Quick Start Guide

AudioCodes One Voice for Microsoft® Skype for Business

CloudBond 365
Pro / Enterprise Box Edition

Version 7.0

AudioCodes

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Trademarks

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Abbreviations and Terminology

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

Related Documentation

Document Name
CloudBond 365 Deployment Guide
CloudBond 365 Software Installation Guide
CloudBond 365 Administration Guide

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Documentation Feedback

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1   Introduction

Thank you for purchasing the AudioCodes CloudBond 365™ Pro or Enterprise solution. Please read this document before starting your deployment. This guide provides:

■   Default configuration of the *AudioCodes CloudBond 365™* Pro / Enterprise unit

■   The four steps to deploy the *AudioCodes CloudBond 365™* into an enterprise environment

■   The AudioCodes CloudBond 365™ architecture and an overview of the IP addresses in relation to AudioCodes CloudBond 365™ Skype for Business.

This document is intended as a summary only for use by experienced AudioCodes CloudBond 365™ installers. For detailed instructions on each of the steps refer to the *CloudBond 365 Software Install Guide* and *CloudBond 365 Deployment Guide*.

For the latest documentation go to http://www.audiocodes.com/downloads

Throughout this guide, AudioCodes CloudBond 365™ will be referred to as CloudBond 365.

Figure 1-1: CloudBond 365 Pro / Enterprise Box Edition

> **Note:** The CloudBond 365 Pro and CloudBond 365 Enterprise units look similar externally, but have a label attached to distinguish them, and have different internal components. The Enterprise Box Edition has a higher user capacity than the Pro Box Edition.

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2   CloudBond 365 Licensing

Your CloudBond 365 is normally shipped with software fully installed, and a CloudBond 365 license already applied.

If however, you re-install the CloudBond 365 software, (or purchased hardware and CloudBond 365 software separately) you will need to apply a CloudBond 365 license to make the unit operational.

The first time you access the CloudBond 365 management interface web pages, you will be prompted to upload a license and activate the product.

Figure 2-1: CloudBond 365 Management Interface License Required
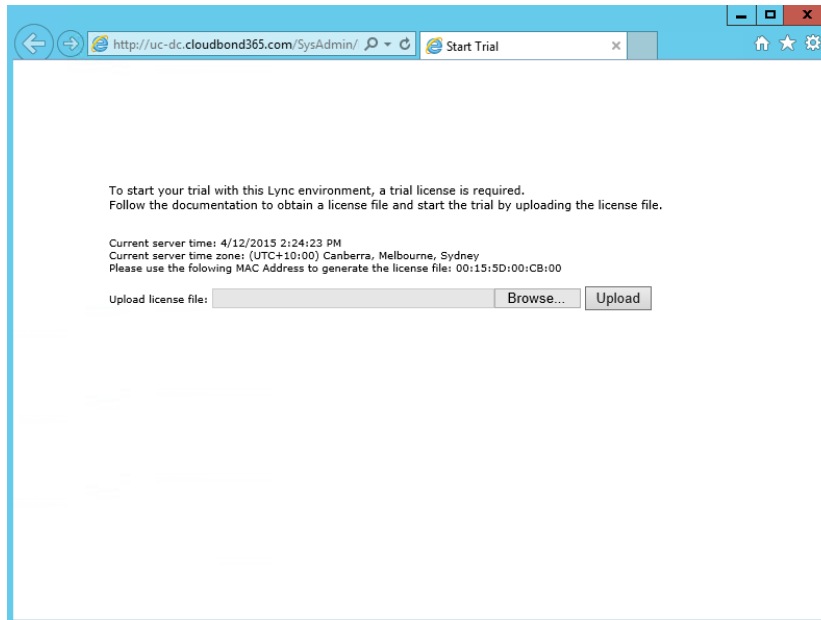
To enable CloudBond 365 for a trial period, visit the CloudBond 365 Trial Activation web site at https://www.audiocodes.com/cloudbond-365 to obtain a trial license.

Please have the following information ready before requesting this license:

■   MAC address of the unit

■   Email address of user within SIP domain (e.g. administrator@XYZ.com)

Figure 2-2: Obtaining a Trial License

> **Note:** Note that the MAC address required for Licensing is displayed on the management interface "First Time" screen, and is also available on the "System Configuration -> Licensing info page" if a License has already been installed.

