-A853
OCAB fan kit for HiPath 3500 upgrade	DUA854	L30251-U600-A854

5.1.1.10 Upgrades and System Software

Order Structure	PST No:	LM-No:
OpenScape Business Upgrade HiPath 3300/3500 V9 to OSBiz X3R/X5R	DUG650	L30251-U600-G650
OpenScape Business Upgrade HiPath 3350/3550 V9 to OSBiz X3W/X5W	DUG651	L30251-U600-G651
OpenScape Business System Software auf SDHC card (w/o OCAB)	DUG669	L30251-U600-G669
OpenScape Business System SW on M.2 SATA SSD	DUG668	L30251-U600-G668

5.1.1.11 Interfaces X3R / X5R

Order Structure	PST No:	LM-No:
Analog subscriber line module SLAV8R8 (8 a/b)	DUA908	L30251-U600-A908
Analog subscriber line module SLAV26R (16 a/b)	DUA909	L30251-U600-A909
Digital subscriber module (8 UP0/E) SLU8NR for OSBiz X3R/X5R	DUA814	L30251-U600-A814
Digital S0 board (4 S0) STLSX4R	DUA83	L30251-U600-A830
ISDN S2M Card TS2RN for OSBiz X5R	DUA820	L30251-U600-A820
ISDN S2M-Card TS2RN incl. Blackbox-converter with cable for OSBiz X5R	DUA821	L30251-U600-A821
Cover plate for unused board slots	DU144	L30251-C600-A144
TST1 trunk board with front panel and cable	DUA166	L30251-U600-A166
Analog trunk board (4 MSI) TLANI4R with 12/16 kHz call detail recording, CLIP and line reversal detection	DUA594	L30251-U600-A594
Analog trunk board (4 MSI) TLANI4R without call detail recording, with CLIP and line reversal detection	DUA636	L30251-U600-A636

5.1.1.12 Interfaces X3W / X5W

Order Structure	PST No:	LM-No:
Digital subscriber module (8 UP0/E) SLU8N for OSBiz X3W/X5W	DUA815	L30251-U600-A815
Analog subscriber line module SLAV4 (4 a/b)	DUA905	L30251-U600-A905
Analog subscriber line module SLAV8 (8 a/b)	DUA906	L30251-U600-A906
Analog subscriber line module SLAV26 (16 a/b)	DUA907	L30251-U600-A907
Digital S0 board (2 S0) STLSX2	DUA670	L30251-U600-A670

Order Structure	PST No:	LM-No:
Digital S0 board (4 S0) STLSX4	DUA671	L30251-U600-A671
ISDN S2M Card (TS2N) for OSBiz X5W	DUA822	L30251-U600-A822
10 m cable for connecting S2M trunk board or per S2M nailed connection to the PPT distributor NT	DUA279	L30251-U600-A279
T1 / PRI trunk module TST1 without cable	DUA182	L30251-U600-A182
Cable T1 to Kentrox for T1/PRI trunk board	DUA167	L30251-U600-A167
Analog trunk board (2 MSI) TLANI2 with 12/16 kHz call detail recording, CLIP and line reversal detection	DUA595	L30251-U600-A595
Analog trunk board (4 MSI) TLANI4 with 12/16 kHz call detail recording, CLIP and line reversal detection	DUA596	L30251-U600-A596
Analog trunk board (2 MSI) TLANI2 without call detail recording, with CLIP and line reversal detection	DUA637	L30251-U600-A637
Analog trunk board (4 MSI) TLANI4 without call detail recording, with CLIP and line reversal detection	DUA638	L30251-U600-A638
Analog trunk board (8 MSI) TLANI8 with 12/16 kHz call detail recording, CLIP and line reversal detection	DUA597	L30251-U600-A597
Analog trunk board (8 MSI) TLANI8 without call detail recording, CLIP and line reversal detection	DUA650	L30251-U600-A650
Analog trunk board (8 MSI) TLANI8 with 12/16 kHz call detail recording, CLIP and line reversal detection	DUA653	L30251-U600-A653

