

CloudBond™ 365

Partner Guidelines for Verifying Third-Party Applications

Table of Contents

1	General Description	7
2	CloudBond 365 Hardware Platform	9
3	CloudBond 365 Application Building Blocks	11
3.1	CloudBond 365 Available ABBs.....	12
4	Responsibility.....	13
4.1	CloudBond 365 Backup and Restore.....	13
5	Test Network Environment.....	15
6	Skype for Business Server Stress and Performance Tool	17
7	Preparing the Test Environment.....	19
7.1	Preparing CloudBond 365.....	19
7.2	Downloading Pre-defined Load Test Files	19
7.3	Configuring the Test Environment.....	19
8	Add Your Application to CloudBond 365	27
9	Starting the Load Test	29
10	Collecting Key Health Indicators	33

This page is intentionally left blank.

Notice

Information contained in this document is believed to be accurate and reliable at the time of printing. However, due to ongoing product improvements and revisions, AudioCodes cannot guarantee accuracy of printed material after the Date Published nor can it accept responsibility for errors or omissions. Updates to this document can be downloaded from <https://www.audiocodes.com/library/technical-documents>.

This document is subject to change without notice.

Date Published: June-21-2018

WEEE EU Directive

Pursuant to the WEEE EU Directive, electronic and electrical waste must not be disposed of with unsorted waste. Please contact your local recycling authority for disposal of this product.

Customer Support

Customer technical support and services are provided by AudioCodes or by an authorized AudioCodes Service Partner. For more information on how to buy technical support for AudioCodes products and for contact information, please visit our Web site at <https://www.audiocodes.com/services-support/maintenance-and-support>.

Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Important Note



Note: OPEN SOURCE SOFTWARE. Portions of the software may be open source software and may be governed by and distributed under open source licenses, such as the terms of the GNU General Public License (GPL), the terms of the Lesser General Public License (LGPL), BSD and LDAP, which terms are located at <https://www.audiocodes.com/services-support/open-source/> and all are incorporated herein by reference. If any open source software is provided in object code, and its accompanying license requires that it be provided in source code as well, Buyer may receive such source code by contacting AudioCodes, by following the instructions available on AudioCodes website.

Document Revision Record

LTRT	Description
26652	Initial document release.

Documentation Feedback

AudioCodes continually strives to produce high quality documentation. If you have any comments (suggestions or errors) regarding this document, please fill out the Documentation Feedback form on our Web site at <https://online.audiocodes.com/documentation-feedback>.

1 General Description

AudioCodes CloudBond™ 365 is a modular, adaptable solution for data centers, customer premises and branches. A versatile all-in-one Microsoft Skype for Business appliance designed for hybrid environments, it combines the best of Skype for Business Server, Phone System in Office 365 (formerly known as Cloud PBX) and the service provider's voice services.

The CloudBond 365 family offers a selection of models for different scales, capacities and deployment typologies. CloudBond 365 enables PSTN/SIP trunk connectivity services for Skype for Business Online as well as for future Microsoft Teams.

Partner and integrators may host additional third-party applications on top of CloudBond 365 within predefined virtual machines called Application Building Blocks.

This document guides partners on how to prepare the CloudBond 365 environment for testing, how to run the load, and how to analyze the results.



Important: AudioCodes does not take any responsibility for the specifications and performance of third-party applications running on the CloudBond 365 platform.

This page is intentionally left blank.

2 CloudBond 365 Hardware Platform

Currently, there are three hardware platforms for CloudBond 365 which are relevant when adding third-party applications:

■ **CloudBond 365 Standard Plus Edition:**

- Capacity for up to 200 users
- Skype deployment combined with Gateway and SBC functionality
- Skype Standard Edition with SQL Server and Windows Server and Reverse Proxy
- Additional virtual machine for trusted applications

■ **CloudBond 365 Pro Edition:**

- Capacity for up to 500 users
- Skype deployment combined with Software SBC functionality
- Skype Standard Edition with SQL Server, Windows Server and Reverse Proxy
- Additional virtual machine for trusted applications

■ **CloudBond 365 Enterprise Edition:**

- Capacity for up to 5,000 users (Media Bypass only)
- Skype deployment combined with Software SBC functionality
- Skype Standard Edition with SQL Server, Windows Server and Reverse Proxy
- Additional virtual machine for trusted applications

This page is intentionally left blank.

3 CloudBond 365 Application Building Blocks

The available resources on CloudBond 365 appliance vary per platform and user count. Three Application Building Blocks (ABB) sizes can be defined:

- Small (ABB1)
- Medium (ABB2)
- Large (ABB3)

A combination of ABBs is also possible within available resources.

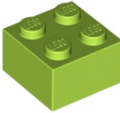

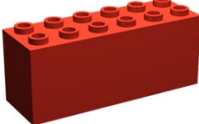
Trusted Application boundaries must be defined per ABB by the vendor, based on Microsoft Skype for Business Stress and Performance Tool.

The same ABB on different hardware platforms provide different results due to differences in CPU, disk and cache size.

Before starting the test process, vendors must define which ABB and CloudBond 365 platform is designated for testing and must follow the rule that if the application is approved on ABB on CloudBond 365 Pro or Enterprise Edition, it is approved only on these two platforms and not on the Standard Plus platform. However, on the other hand, in the event where it is approved on the Standard Plus platform, it is also automatically approved on the Pro and Enterprise Editions as well.

The figure below illustrates the CloudBond 365 ABB specifications.

Figure 3-1: CloudBond 365 Application Building Blocks (ABB)

Type	Specifications on Standard+	Specifications on Pro & Enterprise
 Small	2-cores 4 GB memory 40 GB hard disk space	1-core 4 GB memory 40 GB hard disk space
 Medium	Not available	2-cores 4 GB memory 80 GB hard disk space
 Large	Not available	4-cores 8 GB memory 120 GB hard disk space

3.1 CloudBond 365 Available ABBs

The table below lists CloudBond 365 available ABBs.