> **Note:** If Licensing a Branch Pool Appliance, further information is required. Please contact you AudioCodes supplier for further advice.

> **Warning:** Before applying a CloudBond 365 license, it is important to ensure all CloudBond 365 servers (DC, FE, and Edge) all have the correct time zone and date /time set.

To obtain a permanent license, you will need to contact your AudioCodes dealer or reseller.

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3   Default Configuration CloudBond 365 Unit

3.1   Hardware Specifications

CloudBond 365 Pro and Enterprise Box Editions are built on a HP Server hardware platform.

3.1.1   Specifications

The table below shows the CloudBond 365 Pro and Enterprise Box Edition specifications.

Table 3-1: CloudBond 365 Pro and Enterprise Box Edition specifications

Resource	Specification	
	CloudBond 365 Pro Box Edition	CloudBond 365 Enterprise Box Edition
Chassis Type	1RU system	1RU system
CPU	6 Core Processor	2 Processors with 12 Cores
Memory	32GB RAM	64GB RAM
Network	4 x 1 GbE ports	4 x 1 GbE ports
Disk	2HDD with RAID 1	4HDD with RAID 5
Installation Interface	VGA Monitor and Keyboard	VGA Monitor and Keyboard

For further details of the server hardware, refer to *CloudBond 365 Pro and Enterprise Editions Hardware Installation Manual*.

3.2   CloudBond 365 Pro / Enterprise Information

Below are the Default settings for the CloudBond 365 software. During software installation from the USB Software key, you may override many of these defaults. Refer to *AudioCodes CloudBond 365 Software Installation Guide.*

3.2.1   Login

- **Username:** cloudbond365\Administrator
- **Password:** R3m0t3Supp0rt

3.2.2 IP Address Information:

Table 3-2: IP Address Information

Interface	IP Address	Connection Type
UC-DC	192.168.0.100	-
UC-FE	192.168.0.101	-
UC-EDGE	192.168.0.103	internal
UC-EDGE	192.168.254.103	external
UC-RP	192.168.0.104	internal
UC-RP	192.168.254.104	external
Gateway (SBC)	192.168.0.1	-
All subnet masks	255.255.255.0	-

3.2.3 CloudBond 365 Domain Information

- **Internal FQDN:** cloudbond365.com
- **Netbios domain:** cloudbond365

3.2.4 CloudBond 365 Certificate

Private certificates are now dynamically generated during software installation. Refer to the *CloudBond 365 Certificates Configuration Note* for further requirements.

> **Note:** If you intend to use CloudBond 365 for external connectivity (external users, External conferencing, Federation etc.), or to join with an existing domain, you will need to obtain additional certificates.

3.2.5 CloudBond 365 Default Skype for Business Topology

- Default SIP domain:
  - cloudbond365.com
- Simple URL's:
  - https://meet.cloudbond365.com/dialin
  - https://meet.cloudbond365.com/meet
- Standard Edition FE pool:
  - **uc-fe:** cloudbond365.com
  - **External Web:** ewslync.cloudbond365.com

■ Edge Pool:
- **uc-edge:** cloudbond365.com
- **Access Edge:** sip.cloudbond365.com:5061
- **Web Conferencing:** sip.cloudbond365.com:444
- **A/V Edge:** sip.cloudbond365.com:443

> **Note:** PSTN gateway 192.168.0.1 is defined within the Topology, pointing to the SBC address. The SBC however is not configured.

> **Note:** You will need to modify the Skype for Business Topology during deployment when configuring external access or enterprise voice. You must change or add a valid SIP domain for external access. Refer to *CloudBond 365 Changing or Adding a SIP Domain.*

3.3 Optional Session Border Controller

Refer to *Mediant Virtual Edition SBC Installation Manual* for further information.

3.4 Optional Reverse Proxy

Refer to *CloudBond 365 Reverse Proxy using IIS & ASR Configuration Note* for further information.

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4   Changing the Default Configuration

After installation, you can change the IP addresses of the CloudBond 365 system according to the *CloudBond 365 Manual IP Address Assignment* document.