5.1.1.13 Interfaces X8

Order Structure	PST No:	LM-No:
Analog subscriber line module (8 a/b) SLMAV8N for OSBiz X8	DUA816	L30251-U600-A816
Analog subscriber line module (24 a/b) SLMAV24N for OSBiz X8	DUA817	L30251-U600-A817
Digital Subscriber Line Module UP0 (SLMU)	DUA984	L30251-U600-A984
ISDN S2M Card DIUT2	DUA710	L30251-U600-A710
ISDN S2M Card DIUT2 for OSBiz X8	DUA824	L30251-U600-A824
10 m cable (120 ohms) for connecting DIUN2-/DIUT2-/TMCAS-2 trunk board or per CAS/S2M connection on the trunk side	DUA443	L30251-U600-A443
20 m cable for connecting DIUN2/DIUT2 trunk board or per S2M nailed connection to the PPT distributor NT	DUA444	L30251-U600-A444
Analog E&M Module (4 sets) TMEW2	DUA96	L30251-U600-A96
Analog Exchange/CO trunk board TM DID (8 ports) for direct inward dialing	DUA601	L30251-U600-A601

Order Structure	PST No:	LM-No:
Analog trunk board (8 MSI) TMANI with 12/16 kHz call detail recording, CLIP and line reversal detection	DUA598	L30251-U600-A598
Analog trunk board (8 MSI) TMANI without call detail recording, with CLIP and line reversal detection	DUA639	L30251-U600-A639
Analog trunk board (8 MSI) TLANI4 without call detail recording, CLIP and line reversal detection	DUA677	L30251-U600-A677

5.1.1.14 OpenScape Business Cordless

Order Structure	PST No:	LM-No:
Base station BS5 for OpenScape Business Cordless and HiPath Cordless Office	BBB221	L30280-B600-B221
Outdoor weatherproof housing for BS4 base stations, unheated	BBB212	L30280-B600-B212
SLCN module for OpenScape Business Cordless	DUA99	L30251-U600-A99
EIC code (DECT ID)	DUA395	L30251-U600-A395

5.1.1.15 ECG Euro-ISDN CAS Gateway

Order Structure	PST No:	LM-No:
Trunk board (TCASR-2) for CAS interface	DUA482	L30251-U600-A482
Trunk board (TCAS-2) for CAS interface	DUA483	L30251-U600-A483
Trunk board (TMCAS-2) for CAS interface	DUA484	L30251-U600-A484
10 m cable (120 ohms) for connecting DIUN2-/DIUT2-/TMCAS-2 trunk board or per CAS/S2M connection on the trunk side	DUA443	L30251-U600-A443
Black box converter (75 / 120 Ohms) for TCASR-2/TCAS-2 board	DUA485	L30251-U600-A485
Modem for TMCAS-2 board	DUA491	L30251-U600-A491

5.1.1.16 System Accessories

Order Structure	PST No:	LM-No:
ISDN cable RJ45 / RJ45	DUA151	L30251-U600-A151
CMAe (Clock Module ADPCM extended) for DECT applications (direct base station connections)	DUA983	L30251-U600-A983
Adapter Box for Door Intercom (with amplifier)	CUA405	L30250-U600-A405
Voice Channel Booster Card OCCB1 (1 DSP)	DUA903	L30251-U600-A903
Voice Channel Booster Card OCCB3 (3 DSP)	DUA904	L30251-U600-A904
Voice Channel Booster Card OCCBL	DUA933	L30251-U600-A933
Voice Channel Booster Card OCCBH	DUA934	L30251-U600-A934

5.1.1.17 Main Distribution Frame and Rack Mounting Hardware

Order Structure	PST No:	LM-No:
10 m open-ended cable	DUA251	L30251-U600-A251
CABLU (16-pair, 3 m, separable), long stripper	DU356	L30251-U600-A356
MDF cable 1 (sw)	DUA184	L30251-U600-A184
MDF cable 2 (rt)	DUA185	L30251-U600-A185
MDF cable 3m (1 SU to Champ)	DUA190	L30251-U600-A190
MDF cable 3m (2 SU to Champ)	DUA187	L30251-U600-A187
CABLU with SIVAPAC (16-pair, 3 m, separable), long stripper	DUA338	L30251-U600-A338
CABLU with SIVAPAC (24-pair, 3 m, inseparable), long stripper	DUA425	L30251-U600-A425
MDF cable 10m (1 SU to open-end)	DU67	L30251-U600-A67
24-pair MDF cable (SIVAPAC to open-end), 10 m	DUA498	L30251-U600-A498
24-pair MDF cable (SIVAPAC to open-end), 25 m	DUA439	L30251-U600-A439
Splitting strip 16 DA	DU69	L30251-U600-A69
Jumper strip 25 DA	DU70	L30251-U600-A70
Surge protector set (10 piece)	DUA262	L30251-U600-A262
Ground cable, 3m	DU75	L30251-U600-A75
Ground cable, 10m	DU73	L30251-U600-A73
External patch panel 48 x RJ45, 2-pin	DU147	L30251-U600-A147
External patch panel 24 x RJ45, 4-pin	DU148	L30251-U600-A148
Internal patch panel NPPAB (24XRJ45, 2-wire)	DUA77	L30251-U600-A77
Internal patch panel NPPS0 (8 X RJ45, 4-wire)	DUA78	L30251-U600-A78
Internal patch panel NPPSC (SIVAPAC to Champ)	DUA201	L30251-U600-A201
Patch-Panel Cable, 2m (SIVAPAC to SIVAPAC)	DUA80	L30251-U600-A80
Patch-Panel Cable, 5m (SIVAPAC to SIVAPAC)	DUA450	L30251-U600-A450

