



OpenScape Business S

in hosted/cloud Deployments

Frank Wulf, UNIFY
Version 1.0

UNIFY





Agenda

- OpenScape Business S in hosted/Cloud Deployments
 - Introduction
 - Scenario Overview
 - Scenarios
 - Multi Instance
 - Data Center Deployment
 - Technical Requirements
 - General Hints
 - Bandwidth
 - Firewall

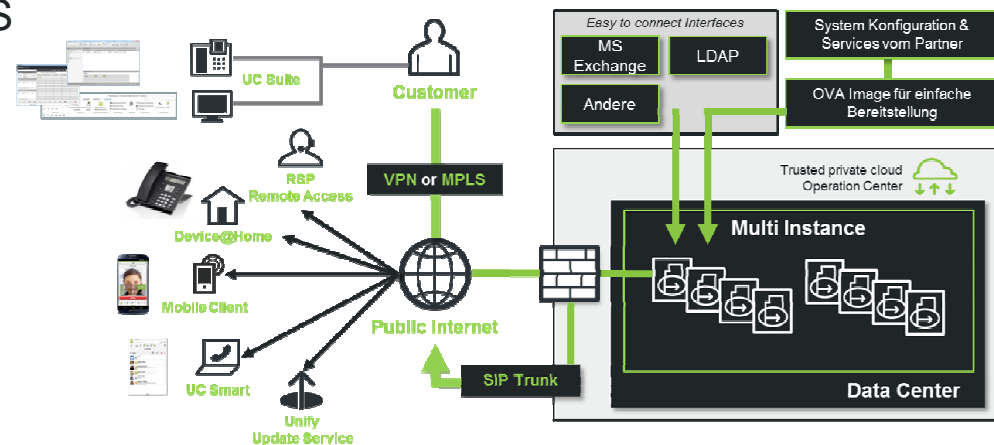


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OpenScape Business S in hosted/cloud deployments - Highlights

- Full featured OpenScape Business S operated out of a Datacenter
- Multi Instance Solution hosted by a Partner or Customer
- Own virtualized OSBiz S Instance per Customer (private Cloud)
- Easy Deployment (~15min) via OVA (Open Virtualization Appliance)



OpenScape Business S with Pay As You Go – a perfect business model for Partners to offer a flexible payment model on top of a secure and trustful landscape



OpenScape Business S in hosted/cloud deployments – Key Advantages

- **Lower costs** due to specialized provider and less own hardware
- High flexible IT resources and all-time up-to-date infrastructures
- **Resilience and high physical safety** for your hosted/cloud solution
- Seamless moving of server infrastructures

- OVA Open virtual Appliance (setup within 15 minutes)
- **one Image only:** “All in one Solution” incl. UC, CC, Fax, Conference
- easy Cloud Setup, deploy OVA, IP Configuration via yast2 or script
- one **secure OSBiz S Instance** per customer
- easy interface connection (MS-Exchange/LDAP.....)

- Cloud Setup without WBM
- System and User Data Provisioning is part of Reseller.



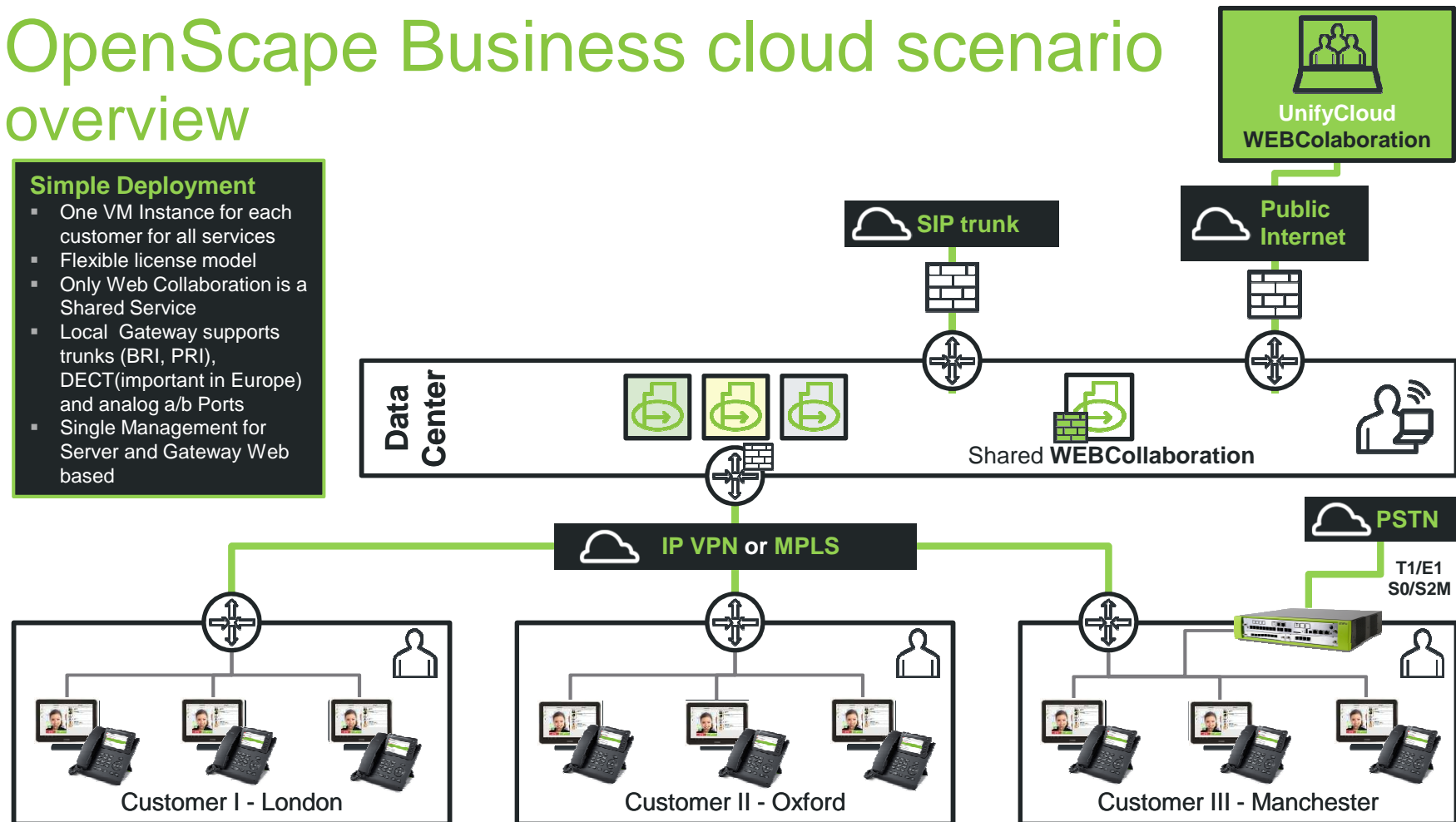
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OpenScape Business cloud scenario overview

Simple Deployment

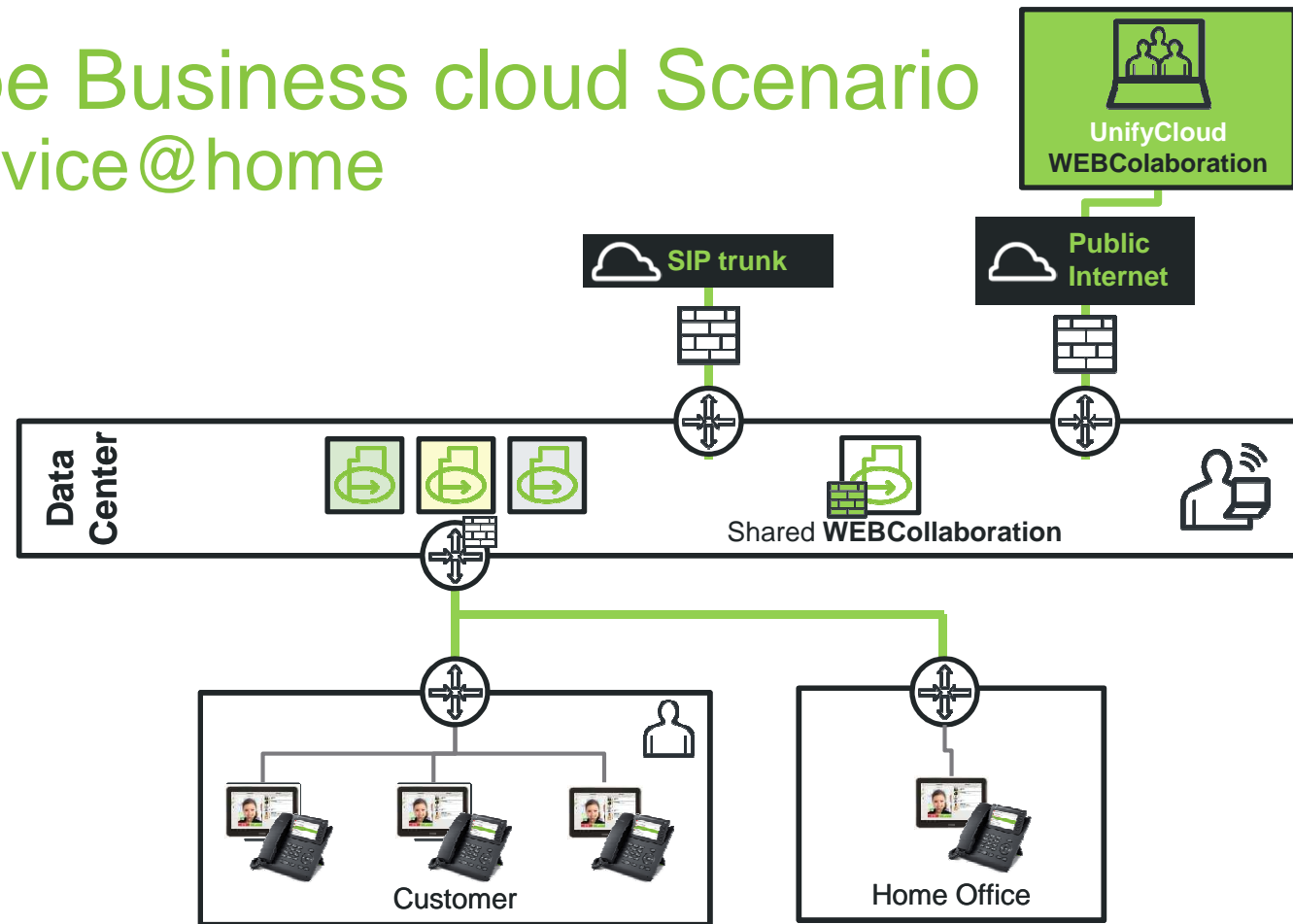
- One VM Instance for each customer for all services
- Flexible license model
- Only Web Collaboration is a Shared Service
- Local Gateway supports trunks (BRI, PRI), DECT (important in Europe) and analog a/b Ports
- Single Management for Server and Gateway Web based



OpenScape Business cloud Scenario overview device@home

Simple Deployment

- One VM Instance for each customer for all services
- Flexible license model
- Only Web Collaboration is a Shared Service
- analog a/b Ports via SIP Adapter
- UC with UC Smart via HTTPS
- UC Suite only via My Portal WEB Edition





