A MITEL
PRODUCT
GUIDE

Unify OpenScape Contact Center Agile V11 R1

Communication Platform

Integration Guide

Integration Guide
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Mitel

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1 About this guide

This guide describes how to configure the various supported communication platforms and voice processors to integrate with the OpenScape Contact Center system.

1.1 Who should use this guide

This guide is intended for communication platform technicians or anyone else in the organization who is responsible for configuring communication platforms and voice processors.

1.2 Formatting conventions

The following formatting conventions are used in this guide:

Bold
This font identifies OpenScape Contact Center components, window and dialog box titles, and item names.

Italic
This font identifies references to related documentation.

`Monospace Font`
This font distinguishes text that you should type, or that the computer displays in a message.

NOTE: Notes emphasize information that is useful but not essential, such as tips or alternative methods for performing a task.

IMPORTANT: Important notes draw special attention to actions that could adversely affect the operation of the application or result in a loss of data.

1.3 Documentation feedback

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2 Configuring the OpenScape Business communication platform

This chapter describes how to configure the following communication platform to communicate with the OpenScape Contact Center system:

- OpenScape Business V2

IMPORTANT: Only properly trained personnel should configure the communication platform. Attempts to configure the communication platform by personnel who are not properly trained might adversely affect the operation of the OpenScape Contact Center system.

The examples provided in this chapter are designed to guide you through simple OpenScape Contact Center routing workflows, including backup routing. If you choose to configure more complex workflows or backup routing strategies, follow the examples provided in this chapter and then configure additional values. For more information, contact your service representative.

After you have completed the configuration tasks in this chapter, continue your implementation by following the guidelines in the *Installation Guide*.

NOTE: Only the scenarios described in Section 2.1, “Supported network setups for OpenScape Business” are supported.

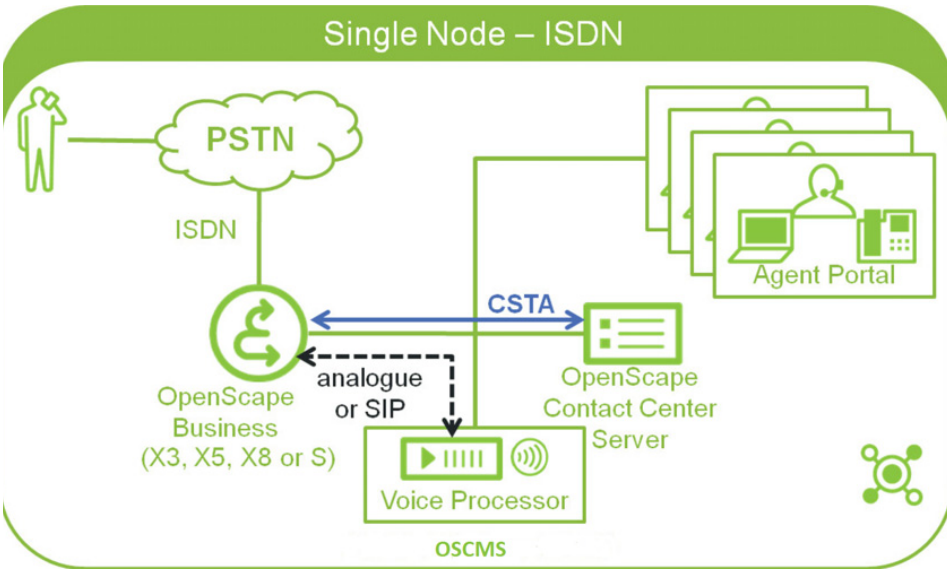
2.1 Supported network setups for OpenScape Business

Only the setups described below are released in combination with OpenScape Business.

2.1.1 Single Node ISDN

- This configuration uses a single-node deployment of the OpenScape Business, which is connected to the public telephony network via ISDN.
- OpenScape Contact Center uses a CSTA connection to OpenScape Business.
- As IVR Voice Processor for the OpenScape Contact Center Call Director an OSCMS (OpenScape Contact Media Service) can be used.

