How To

OpenScape Business Connector
(based hUTC with dynamic registration)

Version 1.5
Definitions

**HowTo**
An OpenScape Business HowTo describes the configuration of an OpenScape Business feature within the OpenScape Business administration. It addresses primarily trained administrators of OpenScape Business.

**Tutorial**
Within the OpenScape Business tutorials procedures for installation, administration and operation of specific devices, applications or systems, which are connected to OpenScape Business, are described. The tutorial addresses primarily trained administrators of OpenScape Business.
# Table of Contents

1. Introduction ........................... 5
2. Configuration of Circuit .......... 6
   2.1. Request Circuit Tenant ........ 6
   2.2. Circuit Licenses ................. 7
   2.3. Create Circuit User(s) ........... 7
   2.4. Request the Connectivity to OpenScape Business 9
3. Configuration OpenScape Business 11
   3.1. Basic Installation / Network/Internet Wizard 11
   3.2. Circuit Connectivity Wizard 12
   3.3. Circuit User Instance .......... 14
   3.4. OSBiz Circuit CTI Features 15
   3.5. OSBiz Scenario Configuration 15
      3.5.1. Scenario 1: Basic MULAP with system phone and Circuit User 15
      3.5.2. Scenario 2: standalone Circuit User 18
4. Configuration in Expert Mode .... 20
   4.1. OpenScape Business LCR Configuration (ROW) 20
   4.2. OpenScape Business LCR Configuration (US) 21
   4.3. Route Configuration .......... 22
5. Special Configuration no DID .... 24
6. Firewall Rules (TBC) ............... 27
   6.1. Outbound connection for https 27
   6.2. Outbound connection for SIP signaling* 27
   6.3. Outbound RTP Ports .......... 27
7. OpenScape Business Serviceability 28
   7.1. Required trace configuration options for error reporting 28
   7.2. Required trace files for error analysis: 28
8. Troubleshooting hints: .......... 29
   8.1. Incoming Calls not possible 29
   8.2. Circuit connectivity Wizard starts with all fields filled out, but nothing ongoing 29
   8.3. Firewall and General Problems after running Circuit Connector Wizard 29
   8.4. Incoming and Outgoing calls not possible 30
<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Changes</th>
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<td>09-03-2016</td>
<td>0.1</td>
<td>Initial Version of configuration hints</td>
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<td>0.2</td>
<td>Screenshots and examples added</td>
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<td>23-09-2016</td>
<td>0.3</td>
<td>Screenshot for Route configuration corrected in Expert mode, add LCR example for US</td>
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<td>05-10-2016</td>
<td>04</td>
<td>Screenshots examples for Circuit eu and na (Wulf)</td>
</tr>
<tr>
<td>02-11-2016</td>
<td>05</td>
<td>Hints for STUN (Wulf)</td>
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<tr>
<td>30.01.2017</td>
<td>09</td>
<td>Update Changes for Circuit release and Special Configuration</td>
</tr>
<tr>
<td>28.03.2018</td>
<td>1.0</td>
<td>Update multiple OSbiz and Circuit Screenshots</td>
</tr>
<tr>
<td>03.04.2018</td>
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<td>Add Troubleshooting</td>
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<tr>
<td>16.04.2018</td>
<td>1.2</td>
<td>Add Screenshot Troubleshooting an Circuit License</td>
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<td>08.05.2018</td>
<td>1.3</td>
<td>Add how many Users and Connectors</td>
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<tr>
<td>19.10.2018</td>
<td>1.4</td>
<td>Add additional IP Address Firewall rules (chapter 8.3)</td>
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<tr>
<td>07.02.2019</td>
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<td>Add Enhanced Feature Interworking</td>
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1. Introduction

To provide the Circuit solution with OpenScape Business several components are used and needs to configure. The solution consists of the Circuit Server, the hUTC (Hosted Universal Telephone Connector) and the OpenScape Business communication system.

The hUTC is located in the Circuit cloud. The connection between the hUTC and the OpenScape Business system is a native SIP trunk connected through the public internet.

You can also connect multiple OpenScape Business to one Circuit Tenant, by using the same API key for each OpenScape Business System. Each OpenScape Business System will get automatically an own trunk after running the wizard.

