MAX Communication Server
Release 8.5

UC Deployment Guide

July 2018

Contents

About This Guide

This document is provided for AltiGen Partners who will be deploying AltiGen's hosted Skype for Business service for a customer with MAXCS Release 8.5.

You can order the hosted Skype for Business services on AltiGen's Cloud Portal.

Related Documentation for Release 8.5

Additional deployment information for Release 8.5 can be found in the following documents:

- *MAXCS 8.5 New Features Guide*
- The *Exchange Integration* chapter in the MAXCS Administration Manual
- *MAXCS 8.5 Deployment Guide*
- *MAXCS 8.5 Upgrade Guide*

Overview

AltiGen's Skype for Business service is supported **only** on AltiGen's hosted Skype for Business offering. Support for Skype for Business hosted by other service providers is not supported.

Requirements

Your environment must meet the following requirements:

- MAXCS 8.5 must already be installed.
- Your Unified Communications (UC) account must already be configured, and you must be able to log in as a Skype for Business user and use the basic Skype for Business tasks.
- MAXCS must have a public IP address and must be properly configured behind NAT. See the next section for instructions.
- The MAXCS server must have a public FQDN. If don't have an existing domain, you will need register a domain from a Domain Name Registrar in order to obtain a public domain. You must create an SRV (Service Record); see page 4 for instructions.

Configure MAXCS Behind NAT

You need to configure MAXCS and the NAT router so that MAXCS works properly behind NAT.

Important! If your firewall/NAT router supports SIP, you must FULLY disable this feature on the firewall/NAT router. If you do not disable the feature, then conflicts may occur between MAXCS and the firewall/NAT router. Those conflicts may cause remote IP phones to not behave properly.

1. Make sure the MAXCS system uses a private *static* IP address, for example, 10.10.0.8. Do *not* use DHCP on the MAXCS system.

2. In *Enterprise Manager*, define the range of the local IP addresses. Make sure the MAXCS system is included in the range. If the range is not defined correctly, IP phones will not work.

3. Set local IP network ranges to private. Multiple private networks can be added.

4. On the *IP Networks* tab, in the *NAT Support* group:

   - Check **Enable SIP NAT support**.

   - Enter the Public IP address of the router in the *Public IP Addresses* section.

   - Do not check the **Enable Virtual IP Addresses Support** option.

5. Configure the NAT/firewall to forward TCP ports 10025, 10027, 10032, 10037, 10050, 10064, 1720 and UDP ports 69, 5060, 10060 to MAXCS.

6. Configure the NAT router to forward to MAXCS UDP ports 49152 ~ 49152 + ipresno * 2 where:

   - *ipresno* is the number of the IP resource channels in the system

   For the MAX1000 system, it would be UDP ports from 49152~49211 (30 IP resource channels).

   An easy way to find out the RTP/TCP port ranges for SIP is to look in the *Current Resource Statistics* window in MAXCS Administrator (**View** > **Current Resource Statistics**). All ports are listed in the Local Ports column.

Create an Address Record and SRV Records

An SRV (Service) record provides information on available services for your systems, most commonly used with SIP configuration. You will create one or more SRV records. You will also create an A (Address) Record, which is used to point your host name or domain name to an IP Address.

In this example, *[yourdomainname]* is used as the domain of your company.

1. Work with your Domain Name Registrar to set up an A Record that points to the IP address of your MAXCS server. We recommend that you use 'maxcs' as the host portion of that A Record. Here is the recommend format:

   ```
   maxcs.[yourdomainname].com
   ```

2. Work with your Domain Name Registrar to set up one or more SRV records.

   There can be multiple SRV records of the same name; if so, then the priority and weight values of those records determine how calls are distributed. Here is the format:

   ```
   _sip._udp.maxcs.[yourdomainname].com
   weight:  10
   priority:  10
   target:  maxcs.[yourdomainname].com
   port:  10060
   ```

   Where:

   _sip._udp.maxcs.*[yourdomainname]*.com = tells how to deliver UDP SIP calls to the MAXCS server.

   weight = A relative weight for records with the same priority, higher values are preferred. We recommend that you set this to 10.

   priority = The priority of the target host. The lower the value in the priority field, the more preferable the associated target. 0 is the highest priority (lowest number). We recommend that you set this to 10.

target = This should be the A Record that you set up in step 1. It points to the IP address of your MAXCS server.

3. After the record has been created, it may take several hours for the propagation process to finish. The configuration will not work properly until the FQDN is fully propagated.

4. At this point, **you must contact your AltiGen Skype for Business Hosting team** to configure routing policies for outbound Skype for Business calls through MAXCS.