Table 3-1: CloudBond 365 Available ABBs

CloudBond 365 Edition	Max. Users	CloudBond 365 Configuration SRV: Type/CPU/MEM	ABB Options
CloudBond 365 Standard Plus	200	<ul style="list-style-type: none"> ▪ Host(DC) ▪ VM1: FE/4/10G ▪ VM2: Edge/4/8G ▪ VM2: RP/4/4G 	1 x ABB1
CloudBond 365 Pro	200	<ul style="list-style-type: none"> ▪ Host(Hyper-V) ▪ VM1: DC/2/4G ▪ VM2: FE/3/10G ▪ VM3: Edge/2/8G ▪ VM4: RP/2/2G ▪ VM5: SBC/1/4G 	1 x ABB1 1 x ABB2
CloudBond 365 Pro	500	<ul style="list-style-type: none"> ▪ Host(Hyper-V) ▪ VM1: DC/2/4G ▪ VM2: FE/3/10G ▪ VM3: Edge/2/8G ▪ VM4: RP/2/2G ▪ VM5: SBC/1/4G 	<ul style="list-style-type: none"> • 1 x ABB1 • 1 x ABB2
CloudBond 365 Enterprise	500	<ul style="list-style-type: none"> ▪ Host(Hyper-V) ▪ VM1: DC/2/4G ▪ VM2: FE/3/10G ▪ VM3: Edge/2/8G ▪ VM4: RP/2/2G ▪ VM5: SBC/1/4G 	<ul style="list-style-type: none"> • 4 x ABB1 • 3 x ABB2 • 1 x ABB3 • Combination of ABB1/2/3
CloudBond 365 Enterprise	1000	<ul style="list-style-type: none"> ▪ Host(Hyper-V) ▪ VM1: DC/2/8G ▪ VM2: FE/5/20G ▪ VM3: Edge/3/16G ▪ VM4: RP/2/2G ▪ VM5: SBC/1/4G 	<ul style="list-style-type: none"> • 3 x ABB1 • 2 x ABB2 • 1 x ABB3 • Combination of ABB1/2/3
CloudBond 365 Enterprise	2500	<ul style="list-style-type: none"> ▪ Host(Hyper-V) ▪ VM1: DC/2/8G ▪ VM2: FE/8/20G ▪ VM3: Edge/3/16G ▪ VM4: RP/2/2G ▪ VM5: SBC/1/4G 	<ul style="list-style-type: none"> • 2 x ABB1 • 1 x ABB2



Note: The Microsoft Hyper-V virtual machines resources (CPU/Memory) must be set according to the number of users.

4 Responsibility

AudioCodes is responsible for performing load testing on CloudBond 365 according to the profile detailed in Chapter 9 and for defining the free resources (available ABBs) per CloudBond 365 Appliance according to user count.

The Partner is responsible for preparing the test environment and performing combined load testing on CloudBond 365 and on its application, and for defining the supported setup when hosted by CloudBond 365.

Partners may define new profiles in case they are more suitable for its application usage. In this case, a note must be added regarding the relevant profiles.



Note: Do not use the Microsoft SQL Servers (Standard Edition and SQL Server Express) that are pre-installed on CloudBond 365 without AudioCodes approval.

4.1 CloudBond 365 Backup and Restore

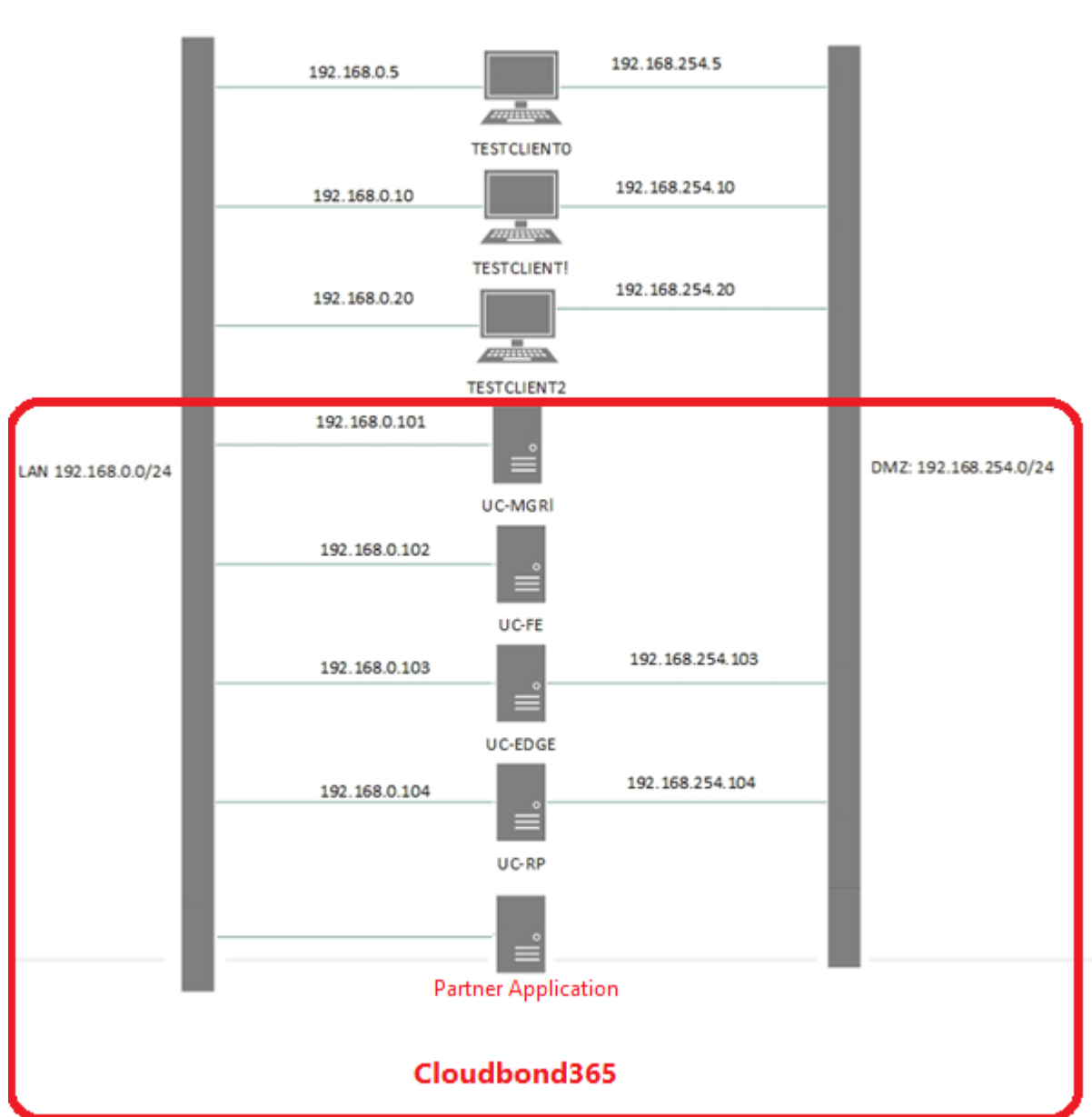
CloudBond 365 provides full backup and restore capability (customer-ordered feature). If you do employ this capability, to back up the entire CloudBond 365 including the ABBs, you must run backup and restore tests that include the entire CloudBond 365 and the vendor applications.

This page is intentionally left blank.

5 Test Network Environment

The network environment for load testing is designed as shown in the following figure.

Figure 5-1: Load Testing Network Environment Block Diagram



The upper three servers (TESTCLIENT0-2) will run on different hardware (physical or virtual) and will perform the load testing. The Partner is responsible for installing the Windows operating system (Windows 2012 R2) and for loading tools on these servers according to the instructions in Chapter 7.

The hardware requirements for the test servers include the following:

- **TESTCLIENT0:** 8 cores, 12G RAM
- **TESTCLIENT1:** 8 cores, 12G RAM
- **TESTCLIENT2:** 4 cores, 8G RAM

This page is intentionally left blank.