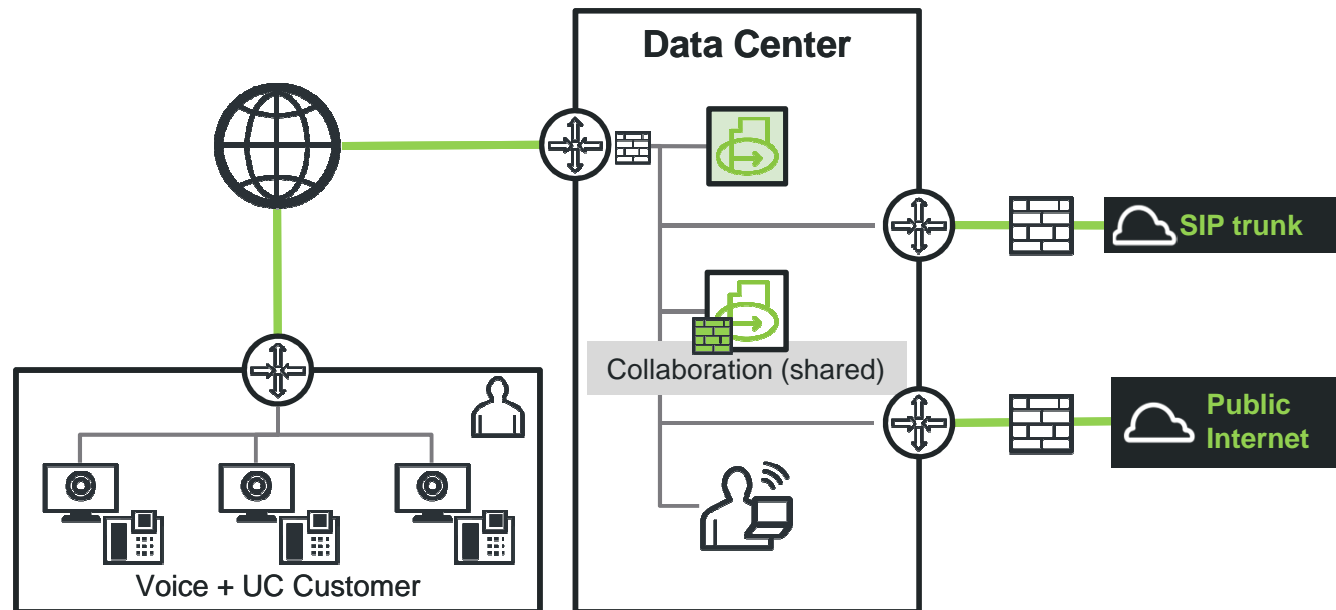
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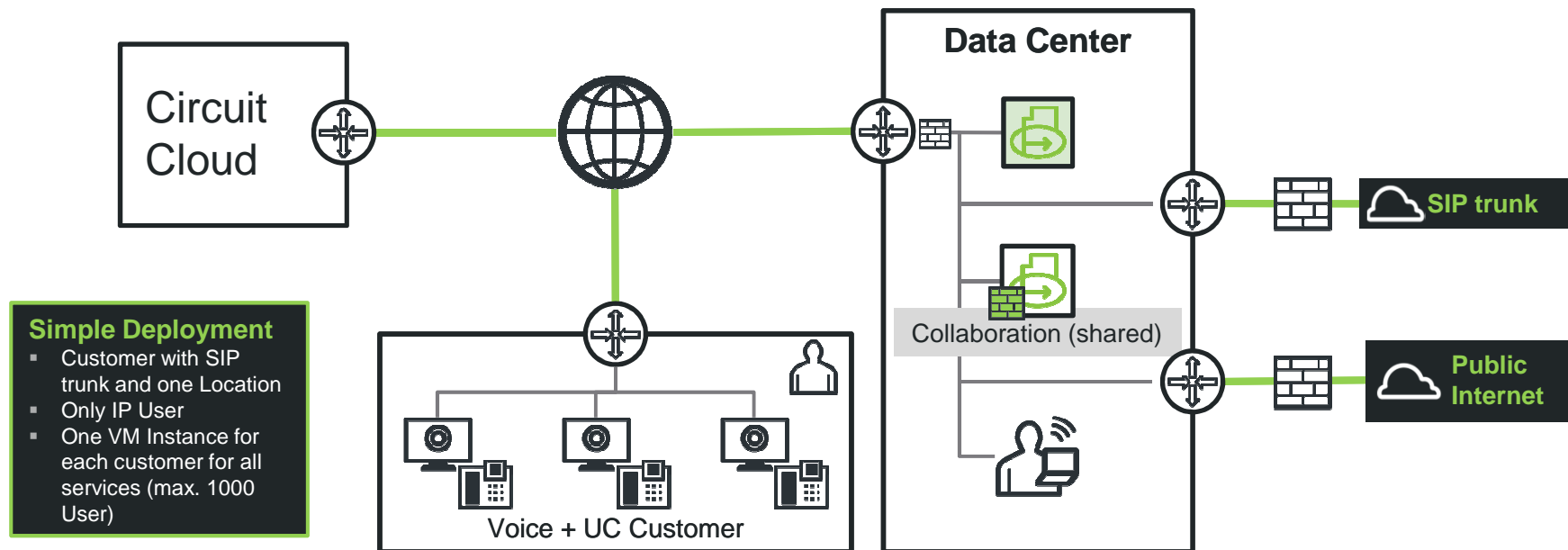
OpenScape Business - Scenario 1 Standard

Simple Deployment

- Customer with SIP trunk and one Location
- Only IP User
- One VM Instance for each customer for all services (max. 1000 User)



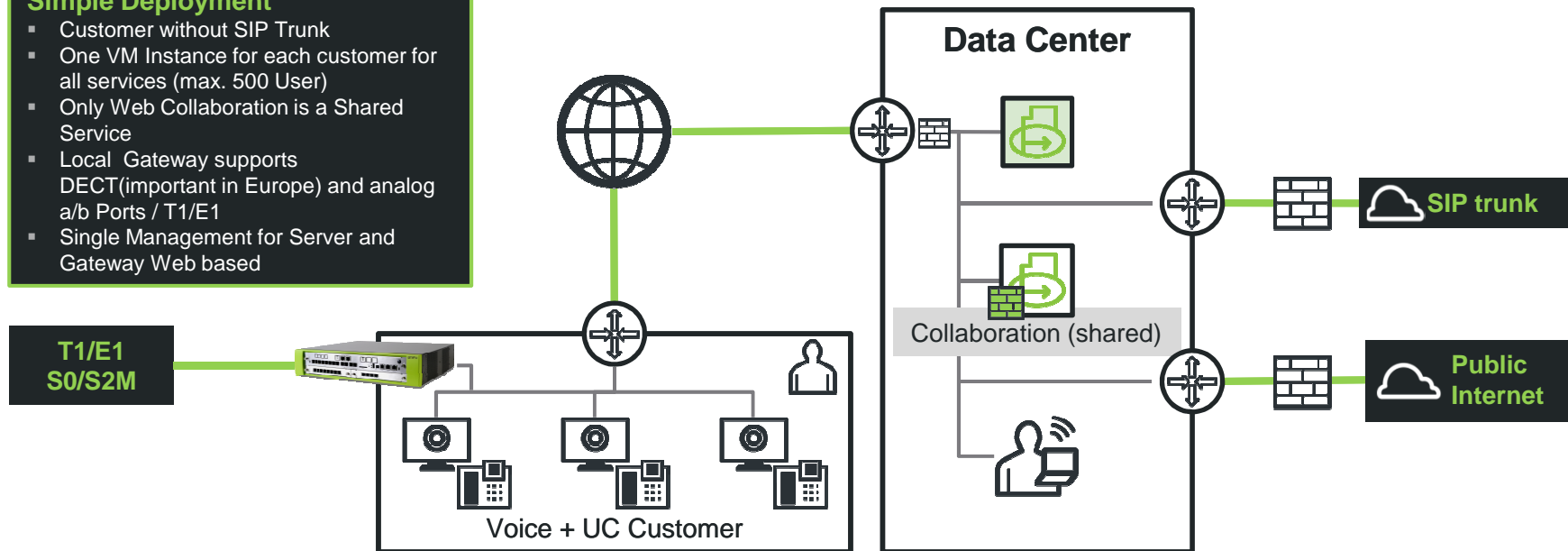
OpenScape Business - Scenario 2 Standard with Circuit



OpenScape Business - Scenario 3 Including Gateway

Simple Deployment

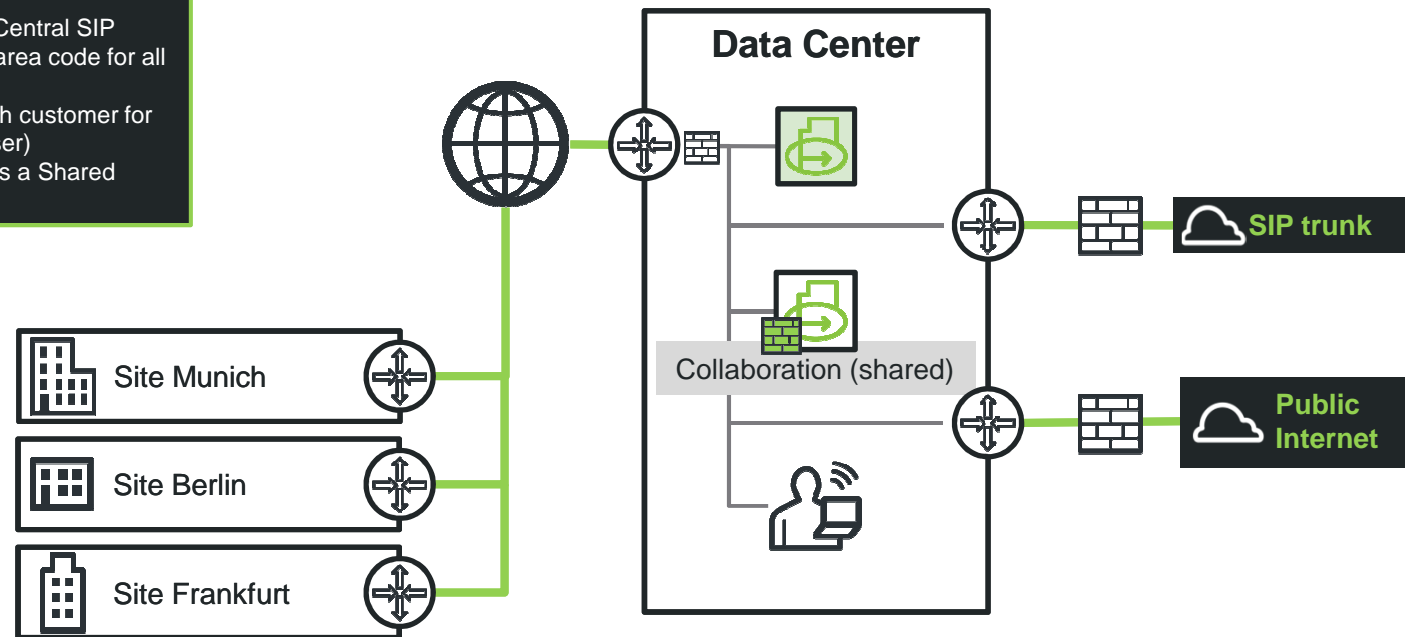
- Customer without SIP Trunk
- One VM Instance for each customer for all services (max. 500 User)
- Only Web Collaboration is a Shared Service
- Local Gateway supports DECT (important in Europe) and analog a/b Ports / T1/E1
- Single Management for Server and Gateway Web based



OpenScope Business - Scenario 4

Simple Deployment

- One Customer with one Central SIP Provider Trunk with one area code for all sites
- One VM Instance for each customer for all services (max. 500 User)
- Only Web Collaboration is a Shared Service

