



A MITEL
PRODUCT
GUIDE

MiVoice Connect

Installing and Configuring MiVoice Connect with MiContact Center Business Guide

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Setting up MiVoice Connect with MiContact Center Business SIP

This chapter contains the following sections:

- [Server Requirements](#)
- [Configuring Server Roles and Features](#)

Overview

This section describes the requirements and the configuration process to set up MiVoice Connect with MiContact Center Business - SIP.

1.1 Server Requirements

For MiVoice Connect, refer to the following sections in the *MiVoice Connect Planning and Installation Guide* located at <https://www.mitel.com/document-center/business-phone-systems/mivoice-connect/mivoice-connect-platform> for the server requirements:

- For Microsoft Server 2012 R2, see the *Microsoft Windows Server 2012 R2 Configuration* section.
- For Microsoft Windows Server 2016, see the *Microsoft Windows Server 2016 Configuration* section.
- For Microsoft Windows Server 2019, see the *Microsoft Windows Server 2019 Configuration* section.

If you are installing Windows DVS, BluStar, and MiContact Center software on the same server, the server requirements are as follows:

Table 1: Server requirements

Hardware	Large
CPU cores	6 @ 2.0GHz
Memory	12 GB
Storage	See the Bandwith and Storage Requirements section in the MiContact Center and Business Reporter System Engineering Guide located at https://www.mitel.com/document-center/applications/contact-center/mi-contact-center-business/micontact-center-business-for-mivb .
Criteria	
Conversations per hour limit	Less than 2700

1.2 Configuring Server Roles and Features

Run the Windows updates and all the related patches before adding the Roles and Features.

Ensure that all the Server Roles and Features are installed and restart the server before you begin the MiVoice Connect PBX Software installation.

To configure the server roles in Windows Server 2012 R2, Windows Server 2016, and Windows Server 2019, see the following sections in the *MiVoice Connect Planning and Installation Guide* located at <https://www.mitel.com/document-center/business-phone-systems/mivoice-connect/mivoice-connect-platform>:

- *Microsoft Windows Server 2012 R2 Configuration > Server Roles and Features*
- *Microsoft Windows Server 2016 Configuration > Server Roles and Features*
- *Microsoft Windows Server 2019 Configuration > Configuring Server Roles and Features and Completing the Installation*

Deploying OVAs

2

After you install the MiVoice Connect software, you must deploy Open Virtualization Appliances (OVAs) for the following servers:

- Edge Gateway (optional)
- Virtual IP Phone Switch
- Virtual SIP Trunk Switch

Note:

Ensure that the computer name for the MiVoice Connect server does not exceed 15 characters. Exceeding this limit causes issues later when configuring the BluStar Server.

To deploy OVAs, follow these steps:

1. Create a new virtual machine for the headquarters (HQ) server. For instructions, see the *Downloading Virtual Appliances Software* section in the *MiVoice Connect Planning and Installation Guide*.
2. Optional: Create a new virtual machine for edge gateway. For details, see the *Installing Virtual Edge Gateway Using ISO Installer > Creating New Virtual Machine in VMware or Hyper-V* section in the *MiVoice Connect Administration Guide for Edge Gateway*.
3. Create a new virtual machine for Virtual IP Phone and SIP Trunk switches. For more information, see the following sections in the *MiVoice Connect Planning and Installation Guide*:
 - *Creating New Virtual Machines in VMware or Hyper-V*
 - *Virtual Switches and Service Appliances*

Installing MiVoice Connect with MiContact Center Business

3

This chapter contains the following sections:

- [Installing the BluStar Server](#)
- [Creating a PBX Link](#)

To install MiVoice Connect with MiContact Center Business, you must:

- Install the BluStar Server. For more information, see [Installing the BluStar Server](#) on page 4.
- Create a PBX link. For more information, see [Creating a PBX Link](#) on page 7.

3.1 Installing the BluStar Server

The BluStar Server must be installed on a MiVoice Connect Windows DVS server and not on the Headquarters (HQ) server.

The Windows DVS, BluStar, and MiContact Center software can reside on the same server. A dual-server implementation is also allowed (DVS and BluStar on one server, MiCC on another). If you prefer having all software on the same server, it is recommended that you install them in the following order:

- Windows DVS
- BluStar
- MiContact Center

It is also recommended that you use the default BluStar SQL software while installing the BluStar software, unless you are using Microsoft Server 2012 R2.

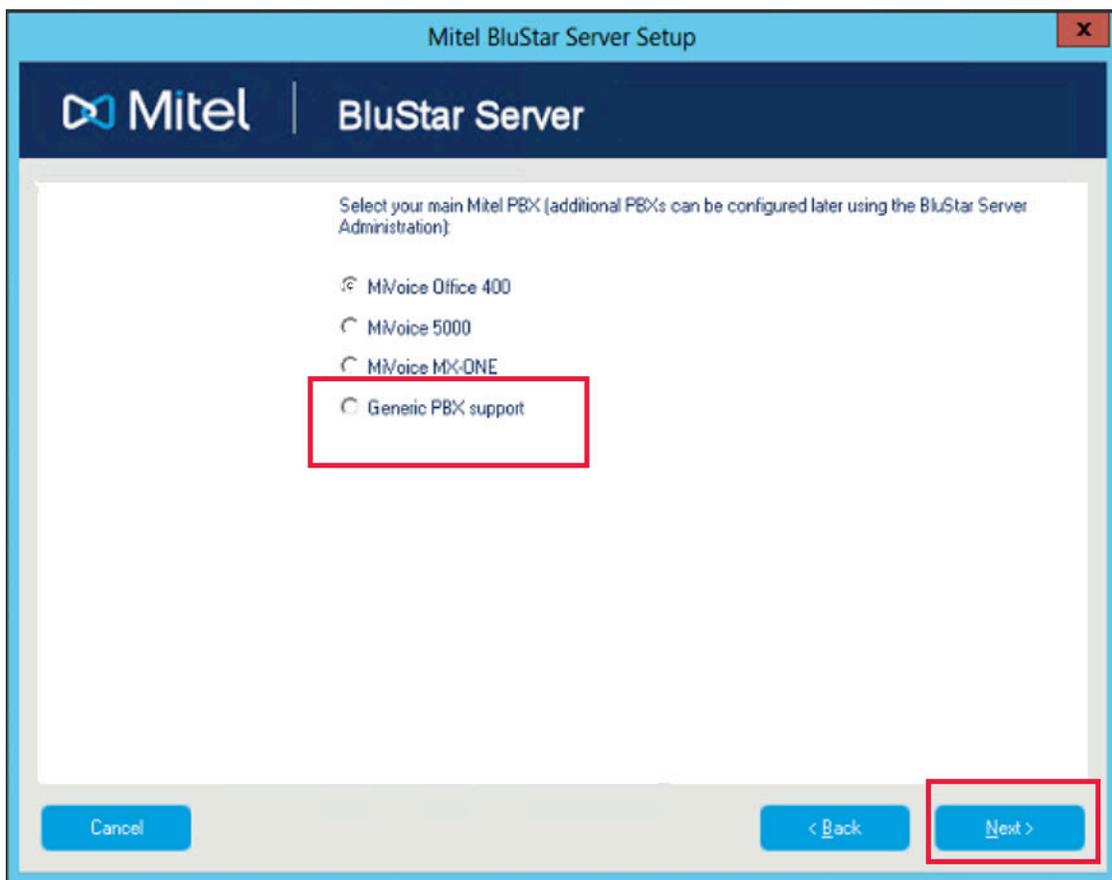
Note:

- Before installing the BluStar Server, you must enable the Application Server Role on the MiContact Center Server.
- If you are using Microsoft Server 2012 R2, SQL 2019 Express installation is not supported. Therefore, you must install SQL 2012 Express or SQL 2014 Express. If you are also installing MiContact Center Business (MiCCB) on this server, install SQL 2014 Express or a later version because SQL 2014 Express is the minimum version required with MiCCB.
- With BluStar 7.3.0.237, the WebDav role must be removed from Internet Information Services (IIS). This might not be a requirement with future releases of the BluStar software. However, currently, the WebDav role prevents BluStar from functioning properly and must be removed.
- While installing the BluStar Server on the MiVoice Connect Windows DVS server, you might get a **Bad Request** error message. For information about resolving this issue, see the following Knowledgebase Article: https://mitel.custhelp.com/app/answers/answer_view/a_id/1013855.

Follow these steps to install the BluStar Server for MiVoice Connect:

1. Navigate to <https://miaccess.mitel.com/>.
2. Go to **Applications > BluStar Server** and click **7.3**. A window with a list of 7.3 versions of BluStar opens.
3. Select the **7.3.237** version with the status **Sane** and click **Deliverables** in the same row. The BluStarServer.zip file appears on the screen.
4. Download the BluStarServer.zip file.
5. Unzip the BluStarServer.zip file and run the Setup.exe in the folder you just extracted.
6. From the **Mitel BluStar Server Setup** window that opens, select **Generic PBX support**, and click **Next** (see [Generic PBX Support](#)).

Figure 1: Generic PBX Support

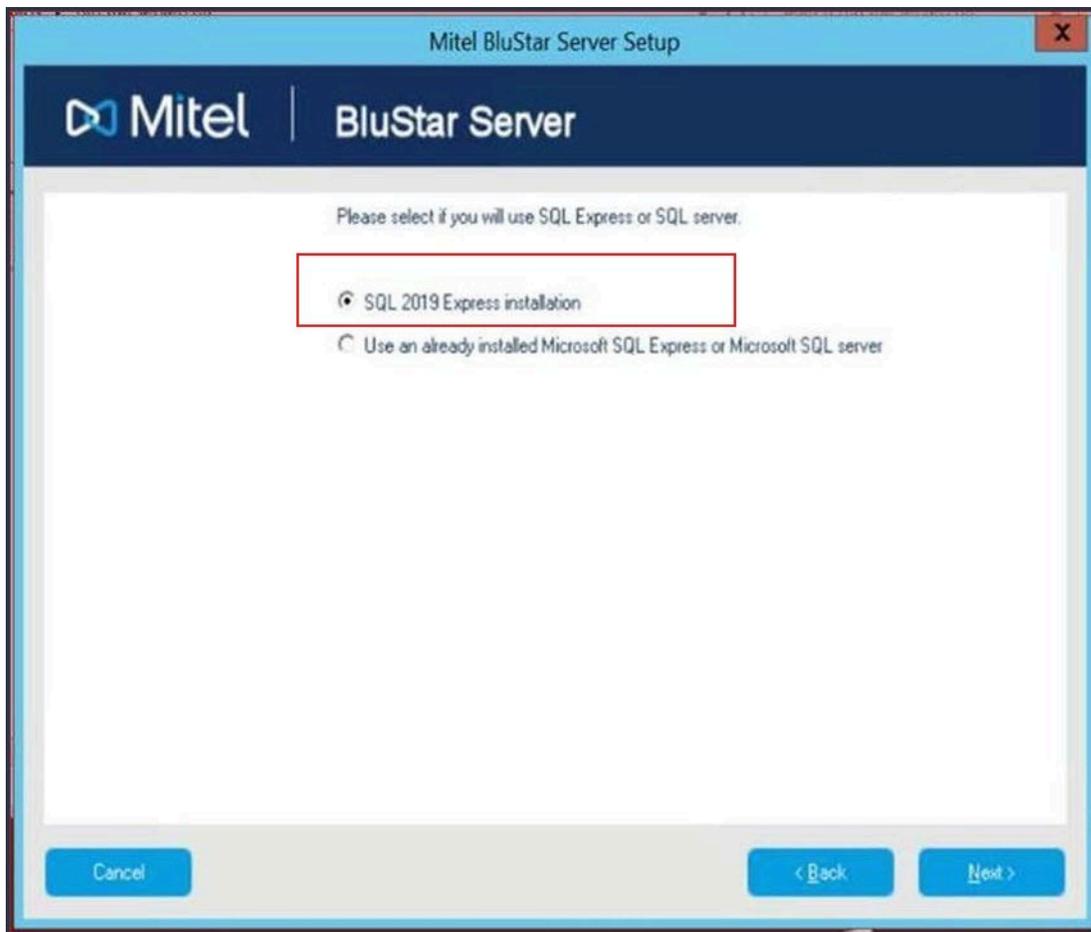


7. In the window that opens, select **SQL 2019 Express installation** and click **Next** (see [Selecting the SQL Server](#)).

i Note:

If you select the **Use an already installed Microsoft SQL Express or Microsoft SQL server** option, then you must create a System Administrator (SA) account with **Mitel123!** as the password or you must run the following tool to change the password `C:\Program Files (x86)\Mitel\BluStar Server\DALConfigurationTool.exe`.