Configure MAXCS

1. On the MAXCS server, open a command line. Type following instruction:

    nslookup maxsbc.sfbhosting.com
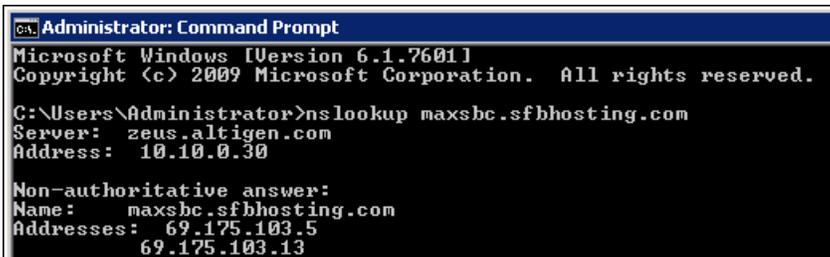
    ```
    Administrator: Command Prompt
    Microsoft Windows [Version 6.1.7601]
    Copyright (c) 2009 Microsoft Corporation.  All rights reserved.

    C:\Users\Administrator>nslookup maxsbc.sfbhosting.com
    Server:  zeus.altigen.com
    Address:  10.10.0.30

    Non-authoritative answer:
    Name:    maxsbc.sfbhosting.com
    Addresses:  69.175.103.5
                69.175.103.13
    ```

    Figure 1: The command returns two addresses

    The command will return two addresses. In our example, the addresses are 69.175.103.5 and 69.175.103.13.

    Write down the addresses that your system returns. You will create new entries in the IP dialing table for each one, during step 4.
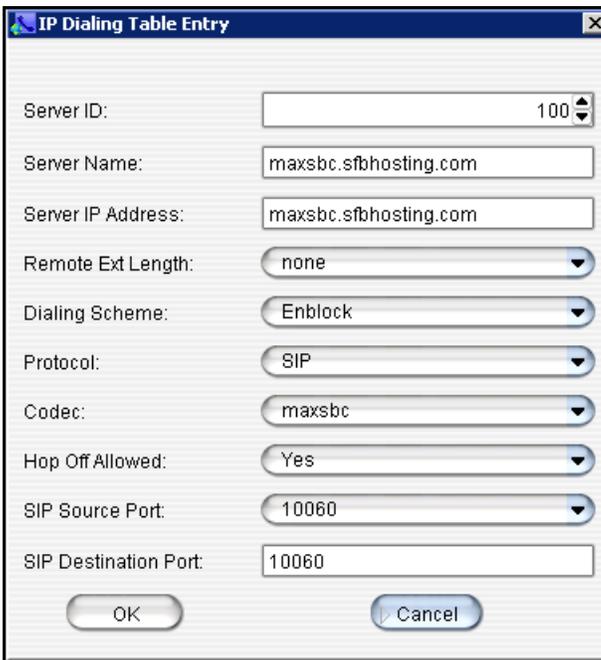
2. In MAXCS Administrator, select **VoIP** > **Enterprise Network Management**. Click the **Codec** button at the top. Create a profile called *maxsbc* with following settings:
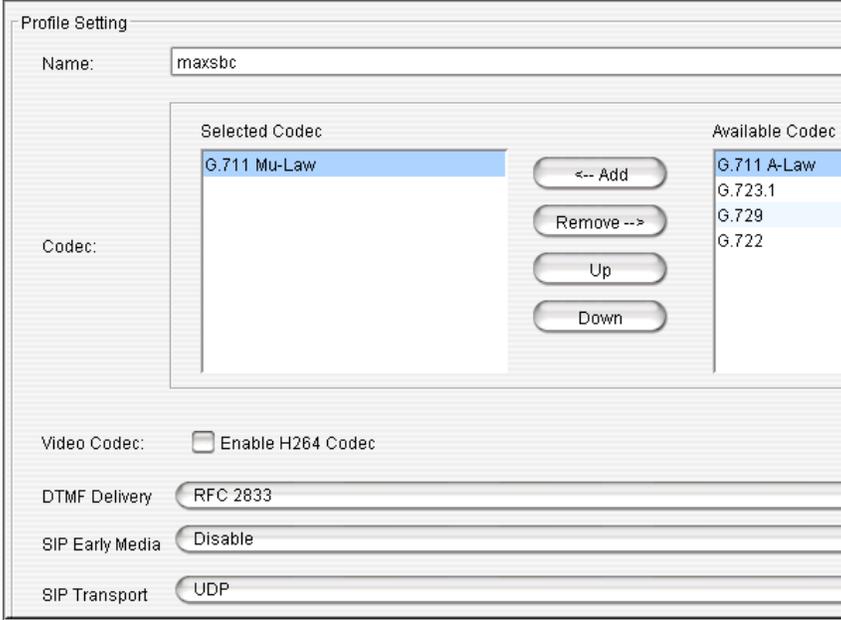
Figure 2: A new codec profile "maxsbc"

3. In the IP Dialing table, add an entry. The *Server Name* and *Service IP Address* entries MUST exactly match the entries in the following figure.