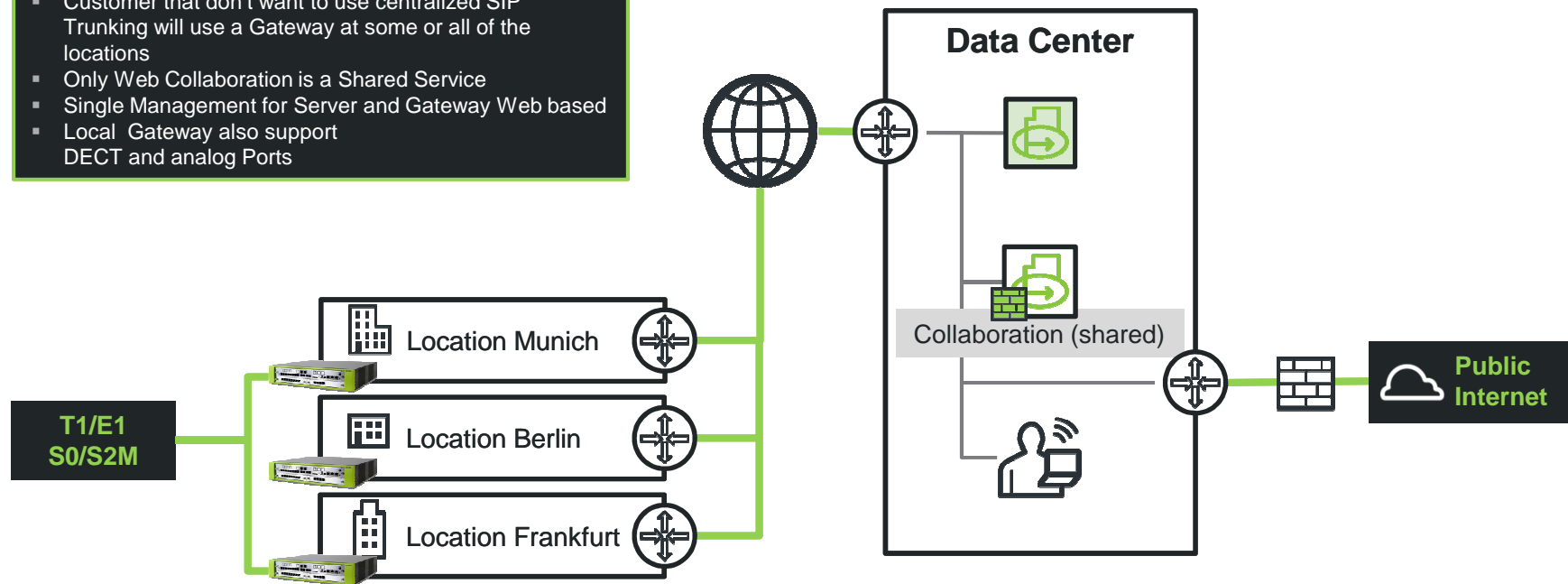


OpenScape Business - Scenario 5

Multi-Gateway

Simple Deployment

- Customer that don't want to use centralized SIP Trunking will use a Gateway at some or all of the locations
- Only Web Collaboration is a Shared Service
- Single Management for Server and Gateway Web based
- Local Gateway also support DECT and analog Ports



OpenScape Business - Scenario 6

Multi-Site separate area code on each site

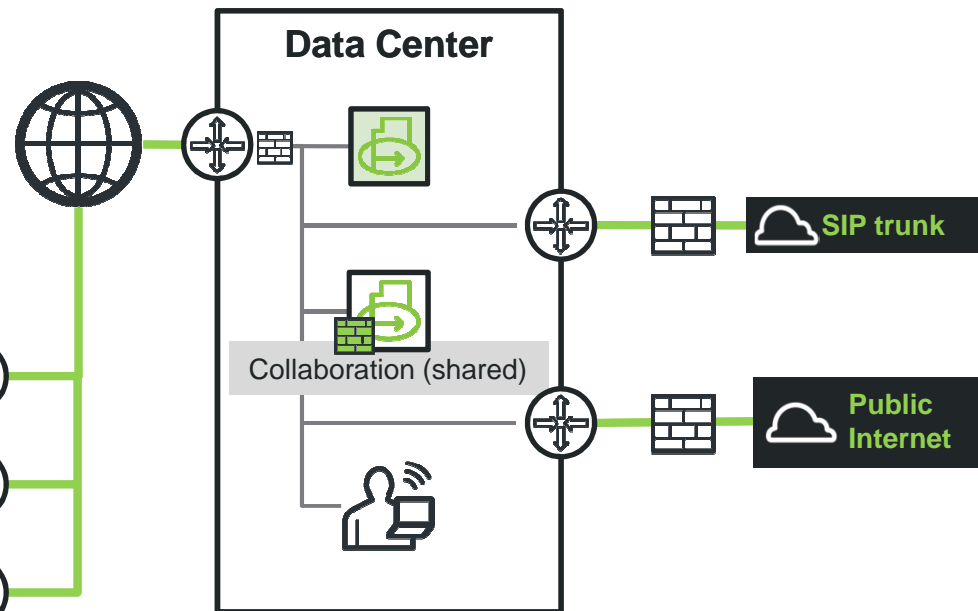
Simple Deployment

- One Customer with max 8 different area codes for each Location
- Only Web Collaboration is a Shared Service

+49-89-xxxxxx

+49-30-xxxxxx

+49-69-xxxxxx



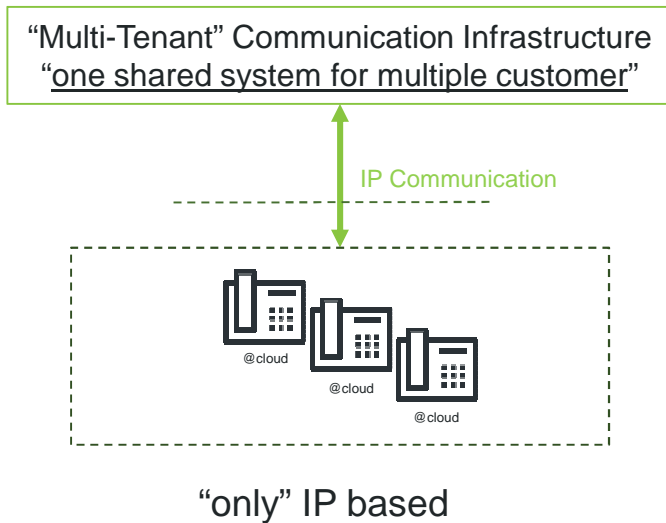


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Multi-Instance vs. Multi Tenant Approach