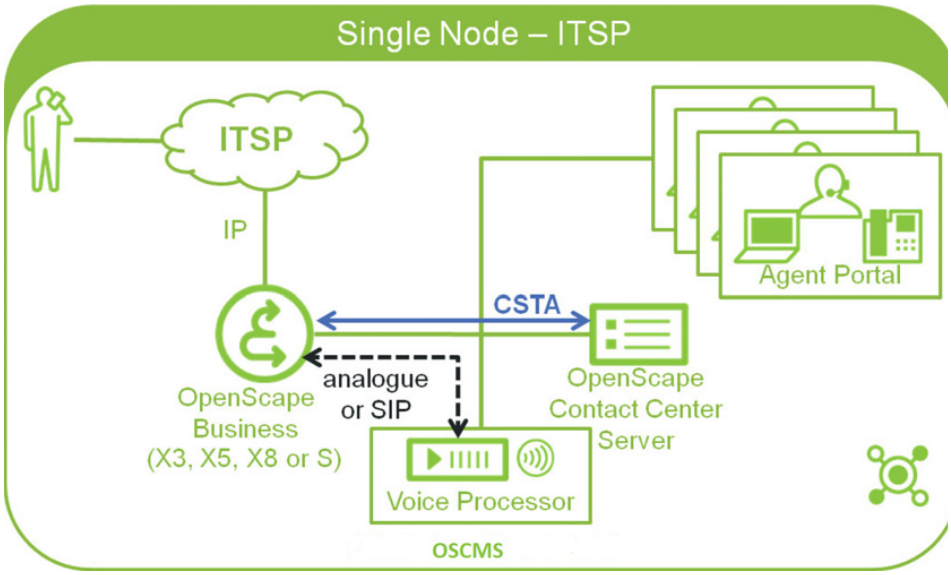
- Agents normally work with HFA IP-phones, but also TDM phones can still be used. Agents cannot use SIP or CMI phones. Agents can use analogue phones on a project specific basis.



2.1.2 Single Node ITSP

- This configuration uses a single-node deployment of the OpenScape Business, which is connected to the Internet.
- OpenScape Contact Center uses a CSTA connection to OpenScape Business.
- As IVR Voice Processor for the OpenScape Contact Center Call Director an OSCMS (OpenScape Contact Media Service) can be used.

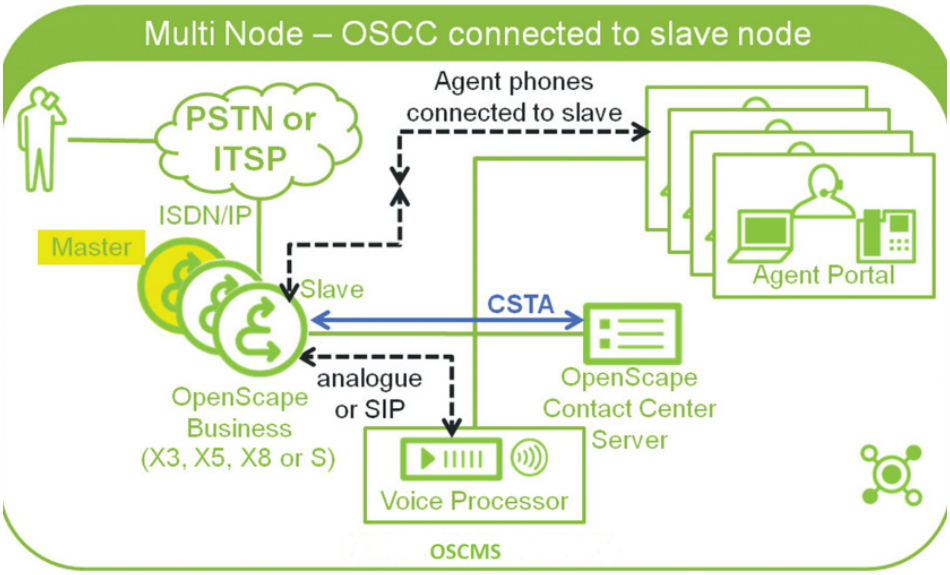
- Agents normally work with HFA IP-phones, but TDM phones can still be used. Analogue phones can be used on a project specific basis. Agents cannot use SIP or CMI phones.