For the solution, two configuration steps are necessary

1. Configuration of the Circuit environment (including hUTC)
2. Configuration of OpenScape Business system
2. Configuration of Circuit

2.1. Request Circuit Tenant

To connect OpenScape Business with Circuit you need an active Circuit Tenant. If you have not yet signed up for Circuit, please request a free Circuit Tenant to start the configuration steps. ([https://www.circuit.com/home](https://www.circuit.com/home))

Please enter the requested data. At the end sign up in circuit and login as administrator.
2.2. Circuit Licenses

For Telephony with hUTC each Circuit User which shall be able to place telephone calls with OpenScape Business need to have the right license. This can be either the UnifyTeam or the UnifyEnterprise or the UnifyProfessional license.

The current licenses shown under Administration->Domain.

If the required licenses are not available, press the button “Manage Packages”. This will forwarded you to the unifyportalshop where you can order additional licenses.

![License Management](image)

2.3. Create Circuit User(s)

Login as Circuit Admin User and go to the Administration page: add at least the Circuit Users which should be able to place telephone calls with OpenScape Business.

![User Management](image)
Add at least the Circuit Users, which should be able to place telephone calls with OpenScape Business.

Please assign the required licenses to the Circuit Users:
2.4. Request the Connectivity to OpenScape Business

Administration -> Telephony

Please request under settings Telephony the telephony connector. Per Circuit Tenant, max of 150 Connectors possible (Example 100 OSBiz Systems and 50 ATC) Each OSBiz can only have one connector.

Please Generate the API Key

Hint: Telekom Customer will get the API key via the Circuit Client in a conversation.
The API key for your OpenScape Business has been successfully generated

API key:

Copy the API key to your OpenScape Business system to connect it with your Circuit domain.

Now you can get the API Key, needed for further OpenScape Business configuration.

"use the same API Key for each OpenScape Business system".
3. Configuration OpenScape Business

3.1. Basic Installation / Network/Internet Wizard

Circuit is connected via the internet, you have to configure the internet connection of the system. Enter the correct upstream value, this is used later on to calculate the max amount of concurrent internet calls. Connectivity to Circuit only via external Router permitted.
3.2. Circuit Connectivity Wizard

Basic configuration settings for Circuit including native SIP trunk to hUTC. Connectivity wizard will configure and establish the connection.

Actions:
Check “Enable Circuit”; Check “Use Circuit API-Key”;
**New:** Check Enable “Enhanced feature interworking” (Enable CTI features OSBiz-Circuit) (min OSBiz Version V2 R6.1.1_009)
**Hint:** If you run the Wizard first Checkbox “Enhanced feature interworking” is greyed out, you have to rerun the wizard.
select Domain (Get the Information from Circuit tenant Administrator)
insert the API Key via copy and paste; (Get the API Key from Circuit tenant Administrator)
select Number of simultaneous circuit calls.
The “upstream up to (Kbps)” value defines the overall bandwidth, which can be used for voice calls to the internet. This includes Circuit calls as well as ITSP and/or Device@Home calls.
**Hint:**
If you want to connect multiple OpenScape Business Systems to one tenant, you must run on each system the Wizard and "**use the same API Key for each system**". Each System will create an own trunk to Circuit.

Press OK&Next

Press execute Function

Wizard configures the trunks and establishes the connection to Circuit:

Press OK&Next
Hint:
If needed IP and Ports hUTC can be verified through Expert Mode/Telephony Server/Voice Gateway/Native SIP Server Trunk/Circuit UTC (Cloud), you can also find the Stun configuration here.

3.3. Circuit User Instance

Configure Circuit User instances

Note: for each Circuit User Instance you need a free internal call number to address the virtual station, which represents the Circuit User in the system and max 150 User for OSBiz X Systems and 250 User for OSBiz S (per OSBiz System)

Actions: Add new Circuit User; Edit configured Circuit User

If you have existing Users and you have enabled the Checkbox "Enhanced feature Interworking" You have to press the "Update CTI" Button
3.4. OSBiz Circuit CTI Features