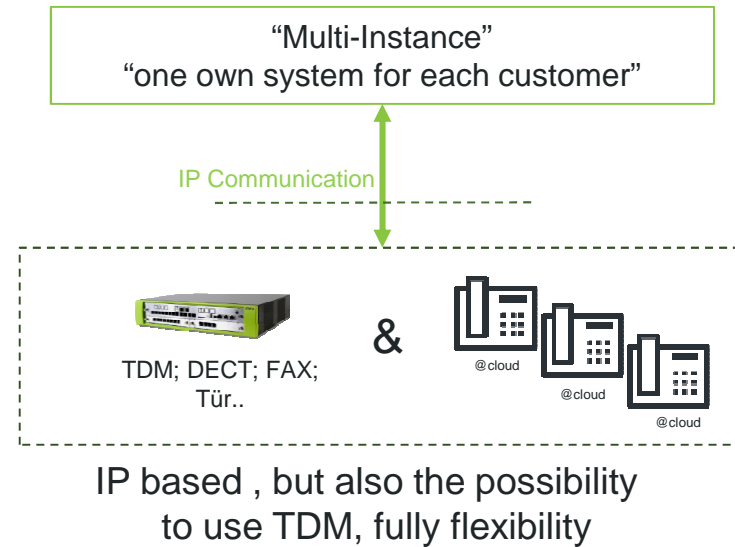
Traditional Cloud Offering



Datacenter

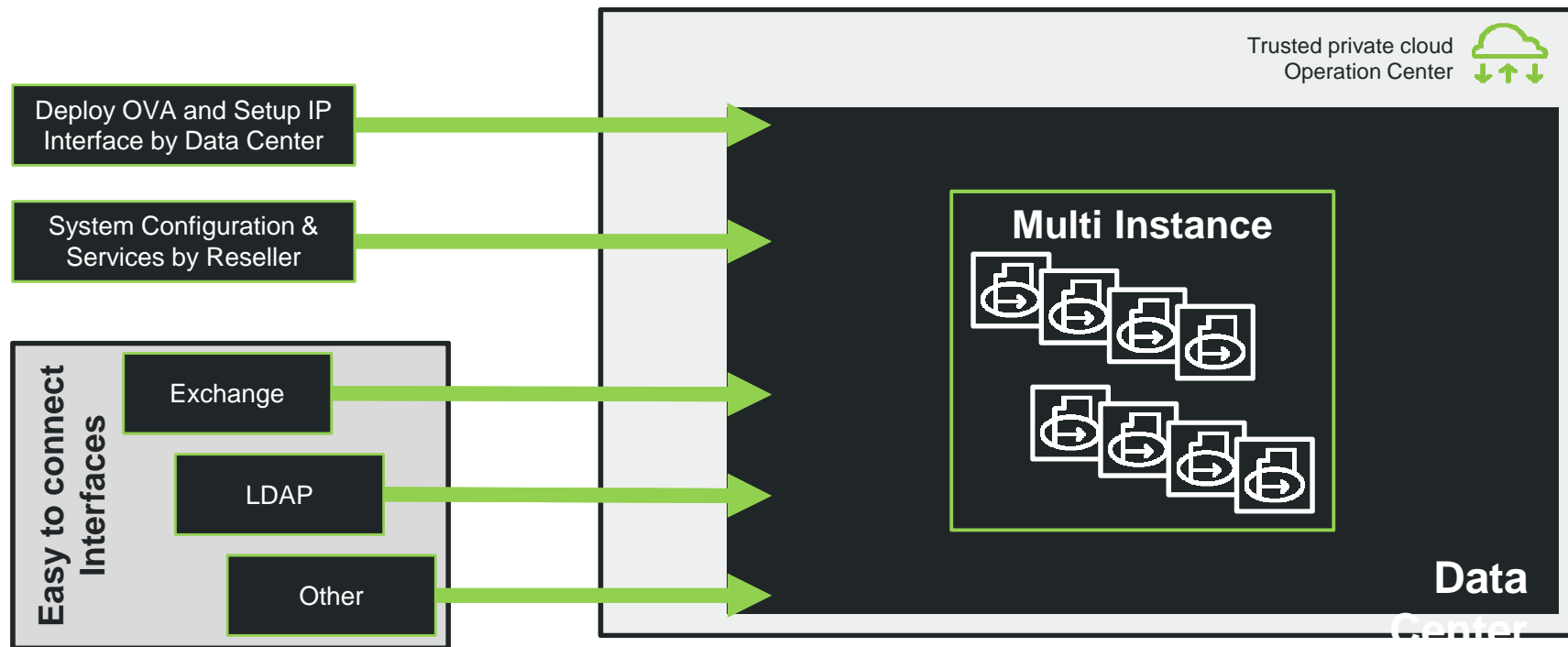
Customer

OpenScape Business Multi Instance



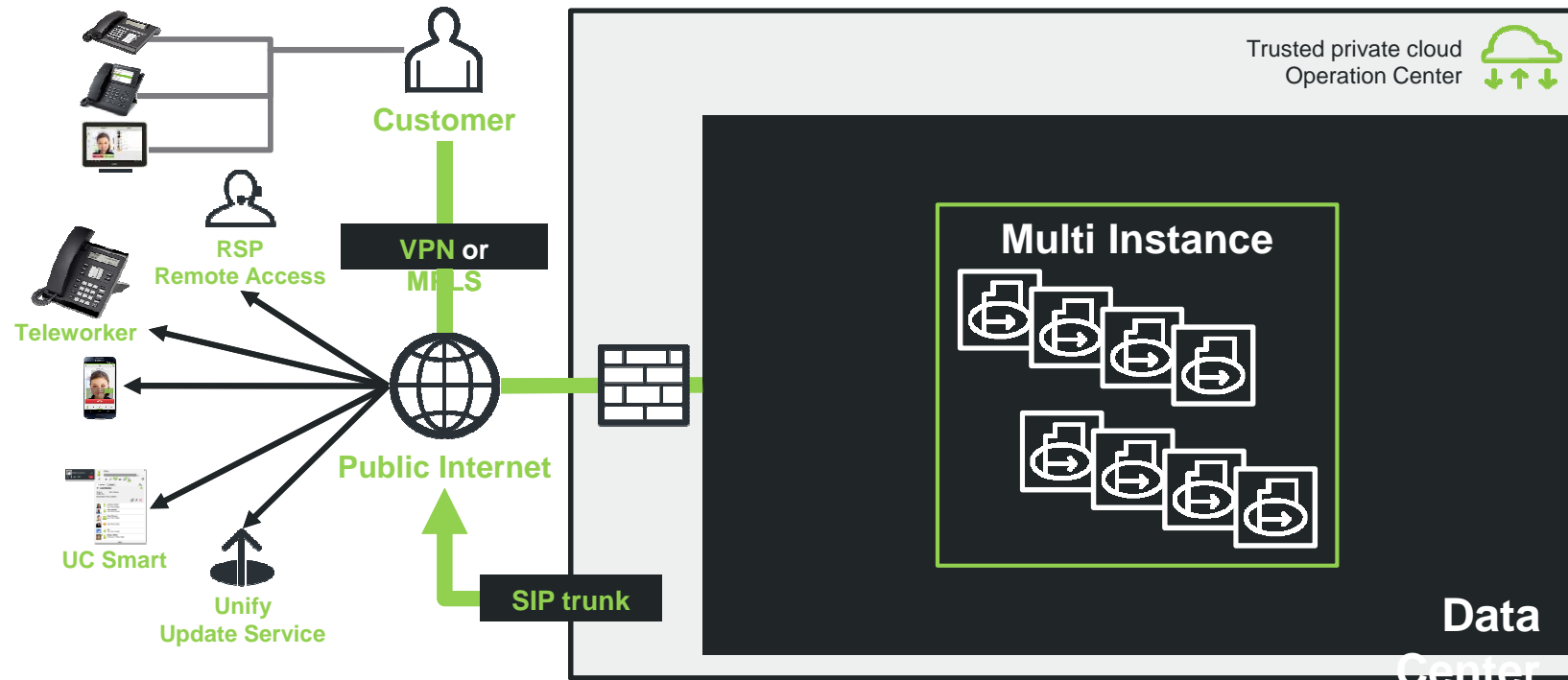
OpenScape Business hosted/Cloud

Multi instance approach deployment, setup and connectors



OpenScape Business hosted/cloud

Multi instance services for each customer



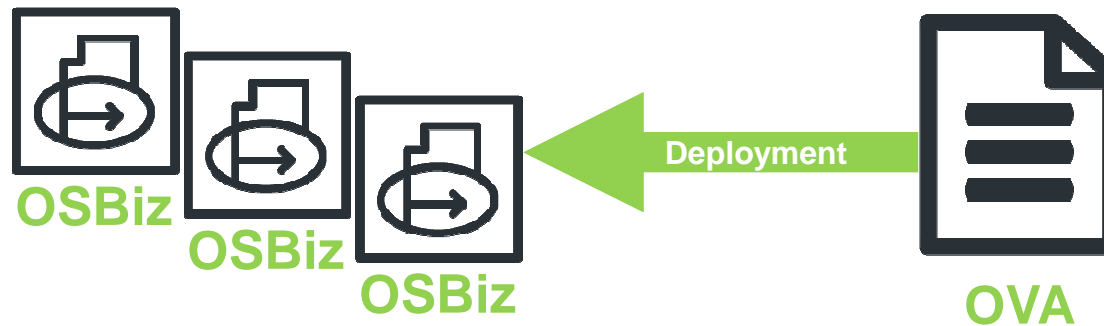


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Virtualization VMware OVA/OVF SLES with OpenScape Business

For deployment of individual VMware instances in the data center you can download the VMware OVA/OVF* file from the Partner Portal / SWS.
Login credentials and some hints will be found after opening the OVA with VMware in the Info Field.



- * OVF Open Virtualization Format
- * OVA Open Virtualization Appliance

OVA File download via Unify Partner Portal

- Can be found within UNIFY Partner Portal Software Download Server

UNIFY Partner Portal

Language Michael Trotz (mchp694a.server-two-production) Auto Login Off Log out

Contact Service Desk Help

Home Program & Tools Learn Sell Supply Support Mein Land Administration

> Support > Service Tools > Software Download > Add to My Favorites

Search Export for SW

Text Search: **P30152-P1603-P17-1**

or:

Main Category: Product Family: Product: Product Version: Prod.Item Nr (PIN) / Vers.: Production Version:

Save Clear Search

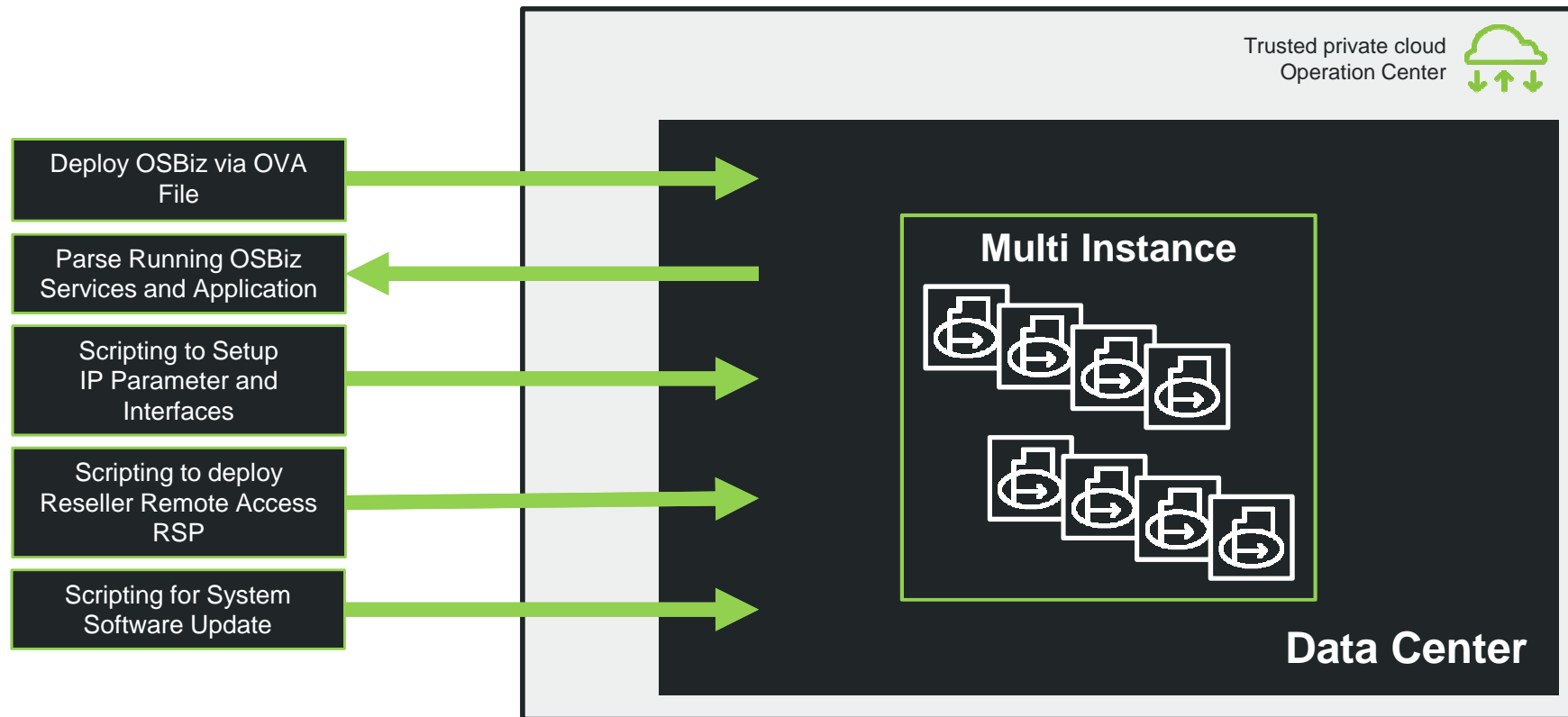
Sort Order Product Version, SW Version Descending? Export to Excel

Click for	Product	Product Version	Product Item Nr (PIN) / Version	Production Version	SW Vers.	Prod. Code Nr	Status	Import Date	Last Mod. Date
> Details	OpenScape Business S	OpenScape Business S V2	P30152-P1603-P17-1 (V2 R0.3.0)	M-OMG2.03.119	V2 R0.3.0	P30152-P1603-P17-1	General Availability	2015-11-05	2015-11-04



OpenScape Business

Service Interfaces for Cloud Data Center





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OpenScape Business Harddisk Size for S

■ Hard disc Size

up to 50 User 15 GB root partition, 40 GB home partition, 2-4 GB Swap partition (overall 60GB)

up to 100 User 15 GB root partition, 80 GB home partition, 2-4 GB Swap partition (overall 100GB)

more than 100 Users and Contact Center 15GB root, 180 GB home, 2-4 GB Swap partition (overall 200GB)

more than 500 Users and Contact Center 15GB root, 480* GB home, 2-4 GB Swap partition (overall 500GB)



Hardware Requirements OpenScape Business S

The OpenScape Business S can be installed on a Linux server. The SLES 11 SP4 64-bit version can be used as the operating system. The OpenScape Business S / may also be run in a virtual environment with VMware vSphere.