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5   4-Step Deployment of CloudBond 365

Figure 5-1: Front View

Figure 5-2: Rear View

LAN Connector   DMZ Connector

5.1   Step 1: Deploying CloudBond 365

This step describes how to deploy CloudBond 365.

> ➢ **To deploy CloudBond 365:**

1. Refer to *CloudBond 365 Pro and Enterprise Box Editions Hardware Installation Manual* for information about mounting your CloudBond 365 Hardware.

2. If the CloudBond 365 software has not been installed, refer to *CloudBond 365 Software Install Guide.*

3. Connecting to your network:
   a. Connect the corporate network side via the LAN (first NIC) connector on the rear of the CloudBond 365 unit.
   b. Connect the public internet (DMZ) side via the DMZ (second NIC) on the rear side of the CloudBond 365 unit.
   c. Note: The remaining two NIC's may be used for more complex DMZ / Firewall configurations, and will require manual configuration.
   d. Connect a VGA Display, USB Keyboard and Mouse to a KVM or standalone monitor.

4. Verify time and time zone settings on all CloudBond 365 servers.
   a. (Host, Management Server, FE, Edge, SBC, and Reverse Proxy)

5. DNS:
   a. Setup a forward lookup stub-zone for the Enterprise FQDN in the CloudBond 365 DNS pointing to a DNS server in the Enterprise forest.

      b. Setup a forward lookup stub-zone for the CloudBond 365 FQDN in the enterprise DNS pointing to the IP address of the CloudBond 365 virtual Management Server.

      c. On the Enterprise DNS server(s) create the required records for the Skype for Business client to be able to sign on automatically

6. Setup integration with the enterprise forest:

      a. Setup a 2-way forest trust between the CloudBond 365 and Enterprise forest

      b. Allow CloudBond 365 Administrator account to update SIP addresses in Corporate AD

7. Obtain and install replacement certificates for internal use. Refer to: *CloudBond 365 Certificates Configuration Note.*

5.2 Step 2: Configuring CloudBond 365 for Basic Use

This step describes how to configure CloudBond 365 for basic use.

➤ **To configure CloudBond 365 for basic use:**

1. Apply a license file using the CloudBond 365 Management Suite.

2. Import users from Enterprise Active Directory.

3. Install and test the Skype for Business Client application.

5.3   Step 3: Configure for Enterprise Voice

This step describes how to configure for enterprise voice.

➢ **To configure for Enterprise voice:**

1. Configure SBC and/or Voice Gateway.

2. Setup Voice policy's and Voice routing rules.

3. Setup a Skype for Business Dial plan matching an existing Exchange UM Dial plan.

4. Setup response groups.

5. Enable the Enterprise network for Skype for Business phone edition devices.

5.4   Step 4: Configure Skype for Business for External User Access and Federation

This step describes how to configure Skype for Business for external user access and Federation.

➢ **To configure Skype for Business for External User Access and Federation:**

1. Change or add SIP Domain.

Refer to: *CloudBond 365 Changing or Adding a SIP domain.*

2. Obtain public certificates.

3. Setup external access policies.

4. Configure enhanced federation.

5. Configure Reverse Proxy server.

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A   CloudBond 365 Architecture & IP Address Overview