<table>
<thead>
<tr>
<th>Feature</th>
<th>Client Mode</th>
<th>Desk Phone Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make call</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Answer call</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Clear call / Reject call</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>DTMF support</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Hold / Retrieve call</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Unattended call transfer</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>OSBiz Voicemail Handling</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Call Forwarding</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Consultation call</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Attended call transfer</td>
<td>✅</td>
<td>✅</td>
</tr>
<tr>
<td>Swap call (= alternate)</td>
<td>✅</td>
<td>✅</td>
</tr>
</tbody>
</table>

OSBiz User and Voicemail License needed

3.5. OSBiz Scenario Configuration

3.5.1. Scenario 1: Basic MULAP with system phone and Circuit User

**Incoming Call „Twinning“ (ONS)**

- **Twinning** between Circuit + OpenScape Business User (ONS) +492117007300
- **Answer Call** via Circuit or OpenScape Business Device
- **Customer is reachable** via One Number Service on his/her preferred device
- **IP/TDM User license needed** for the fixed Desktop Phone as usual

1. Select the Circuit User for which this configuration applies
2. Enter the MULAP DID (all needed prefixes are added automatically by the wizard)
3. Enter the associated internal call number (callno) of the virtual user
4. Enter the associated DID number of the virtual user
Press OK & Next

**Hint:**
Same Rules as Mobility, each User needs **“DSP Resources”**.

To Pull the Circuit Call to the desk phone, please add DSS Key on Desk phone with Circuit Phone Number (virtual Circuit User)

The next page gives an overview of all configured Circuit Users

Press OK&Next

Leave the „Circuit“ wizard and Create a MULAP by entering the „Team Configuration“ wizard
Press, “Add” to create a new MULAP

Select the associated Deskphone

Assign Name to MULAP and select the associated Circuit User callno

Press OK&Next
3.5.2. Scenario 2: standalone Circuit User

- User with circuit client configured as virtual OSBiz user
- reachable via an OSBiz phone number (+49 228 422785 942)

Location data:
- Country code: 49
- Area code: 228
- PBX no: 422785

Circuit User: (856-0049-228-422785) 942
Calno: 342
DID: 942
Labor Dlf:

Callno: 342
DID: 942

Miscellaneous:
- Native SIP Trunk
  - Seizure Code: 856
- Co DID Trunk:
  - +49 228 422785 900 ... 999
1. Select the Circuit User for which this configuration applies
2. Enter the DID (all needed prefixes are added automatically by the wizard)
3. Enter the internal call number (callno) of the virtual user
4. Enter the same DID as in step 2

Press OK & Next

The next page gives an overview of all configured Circuit Users

Press OK & Next

Leave the „Circuit“ wizard, standalone user configuration is finished.
4. Configuration in Expert Mode

4.1. OpenScape Business LCR Configuration (ROW)

Additional manual configuration in LCR is required in order to reformat the dial string to E.164 format.

1. Changes in Dial plan
2. Create dial rule
3. Configure Route table

Delete the existing default entries for the Circuit route

Add a Dial plan entry: <seizure code Circuit route>C<international prefix>-Z e.g. 856C00-Z

Dial
Create dial rule E3A, Network access = corporate network, type = country code

Configure Route table: select Circuit route and assign the Circuit Dial Rule

4.2. OpenScape Business LCR Configuration (US)

Additional manual configuration in LCR is required in order to reformat the dial string to E.164 format.

1. Changes in Dial plan
2. Create dial rule
3. Configure Route table

Delete the existing default entries for the Circuit route

Add a Dial plan entry: <seizure code Circuit route>C<international prefix>-Z e.g. 855C011-Z
Create dial rule: E3A, Network access = corporate network, type = country code

Configure Route table: select Circuit route and assign the Circuit Dial Rule

4.3. Route Configuration

Select Circuit Route

Disable Call No. with international / national prefix:

Set No. and type, outgoing: to Country Code
5. Special Configuration no DID

This Chapter should give some hints, if Customer have no DID for each Circuit User and should configured only by experts.