6 Skype for Business Server Stress and Performance Tool

The Skype for Business Server 2015 Stress and Performance Tool is used to perform load testing on the environment and can be downloaded from <https://www.microsoft.com/en-us/download/details.aspx?id=50367>. Full information on performance testing is available at <https://technet.microsoft.com/en-us/library/mt631400.aspx>.

During the load from the Skype for Business Server 2015 Stress and Performance Tool, Key Health Indicators (KHI) are collected from the following three servers being tested:

- Host server running the virtual machines (UC-HOST.cloudbond365.local)
- Skype for Business Server 2015 Front End Server (UC-FE.cloudbond365.local)
- Skype for Business Server 2015 Edge Server (UC-EDGE.cloudbond365.local)

The KHI Performance Monitor Data Collector sets are provided by Microsoft as part of the “Key Health Indicators for Lync Server 2013 and Skype for Business Server 2015”, which can be downloaded from <https://www.microsoft.com/en-us/download/details.aspx?id=46895>.

This page is intentionally left blank.

7 Preparing the Test Environment

This chapter describes how to prepare the test environment.

7.1 Preparing CloudBond 365

A CloudBond 365 system is already installed as a standalone system when shipped from AudioCodes, with the same IP addresses as shown in [Figure 5-1](#) and is ready for use.

The Hyper-V Virtual machines resources (CPU/Memory) must be set according to the number of users and CloudBond 365 platform, as shown in [Table 3-1](#).

In the event of re-imaging the CloudBond 365 system, run the installation again. The default options will create the CloudBond 365 as received from production. Follow the step-by-step instructions described in the CloudBond 365 documentation for the re-image and re-install process:

<https://www.audiocodes.com/library/technical-documents?productFamilyGroup=1655&productGroup=8540>

If you need to make changes (not recommended), for example, to the IP address, certificate, and SIP domain, refer to the CloudBond 365 documentation for full instructions.

7.2 Downloading Pre-defined Load Test Files

Download the pre-defined load-test files from [here](#).

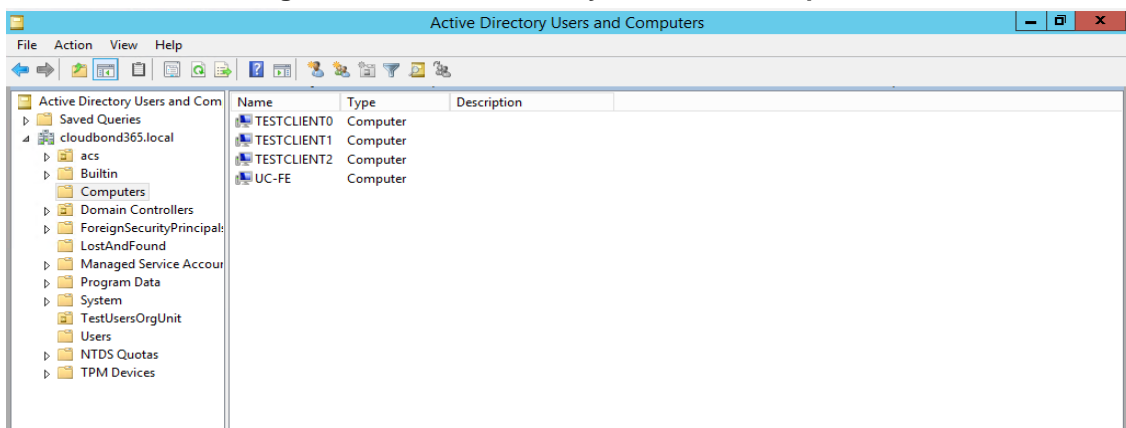
7.3 Configuring the Test Environment

Follow the instructions below for configuring the test environment.

➤ **To configure the test environment:**

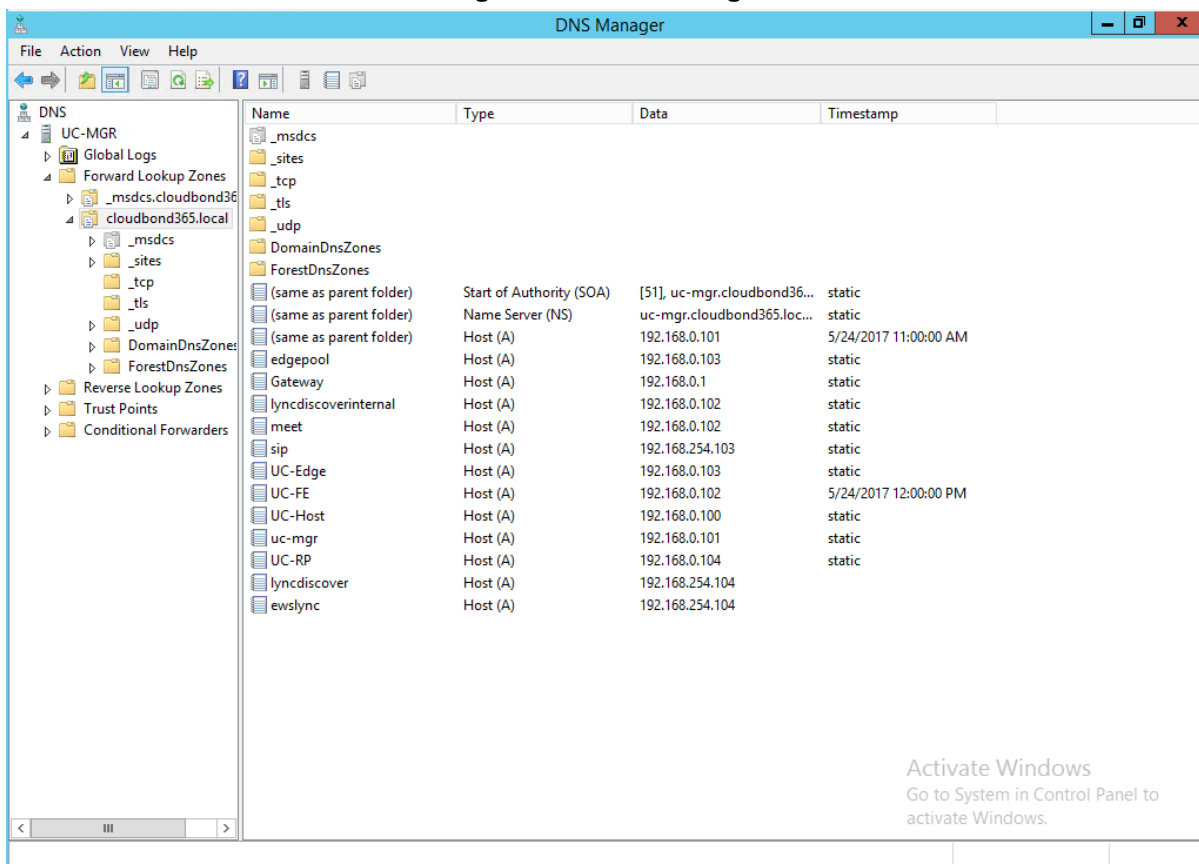
1. Make sure that the Time, Date and Time-Zone on the servers under testing match the actual time. This verification prevents related authentication and certificate issues. Make sure that you are using the latest CloudBond 365 version, which can be downloaded from http://downloads-audiocodes.s3.amazonaws.com/Download/UMP365_IW.html.
2. Connect the CloudBond 365 to the network. Note that there are two NICs -- one for LAN and one for DMZ. (Refer to the CloudBond 365 manual to determine the correct NIC position according to the CloudBond 365 platform.)
3. Join the TESTCLIENT0, TESTCLIENT1 and TESTCLIENT2 servers to the CloudBond365.local domain (the server under test) so that the stress test clients trust the certificate authority that is used within the network and query the same DNS server for name resolution.