The server PC must satisfy the following minimum requirements:

- Certified by the PC manufacturer for SLES 11 SP4 64 bit
- The communication software for OpenScape Business must be the only application running on the server (excluding virus scanners)
- At least a dual-core processor with 2.0 GHz per core or more up to 500 Users; 8 cores for more than 500 users
- At least 2 GB RAM (recommended: 4 GB RAM)
- Hard disk (recommended: 60GB [up to 50 users]; 100GB [up to 100 users]; 200 GB [up to 500 users] or more)
- Screen resolution: 1024x768 or higher
- Min 4 vCPUs and 8GB RAM for up to 1000 users

The RAM requirements for the server PC are dependent on the OpenScape Business System expansion and functions used. For the following functions a minimum of 4 GB of RAM is a requirement:

- Convert Fax to PDF format
- OpenScape Contact Center Multimedia Business
- more than 100 users
- Gate View
- XMPP

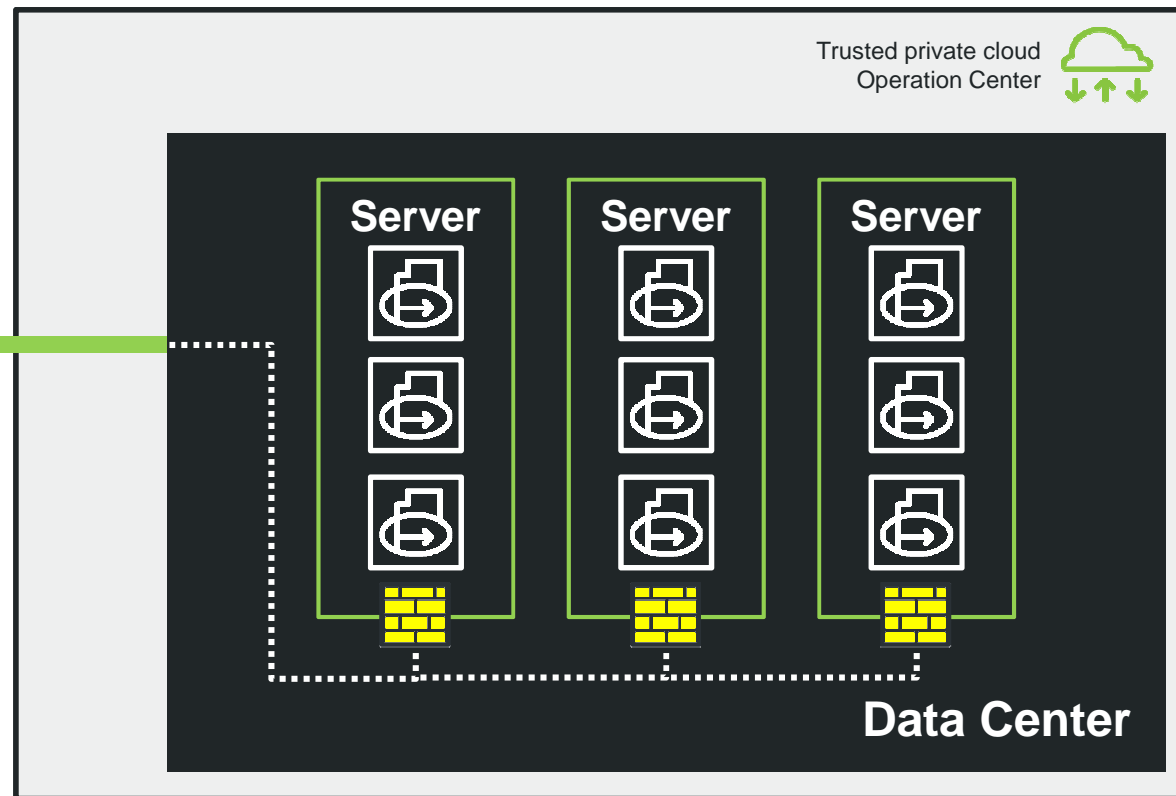


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Good to know: Firewall

OpenScape Business S
requires a firewall on the
server where installed!





Good to know:

Licensing with **A**dvanced **L**ocking **I**D (ALI)

The following parameters are necessary for the licensing :

- IP Address of the virtual instance from the system
- DNS Server Address
- Default Gateway
- Hostname
- Time zone

Please note: A change of one or several of these parameters requires a license “rehost” on Central License Server



Agenda

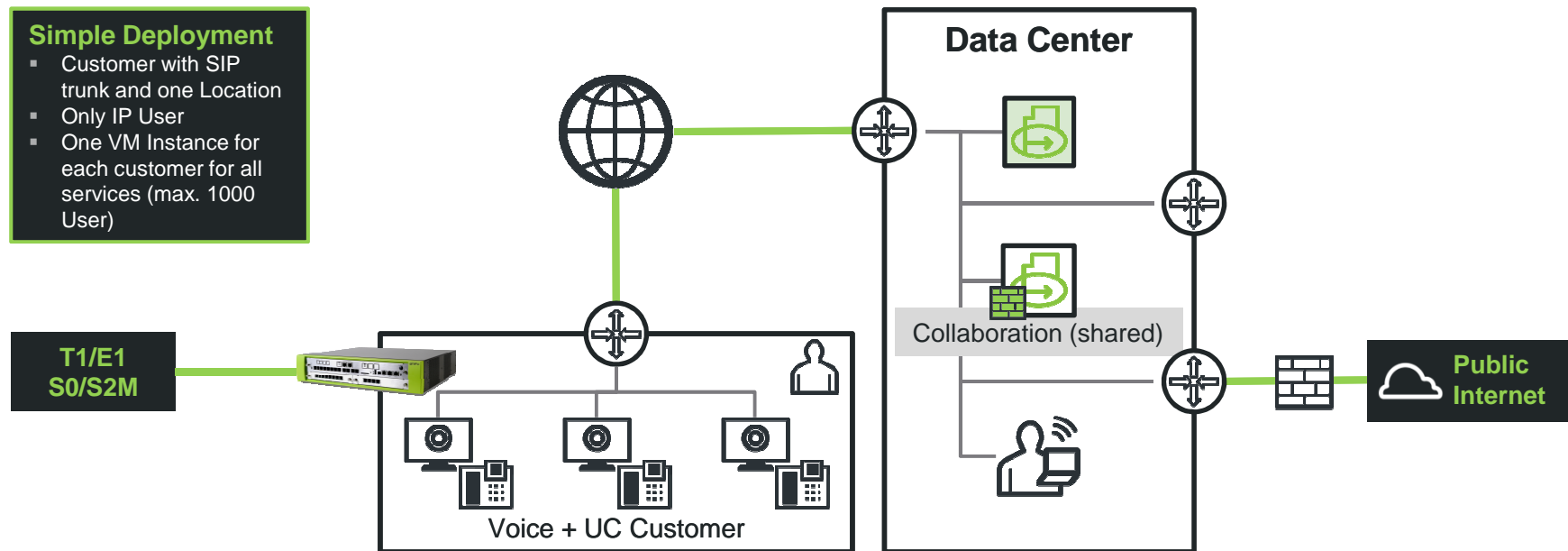
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Bandwidth between Data Center und Customer Location

ISDN Gateway at Customer Location (Scenario 1)

Simple Deployment

- Customer with SIP trunk and one Location
- Only IP User
- One VM Instance for each customer for all services (max. 1000 User)





Bandwidth between Data Center und Customer Location

ISDN Gateway at Customer Location

Boundery conditions

1. ISDN Gateway at Customer Location(!)
2. Prioritization Real time Information / QoS must be available; Latency and Packet loss accordingly Unify Guideline for VoIP
3. All values are for G.711 Codec and default Packet Size
4. All values for Standard Voice Mail usage (Message and length)
5. Bandwidth must be symmetrical available (in both directions)
6. Bandwidth deficits can have effects on existing connections, not only for new connections
7. Other hosted applications, additional to OpenScape business may have effects on Bandwidth (e.g.. E-Mail, Web Collaboration, File Space, Terminal Server, Virtual Desktops, ...) it is necessary to calculate additional bandwidth for this services

Bandwidth between Data Center und Customer Location

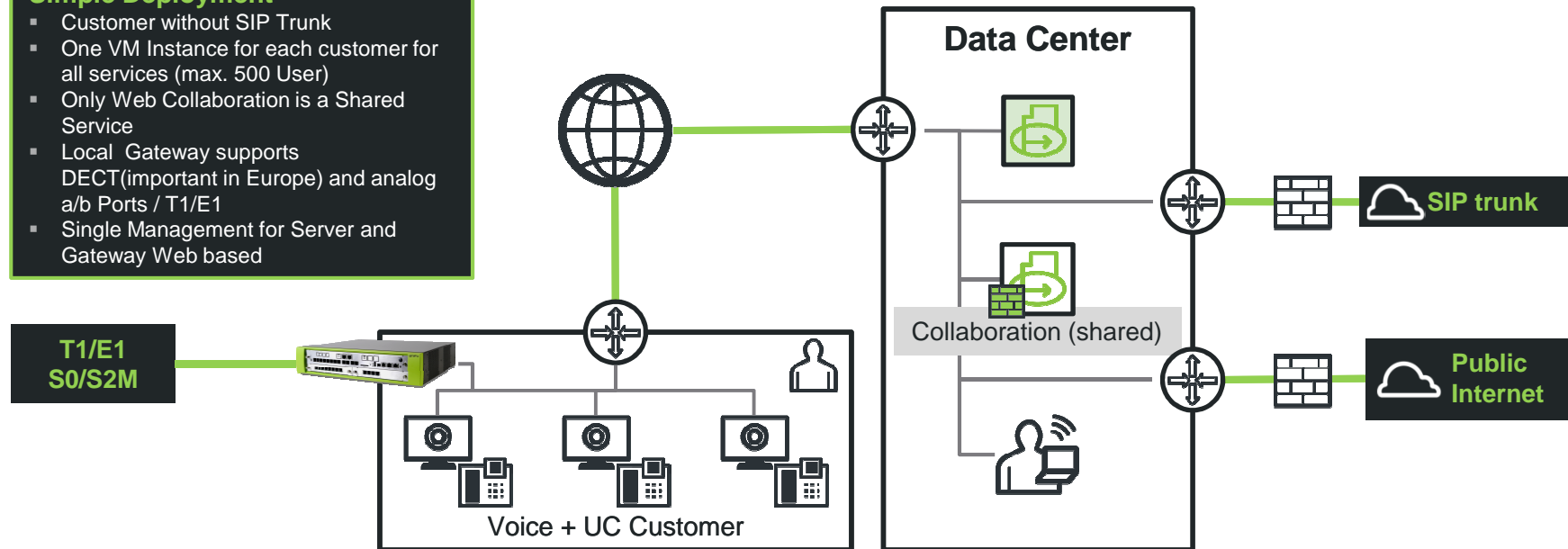
ISDN Gateway at Customer Location

User on Location Site	Standard	Power User	Standard + CC	Power + CC
	<ul style="list-style-type: none"> ▶ Normal Traffic (0,15 Erl.) ▶ 50% Voice Only ▶ 50% UC (myPortal) ▶ 50% use Voice Mail ▶ No Personal Fax ▶ No Contact Center ▶ Less conferences 	<ul style="list-style-type: none"> ▶ High Traffic(0,18 Erl.) ▶ 25% Voice Only ▶ 75% UC (myPortal) ▶ 75% use Voice Mail ▶ 25% use Personal Fax ▶ No Contact Center ▶ Many conferences 	<ul style="list-style-type: none"> ▶ Normal Traffic (0,15 Erl.) ▶ 50% Voice Only ▶ 50% UC (myPortal) ▶ 50% use Voice Mail ▶ No Personal Fax ▶ 10% CC Agents ▶ Less conferences 	<ul style="list-style-type: none"> ▶ High Traffic (0,18 Erl.) ▶ 25% Voice Only ▶ 75% UC (myPortal) ▶ 75% use Voice Mail ▶ 25% use Personal Fax ▶ 10 % CC Agents ▶ Many conferences
10	0,34 Mbit/s	0,40 Mbit/s	0,46 Mbit/s	0,50 Mbit/s
20	0,44 Mbit/s	0,50 Mbit/s	0,63 Mbit/s	0,69 Mbit/s
50	0,76 Mbit/s	0,87 Mbit/s	1,15 Mbit/s	1,25 Mbit/s
100	1,18 Mbit/s	1,40 Mbit/s	1,88 Mbit/s	2,08 Mbit/s
150	1,57 Mbit/s	1,88 Mbit/s	2,55 Mbit/s	2,84 Mbit/s
200	1,94 Mbit/s	2,33 Mbit/s	3,21 Mbit/s	3,58 Mbit/s
400	3,33 Mbit/s	4,07 Mbit/s	5,70 Mbit/s	6,41 Mbit/s