	Sales Region Germany	International Market
Purchase	See pricelist in the Partner Portal https://unify.com/en/partners/partner-portal	
Warranty	Internal warranty claims are covered by the branch office price/transfer price.	
Export regulations	The contents of the attached export regulations, the Ordering and Invoicing Guidelines (BAV) and the Internal Control Program (ICP) apply.	

In addition, the terms and conditions that have already been agreed upon with you apply.

5.2 Export Regulations

Certain products in our sales program are subject to the regulations governing export permits required under EU / German / US law [in accordance with the Export List (in German 'AL') and Export Administration Regulations (EAR)].

When submitting an offer or confirming of an order, it cannot be assumed with certainty

- the required export license will be granted in every case
- that existing export/re-export licenses will be extended for a period that encompasses delivery dates resulting from planning or delays.

Your offers, order confirmations and contracts for your customers, which are known to involve or can be assumed to involve deliveries intended for export/re-export - in other words, indirect exports and transactions with dealers - should therefore include the following proviso:

"This offer (contract or order confirmation) and the fulfillment of the contract are subject to the proviso that the required export licenses have been issued and that there are no other impediments arising from German or other export regulations".

6 Data Protection and Information Security

6.1 Customer Information on Data Protection and Information Security

The respective country-specific provisions regarding data protection must be complied with.

6.2 Unify Information on Data Protection and Information Security

Detailed information can be found under "Data Privacy and Information Security":

https://unify.com/en/data-protection

7 Training Concept

7.1 Information on the Training Offer

As a customer of Unify GmbH & Co. KG, you can obtain further information about this from your country-specific Unify organization.

Further information on the trainings offered in Germany can be found at the following URL:

https://academy.unify.com

8 Appendix

8.1 Appendix 1: Product history of the OpenScape Business V3

Below is an overview of the further development of OpenScape Business V3 software and hardware since its market launch

8.2 Appendix 2: HiPath 3000/5000 Migration - Changed Features

When migrating from HiPath 3000/5000 systems to OpenScape Business, many functions are taken over. Some functions have been replaced by more powerful ones or replaced by new functions. However, some features are no longer available in OpenScape Business.

The following chapters provide an overview.

8.2.1 HiPath 3000 Changed / Dropped Features and Interfaces

8.2.1.1 HG1500 DSP channels / B channels

The HG1500 module is no longer required. The DSP functionality is integrated in OpenScape Business on the V3 motherboard and via optional Voice Channel Booster cards.

Please determine the number of DSP channels required. DSP channels are required to implement network transitions from TDM telephony to VoIP. OpenScape Business has 8 DSP channels integrated on the V3 mainboard. To extend DSP channels, the DSP module OCCB1/OCCBL (up to 40 channels) or the DSP module OCCB3/OCCBH (up to 120 channels) can be used.

8.2.1.2 Entry Voicemail

The Entry Voicemail module is dropped in OpenScape Business - the function is integrated as Smart Voicemail in the OpenScape Business mainboard. Smart Voicemail users must be licensed.

8.2.1.3 Enhanced SIP Functionality

The following SIP features have been additionally implemented as compared to HiPath 3000 V9:

- Call completed elsewhere
- Message Waiting Indication for Voicemail
- Calling Name Presentation (CNIP)
- Distinctive Ringing (internal/external calls)
- 3rd Party Call Control
- Call Forwarding busy/no reply/unconditional (handset controlled)

8.2.1.4 SIP Trunking

To connect external SIP servers (e.g., OpenScape Alarm Server, HiPath 4000, OpenScape Voice or UC Suite) SIP routes are available in OpenScape Business. See also the Administrator Documentation, Networking.