Figure 7-1: Active Directory Users and Computers



4. Install the Skype for Business Server 2015 Stress and Performance Tool on TESTCLIENT0, TESTCLIENT1 and TESTCLIENT2 servers, by running the CapacityPlanningTool.msi application (<https://www.microsoft.com/en-us/download/details.aspx?id=50367>).
5. Log in with domain administrator credentials.
6. Turn off the Windows Firewall on TESTCLIENT2.
7. Add all required DNS records to the DNS server running on 192.168.0.101 (UC-MGR.cloudbond365.local), as shown below. Add all TESTCLIENT machines as well.

Figure 7-2: DNS Manager



8. Add the following domain resolving to the hosts file on TESTCLIENT0 and TESTCLIENT1:


```
192.168.254.103 sip.cloudbond365.local
```
9. Verify there is a successful ping from the TESTCLIENT machines to both the Front End (192.168.0.102) and the Edge (192.168.254.103) servers.
10. Install the Skype for Business Server 2015 Stress and Performance Tool on the Front End server (UC-FE.cloudbond365.local / 192.168.0.102), by running the CapacityPlanningTool.msi application (<https://www.microsoft.com/en-us/download/details.aspx?id=50367>).

- 11. Using the Skype for Business Topology builder, add a default gateway to the Skype for Business topology, pointing to 192.168.0.20 (TESTCLIENT2, which will be used to simulate PSTN calls).