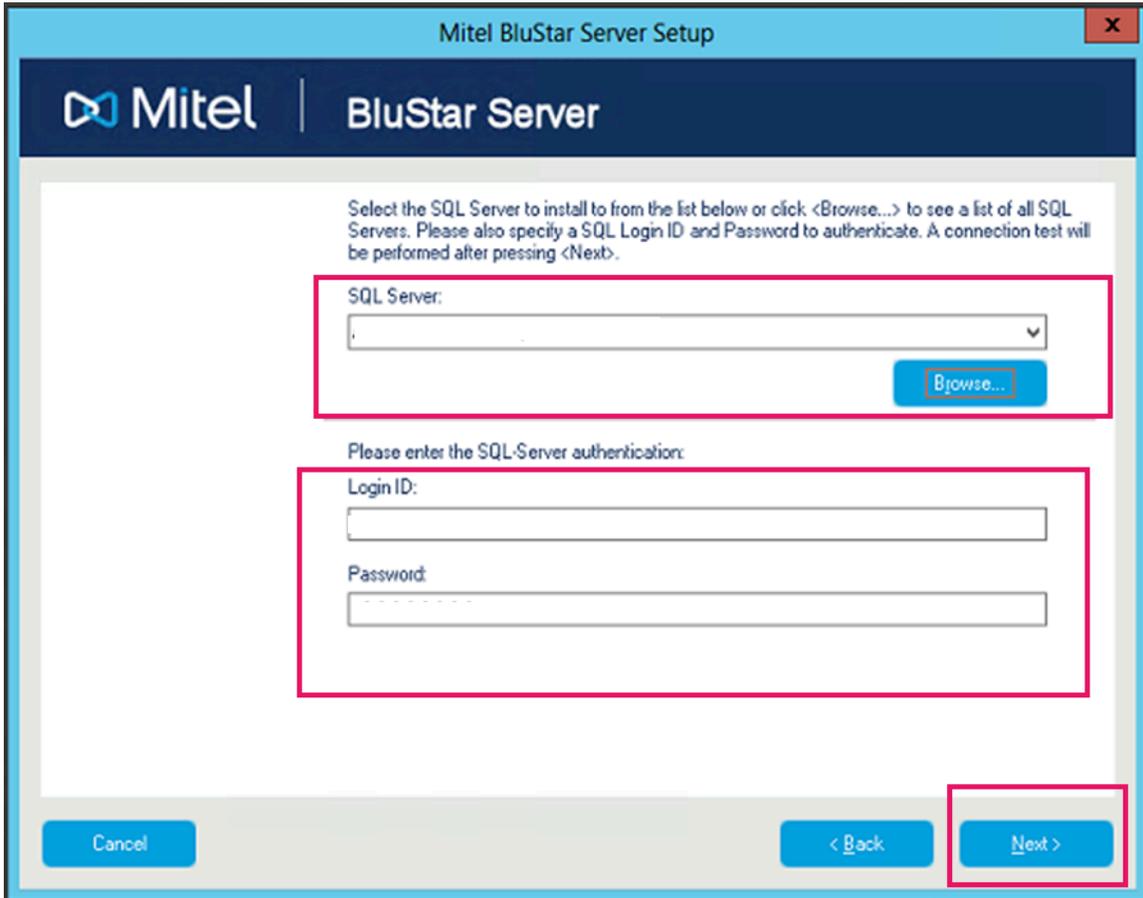
Figure 2: Selecting the SQL Server



8. In the window that opens, complete the following fields and click **Next** (see [SQL Login ID and Password Screen](#)):

- **SQL Server**
- **Login ID**
- **Password**

Figure 3: SQL Login ID and Password Screen



The screenshot shows the 'Mitel BluStar Server Setup' window. The title bar is blue with the Mitel logo and 'BluStar Server' text. Below the title bar, there is a dark blue header with the Mitel logo and 'BluStar Server' text. The main content area is white and contains the following text: 'Select the SQL Server to install to from the list below or click <Browse...> to see a list of all SQL Servers. Please also specify a SQL Login ID and Password to authenticate. A connection test will be performed after pressing <Next>.' Below this text, there is a red-bordered box containing a 'SQL Server:' label, a dropdown menu, and a 'Browse...' button. Below this box, there is another red-bordered box containing the text 'Please enter the SQL-Server authentication:', a 'Login ID:' label, a text input field, a 'Password:' label, and a password input field. At the bottom of the window, there are three buttons: 'Cancel', '< Back', and 'Next >'. The 'Next >' button is highlighted with a red border.

9. When the installation is complete, click **Finish**. The **BluStar Server Administration** icon is displayed on the desktop.

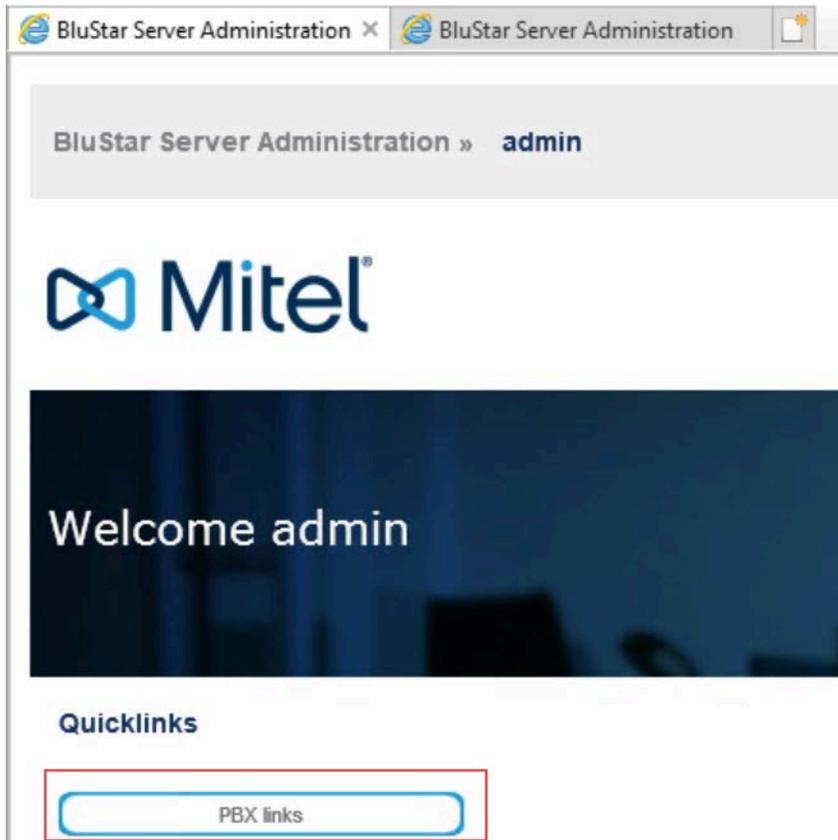
3.2 Creating a PBX Link

To create a PBX link, follow these steps:

1. Launch BluStar Server Administration from the desktop.
2. Log in using the following default credentials:
 - User name: **admin**
 - Password: **Mitel123**

3. When the BluStar Server Administration window opens, click **PBX links**.

Figure 4: Selecting the PBX links option



4. In the window that opens, click **Add PBX Link**.

Figure 5: Add PBX Link option



5. In the window that opens, complete the following fields:

- **PBX link name:** Select **MiVC**.
- **Server:** Select the server from the list of options.
- **Telephone system:** Select **MiVoice Connect**

Figure 6: PBX link name

PBX link name PBX link number

Server

Telephone system

Telephone system

PBX connection

TAPI Communication device

Recognition of external / internal phone numbers

Value

Handling of outgoing numbers

Handling of incoming numbers

[Save](#) [Back to the link list](#)

Activate Windows
Go to Settings to activate Windows.

6. Click **Save** to create the PBX link.

7. Confirm that the PBX link is up and running.



Note:

If the PBX link is working, it displays a green checkmark icon beside it.

Configuring MiVoice Connect with MiContact Center Business

4

This chapter contains the following sections:

- [Creating User and User Groups](#)
- [Creating Trunk Groups](#)
- [Creating Off-System Extensions](#)
- [Creating a DID Mapping](#)
- [Configuring Site Settings](#)
- [Creating DNIS Mapping](#)
- [Setting up Special Dialable Numbers](#)

This section provides guidelines for configuring MiVoice Connect gateway for MiContact Center Business.

For information about installation of MiVoice Connect, see the *MiVoice Connect Planning and Installation Guide* and the *MiVoice Connect System Administration Guide*.

Note:

Run the Windows updates and all the related patches before adding the Server Roles and Features and ensure that all the Server Roles and Features are installed, and restart the server before starting the MiVoice Connect PBX Software installation.

To configure MiVoice Connect for MiContact Center Business, you must perform the following tasks:

1. Create Users and User Group. For more information, see [Creating User and User Groups](#) on page 10.
2. Create Trunk Groups. For more information, see [Creating Trunk Groups](#) on page 12.
3. Create Off-System Extensions OSE(s). For more information, see [Creating Off-System Extensions](#) on page 13.
4. Create a Direct Inward Dialing (DID) mapping. For more information, see [Creating a DID Mapping](#) on page 13.
5. Configure the Site Settings. For more information, see [Configuring Site Settings](#) on page 15.
6. Create Dialed Number Identification Service (DNIS) Mapping. For more information, see [Creating DNIS Mapping](#) on page 15.

4.1 Creating User and User Groups

To create Users and User Groups for a new installation, you must configure the following system components:

1. Define the Class of Service (COS)

2. Create the User Groups
3. Create a User

4.1.1 Defining the Class of Service

To define the Class of Service, follow these steps:

1. Launch Connect Director.
2. Go to **Administration > Users > Class of Service > Telephony Features Permissions**, and specify the Class Of Service.

Note:

For more information, see the *Specifying a Class of Service* section in the *MiVoice Connect System Administration Guide*.

4.1.2 Creating the User Groups

To create the User Groups, do the following:

1. Launch Connect Director.
2. In the navigation pane, click **Administration > Users > User Groups**. The **User Groups** page opens.
3. You can do the following:
 - To edit an existing User Group, click the name of the user in the list pane.
 - To create a copy of an existing User Group, click **Copy**.
 - To create a new User Group, click **New**.

Note:

For more details on how to add and view User Groups, see the *Viewing User Groups* section in the *MiVoice Connect System Administration Guide*.

4.1.3 Creating a User and User Configuration

To create a user, follow these steps:

1. Launch Connect Director.
2. In the navigation pane, click **Administration > Users > Users**. The **Users** page opens.

3. You can do the following:

- To edit an existing user, click the name of the user in the list pane.
- To create a copy of an existing user, click **Copy**.
- To create a new user, click **New**.

4. In the **General** tab, select **Standard** from the **Ring type** drop-down list.

5. Select the **Enable call waiting tone** check box.

6. Click **Save** to save the settings.

Note:

- When creating a user, you must change the **Forward after (1-20) rings** so that it does not interfere while an ACD call is being routed to an agent. By default, the ring timer from MiContact Center is 20 seconds; you must change the **Forward after (1-20) rings** to count 5 or greater through Connect Director.
- When you create a user, you must set the **Call Stack depth** field value to **1**. This is because Agents can have only one call at a time.
- Site prefixes are not allowed. Agents cannot have an extension in the format `xxx-xxxx`.
- For more details on how to add, and view users, see the *Configuring a User Account* section in the *MiVoice Connect System Administration Guide*.
- Ensure that the value of the voicemail ring timer is more than that of the requeue timer in MiContact Center. If the voicemail ring timer value is less than the requeue timer, the customers get redirected to the agents voicemail instead of being requeued for another agent to answer the call.

4.2 Creating Trunk Groups

The Trunk Group is connected to the MiContact Center Server that runs FreeSwitch. This allows the User to use MiVoice Connect extension and place a call to any extension that is configured on MiVoice Business.

Note:

The Administrator must create a DNIS CLIP, so that all agents can automatically use it for making outbound calls from, within Web Ignite.

To create a Trunk Group, follow these steps:

1. Launch Connect Director.
2. In the navigation pane, click **Administration > Trunks > Trunk Groups > Trunk Groups**. The **Trunk Groups** page opens.

3. You can do either of the following:

- To edit an existing Trunk Group, click the name of the trunk group in the list pane.
- To create a copy of an existing Trunk Group, click **Copy**.
- To create a new Trunk Group, click **New**.

The **General** tab in the details pane displays parameters for the new or existing trunk group.