8.2.1.5 VoIP over PPP via ISDN

Routed voice calls over lines with low bandwidth are no longer supported.

8.2.1.6 G. 723 support

G.723 codecs are no longer supported.

8.2.1.7 Babyphone

The Babyphone (room monitoring) feature is no longer supported

8.2.1.8 Number of Base Stations and DECT Telephones at OpenScape Business X3

The number of base stations at OpenScape Business X3 was increased from 3 to 7 as compared to HiPath 33xx. The number of DECT telephones at OpenScape Business X3 was increased from 16 to 32 as compared to HiPath 33xx.

8.2.1.9 HiPath 3000 BS4

Base station licenses are no longer required in OpenScape Business

8.2.1.10 SSDP based on the Plug PC

SSDP is integrated in OpenScape Business. The Plug PC is no longer required.

8.2.1.11 Accounting Interface

The interfaces of the accounting data have changed compared to HiPath 3000.

8.2.1.12 V24 applications

V24 applications are no longer supported.

8.2.1.13 Other External Applications

Subsequent applications connected externally to HiPath 3000 can no longer be operated on OpenScape Business.

HiPath 3000 Application	Successor Application for OpenScape Business	Remark
optiClient Attendant	OpenScape Business Attendant	New application No license transfer possible
optiClient BLF V1/V2	OpenScape Business Attendant (OpenScape Business BLF)	New application No license transfer possible
HiPath TAPI 120/170	OpenScape Business TAPI 120/170	New application No license transfer possible
Communication Clients der Entry WEB Services on Plug PC	Integrated UC Solution	New application No license transfer possible
myPortal for Mobile/Tablet	myPortal to go	New application No license transfer possible

Table 97 External applications no longer connectable to OpenScape Business

8.2.1.14 HiPath 5000 RSM Changed / Dropped Features

HiPath 5000 RSM is no longer supported. The functionality of HiPath 5000 RSM has been integrated into OpenScape Business. This means that a separate server is no longer required.

Feature	HiPath 5000 RSM	OpenScape Business
Network-wide licensing, assignment of licenses to the individual nodes	All system licenses of the network are combined at the CLS into a network-wide license.	All system licenses of the network are combined at the CLS into a network-wide license.
Network-wide administration	DB Feature Server: all nodes of the network are combined into a network CDB using Manager E. The numbering scheme is synchronized across the network.	All nodes of the network are recorded through the OPENSCAPE BUSINESS ASSISTANT (WBM) with a network wizard. The numbering scheme is synchronized network-wide (closed numbering).

Connection to external nodes or external applications	SIP-Q connection of up to 4 external nodes	Up to 10 SIP interconnection routes with up to 2 SIP-Q or up to 10 Native SIP or up to 8 ITSP
Resilience / Survivability	User survivability for HFA phones with closed numbering	User survivability for HFA phones with closed numbering (change from Open Scape Business S <-> Open Scape Business X3/X5/X8)
Backup / Restore	Netwide	Local
Inventory function	Netwide	Local
Presence Manager	Network-wide function with the provision of 5000 RSM	Network-wide function with the provision of a multi-node CSP based on the Open Scape Business UC Booster Card, the Open Scape Business UC Booster Server or Open Scape Business S. Prerequisite: closed numbering
TAPI 170 on a standalone system	TAPI 170 on a standalone system runs on a Windows computer with its own licensing (separate license file for the TAPI 170).	TAPI 170 on a standalone system runs on a Windows computer. The license request and supply of the TAPI 170 database occurs from the SQL DB of Open Scape Business. The connection of the TAPI 170 occurs via the CSP of the system (Open Scape Business UC Booster Card, Open Scape Business UC Server Booster or Open Scape Business S)
TAPI 170 in an Internetwork	TAPI 170 runs on 5000 RSM with its own licensing (separate license file for the TAPI 170). The TAPI 170 database is obtained from the DB Feature Server of the 5000 RSM.	As with the standalone system, but the connection of the TAPI 170 occurs at the multinode CSP of a master node (i.e., network-wide). Prerequisite: closed numbering

Table 98 Differences between HiPath 5000 RSM and OpenScape Business V3

8.3 Unsupported HiPath 3000 Boards

The modules used in HiPath 3000 that are no longer supported by OpenScape Business V3 are listed with their respective successors in section 3.3 “Unsupported Boards”.