Figure 3: New entry in the IP Dialing Table

4. In the IP Codec table, create two new entries; one entry for each of the two addresses that were returned from the command line that you ran in step 1 on page 5. In our example, 69.175.103.5 is one of the IP addresses that were returned in step 1.
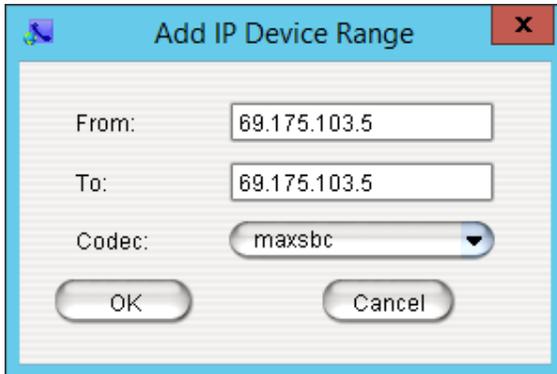

Figure 4: Create two new entries in the IP Codec table, one for each returned address in step 1

5. In MAXCS Administrator, select **System** > **Unified Communication Configuration**. Check the option **Enable UC Integration** and set your trunk access code.
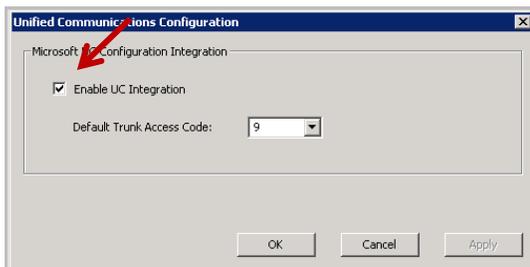

Figure 5: The System menu

*Figure 6: Enable UC integration for the MAXCS system*

5. Contact your AltiGen SfB hosting team to configure routing for outbound SfB calls through MAXCS.

Configure User Call Integration

There are two different choices for call integration. Choose the configuration that works best for users in your organization.

The two configuration options differ only in how **incoming** PSTN and MAXCS extension-to-extension calls are routed. (There is no difference in how *outgoing* calls are handled.)

- Configuration A: Incoming calls go to the user's **MAXCS extension**

- Configuration B: Incoming calls **are forwarded to the Skype for Business client** (not supported for Workgroup or Huntgroup members)
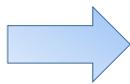
Important!   When configuring MAXCS users who are members of a Workgroup or a Huntgroup, **do not use Configuration B**. These users must be set up with Configuration A. Otherwise, Workgroup and Huntgroup calls will not be routed to them.
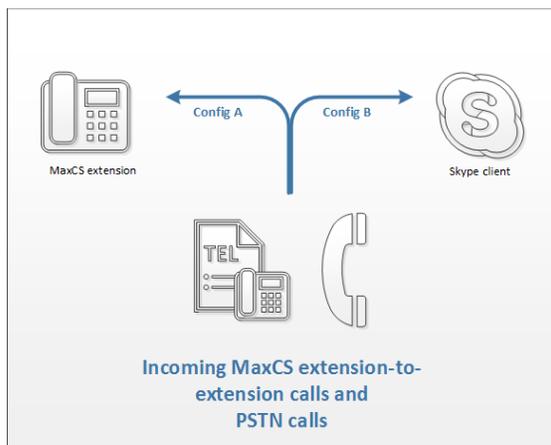
Figure 7: Two options for configuring incoming PSTN and MAXCS extension calls

Configuration A

Configuration A will send incoming PSTN and MAXCS extension-to-extension calls to the user's MAXCS extension.

1. In MAXCS Administrator, select **PBX** > **Extension Configuration**.

2. In the left panel, select the extension. (Our example uses extension 228.) On the *General* tab, set the following parameters:

   - Check the option **Enable Unified Communications**.

   - For the *SIP URI field*, enter the corresponding SIP URI. (Our example is sip:john@qualtigen.com.)