4. Review the parameters on all of the tabs in the **Details** pane, and specify appropriate values.
5. Go to the **Inbound** tab, and select the **Extension** check box.
6. Select **Default ITSP** as the SIP Profile.
7. Select **Tandem trunking** and the select the User Group created.



Note:

For more information about the Trunk Group parameters on the various tabs of the Details pane, see the *Trunk Group Parameters* section in the *MiVoice Connect System Administration Guide*.

8. Click **Save** to save the settings.

4.3 Creating Off-System Extensions

Creating Off System Extensions (OSEs) range will restrict the endpoint that gets pushed to MiContact Centre on the Media Server as on Endpoint.

To create Off System Extensions, follow these steps:

1. Launch Connect Director.
2. In the navigation pane, click **Administration > Trunks > Trunk Groups > Off-System Extensions**. The **Off-System Extensions** page opens.
3. Go to the **General** tab and do the following:
 - In the **Trunk group** field, select the name of the Trunk Group the off-system extension will be assigned to.
 - In the **From** and **To** fields, specify the lower bound and the upper bound of the off-system extension.
4. Click **Save**.

4.4 Creating a DID Mapping

You must create a DID and assign the OSEs to the **Receiving Digit** field.

To create a DID, do the following:

- Create User configurations. For more information, see [Creating a User and User Configuration](#) on page 11.

- Add custom rules while making outbound calls. For more information, see [Adding Custom Rules](#) on page 14.

After you create the DID, perform the following steps to map the DID to trunk groups:



Note:

For more information, see the *Configuring DID* section in the *MiVoice Connect System Administration Guide*.

1. Launch Connect Director.
2. In the navigation pane, click **Administration> Trunks> Trunk Groups> Trunk Groups**. The **Trunk Groups** page opens.
3. In the **Inbound** tab, select the **Enable DID** check box.
4. Click **Edit DID Range** to create the new DID range.
5. In the navigation pane, click **Administration> Trunks> Trunk Groups> DID Ranges**. The **DID Ranges** page opens.
6. In the List pane, select a trunk group.
7. In the **General** tab, enter a phone number in the **Base phone number** field.
8. Enter **500** in the **Number of phone numbers** field.
9. Click **Save**.

4.4.1 Adding Custom Rules

You must create a custom rule so that while making outbound calls from Web Ignite, the number is displayed correctly in the phone. This allows agents to redial to the customers from their phone where 9 is programmed as the access code.

To add the custom rule, do the following:

1. Hold **Shift+ Ctrl** to be able to login to Connect Director as Support.
2. Enter the user name and password on the log in screen.

Figure 7: Connect Director Login Screen

3. In the navigation pane, click **Administration> Trunks> Trunk Groups> Trunk Groups**. The **Trunk Groups** page opens.
4. Select the MiContact Center Trunk Group.
5. On the **Custom Rules** tab, enter **<9XXXXXXXXXX>x+X.G**.
6. Click **Save**.

4.5 Configuring Site Settings

To configure the site settings, do the following:

1. Launch Connect Director.
2. In the navigation pane, click **Administration> System> Sites**. The **Sites** page opens.
3. In the **General** tab, complete the following fields:
 - **Name**
 - **Language**
 - **Country/area**
 - **Time zone**
 - **Local area code**
 - **Emergency number list**
4. In the **General** tab, do the following:
 - Enter the bandwidth in the **Admission Control Bandwidth** field.
 - Select **High Bandwidth Codecs** from the **Intra-site calls** drop-down list.
 - Select **Low Bandwidth Codecs** from the **Inter-site calls** drop-down list.
 - Select **Fax Codecs-High Bandwidth** from the **Fax and modems calls** drop-down list.
 - Select **VirtualPhoneSwitch** from the **Proxy switch 1** drop-down list.
5. Click **Save**.

4.6 Creating DNIS Mapping

To create a DNIS Mapping, follow these steps:

1. Launch Connect Director.
2. In the navigation pane, click **Administration> Trunks > Trunk Groups> DNIS Map**. The **DNIS Map** page opens.
3. Go to the **General** tab.
4. Select the Trunk Group from the **Trunk Group** drop-down list.
5. Enter **extension** in the **Received Digits** field. For example, 138116.
6. Enter a display name in the **Display Name** field. For example, To116
7. Enter the destination of the extension in the **Destination** field.
8. Select **Mitel** from the **Music on Hold** drop-down list.
9. Click **Save**.

4.7 Setting up Special Dialable Numbers

If you are using MiContact Center Business with MiVoice Connect and will have any call scenarios using route points or auto attendants. You must add the dialable number of the route point or auto attendant to the following Global Application Setting precisely as shown.

To add the dialable numbers to the Global Application Settings, perform the following steps:

- Navigate to the path (Program Files (x86))\Mitel\MiContact Center\Services\ConfigService) to access GlobalAppSettingsEditor.
- Modify the values in the editor as shown in the table below:

Table 2: Global Application Settings - Attributes

Attribute Name	Value
Application	Leave this blank
Section Group	prairieFyre.Framework.ContactCenterManagement.Properties.Settings
Name	SpecialDeviceDNs
Value	Enter the dialable numbers of each route point and a auto attendant in comma separated list without spaces.
Description	Enter a short description of the setting or user/date.



Figure 8: Global Application Settings Editor - Example

Configuring MiContact Center Business to Deploy MiVoice Connect

5

This section describes the procedure for configuring MiContact Center Business to deploy MiVoice Connect.

Note:

To configure MiContact Center Business with MiVoice Connect, you must have a SIP license.