Outgoing call via Circuit Client (ONS) without DID
Attendant Number should shown

- Circuit User (MULAP with OSBiz User) calls external User
- Circuit User sent MULAP Calling Number (ONS)
- Internal Number for ONS → 100
- External DID for Attendant +49 2302 983874 also used for outgoing calls from Team Member 100

External Call via OSBiz Auto Attendant – forwarding to Circuit Client (User)

- External Call to OpenScape Business Auto Attendant
- Target User Circuit Client (User)
- Customer call can be transferred to a Circuit or OpenScape Business User
Circuit User Wizard

Use Expert Mode to configure external Number, which should show for external calls and delete DID.
Configure Team

Configure Call Number Type
Configure No and Type outgoing
6. Firewall Rules (TBC)

6.1. Outbound connection for https

<table>
<thead>
<tr>
<th>Protocol</th>
<th>TCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source IP</td>
<td>OpenScape Business host IP</td>
</tr>
<tr>
<td>Source Port</td>
<td>TCP ephemeral port</td>
</tr>
<tr>
<td>Destination IP</td>
<td>Circuit Domain</td>
</tr>
<tr>
<td>Destination Port</td>
<td>443</td>
</tr>
</tbody>
</table>

6.2. Outbound connection for SIP signaling*

<table>
<thead>
<tr>
<th>Protocol</th>
<th>TCP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source IP</td>
<td>OpenScape Business host IP</td>
</tr>
<tr>
<td>Source Port</td>
<td>TCP ephemeral port</td>
</tr>
<tr>
<td>Destination IP</td>
<td>Circuit hUTC IP ¹</td>
</tr>
<tr>
<td>Destination Port</td>
<td>50000 ¹</td>
</tr>
</tbody>
</table>

¹) hUTC IP/Port can be verified through Expert Mode/Telephony Server/Voice Gateway/Native SIP Server Trunk/Circuit UTC (Cloud), you can also find the Stun configuration here.

6.3. Outbound RTP Ports

Used RTP Ports OpenScape Business:
29274:30529 OSBiz S > Server
30528:30887 OSBiz X > Embedded

Circuit RTP port range is 10000 - 49999
7. OpenScape Business Serviceability

7.1. Required trace configuration options for error reporting

OpenScape Business Trace Profiles:
1. Basic
2. Voice Fax Connections
3. SIP_Interconnection_Subscriber_ITSP
4. SIP_Registration (for registration only problems)

OpenScape Business Trace Components:
1. FP_Circuit: lvl 9
2. FP_DH_SIP: lvl 9 (only for OpenScape Business X variant)
3. FP_DH_CARD: lvl9

7.2. Required trace files for error analysis

OpenScape Diagnosis Logs, Wireshark traces
8. Troubleshooting hints:

8.1. Incoming Calls not possible

If incoming calls not possible, please check LCR Rules (Chapter 4).

8.2. Circuit connectivity Wizard starts with all fields filled out, but nothing ongoing

Please Disable Checkbox “Enable Circuit” and press OK&Next.
End the Circuit connectivity Wizard and start again from scratch (Chapter 3.2).

8.3. Firewall and General Problems after running Circuit Connector Wizard

Please check via Expert Mode the IP Addresses and ports, you should got from Circuit, by running the Circuit Connectivity Wizard.
(Normally empty). Check your Firewall Settings.

For AMS we need outgoing connections from OSBiz to TCP eu.yourcircuit.com:443, Outgoing connections to TCP 46.16.184.41:21418, media UDP open from/to 46.16.184.46:10000-49999 and 158.177.97.30:10000-49999 and incoming TCP connections open from 46.16.184.41 to OSBiz signalling IP:port.

For WDC we need outgoing connections from OSBiz to TCP na.yourcircuit.com:443, Outgoing connections to TCP 158.85.5.53:21418, media UDP open from/to 158.85.5.45:10000-49999, and incoming TCP connections open from 158.85.5.53 to OSBiz signalling IP:port.
8.4. Incoming and Outgoing calls not possible

Please check automatic circuit trunk assignment
**About Unify**

Unify is one of the world’s leading communications software and services firms, providing integrated communications solutions for approximately 75 percent of the Fortune Global 500. Our solutions unify multiple networks, devices and applications into one easy-to-use platform that allows teams to engage in rich and meaningful conversations. The result is a transformation of how the enterprise communicates and collaborates that amplifies collective effort, energizes the business, and enhances business performance. Unify has a strong heritage of product reliability, innovation, open standards and security.

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