2.1.3 Multinode - OSCC to Slave

- This configuration uses a multi-node deployment of the OpenScape Business, which is connected to the public telephony 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 nodes is done via SIP-Q.
- OpenScape Contact Center uses a CSTA connection to a slave node of this OpenScape Business network.
- As IVR Voice Processor for the OpenScape Contact Center Call Director an OSCMS (OpenScape Contact Media Service) can be used. This Voice Processor needs to be attached to the same OpenScape Business node, that is connected to OpenScape Contact Center via CSTA.

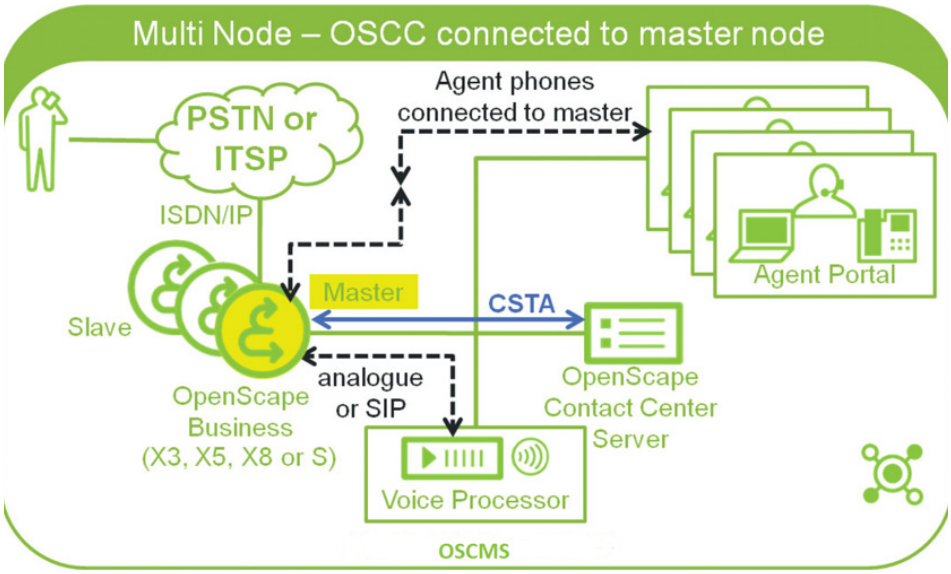
- Agents normally work with HFA IP-phones, but also TDM phones can still be used. Agents cannot use SIP or CMI phones. Agents can use analogue phones on a project specific basis. Agent Phones need to reside in the same OpenScape Business node, that is connected to OpenScape Contact Center via CSTA.



2.1.4 Multinode - OSCC to Master

- This configuration uses a multi-node deployment of the OpenScape Business, which is connected to the public telephony 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 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 Processor for the OpenScape Contact Center Call Director an OSCMS (OpenScape Contact Media Service) can be used. This Voice Processor needs to be attached to the master node of the OpenScape Business network.