Figure A-1: CloudBond 365 Network
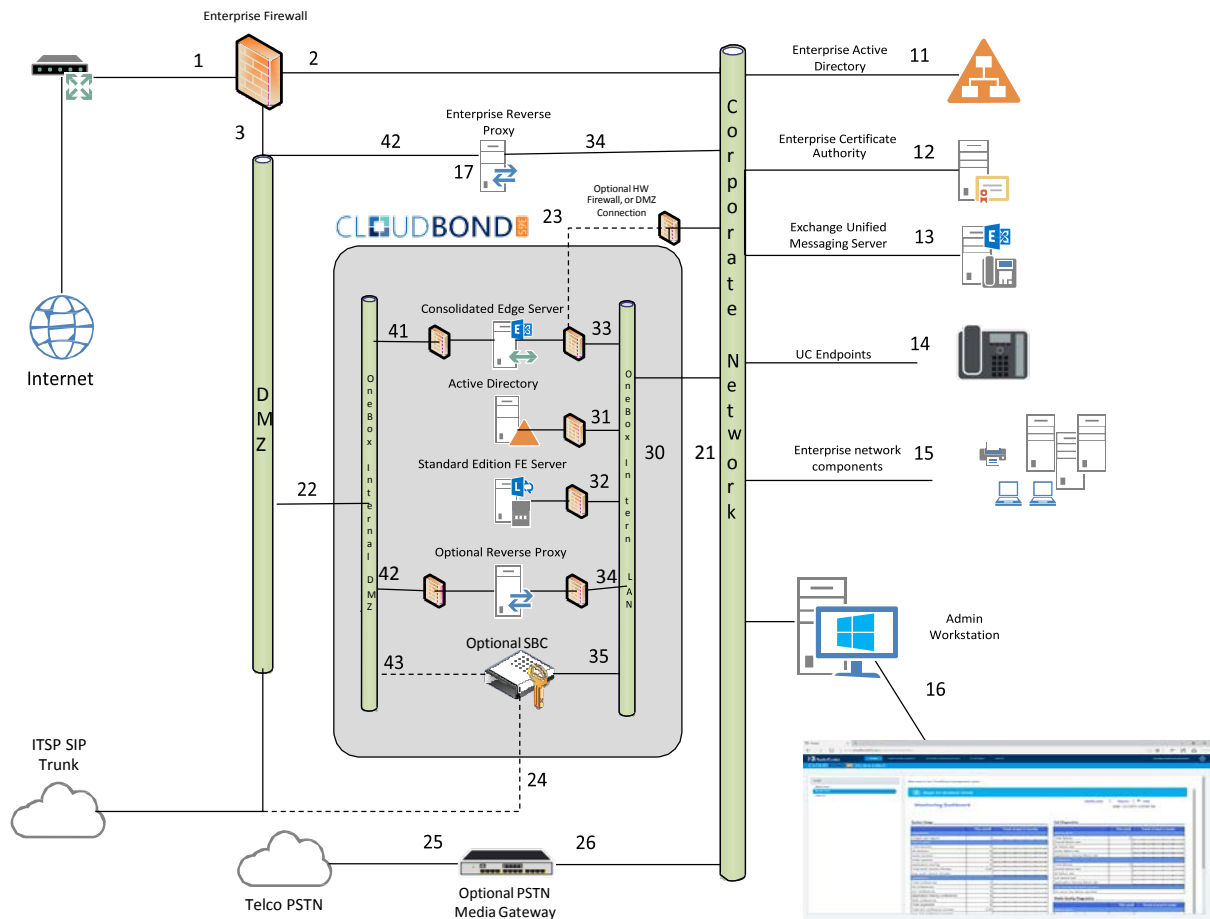
A.1   References

The items below correspond to the entries on the Network diagrams.

A.1.1   Existing Corporate Firewall

Each customer will have their own existing Internet access, firewall, and network configuration. Each will vary in capacity, features and capabilities.

The Enterprise Firewall and networks shown in the diagram are examples only. Each CloudBond 365 installation will need to be adapted to suit the customer environment.

1.   The public internet side of the corporate firewall:

- This IP address may be required if NATing is used to access the Edge server.
- If NATing is used, Public DNS records for SIP will point here
- If the Firewall is also a Reverse Proxy server, other DNS records may point here

2. The private internal corporate LAN
   - This IP address may be used as a gateway address for internal servers to access the internet. E.g. Windows Updates.

3. The DMZ or other network for servers with external access
   - This IP address will be used as a gateway address for externally accessible servers, such as Edge and Reverse Proxy.

A.1.2 Existing Internal Corporate Servers

11. Enterprise Active Directory:
    - Used for Forest trust and user replication. May also host corporate DHCP and DNS servers

12. Enterprise Certificate Authority:
    - Used to issue internal private certificates for communication with Skype for Business servers

13. Exchange Unified Messaging Server:
    - Used for enterprise Voice Voicemail features of Skype for Business

14. UC Endpoints:
    - Skype for Business clients. May be either Skype for Business Phone Edition or Skype for Business Client Software
    - N.B. Skype for Business Mobile clients are used externally to the corporate network

15. Enterprise Network Component

16. Admin Workstation:
    - Typical Administrators workstation, used to access CloudBond 365 Management Suite application and also RDP to Skype for Business servers for maintenance activities.