Bandwidth requirements btw. datacenter and customer site ISDN gateway or SIP connection in the Cloud (Scenario 2)

Simple Deployment

- Customer without SIP Trunk
- One VM Instance for each customer for all services (max. 500 User)
- Only Web Collaboration is a Shared Service
- Local Gateway supports DECT (important in Europe) and analog a/b Ports / T1/E1
- Single Management for Server and Gateway Web based





Bandwidth requirements btw. datacenter and customer site

ISDN gateway or SIP connection in the Cloud

Boundery conditions

1. ISDN Gateway or SIP connection in the Cloud (!)
2. Prioritization of real-time information / QoS must be available; Latency and packet loss corresponding to the Unify requirements for VoIP
3. All mentioned values are for G.711 Codec and Standard package size
4. All values are for a standard usage of voice mail
(Message traffic and retrieval, number and length of messages)
5. The mentioned symmetrical bandwidth must be available (in both directions)
6. Bandwidth deficits may also affect existing connections, located not only on newly started or under start conditions
7. Are in the data center additional OpenScape Business Application Server hosted further more (eg E-Mail, Web Collaboration, File Server, Terminal Server, Virtual Desktops, etc.) increases the bandwidth required to meet the requirements of these services

Bandwidth requirements btw. datacenter and customer site

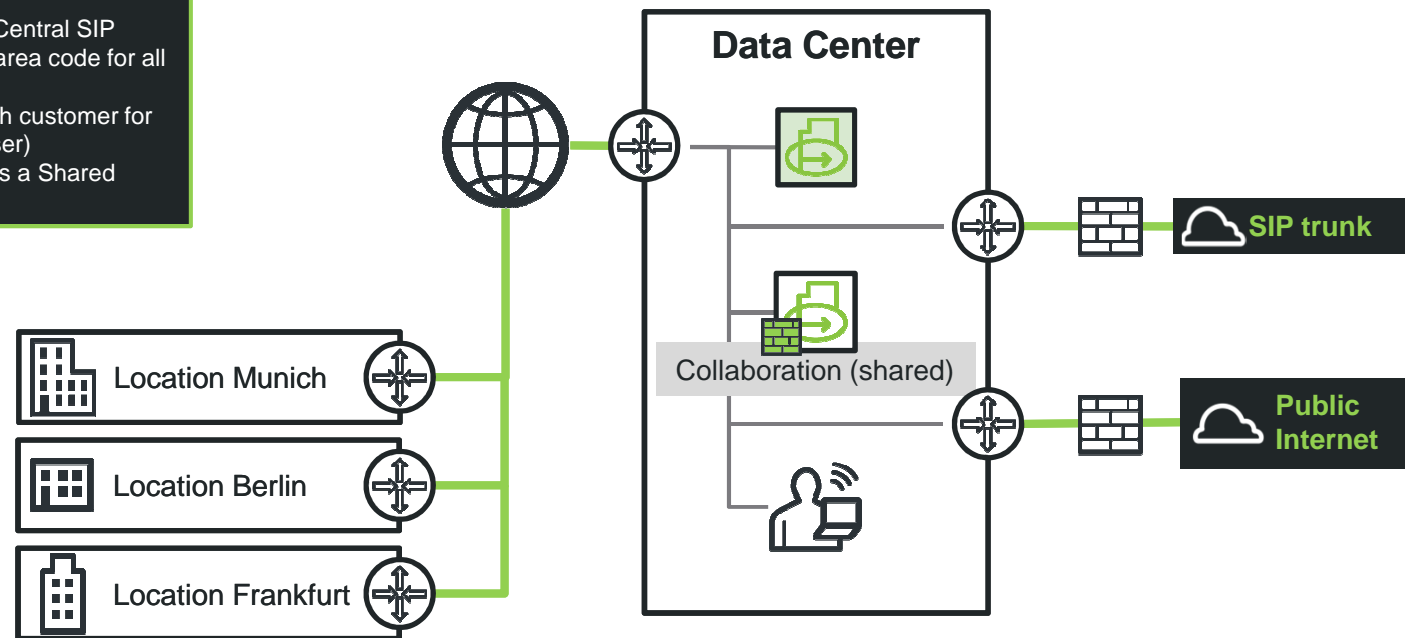
ISDN gateway or SIP connection in the Cloud

User on Location Site	Standard	Power User	Standard + CC	Power + CC
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10	0,43 Mbit/s	0,58 Mbit/s	0,64 Mbit/s	0,78 Mbit/s
20	0,62 Mbit/s	0,86 Mbit/s	0,99 Mbit/s	1,21 Mbit/s
50	1,09 Mbit/s	1,58 Mbit/s	1,86 Mbit/s	2,31 Mbit/s
100	1,76 Mbit/s	2,64 Mbit/s	3,16 Mbit/s	3,99 Mbit/s
150	2,39 Mbit/s	3,65 Mbit/s	4,41 Mbit/s	5,61 Mbit/s
200	2,99 Mbit/s	4,62 Mbit/s	5,62 Mbit/s	7,18 Mbit/s
400	5,29 Mbit/s	8,38 Mbit/s	10,31 Mbit/s	13,31 Mbit/s

Bandwidth requirements btw. Datacenter and two customer location (Scenario 3)

Simple Deployment

- One Customer with one Central SIP Provider Trunk with one area code for all locations
- One VM Instance for each customer for all services (max. 500 User)
- Only Web Collaboration is a Shared Service





Bandwidth requirements btw. Datacenter and two customer location

Boundery conditions

1. ISDN Gateway or SIP connection in the Cloud (!)
2. Prioritization of real-time information / QoS must be available; Latency and packet loss corresponding to the Unify requirements for VoIP
3. All mentioned values are for G.711 Codec and Standard package size
4. All values are for a standard usage of voice mail
(Message traffic and retrieval, number and length of messages)
5. The mentioned symmetrical bandwidth must be available (in both directions)
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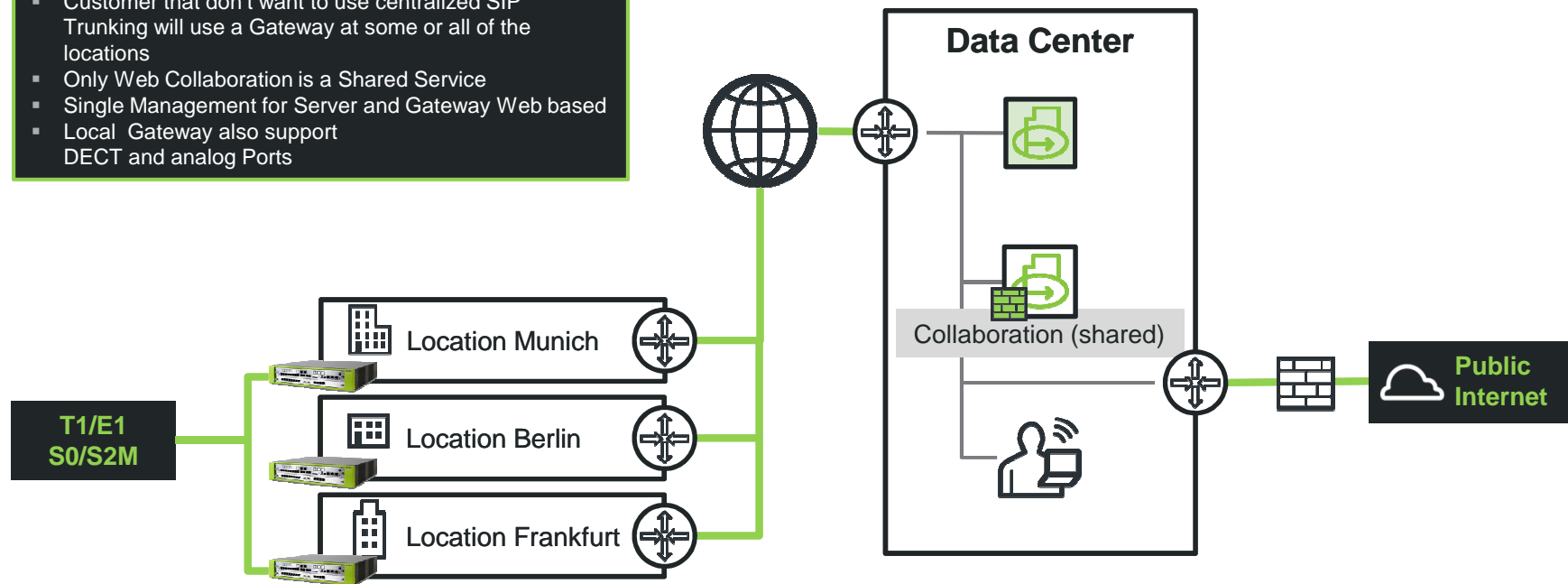
Bandwidth requirements btw. Datacenter and two customer location

User on Location Site	Standard	Power User	Standard + CC	Power + CC
	<ul style="list-style-type: none"> ▶ Normal Traffic (0,15 Erl.) ▶ 50% Voice Only ▶ 50% UC (myPortal) ▶ 50% use Voice Mail ▶ No Personal Fax ▶ No Contact Center ▶ Less conferences 	<ul style="list-style-type: none"> ▶ High Traffic(0,18 Erl.) ▶ 25% Voice Only ▶ 75% UC (myPortal) ▶ 75% use Voice Mail ▶ 25% use Personal Fax ▶ No Contact Center ▶ Many conference 	<ul style="list-style-type: none"> ▶ Normal Traffic (0,15 Erl.) ▶ 50% Voice Only ▶ 50% UC (myPortal) ▶ 50% use Voice Mail ▶ No Personal Fax ▶ 10% CC Agents ▶ Less conferences 	<ul style="list-style-type: none"> ▶ High Traffic (0,18 Erl.) ▶ 25% Voice Only ▶ 75% UC (myPortal) ▶ 75% use Voice Mail ▶ 25% use Personal Fax ▶ 10 % CC Agents ▶ Many conferences
10	0,42 Mbit/s	0,45 Mbit/s	0,70 Mbit/s	0,73 Mbit/s
20	0,60 Mbit/s	0,64 Mbit/s	1,06 Mbit/s	1,10 Mbit/s
50	1,01 Mbit/s	1,09 Mbit/s	1,99 Mbit/s	2,06 Mbit/s
100	1,62 Mbit/s	1,74 Mbit/s	3,40 Mbit/s	3,51 Mbit/s
150	2,18 Mbit/s	2,34 Mbit/s	4,75 Mbit/s	4,90 Mbit/s
200	2,72 Mbit/s	2,92 Mbit/s	6,07 Mbit/s	6,26 Mbit/s
400	4,78 Mbit/s	5,13 Mbit/s	11,17 Mbit/s	11,51 Mbit/s

Bandwidth requirements btw. Datacenter and two customer location ISDN Gateways or SIP in the Cloud (Scenario 4)

Simple Deployment

- Customer that don't want to use centralized SIP Trunking will use a Gateway at some or all of the locations
- Only Web Collaboration is a Shared Service
- Single Management for Server and Gateway Web based
- Local Gateway also support DECT and analog Ports





Bandwidth requirements btw. Datacenter and two customer location ISDN Gateways or SIP in the Cloud

Boundery conditions

1. ISDN Gateway or SIP connection per customer location in the Cloud (!)
2. Prioritization of real-time information / QoS must be available; Latency and packet loss corresponding to the Unify requirements for VoIP
3. All mentioned values are for G.711 Codec and Standard package size
4. All values are for a standard usage of voice mail
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Bandwidth requirements btw. Datacenter and two customer location ISDN Gateways or SIP in the Cloud

User on Location Site	Standard	Power User	Standard + CC	Power + CC
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20	0,76 Mbit/s	0,91 Mbit/s	1,09 Mbit/s	1,25 Mbit/s
50	1,39 Mbit/s	1,71 Mbit/s	2,11 Mbit/s	2,44 Mbit/s
100	2,29 Mbit/s	2,93 Mbit/s	3,66 Mbit/s	4,27 Mbit/s
150	3,15 Mbit/s	4,07 Mbit/s	5,14 Mbit/s	6,01 Mbit/s
200	4,00 Mbit/s	5,19 Mbit/s	6,58 Mbit/s	7,73 Mbit/s
400	7,24 Mbit/s	9,52 Mbit/s	12,19 Mbit/s	14,43 Mbit/s



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 - Firewall examples/hints



OpenScape Business hints for external firewall settings

In general all ports should closed from and to OpenScape Business S (and X Models)
The document should give some hints and examples to help and understand
OpenScape Business S (or X Models) behind a Router / Firewall

Changes and configuration of the Firewall happens on your own risk

In most scenarios, the OpenScape Business is behind a SOHO NAT Router and nothing has to be configured, exception Device@home (for HFA and SIP) and UC Smart or myPortal to go.