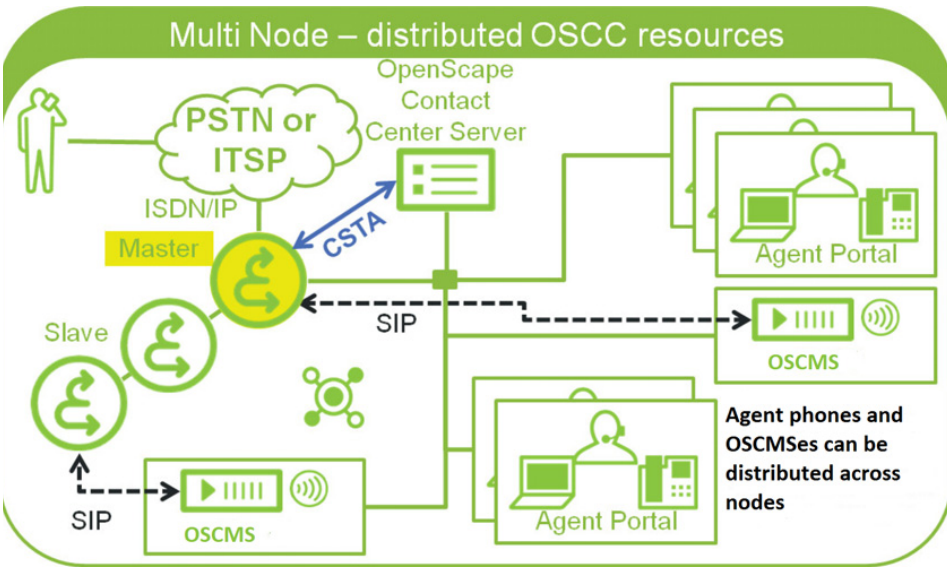
- Agents normally work with HFA IP-phones, but also TDM phones can still be used. Agents cannot use SIP or CMI phones. Agents can use analogue phones on a project specific basis. Agent Phones need to reside in the master node of the OpenScape Business network.



2.1.5 Multinode - OSCC to Master with distributed resources

- This configuration uses a multi-node deployment of the OpenScape Business, which is connected to the public telephony 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 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 OSCMSes (OpenScape Contact Media 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.



2.2 Before you begin

Before you can configure the communication platform, you must ensure that:

- The communication platform is operational and fully functional. Test the communication platform to ensure that it can make and receive external calls.
- You have administrative access to the communication platform.
- The communication platform is running the correct patch for the software level. For more information, contact your service representative.

2.3 Network configuration

This section describes how the OpenScape Contact Center system and the communication platform communicate.

2.3.1 OpenScape Business

OpenScape Contact Center is connected to OpenScape Business via LAN using the CSTA protocol. OpenScape Business X systems provide the CSTA interface either by embedded UC Booster card (OCAB) or by external UC Booster Server. OpenScape Business S systems provide CSTA interface directly. The CSTA interface is not licensed within OpenScape Business. For more information, see the OpenScape Business documentation.

The Call Director solution uses the Call Director feature with the OpenScape Contact Media Service voice processor.

For information on how to configure the OpenScape Contact Media Service, see Section 3.1, “Configuring the OpenScape Contact Media Service”.

2.4 Understanding the basic configuration

This section describes some concepts related to the basic configuration.

2.4.1 UCD configuration

This section describes the UCD (Uniform Call Distributor) configuration. Table 1 identifies the flow required on the communication platform. The numbers in brackets are examples of numbers that can be used for the configuration. Each pilot number (or DNIS) must point to a specific Call Destination List (CDL).

NOTE: When setting up the UCD groups on the communication platform, each CDL created for a pilot number should contain two UCD groups: Target 1 UCD group with one virtual user (OpenScape Contact Center UCD group) and Target 2 UCD group with the users logged on (Backup UCD group).

For the pilot number receiving the most calls, assign the OpenScape Contact Center UCD group and backup targets as shown in Table 1. We recommend that UCD group 60 be used as the OpenScape Contact Center UCD group, as UCD group 60 will support up to 72 calls.

DNIS Number (pilot number) (2900)	Call Destination List (CDL)	Target 1	Target 2	Target 3	Target 4
		OpenScape Contact Center UCD group (60)	Backup UCD group (59) (2910)	Voice mail	Empty

Table 1 UCD group configuration

For each additional pilot number or backup target, you must configure an additional OpenScape Contact Center UCD group, as shown in Table 2.

DNIS Number (pilot number) (2901)	Second Call Destination List (CDL)	Target 1	Target 2	Target 3	Target 4
		Second OpenScape Contact Center UCD group (58)	Backup UCD group (59)[a] (2910)	Voice mail	Empty

Table 2 UCD group configuration for additional pilot numbers

a Can be set as a separate backup UCD group for the contact center.