To configure MiContact Center Business to deploy MiVoice Connect, follow these steps:

1. Log in to **YourSite Explorer** application in MiCCB server.

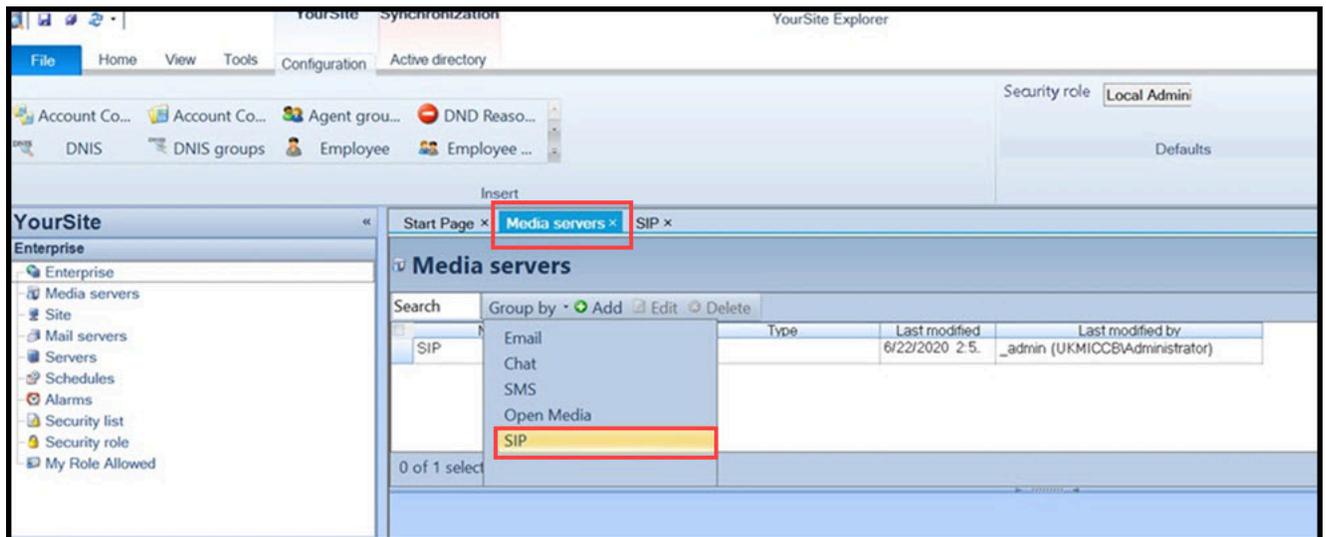
Note:

The default login credentials are:

- User ID: **_admin**
- Password: **_password**

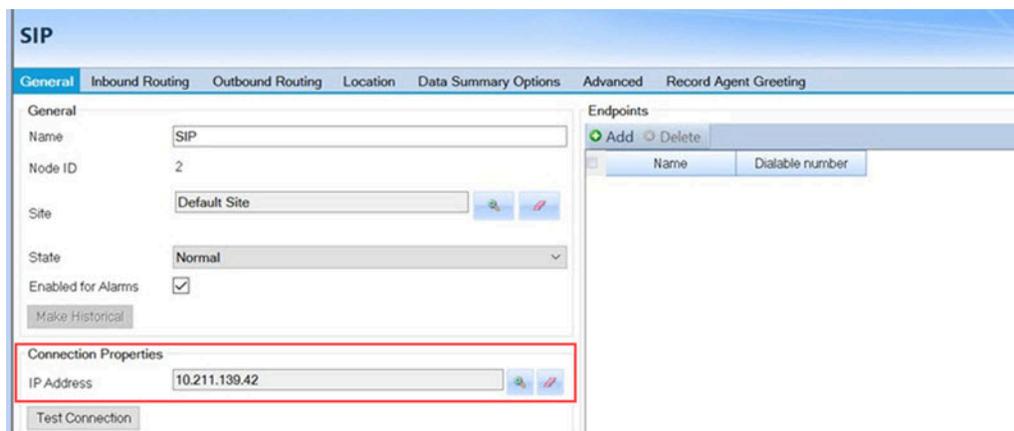
2. In the **YourSite Explorer** application, go to **Media servers > Group by** and select **SIP** to specify SIP as the Media Server type. (see [YourSite Explorer Window](#))

Figure 9: YourSite Explorer Window



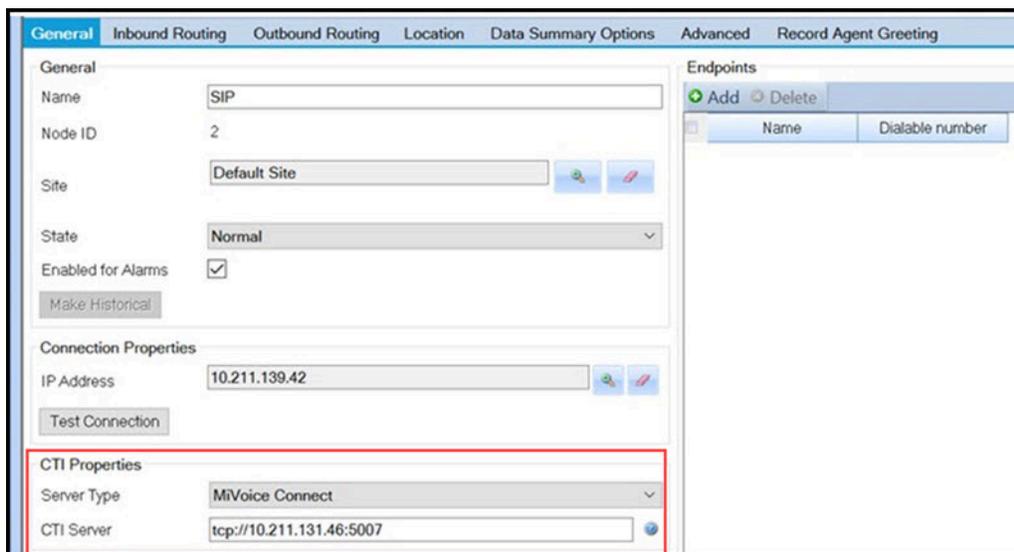
- In the window that opens, go to **Connection Properties** > **IP Address** field and enter the IP address of the trunk switch that is configured with SIP trunks pointing to MiCCB.

Figure 10: IP Address Field



- Under **CTI Properties**, complete the following fields:
 - Server Type:** Select **MiVoice Connect** from the list of options.
 - CTI Server:** Enter **tcp://<DVS IP Address with BluStar Server installed>:5007** as the CTI server.

Figure 11: CTI Properties field



- In the **Inbound Routing** tab, go to **Properties** and select the **Validate workflow** option.
- In the **Outbound Routing** tab, go to **Properties** and select the **Validate workflow** option.