Figure 7-3: Skype for Business Topology Builder

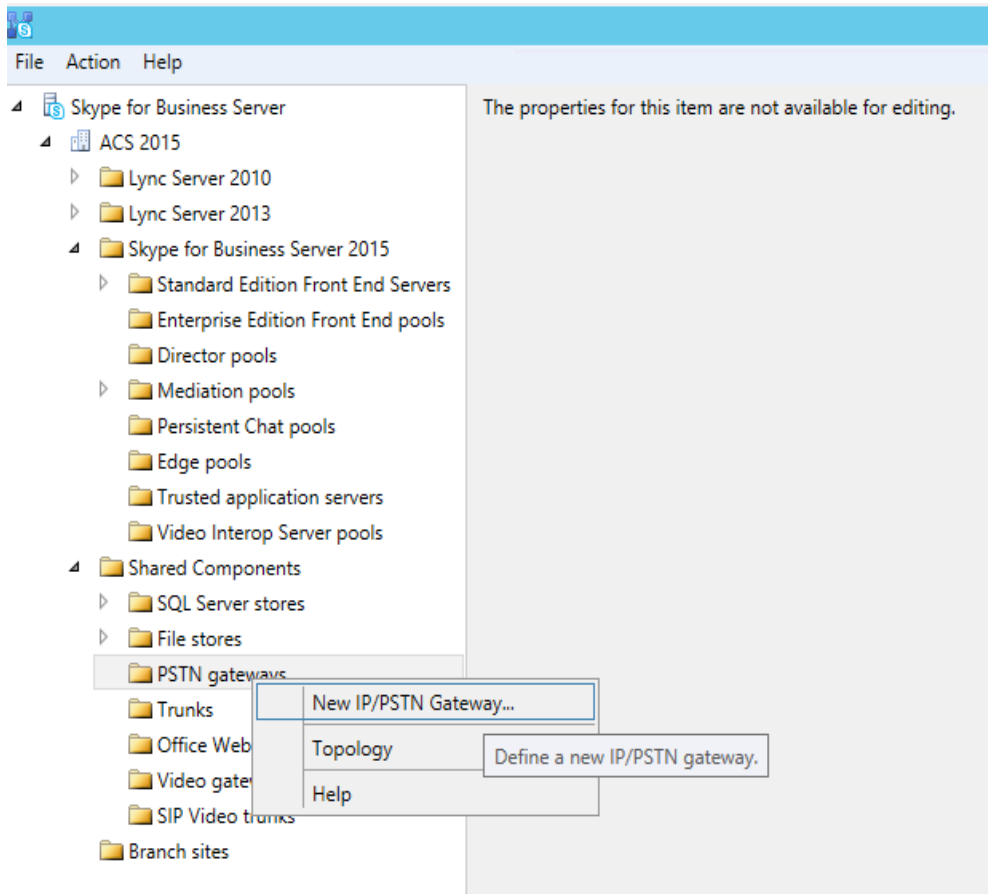


Figure 7-4: Define PSTN Gateway FQDN

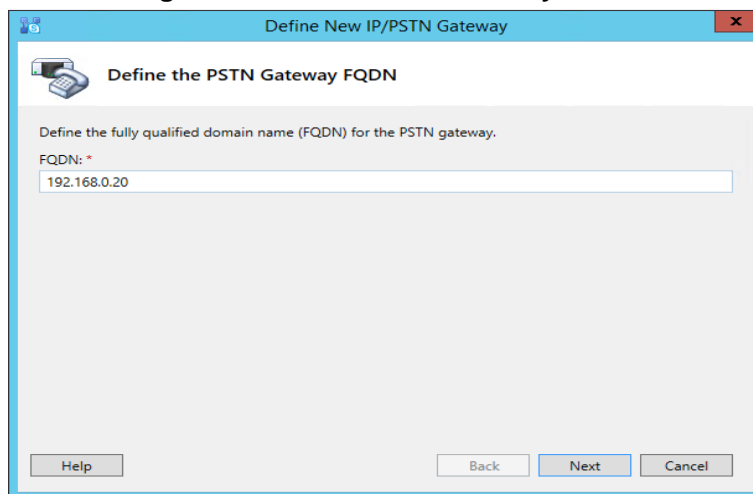


Figure 7-5: Define the IP Address

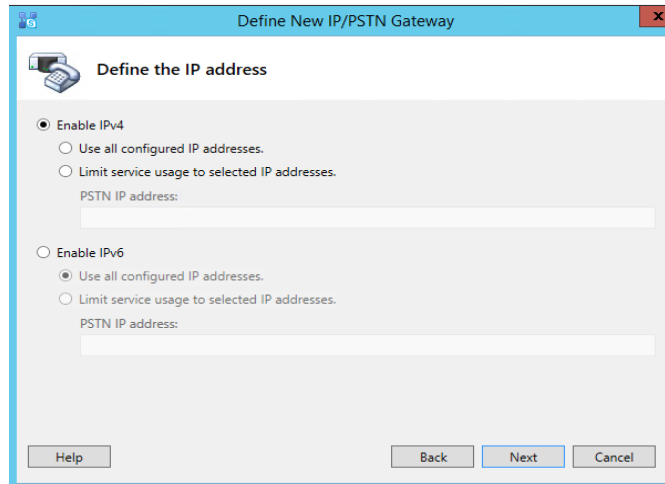
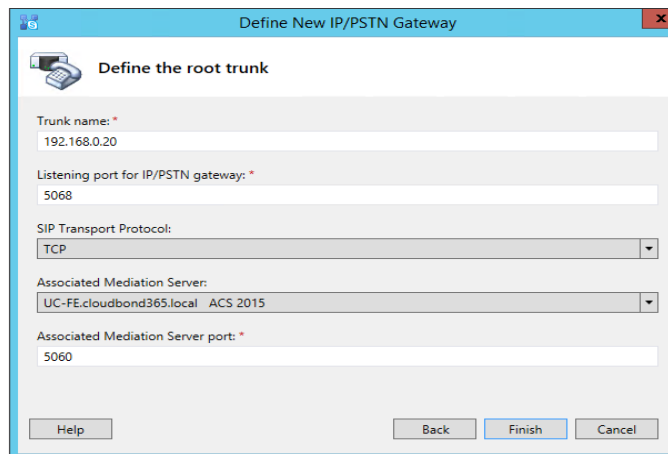


Figure 7-6: Define the Root Trunk



12. When finished, publish the topology and wait for replication to complete on all servers.
13. On the Front End server, open an elevated PowerShell Window (administrator mode) with an account that is a member of the required Skype for Business Security Groups. The default account is **cloudbond365\Administrator** with password **R3m0t3Supp0rt**.
14. To prepare the Skype for Business Server environment for the tests, start the following PowerShell Scripts in the order listed from *C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\Doc*:
 - a. .\ArchivingPolicy.ps1
 - b. .\MeetingPolicy.ps1
 - c. .\ContactsPolicy.ps1
 - d. .\FederationPolicy.ps1
 - e. .\BandwidthPolicy.ps1
 - f. .\RoutingRules.ps1
 - g. .\ConferenceAutoAttendantConfiguration.ps1
 - h. .\CallParkConfiguration.ps1

15. Start the UserProvisioningTool.exe application from *C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\LyncStress1* to prepare the users, contacts and distribution lists that are used during the test, by filling out the information as shown below and clicking the specific **Create** buttons. Alternatively, load the create_5000_users.xml that is supplied (**Configuration > Load Configuration**) and then change the number of users to suit your test needs.

Figure 7-7: Skype for Business Stress Test- User Creation

The screenshot shows the 'User Provisioning Tool' configuration window with the 'User Creation' tab selected. The configuration fields are as follows:

Front-End Pool FQDN	UC-FE.cloudbond365.local
User Name Prefix	testuser
Password	P@ssw0rd
SIP Domain	cloudbond365.local
Account Domain	cloudbond365.local
Organizational Unit	TestUsersOrgUnit
Phone Area Code	+1425
Number of Users	5000
Start Index	0
Voice Enabled	<input checked="" type="checkbox"/>

Buttons: **Create Users** (highlighted with a dashed border), **Delete Users**

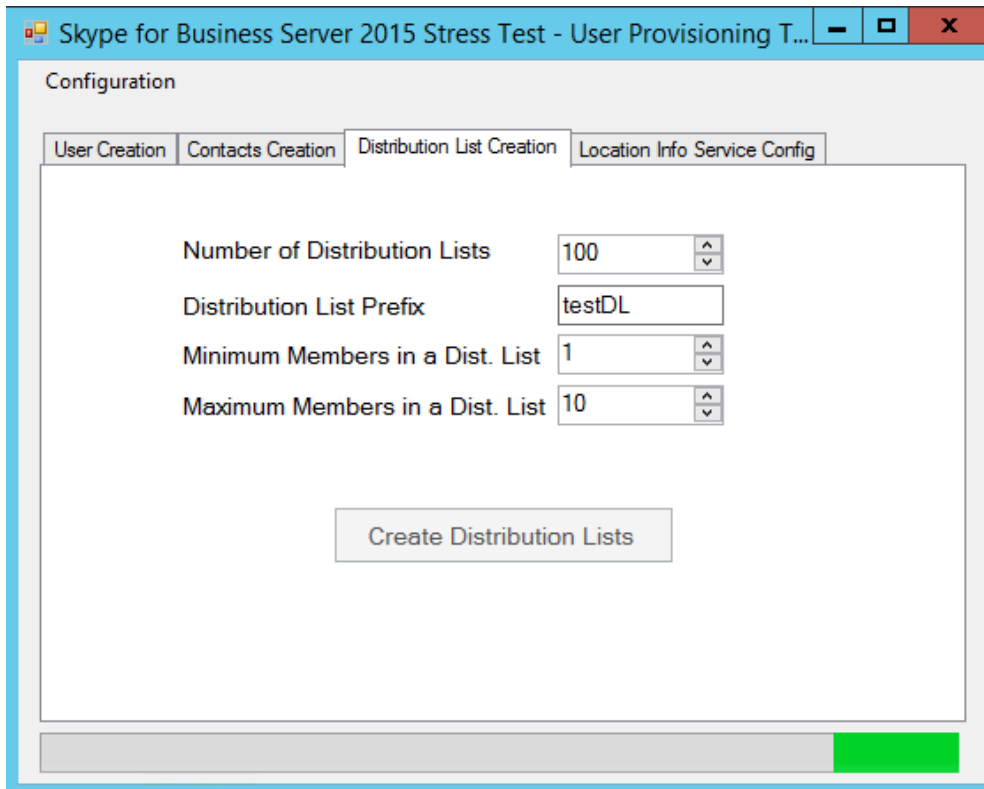
Figure 7-8: Skype for Business Stress Test-Contacts Creation

The screenshot shows the 'User Provisioning Tool' configuration window with the 'Contacts Creation' tab selected. The configuration fields are as follows:

Average Contacts per User	50	<input checked="" type="checkbox"/> Fixed
Average Contact Groups per User	5	
Federated / Cross Pool Contacts Percentage	0	
Federated / Cross Pool User Prefix	federateduser	
Federated / Cross Pool User SIP Domain	fabrikam.com	