NOTE: Each UCD group can be used only once in the first position of a CDL. For multiple pilot numbers to the same UCD group, you must use virtual devices that get forwarded to the UCD group via the CDL.

When planning the UCD group configuration, consider the following:

- Multiple pilot numbers are supported for a single CDL/OpenScape Contact Center UCD group.
- When the UCD groups are first defined, the call number should be the same number as the UCD group you chose for the CDL number. These numbers are monitored by OpenScape Contact Center.
- For each CDL, Target 1 should be a UCD group that OpenScape Contact Center will monitor.
- Set Target 2 of the CDL to a Backup UCD group (59) where the users log in. These groups are used for backup routing. For additional information on backup routing, see Section 2.4.3, “Heartbeat mechanism”, on page 16.
- Set Target 3 of the CDL to voice mail or another destination. The final target of each call destination list used by OpenScape Contact Center must contain a valid internal destination. If the final target is a voice mail server, mailboxes must be set up to process the original set of digits received by the communication platform.

2.4.2 CDL configuration

The following important guidelines must be observed when configuring a Call Destination List (CDL):

- Use virtual devices for backup routing. In a situation where OpenScape Contact Center becomes unavailable, you must set up efficient rollover to backup routing. To do this, you must set up virtual users:
  - You must add a virtual user with a user ID to each OpenScape Contact Center UCD group. This virtual user only exists so that if there is a failure on the CSTA link between OpenScape Contact Center and the communication platform, then the calls will quickly move into Target 2 of the CDL (Backup UCD group 59).
  - The virtual user must be logged on to a virtual device.
  - The virtual user must **never** receive calls — it allows the communication platform to overflow calls in a backup UCD group should OpenScape Contact Center fail.
- Set up pilot numbers correctly. For the pilot number that will receive the most calls, set the pilot number to the CDL that points to the last UCD group in the communication platform. This is UCD group 60. This UCD group has a queue depth (number of queued calls) of 72.

For each additional pilot number, set the pilot number to a different CDL that points to another UCD group (not UCD group 60). All other OpenScape Contact Center UCD groups on the communication platform should be set to have a queue depth of 30.

- Ensure that there is sufficient queue depth to handle calls returned from Call Director in queue processing scenarios.

2.4.3 Heartbeat mechanism

A heartbeat mechanism is used by the communication platform to determine if OpenScape Contact Center is functioning correctly. If the OpenScape Contact Center system is not functioning correctly, the communication platform routes calls using backup routing logic configured on the communication platform.

When OpenScape Contact Center is available, the heartbeat mechanism notifies the communication platform that it is routing calls for its monitored UCD groups on the communication platform. When the communication platform receives this notification, it does not route calls for these UCD groups.

To accomplish this, a Host Control Bit (HCB) is set on the UCD group to indicate that the routing of calls will be performed by OpenScape Contact Center rather than the communication platform. If OpenScape Contact Center becomes unavailable, the Host Control Bit is turned off and the communication platform no longer receives a heartbeat notification. At this point the communication platform takes over the routing of incoming calls. Since there are no physical users logged on to the first UCD target of the CDL, calls will automatically flow to the second UCD of the CDL where physical users are logged on.

2.5 Configuring the communication platform

This section describes how to configure the communication platform to communicate with the OpenScape Contact Center system. For detailed instructions, see the OpenScape Business documentation.

2.5.1 Configuring UCD groups

You must configure an OpenScape Contact Center UCD group for the pilot number that is expected to process the most incoming calls.

To configure UCD groups:

1. Locate and edit the last UCD group on the communication platform (for example, UCD group 60).
2. Configure the call number, direct inward dialing number, and name of the UCD group. The default call number is 2900.
3. Add a virtual user to the UCD group. We recommend using a user ID that is greater than 199 as theses IDs are not within the default range used by the OpenScape Contact Center system.

2.5.2 Configuring backup UCD groups

You must configure a backup UCD group that you want to use to process calls if the OpenScape Contact Center system is unable to route calls.