On the next page you find the term Client and Server:

Client is the sender to start the session (for e.g. OpenScape Business in some scenarios)

Server is the receiver of the session (for e.g. SIP Provider in some scenarios)



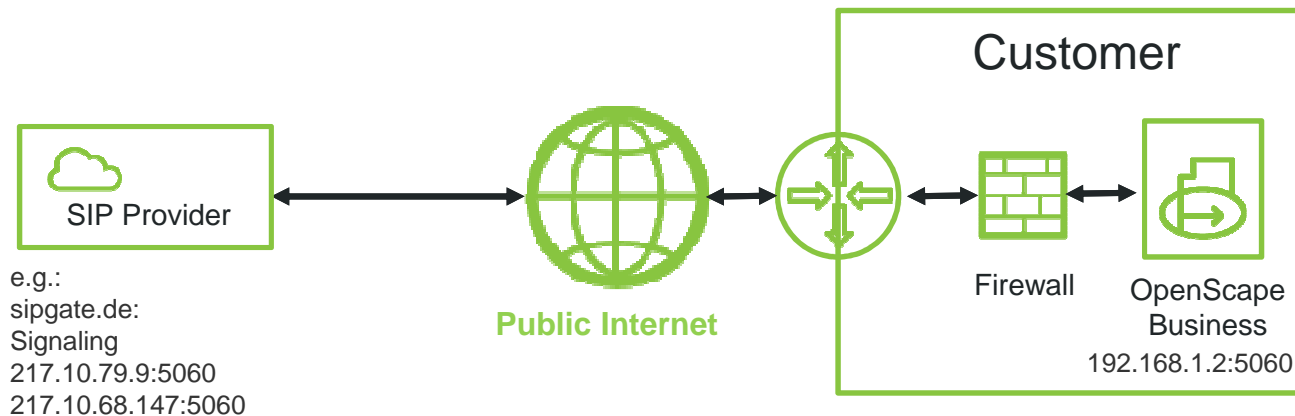
OpenScape Business

Remote access for Administration via WBM

For a Secure Remote Access to OpenScape Business Web Based Management (Administration) it is strictly recommended to use Unify RSP – Remote Service Platform instead of using a public IP via `https://ip-address`

OpenScape Business

SIP Provider Trunk example for Sipgate

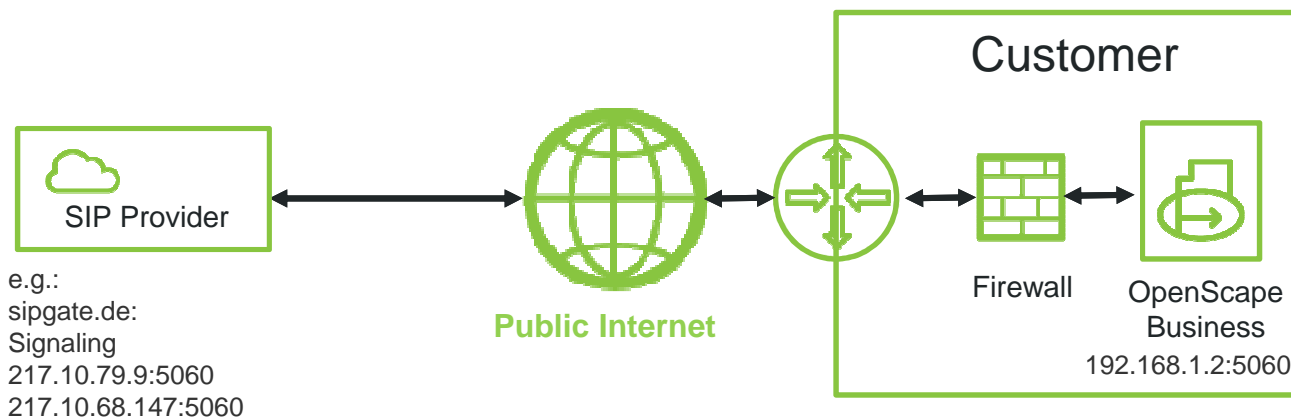


OpenScape Business works as a client and initiate the session to the SIP provider via domain name sipgate.de Port 5060 and can reach different sipgate servers.

Behind standard SOHO NAT routers Firewall should not be opened because in this scenario OpenScape Business works as a client and initiates the session.

OpenScape Business

SIP Provider Trunk example for Sipgate Firewall rules



SIP provider via domain name sipgate.de Port 5060 and can reach different sipgate servers
OpenScape Business RTP/UDP Range 30274:30529* OSBiz X 30528:30887* OSBiz S used for payload
OpenScape Business STUN 3478

If it is necessary to open the firewall from direction SIP provider Port 5060 please use the IP provider addresses and never "any IP addresses"

Firewall rule from Internet: Source IP 217.10.79.9 Port TCP 5060 Destination IP 192.168.1.2 Port TCP 5060
Source IP 217.10.68.147 Port TCP 5060 Destination IP 192.168.1.2 Port TCP 5060
..... Get the IP Addresses of all Servers from the Provider, can be much more.

Firewall rule to Internet: Source: IP 192.168.1.2 Port TCP 3478 Destination: Internet
Source: IP 192.168.1.2 Port UDP 29274:30529* Destination: Internet



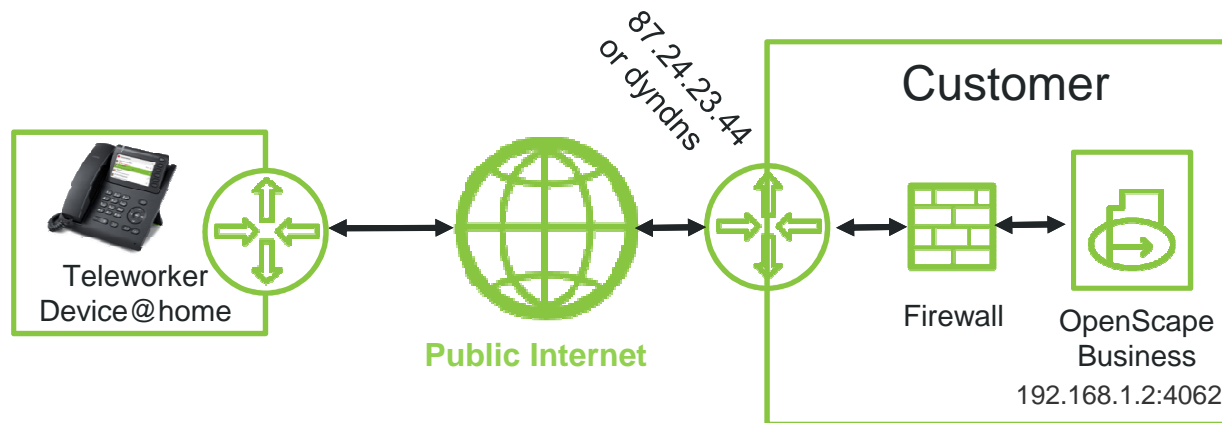
OpenScape Business

SIP Provider Trunk hints external Firewall

- RTP:
If necessary to add a rule for incoming RTP packages, (Server/SIP Provider) you have to request the UDP Port Range from the SIP-Provider. The incoming RTP/UDP Ports
- STUN:
e.g.: If you used Port 3478 from OSBiz (works as Client) it can be the Server answered on a different Port e.g.: Port 3479

OpenScape Business

Device@Home (HFA)



Teleworker Device@Home works as a client and initiate the session to OpenScape Business via IP-Address or dyndns Port 4062
RTP/UDP Range
29274:30529 OSBiz X
30528:30887 OSBiz S
used for payload
OpenScape Business for STUN works as a Client e.g.: 3478

Firewall rules necessary:

Firewall rule and

Router forwarding from Internet: Source: IP 87.24.23.44 Port TCP 4062

Destination: IP 192.168.1.2 Port 4062

Source: IP 87.24.23.44 Port UDP 29274:30529

Destination: IP 192.168.1.2 Port 29274:30529

Firewall rule to Internet:

Source: IP 192.168.1.2 Port TCP 3478

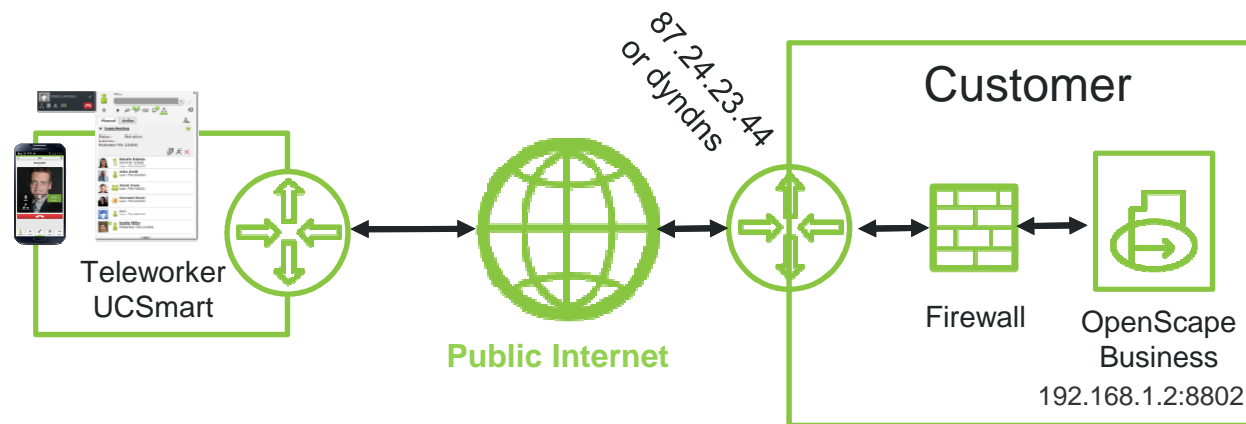
Destination: Internet

A technical configuration guide for Device@Home can be found here:

http://wiki.unify.com/wiki/OpenScape_Business#System.28HFA.29Device.40Home

OpenScape Business

UC Smart / myPortal to go



Teleworker UCSmart works as a client and initiate the session to OpenScape Business via `https://IP-Adress or dyndns Port 8802`