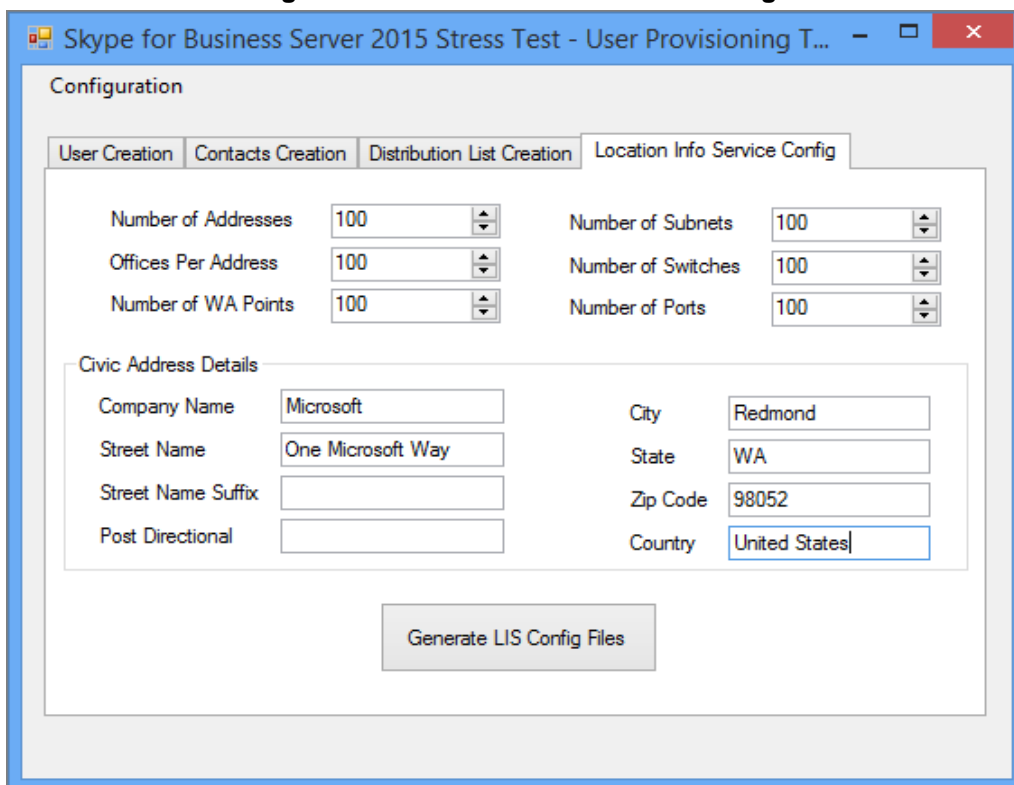
Button: **Create Contacts**

Figure 7-9: Skype for Business Server 2015 Stress Test- Distribution List Creation



- Under the **Location Info Service Config** tab, enter the details, and then click **Generate LIS Config Files**:

Figure 7-10: Location Info Service Config



17. Copy the `C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\Doc\LisConfiguration.ps1` file to the `C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\LyncStress` folder, and then run it from this location using PowerShell in elevated mode (`.\LisConfiguration.ps1`).
18. Open the file `ResponseGroupConfiguration.ps1` from `C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\Doc` to fix the `$agentPrefix`, matching the User Name Prefix as defined in the User Provisioning Tool:

Figure 7-11: ResponseGroup Configuration

```

1 #####
2 # The following script is an example of configuring Skype for Business
3 # Server 2015 for running Skype for Business Server 2015 Load Simulation.
4 # The script needs to be modified to match the actual parameters of the
5 # Skype for Business Server 2015 Deployment. The example is not intended as
6 # an example of all the features of the component rather an example of how
7 # Skype for Business Server 2015 can be configured to run Skype for Business
8 # Server 2015 Stress and Performance Tool for a specific component.
9 #
10 # The script is provided "as is" without any warranties or guarantees.
11 #####
12
13 Import-Module SkypeForBusiness
14
15 $d = Get-Date
16 $h=$d.Hour
17 $m=$d.Minute
18 $s = $d.Second
19 Start-Transcript -Verbose -Path: ResponseGroupConfiguration$h$m$s.txt
20
21 # the prefix of the user in the pool
22 $agentPrefix = "contosouser"
23

```

19. Change "contosouser" to "testuser".
20. From `C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\Doc`, run the `.\ResponseGroupConfiguration.ps1` script using PowerShell in elevated mode.

This page is intentionally left blank.

8 Add Your Application to CloudBond 365

The Partner's application runs on a separate virtual machine. Using the Hyper-V Manager, create the extra virtual machine and allocate the resources according to ABB specifications that you wish to test and which is available on the CloudBond 365 platform that you are testing. Configure your application to run the load as shown in [Figure 3-1](#).

This page is intentionally left blank.

9 Starting the Load Test

Make sure the test clients are prepared according to the documentation, which includes installing the Skype for Business Server 2015 Stress and Performance Tool on every client and registering the following two DLLs manually (which can only be done after the \Setup\amd64\vcredist_x64.exe from the Skype for Business Server DVD has been installed):

- `regsvr32.exe /i /n /s 'C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\LyncStress\LyncPerfToolPerf.dll'`
- `regsvr32.exe /i /n /s 'C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\LyncStress\S4Perf.dll'`

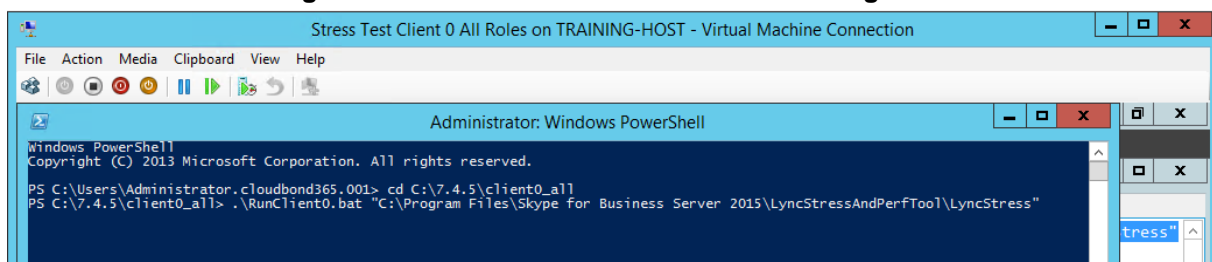
Run the load test for the relevant number of users defined in the Skype for Business User Profile:

```
Voice Conference=10%,
Video Conference=0%
IM conference=10%
PSTN calls=10%,
VoIP (C2C) calls=10%
Contacts per user=50
External (Edge) users=25%
```

➤ To start the load test:

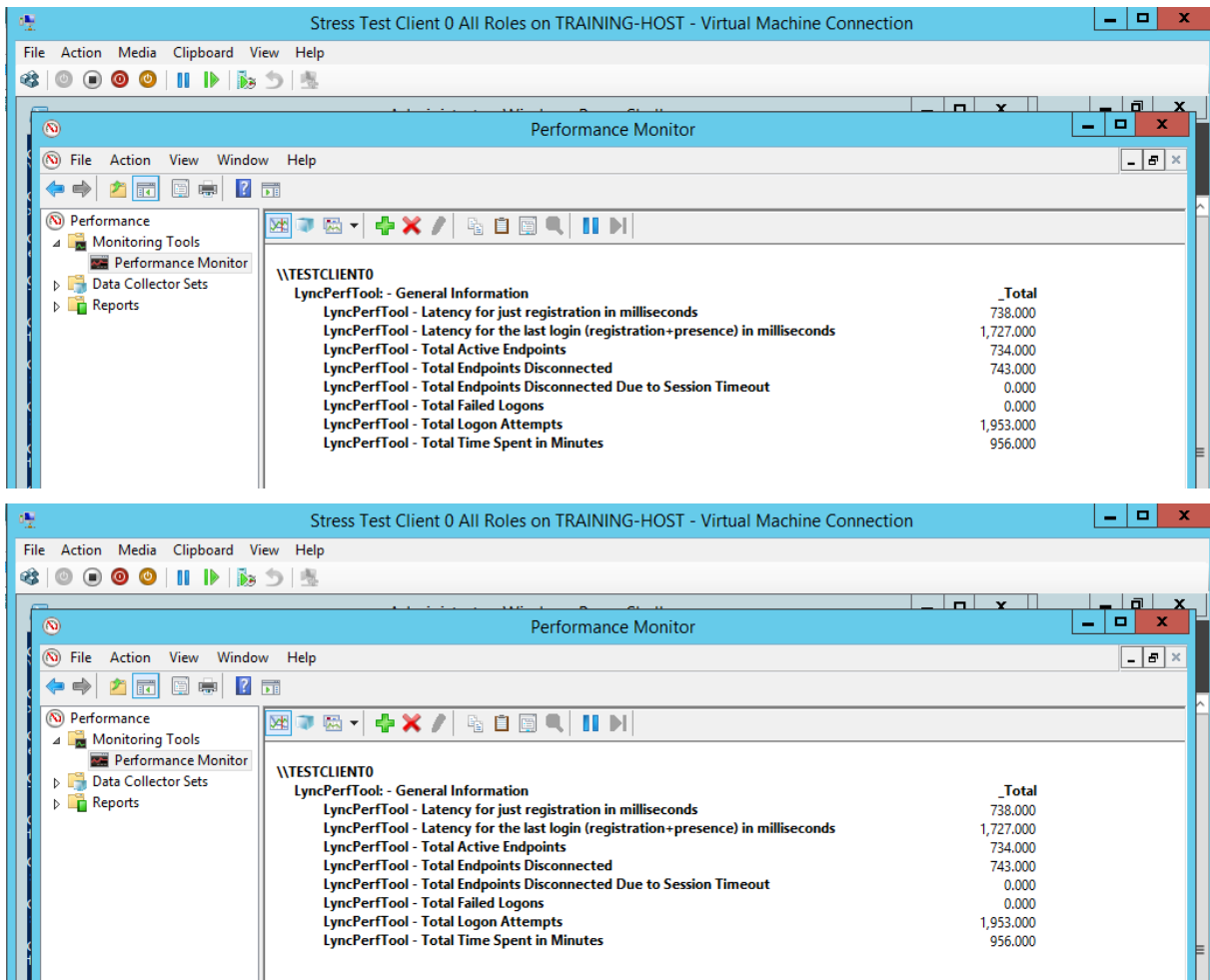
1. Copy the pre-defined load-test files provided by AudioCodes to the corresponding test server (it is recommended to copy these files under the LyncStress folder):
 - For 200/500/1,000 users, there are two load-test folders:
 - ◆ `client0_all` should be run from `TESTCLIENT0`
 - ◆ `client1_pstn` should be run from `TESTCLIENT2`
 - For 2,500 users, there are three load-test folders:
 - ◆ `client0_all` should be run from `TESTCLIENT0`
 - ◆ `client1_all` should be run from `TESTCLIENT1`
 - ◆ `client2_pstn` should be run from `TESTCLIENT2`
2. Start the load by issuing the `.\RunClient<bat_filename>.bat "C:\Program Files\Skype for Business Server 2015\LyncStressAndPerfTool\LyncStress"` command from the location where the files are copied:

Figure 9-1: Stress Test Client Roles on Training Host



- Verify that the endpoints register successfully using the performance monitor application with the LyncPerfTool–General information counters on the client0 and client1:

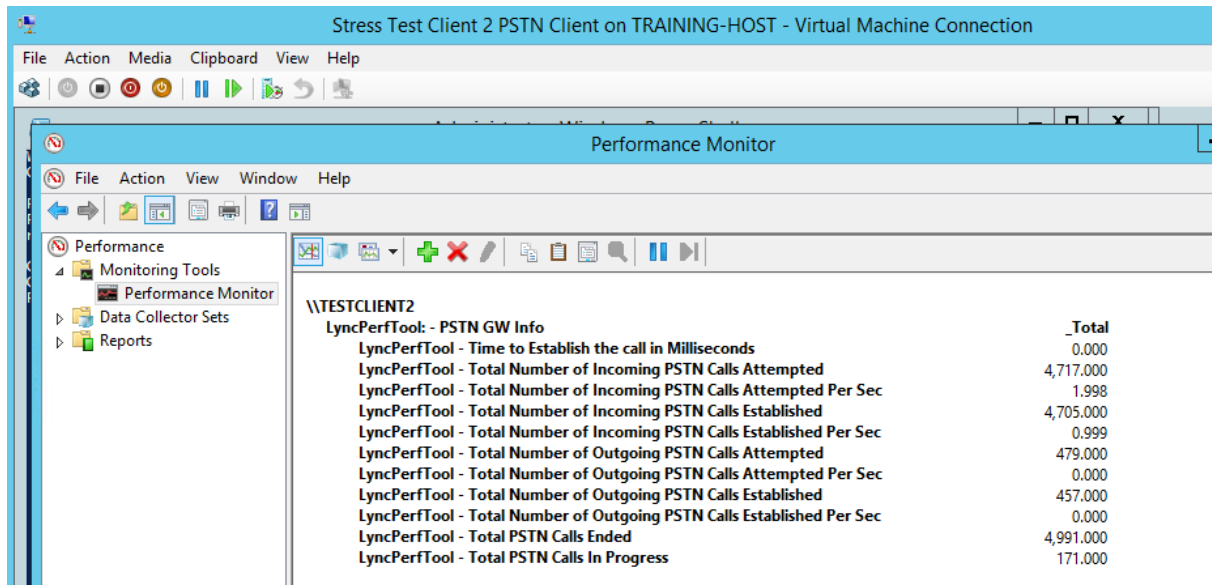
Figure 9-2: Performance Monitors



Total Failed Logons should be 0.

LyncPerfTool-PSTN GW Info on testclient2 should show active PSTN calls.

Figure 9-3: Incoming PSTN Calls Established and Outgoing PSTN Calls Established.



4. Run the load tests on your application and validate that it is successfully loaded.
5. Perform testing with actual Skype clients (calls, conferences, and change presence). Verify that there are no significant delays in response time, call delay, voice quality and conference quality with maximum load.