   - Make sure that Line URI matches the Skype for Business Account's Line URI. In our example, this is +14085979028.
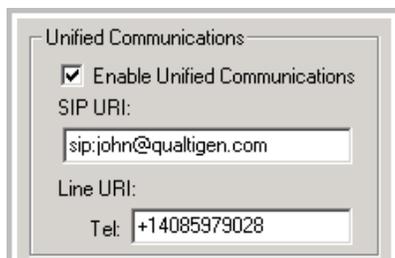
Figure 8: Enable UC for a user

3. Log into MaxAgent/MaxCommunicator as this user. You should see the presence updating.
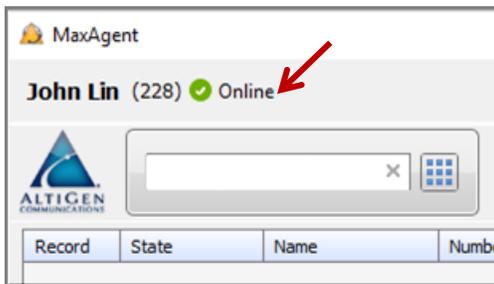

Figure 9: Log into the client and check that the user's presence updates

Configuration B

Configuration B will forward incoming PSTN and MAXCS extension-to-extension calls to the Skype for Business client.

Note: Do not use this configuration for any users who are members of a MaxCS Workgroup or Huntgroup. If you do so, those users will not receive Workgroup or Huntgroup calls.

The settings for Configuration B are the same as for Configuration A, with one additional parameter:

- For the extension, on the *Answering* tab, set the *Enable Forward to* option to **UC Client**. You must also set the Ring Time option to a shorter period than is set in the user's Skype for Business client (**Tools** > **Options** > **Call Forwarding**), so that MaxCS can handle the RNA condition.
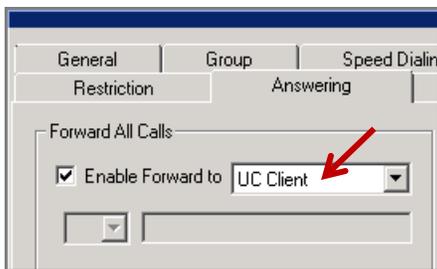

*Figure 10: An extra option must be set to configure a user for Configuration B*

Routing Skype for Business Unanswered Calls to MaxCS Voicemail

This feature applies only those organizations which do not have voicemail integration with Exchange online.

You can configure extensions so that unanswered Skype for Business incoming calls will be forwarded to the extension's MaxCS voicemail. One limitation of this feature is that users will not be able to access their MaxCS voicemail messages from their Skype for Business clients.

To configure this forwarding, the user follows these steps:

1. In the Skype for Business client, choose **Tools** > **Options**.

2. In the left menu, select **Call Forwarding**.

3. Click the **Unanswered calls will go to** option.
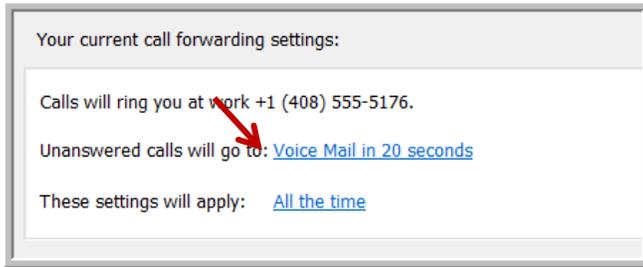
4. In the next dialog box, select **New Number or Contact**.

5. In the panel that opens next, enter your extension number preceded by an asterisk character (*). For example, if your MaxCS bound extension number is 678, you would enter *678.
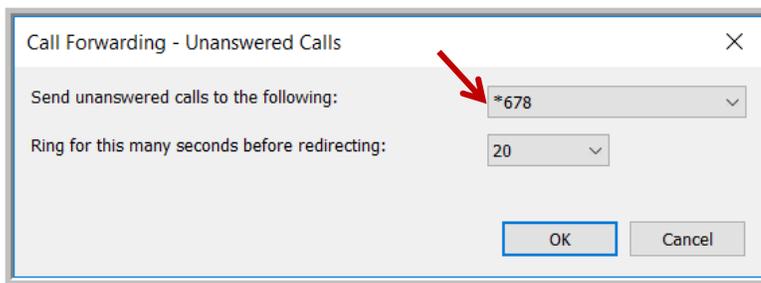
6. Specify how many seconds to wait before forwarding the call.

Verification

Verify that the configuration works correctly.

1. Log in as a Skype for Business user. Place outbound Skype for Business calls and make sure that the calls go through the MAXCS server.

2. Place test calls to verify that inbound calls are correctly routed correctly. Check that inbound calls to both Configuration A and Configuration B users work correctly.

Other User UC Options

For descriptions of other user UC options, including the user option to dock the Skype for Business client window and the option to map an agent's voicemail greetings to Presences, refer to the MAXCS 8.5 client documentation (the MaxAgent Manual or the MaxCommunicator Manual).

Operational Limitations

In some cases, phones may not hang up when the user end a Skype for Business conference call. The phone will hang up once the last conference participant ends the conference call.

For a full list of open issues in this release, refer to the readme files.