7. Create an employee by following these steps:

a. Go to **Devices**, select **Employee**, and complete the following fields:

- **First name**
- **Last name**
- **Employee ID**
- **Line URI**



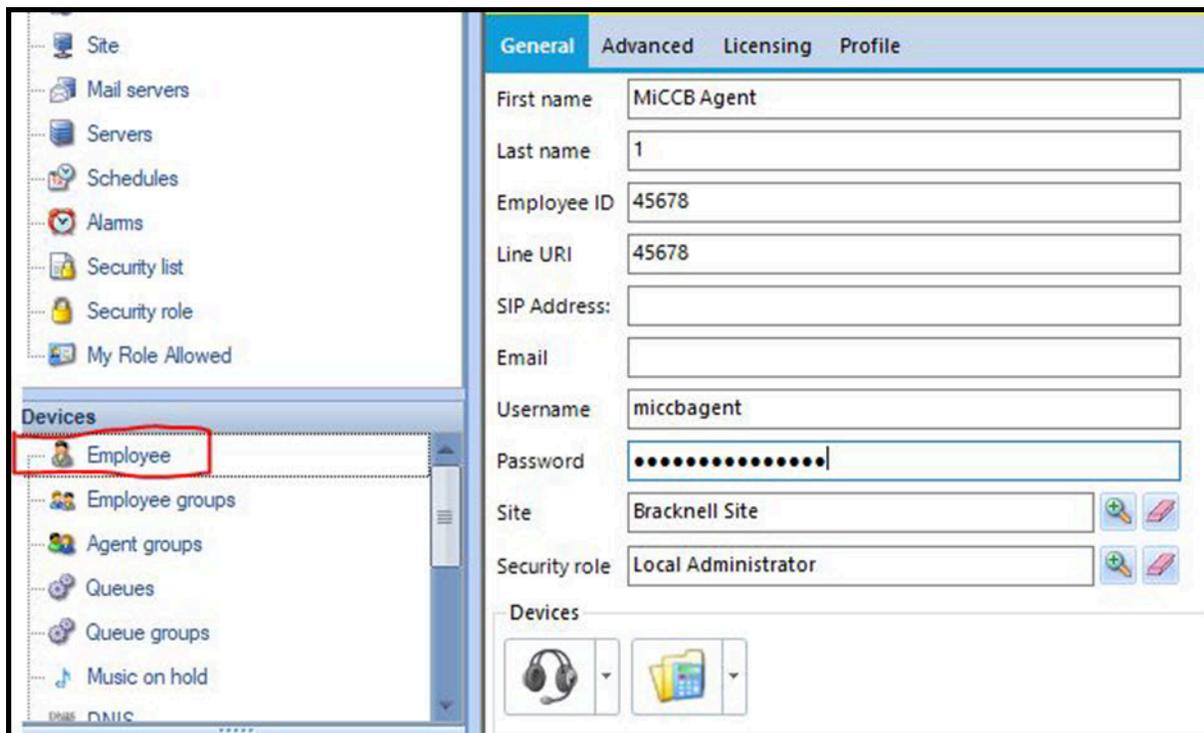
Note:

The Line URI must be the same as the extension number in the MiVoice Connect server.

- **Username**
- **Password**
- **Site**
- **Security role**
- **Devices**

b. Click **Save** to create the employee (see [Creating an Employee](#)):

Figure 12: Creating an Employee



8. Create an employee group by following these steps:

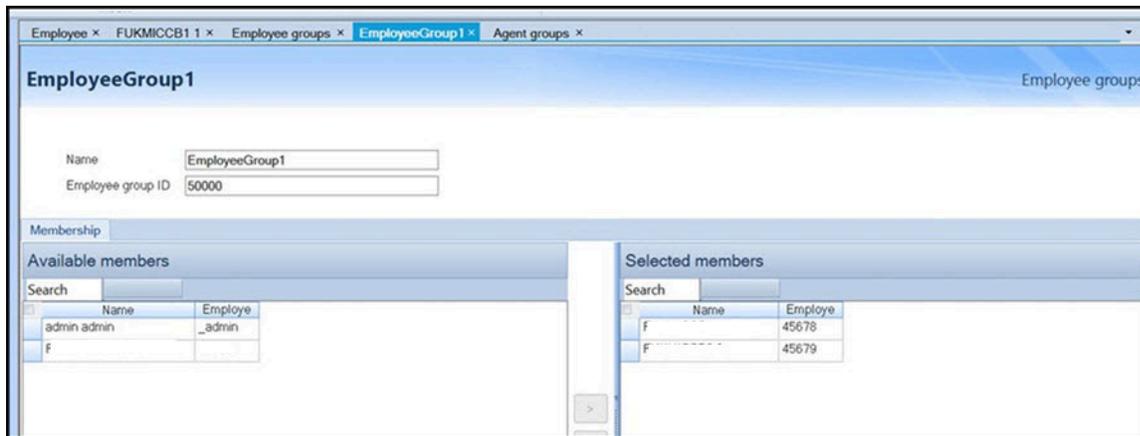
a. Select **Employee groups** under **Devices** and complete the following fields:

- **Name**
- **Employee group ID**

b. From the **Membership** tab, select the employees to be added in the employee group.

c. Click **Save** to create the employee group.

Figure 13: Employee Group example



9. Create an agent group by following these steps:

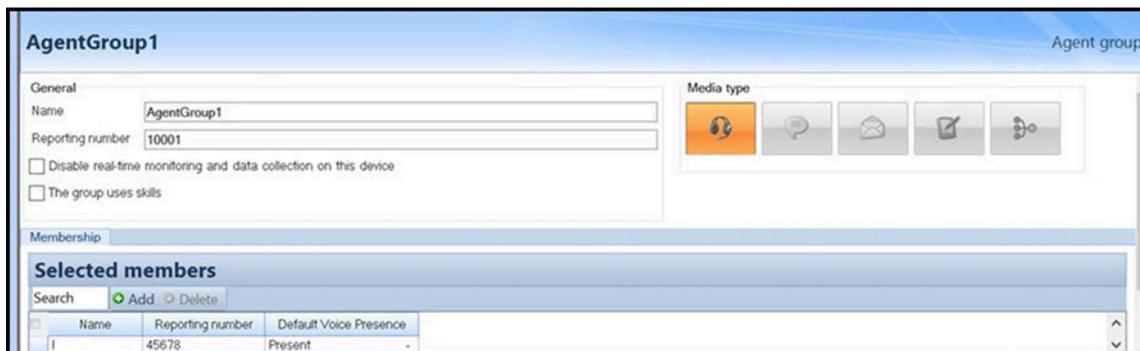
a. Select **Agent groups** under **Devices** and complete the following fields:

- **Name**
- **Reporting number**
- **Media type**

b. From the **Membership** tab, select the employees to be added as members of this agent group.

c. Click **Save** to create the agent group.