To configure backup UCD groups:

1. Locate and edit the UCD group that you want to use for backup routing (for example, UCD group 59).
2. Configure the call number, direct inward dialing number, and name of the UCD group. The default call number is 2910.
3. Add a virtual user to the UCD group. We recommend using a user ID between 100 and 199 as these IDs are within the default range used by OpenScape Contact Center.

NOTE: If more than one backup UCD group is required, place the users in the backup UCD group that corresponds to the second target of each pilot number.

2.5.3 Configuring UCD parameters

You must configure the parameters for the UCD groups that you created.

To configure UCD parameters

1. Locate and edit the OpenScape Contact Center UCD group (for example, UCD group 60) and backup UCD group (for example, UCD group 59).
2. Set the primary ring cycle for each OpenScape Contact Center UCD group that will be used for routing and queue identification purposes to **1 cycle**. The backup UCD group can remain at **3 cycles**.

   The secondary ring cycle timer controls how long the call will remain in the backup queue if the OpenScape Contact Center system is unable to route calls. The secondary ring cycle can have a value of 1 cycle (5 seconds) to 720 cycles (60 minutes).
3. Set the queued calls for the main OpenScape Contact Center UCD group to **72**. For each additional OpenScape Contact Center UCD group that you have configured, set the value to 30.
4. Set the overflow time to the maximum of **15240**. If you do not change the default of 600, calls will be disconnected after remaining in queue for 10 minutes.

2.5.4 Configuring call forwarding

You must configure call forwarding by updating the Call Destination List (CDL) for incoming calls and backup routing.

To configure call forwarding:

1. Locate and edit the Call Destination List (CDL) for incoming calls (for example, 740) as follows:
   a) Set target 1 to the OpenScape Contact Center UCD group that you configured (for example, #260).
   b) Set target 2 to the backup UCD group that you configured (for example, #259).
   c) Set target 3 to voice mail or another destination where you want to move calls when the contact center is closed.
2. Locate and edit the Call Destination List (CDL) for backup routing (for example, 739). Set target 1 to the backup UCD group that you configured (for example, #259).

3. Change the values of the **Day**, **Night**, and **Internal** settings for the call numbers that you configured to the corresponding CDL that you created. For example, 2900 would be 740 and 2910 would be 739.

2.5.5 Enabling CSTA applications

You must enable CSTA applications on the communication platform to ensure proper communication between the OpenScape Contact Center system and the communication platform.

To enable CSTA applications:

1. Ensure that all the equipped trunks in the system have been assigned a trunk identification code.
2. Edit the UCD parameters to ensure that the Allow UCD applications setting is enabled.
3. Ensure that the CSTA Plus product flag **Blind Transfer** is enabled. **Call Director** transfers are not working properly, if this flag is not enabled.

2.5.6 Configuring additional dialable numbers

Pilot numbers can be used to support requeue targets in the OpenScape Contact Center system.

The communication platform supports multiple pilot numbers for a single CDL/ OpenScape Contact Center UCD group. Pilot numbers must be set up as virtual devices that are assigned to a single CDL associated with the UCD. All calls to the UCD must always be sent through a virtual device number assigned to its CDL and not directly through the CDL number.

When configuring a UCD, the CDL call number should always be set to a virtual device number assigned to the CDL associated with the UCD.

2.5.7 Configuring stations

You must configure stations if you plan to use the Call Director feature to enable announcements or interactive messages for callers.

NOTE: You must also configure the Call Director stations and the voice processor. For details, see the *Manager Help*.

NOTE: Do not configure Call Director stations as agent auto logon because Call Director may fail.

2.5.7.1 Configuring virtual stations

You must configure a virtual station for each virtual user.

To configure virtual stations:

1. Configure the call number, direct inward dialing number, and name of the virtual station.
2. Ensure that the type is set to **Virtual Station**.
3. If you are using an OpenStage telephone, ensure that the **autom. connection, CSTA flag** is enabled.