These test results provide one of the important indications that the system can support the required load.

This page is intentionally left blank.

10 Collecting Key Health Indicators

Due to the fact that a huge load is generated at the startup of the test process, it is best to wait 60 minutes before capturing Key Health data. This will prevent false negatives like the Conference Mcu Allocator Max shown below from appearing in the data, which is caused by too many simultaneous registration actions upon startup.

Figure 10-1: Counters Pivot Table

Counters Pivot Table							
Counter Name \ Counter Instance \ Server Name	Counter Date	KHI	Min	Max	Avg	# Burst	
LS:USrv - Conference Mcu Allocator\USrv - Create Conference Latency (msec)							
LS:USrv - Conference Mcu Allocator							
UC-FE			0.00	12,421.50	154.10	1	
\PhysicalDisk(*)\Avg. Disk sec/Read							
PhysicalDisk(_Total)							
UC-FE			0.00	0.16	0.02	21	
PhysicalDisk(0 C:)							
UC-FE			0.00	0.16	0.02	21	

➤ **To start the KHI collector sets:**

1. Copy the *Create_KHI_Data_Collector.ps1* file (part of “Key Health Indicators for Lync Server 2013 and Skype for Business Server 2015”: <https://www.microsoft.com/en-us/download/details.aspx?id=46895>) to the Host, Front End and Edge Server.
2. Run this file from PowerShell in an elevated window, with the parameter **-version Skype4B**, as shown below. Once the collector set is created, start logging with the command: **logman start KHI**.

Figure 10-2: Edge on UC-HOST

```

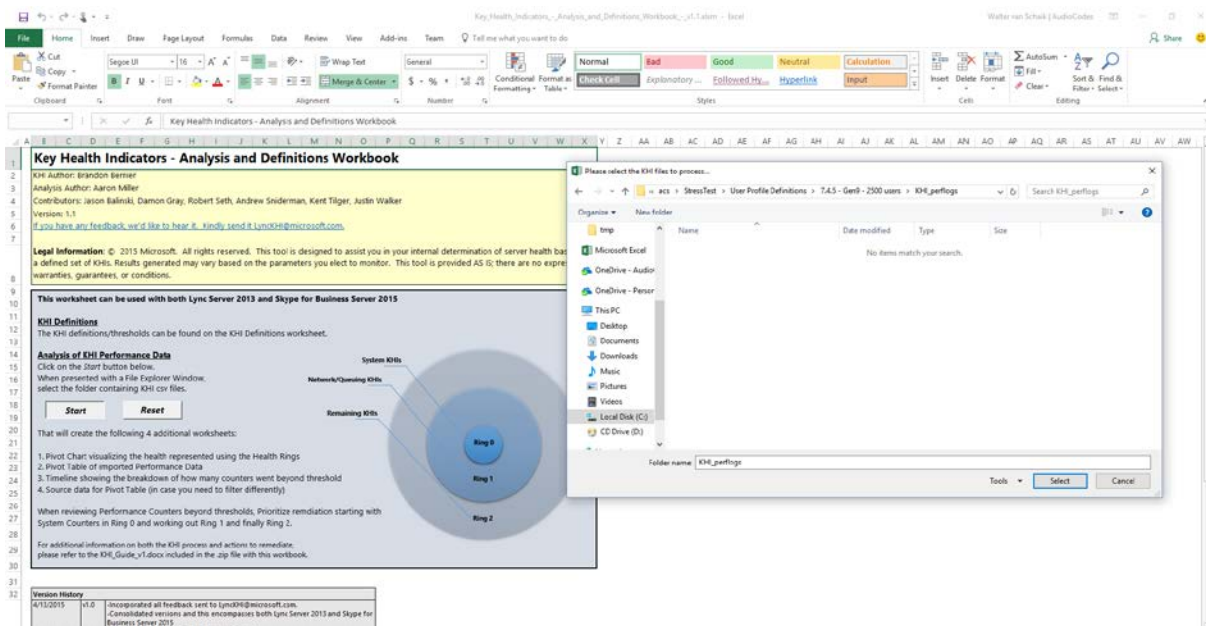
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2014 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> cd C:\KHI_collector
PS C:\KHI_collector> .\Create_KHI_Data_Collector.ps1 -version Skype4B
Creating KHI Data Collector on UC-EDGE.
The command completed successfully.
PS C:\KHI_collector> Logman start KHI
The command completed successfully.
PS C:\KHI_collector> _
  
```

3. Keep the load running for at least 60 minutes, and then stop the data gathering with the **logman stop KHI** command.
4. Collect all .csv files created by this process from the C:\PerfLogs\Admin folder on the Host, Front End and Edge and copy them to a single location on a computer where Microsoft Excel is installed.

- Open the *Key_Health_Indicators_-_Analysis_and_Definitions_Workbook_-_v1.1.xlsm*, and then point it to the location where you stored the three server .csv files, by clicking the **Start** button.

Figure 10-3: Key Health Indicators - CSV File Output



- Under the **Pivots** tab, analyze the average values by using the KHI information from the *KHI_Guide.docx*. There are several KHI errors that are known to occur as a result of the load on CloudBond 365. These errors can be ignored, including:
 - For Enterprise server:
 - Disk read
 - SQL page life expectancy
 - Dbstore queue latency/sproc latency
 - Inoming responses dropped/sec
 - SIP local 503 responses/sec
 - SIP average outgoing queue delay
 - For Pro server:
 - Memory
 - Disk read
 - MSSQL page life expectancy
 - Peers (clients)\SIP - average outgoing queue delay
 - Protocol\SIP - average incoming message processing time
 - Load management\SIP - average holding time for incoming messages
 - For Standard Plus:
 - Disk read
- On the Host, use the performance monitor application to verify that the following performance counter is within the desired threshold (within 70%):


```
HyperV Hypervisor Logical Processor -> % Total Run time
```

This page is intentionally left blank.

International Headquarters

1 Hayarden Street,
Airport City
Lod 7019900, Israel
Tel: +972-3-976-4000
Fax: +972-3-976-4040

AudioCodes Inc.

27 World's Fair Drive,
Somerset, NJ 08873
Tel: +1-732-469-0880
Fax: +1-732-469-2298

Contact us: <https://www.audiocodes.com/corporate/offices-worldwide>

Website: <https://www.audiocodes.com/>

©2018 AudioCodes Ltd. All rights reserved. AudioCodes, AC, HD VoIP, HD VoIP Sounds Better, IPmedia, Mediant, MediaPack, What's Inside Matters, OSN, SmartTAP, User Management Pack, VMAS, VoIPerfect, VoIPerfectHD, Your Gateway To VoIP, 3GX, VocaNom, AudioCodes One Voice and CloudBond are trademarks or registered trademarks of AudioCodes Limited. All other products or trademarks are property of their respective owners. Product specifications are subject to change without notice.

Document #: LTRT-26652