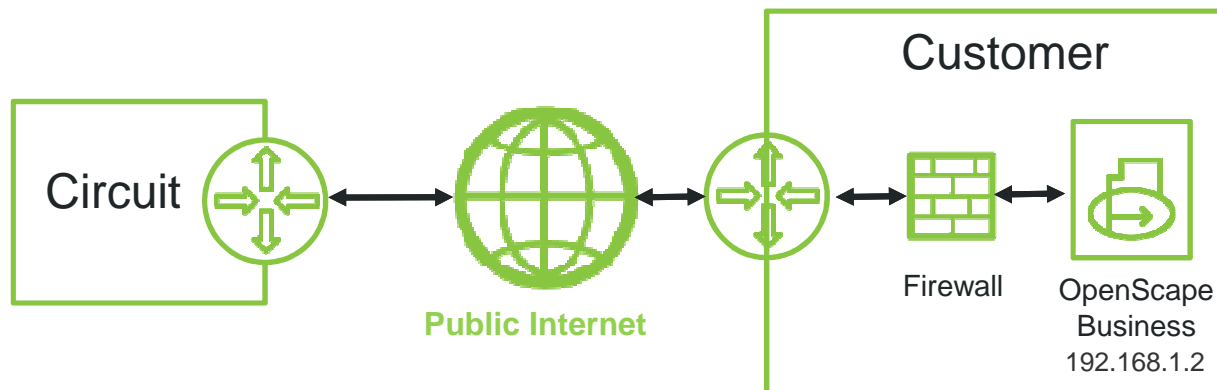
Firewall rule or Router forwarding from Internet: Source Internet Port TCP 8802 Destination IP 192.168.1.2 Port TCP 8802

A technical configuration guide for Device@Home and myPortal to go can be found here:

http://wiki.unify.com/wiki/OpenScape_Business#System.28HFA.29Device.40Home

OpenScape Business

Circuit example for Firewall rules if needed



OpenScape Business works as a Client to get the Circuit Parameters for Trunk and Users

RTP/UDP Range
 29274:30529 OSBiz X
 30528:30887 OSBiz S
 10000:49999 Circuit

Firewall rule from OSBiz:	Source 192.168.1.2	Port TCP 443	Destination IP Circuit WEB	Port TCP 443
Firewall rule from OSBiz:	Source 192.168.1.2	Port TCP ephemeral *2)	Destination Circuit hUTC IP	Port 50000
Firewall rule or				
Router forwarding from Internet:	Source Circuit hUTC *1)	Port TCP 5060 *3)	Destination 192.168.1.2	Port TCP 5060

*1) **IMPORTANT:** use always the Circuit hUTC IP here! Never configure a portforwarding from “ANY” IP

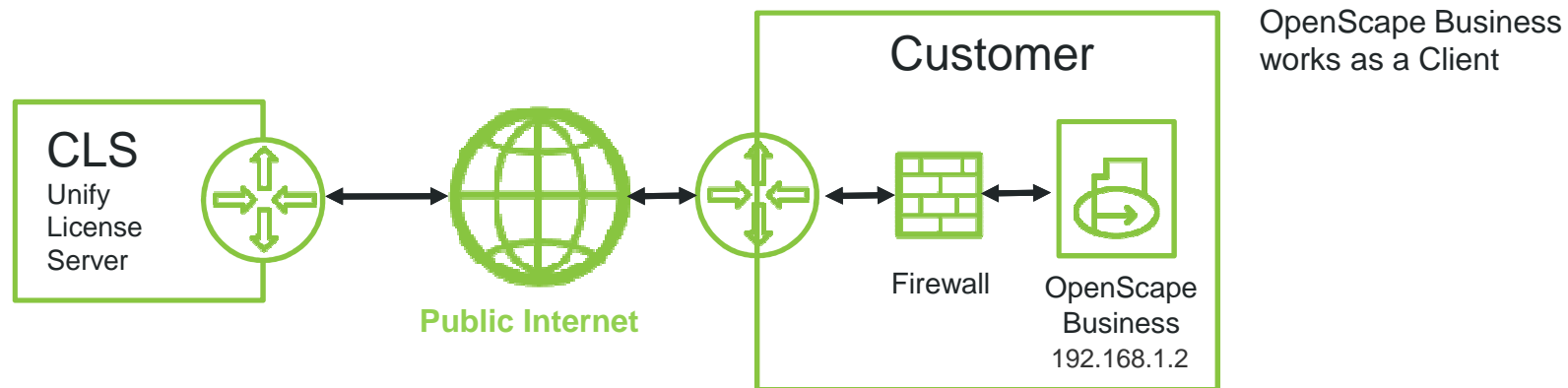
*2) hUTC IP/Port can be verified through Expert Mode/Telephony Server/Voice Gateway/Native SIP Server Trunk/Circuit UTC (Cloud)

*3) configurable in OpenScape Business, 5060 in default

Please Note: For Circuit Interworking with OpenScape Business please request a Project Specific Release via your UNIFY Partner Manager

OpenScape Business

pay as you go example for Firewall rules if needed



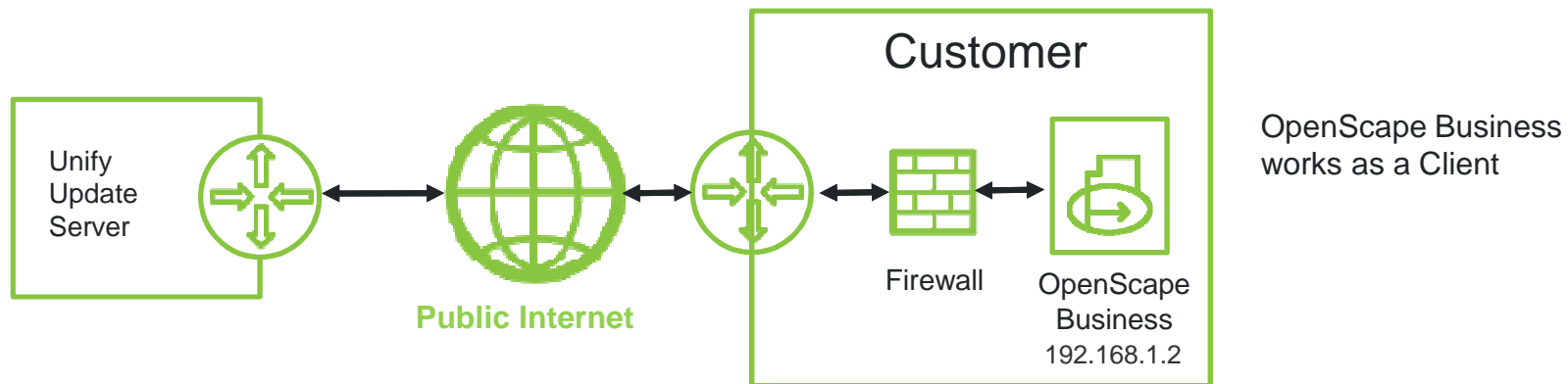
Behind standard SOHO NAT routers Firewall should not be opened because in this scenario OpenScape Business works as a client and initiates the session

Firewall rule from OSBiz:	Source 192.168.1.2	Port TCP 7780	Destination IP 188.64.16.4	Port TCP 7780
Firewall rule from OSBiz:	Source 192.168.1.2	Port TCP 7790	Destination IP 188.64.16.4	Port TCP 7790

Please Note: For Circuit Interworking with OpenScape Business please request a Project Specific Release via your UNIFY Partner Manager

OpenScape Business

Software Update Server example for Firewall rules if needed

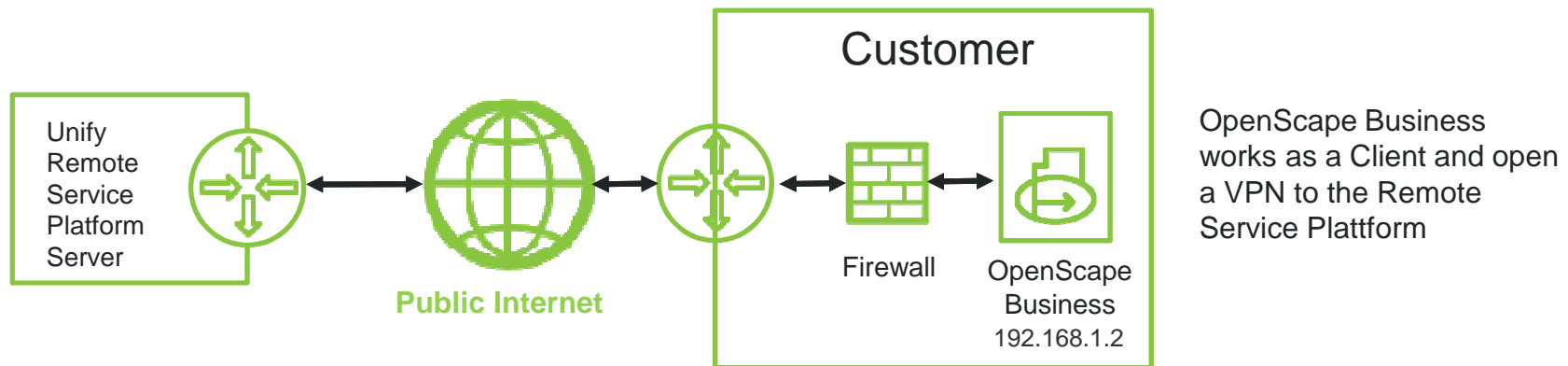


Behind standard SOHO NAT routers Firewall should not be opened because in this scenario OpenScape Business works as a client and initiates the session

Firewall rule from OSBiz: Source 192.168.1.2 Port TCP 443 Destination IP 188.64.17.244 Port TCP 443

OpenScape Business

Remote Service Platform example for Firewall rules if needed



Behind standard SOHO NAT routers Firewall should not be opened because in this scenario OpenScape Business works as a client and initiates the session

Firewall rule if needed:

Port 443

RSP Registrar: 188.64.18.51 und 188.64.17.51

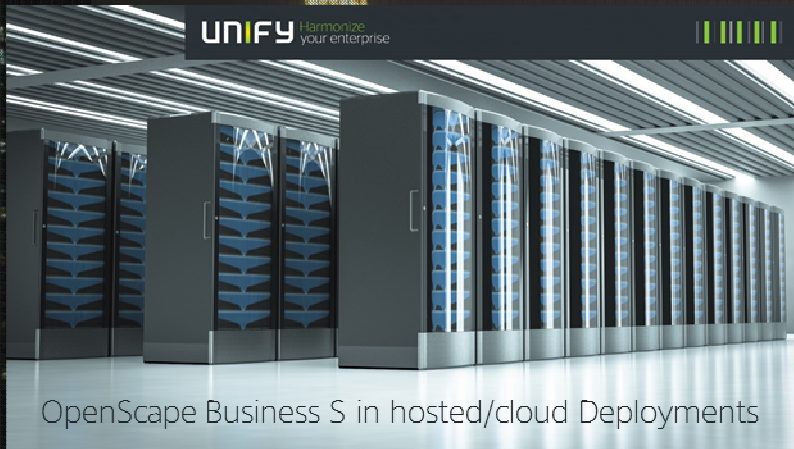
VPN Server: 188.64.18.50 und 188.64.17.50

Any Questions?

We're here to help and support



Q & A



Let's Go Cloud!

...with OpenScape Business
and you can even make calls with it!

Thank You!

unify