NOTE: Log on each of the virtual users and make them available. To do this, locate the extension (the first extension entered on the communication platform) and type: `*83 [call no.] *401 [user ID]`

2.5.7.2 Configuring Call Director SIP stations

When using an OpenScape Contact Media Service voice processor, you must configure the SIP stations for Call Director on the communication platform. For more information on the OpenScape Contact Media Service see Section 3.1, “Configuring the OpenScape Contact Media Service”.

It is only possible to configure interactive ports when using the OpenScape Contact Media Service voice processor. You must have a Call Director license to enable interactive messages.

The SIP stations do not require any special configuration besides the recommendation for extension recommendations on this guide. For more information on how to configure SIP stations on the communication platform, please consult the communication platform guides.

The Transport Type for the SIP stations used as CD ports must configured as TCP (on OpenScape Contact Media Service side and on OpenScape Business communication platform).

2.5.7.3 Configuring Call Director analog stations

This section describes how to configure analog Call Director stations on the communication platform.

An announcement is played to many callers simultaneously, whereas an interactive message is played to only one caller. You must have a Call Director license to enable interactive messages. You do not need an additional license to enable announcements - these are included with the OpenScape Contact Center license.

To set up announcement devices, you need to configure Call Director stations and associate them with device IDs, as shown in Figure . If you are not using announcements, then you do not need to associate stations with device IDs.

NOTE: OpenScape Business Assistant does not support configuration of all parameters mentioned below. Manager E tool is required for configuration of these parameters.

Configuring the communication platform

Note the following about announcement devices:

- The announcement device must be analog.
- A maximum of 30 callers can listen to the same announcement at one time.
- Bundling callers on a single port can be used to play an announcement to multiple callers.

To configure Call Director stations:

1. Ensure that the following system parameter flags are enabled:
   - **DTMF Automatic**
   - **Broadcast with connection.**
   - **Line change for direct call**
   - **Call forwarding after deflect call/single step transfer**

- **Follow call management in case of deflect call/single step transfer**

Ensure that the **Open numbering scheme** checkbox is not selected.

2. If you are using analog stations, you must configure each extension as either an announcement or an interactive device as follows:
   a) To configure an extension as an announcement device, set the type to **Answer Machine** and set the operating model to **16. SLA, ONS short**.
   b) To configure an extension as an interactive device, set the type to **Standard** and ensure that the external call and internal call ring tone settings are as follows:
      - Pulse 1 - Pulse = `1000` and Pause = `3000`
      - Pulse 2 - Pulse = `0` and Pause = `0`
      - Pulse 3 - Pulse = `0` and Pause = `0`
3. If you are using digital interactive stations (North America only), you must configure each extension as follows:
   a) Add a TMST1 board to the communication platform:
   b) Select as many ports as required (to the maximum of 24), based on how many digital interactive stations are being configured.
   c) Type an extension number for each port that you selected when you added the T1 board.
   d) Ensure that the following flags are enabled:
      - **Call waiting rejection on**
      - **FWD external permitted**
      - **Compress display data**
      - **Autom. connection, CSTA**
      - **Transit allowed via Hook-on**
   e) Set the operating mode to **16. SLA, ONS short**.

2.5.8 Additional configuration

In order to allow Transfer Nodes for external numbers, the OpenScape Business **SIP Prov. to SIP Prov. transit** flag must be enabled.

For more information, see *OpenScape Business Administrator Documentation*, chapter **Expert Mode > Basic Settings > System > System Flags**.

2.6 Configuring a user telephone

You must configure each telephone used by OpenScape Contact Center users to ensure that the deflect, reject, call forwarding unconditional (or all calls) and call forwarding on busy features are not enabled on the telephone.

NOTE: If the telephone has been configured to display the Contacts Waiting Indicator and the user is not logged on to the Client Desktop application, the Contacts Waiting lamp indicator on the telephone will notify the user when there are contacts waiting in the queue. The lamp indicator on the telephone is turned off when the user is logged on to the Client Desktop application.