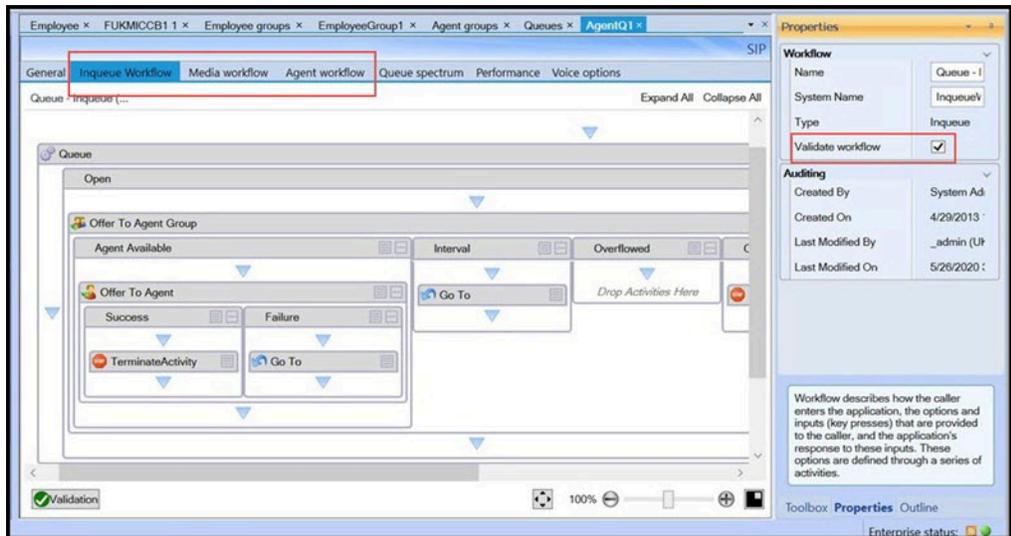
Figure 14: Agent Group example



10. Create an agent queue by following these steps:

- a. Select **Queues** under **Devices** and select the agent group for Inbound Routing.
- b. In each of the tabs **Inqueue Workflow**, **Media workflow**, and **Agent workflow**, select the **Validate workflow** option.
- c. After the validation is complete, click **Save** to create agent groups.

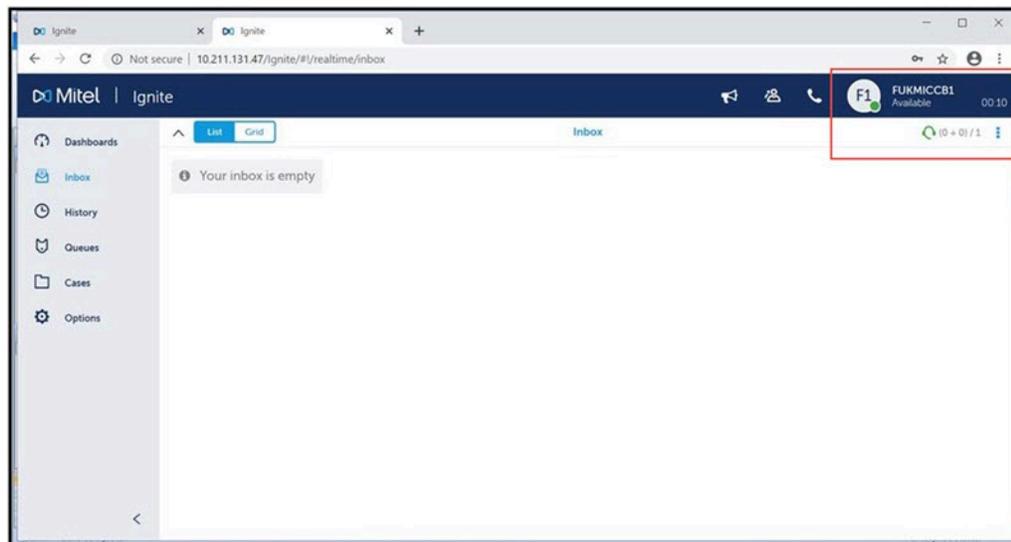
Figure 15: Agent Queues example



11. Close the **YourSite Explorer** application.

12. Log in to the Web Ignite application and change the agent state to **Available**.

Figure 16: Web Ignite screen

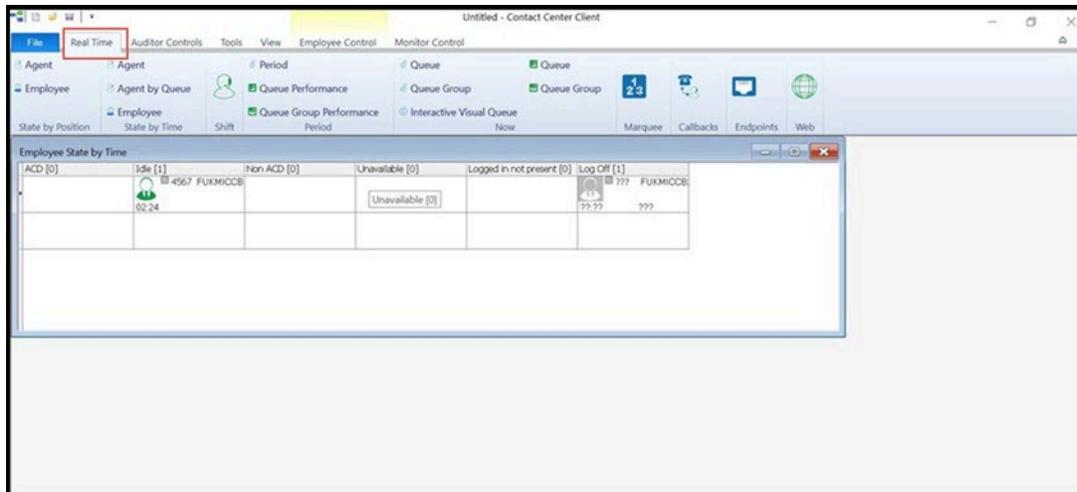


13. Launch the Contact Center Client application and do the following:

- a. Select the **Real Time** tab to monitor the agent state.
- b. If required, change the agent state.
- c. Click **Save** to save the changes.

This completes the MiContact Center Business configuration for deploying MiVoice Connect.

Figure 17: Contact Center Client application





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