17. Enterprise Reverse Proxy Server:
    - A Reverse Proxy server is required for some external connectivity functions of Skype for Business, such as Skype for Business Mobile Clients. Microsoft best practice recommends a Reverse Proxy server rather than allowing direct external connections to the FE server.
    - If the customer has an existing Reverse Proxy server, it should be used in preference to the optional internal CloudBond 365 Reverse Proxy.

A.1.3 CloudBond 365 Physical Connections

All CloudBond 365 Editions require an internal network connection (21) for clients to connect.

It is highly recommended that an external network connection (22) is provided to maximize the features and usability of CloudBond 365.

All versions of CloudBond 365 have "spare" network adapters (23, 24) which can optionally be used to separate network traffic and enhance network security where required.

21. Corporate LAN Connection (trusted network)
    - CloudBond 365 Pro / Enterprise Edition uses rear NIC # 1

22. DMZ Connector (untrusted public network)
    - CloudBond 365 Pro / Enterprise Edition uses rear NIC # 2

23. Optional Edge firewall connector:
    - CloudBond 365 Pro / Enterprise Edition uses rear NIC # 3
24. Optional SBC ITSP Connection
    - CloudBond 365 Pro / Enterprise Edition uses rear NIC # 4
25. PSTN Connection (typically ISDN BRI or PRI)
26. Media Gateway internal IP Address
    - Typically the management connection address (OAMP)
    - May also be media address for IP Calls e.g. OAMP + Media + Control

A.1.4 CloudBond 365 Internal Connections

The CloudBond 365 Systems have an internal trusted network and an external untrusted network (DMZ)

A.1.4.1 Internal Trusted Networks

It is safe to connect this network directly to the Corporate LAN. All CloudBond 365 components with connections to this network are meant to act as internal servers.

Whilst a firewall may be placed between this network and the Corporate LAN, doing so complicates the deployment and requires significant firewall configuration.

You may use the "spare" network adapters to provide traffic separation, but doing so requires additional manual configuration of the CloudBond 365 component affected.

31. Hyper-V Host IP address (Optional):
    - Applies only to CloudBond 365 Pro/Enterprise Edition
32. CloudBond 365 Management Server IP address (UC-DC):
    - Used for maintenance and access to CloudBond 365 Management Suite application
    - Used for Forest trust with Enterprise DC.
    - Default 192.168.0.100
33. Skype for Business Standard Edition Front End Server (UC-FE):
    - Used for all Skype for Business processing
    - Default 192.168.0.101
    - Entry in internal DNS typically sip.contoso.com and meet.contoso.com
34. Skype for Business Consolidated Edge Server (UC-Edge):
    - Used for Skype for Business external communications, including external users, federation, etc.
    - • Default 192.168.0.103
    - To enhance security, an additional rear Ethernet connector and internal hardware firewall can be used to separate this server from the corporate network. See 23.
35. Optional Reverse Proxy Server:
    - Available in CloudBond 365 Pro / Enterprise Box Edition only
    - May exist as external Enterprise server
    - Used for Mobile clients, web conferencing, address book expansion etc.
    - Default 192.168.0.104
36. Optional AudioCodes SBC:
    - Available as optional server in CloudBond 365 Pro / Enterprise Box Edition
        - Default address 192.168.0.1

A.1.4.2 External Untrusted Networks

This network may be connected directly to the Corporate DMZ. All CloudBond 365 components connected to this network have their own firewalls enabled, and are designed for connection to untrusted networks.

You may use the "spare" network adapters to provide traffic separation, but doing so requires additional manual configuration of the CloudBond 365 component affected.

41. Edge external connection:

- Used for external user access, federation, etc.
- May use NATing of Enterprise Firewall
- Default address 192.168.254.103
- Entry required in Public DNS and Certificates. Typically sip.contoso.com, plus SRV DNS records.

42. Reverse Proxy external address:

- Used for Mobile clients, conferencing, address book expansion, etc.
- Entry required in Public DNS and Certificates. Typically meet.contoso.com
- Skype for Business traffic forwarded to Front End server (UC-FE)

43. SBC External address:

- Used as SIP Trunk endpoint from ITSP

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