NOTE: The buttons on the telephone indicate the user's routing state. If the user is not configured to use the Client Desktop application, and the user is in Post-processing handling state, the Work button on the telephone will be activated regardless of the user's routing state. In this case, to exit Post-processing handling state, the user can press one of the other buttons on the telephone, such as Available.

2.7 Configuring a multinode environment

In effect, OpenScape Contact Center considers a multinode cluster as one virtual communication platform. The CSTA hides all multinode specifics from OpenScape Contact Center. We strongly recommend that you connect the voice processor to the most powerful communication platform and to the platform which receives the most calls.

NOTE: If the communication platforms are located in cities that have different area codes, the OpenScape Contact Center callback feature is not supported.

2.7.1 Configuring UCD groups

Configuring UCD groups in a multinode environment is similar to configuring UCD groups in a single-node environment, with a few notable exceptions:

- Each communication platform (node) must have a unique list of user IDs.
- Each communication platform (node) must have distinct stations and CDL call numbers for UCD groups.

For example, in a multinode environment with three nodes (A, B and C), you could configure the following user IDs and call numbers:

	Node A	**Node B**	**Node C**
User IDs	100 - 120	130 - 140	160 - 180
CDL Call Numbers	1000 - 1200	1300 - 1400	1600 - 1800

The following is a description of one potential multinode configuration for OpenScape Contact Center:

- The UCD group used by OpenScape Contact Center is configured on only one of the nodes, but all nodes have a UCD group for backup routing purposes.
- The unique user IDs are configured on each node separately.
- When configuring OpenScape Contact Center resources, all user IDs from all nodes that handle OpenScape Contact Center contacts are added to a logical UCD group. OpenScape Contact Center then distributes incoming calls to the available users.

NOTE: Other configurations are also possible where each node has its own basic UCD group and backup routing UCD group.

2.7.1.1 Configuring backup routing

Agent UCD call numbers are used only when the connection to the OpenScape Contact Center server is not operational. Calls are then routed to UCD groups based on the CDL configuration.

NOTE: This procedure must be performed on the node where the UCD resides.

To configure backup routing:

1. On the **Incoming call** menu, click the **Call Forwarding** tab.
2. In the **Call dest. list** definition table, add **target 1** as the basic UCD and **target 2** as the UCD.
3. To add target 3 as the UCD for another node, click **target 3**, and then select **External destination** from the list. The **External destinations** dialog box appears.
4. In the **Route** box, select the route to node 2.
5. In the **Call no.** box, type the UCD call number for node 2.
6. Click **OK**.
7. If you have other nodes, repeat this procedure.
8. Click **Apply**.
9. Save the changes.

2.7.2 Configuring announcements

When configuring announcements in a multinode environment, ensure that the announcement device IDs are consistent across all nodes.

NOTE: Announcements are not possible, when using OSCMS.

2.7.2.1 Configuring announcements for the node where the voice processor is connected

Configuring an announcement for the node where the voice processor is connected is the same for both multinode and single-node environments.

2.7.2.2 Configuring announcements in destination nodes

Announcements in the destination nodes are configured as described in this section.

To configure a subscriber announcement in a destination node:

1. In the left pane, under **Auxiliary equipment**, click **Announcement**.
2. Under **Announcement equipment**, click **External dest.** The **External destinations** dialog box appears.

3. In the **Route** list, select the route to the announcement device.
4. In the **Call no.** box, type the announcement extension number.
5. Click **OK**.

3 Configuring a voice processor

This chapter describes how to configure a voice processor that is used with the Call Director feature.

Call Director can be configured to use the following voice processor:

- OpenScape Contact Media Service - multiple voice processors can be configured.

3.1 Configuring the OpenScape Contact Media Service

NOTE: The OpenScape Contact Media Service is a software-based voice processor that can be used with the Call Director feature to play interactive messages and announcements to callers. The system supports the use of multiple distributed OpenScape Contact Media Service voice processors.

The Transport Type for the SIP extensions used as CD ports must configured as TCP (on OpenScape Contact Media Service side and on OpenScape Business communication platform).

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