

CloudBond 365™ Pro / Enterprise Box Editions

Version 7.4.0

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

Related Documentation

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CloudBond 365 Software Installation Guide
CloudBond 365 Administration Guide

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LTRT-26496	Updates for default IP address information and for references to the CloudBond Installation Manual (a new manual consolidating previous related documents).

Documentation Feedback

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1 Introduction

Thank you for purchasing the AudioCodes CloudBond 365™ Pro or Enterprise solution. Best practice is to read this guide before starting to deploy the product. The guide provides:

- Default configuration of the CloudBond 365 Pro / Enterprise unit
- Four steps to deploy CloudBond 365 in an enterprise environment
- CloudBond 365 architecture and an overview of the IP addresses in relation to AudioCodes' CloudBond 365 Skype for Business.

The guide is intended as a summary reference for experienced AudioCodes CloudBond 365 installers. For detailed instructions on each step, refer to the *CloudBond 365 Installation Manual*.

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

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



Note:

- Though CloudBond 365 Pro and CloudBond 365 Enterprise units look similar externally, they're distinguished by a label and different internal components.
- The Enterprise Box Edition features a higher user capacity than the Pro Box Edition.

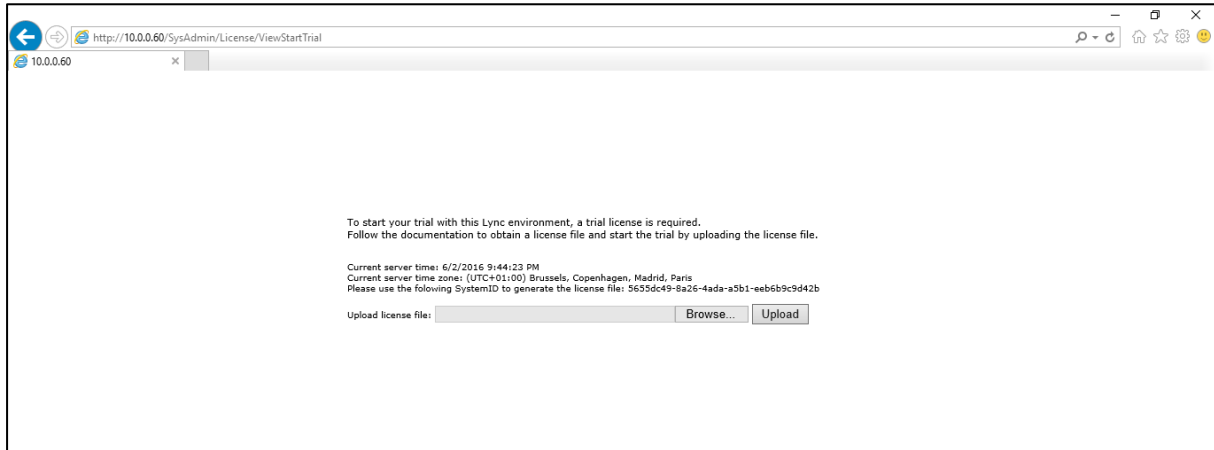
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2 CloudBond 365 Licensing

Your CloudBond 365 is shipped with the software installed but without a CloudBond 365 license applied.

When the SysAdmin utility is accessed for the first time on a new CloudBond 365 system, you're required to upload and install a License file..

Figure 2-1: CloudBond 365 Management Interface License Required



Note:

- The System ID required for licensing is displayed in this 'first-time' screen.
- If a license has already been installed, the System ID will be displayed in the 'Licensing info' page (**System Configuration > Licensing info**).



Important: Before applying a CloudBond 365 license, make sure all CloudBond 365 servers (DC, FE and Edge) are configured with the correct time zone and date / time.

2.1 Activating a CloudBond 365 License

This section shows how to activate your CloudBond 365 license.

➤ **To activate your CloudBond 365 license:**

1. Install the product (see the instructions in the *CloudBond 365 Installation Manual*).
2. Obtain the product's Fingerprint (System ID) (see the instructions under the 'Licensing the Product' section of the *CloudBond 365 Installation Manual*). Activate the product through the AudioCodes License Activation tool, at <http://www.audiocodes.com/swactivation>. You'll need your Product Key and Fingerprint (System ID) for the activation process. An email will subsequently be sent to you with your Product License.
3. Install the Product License. Follow the instructions under the 'Installing the Product License' section of the *CloudBond 365 Installation Manual*.

The Product Key is a unique key representing the initial order for CloudBond 365, used for online license generation. The key is also used after acquiring a future version of the product in order (for example) to upgrade the initial order.

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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, see chapter 'Hardware Installation' in the *CloudBond 365 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 the *CloudBond 365 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
Host	192.168.0.100	
UC-DC	192.168.0.101	-
UC-FE	192.168.0.102	-
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. For more information, see chapter 'Configuring Certificates' in the *CloudBond 365 Installation Manual*.



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. See chapter 'Changing or Adding SIP Domain' in the *CloudBond 365 Installation Manual*.

3.3 Optional Session Border Controller

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

3.4 Optional Reverse Proxy

For further information, see chapter 'Reverse Proxy using IIS & ASR' in the *CloudBond 365 Installation Manual*.

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4 Changing the Default Configuration

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

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5 Deployment of CloudBond 365

Figure 5-1: Front View



Figure 5-2: Rear View



5.1 Step 1: Deploying CloudBond 365

This step describes how to deploy CloudBond 365.

➤ **To deploy CloudBond 365:**

1. See chapter 'Hardware Installation' in the *CloudBond 365 Installation Manual* for information about mounting your CloudBond 365 Hardware.
2. If the CloudBond 365 software has not been installed, refer to *the CloudBond 365 Installation Manual*.
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. See chapter 'Configuring Certificates' in the *CloudBond 365 Installation Manual*.

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

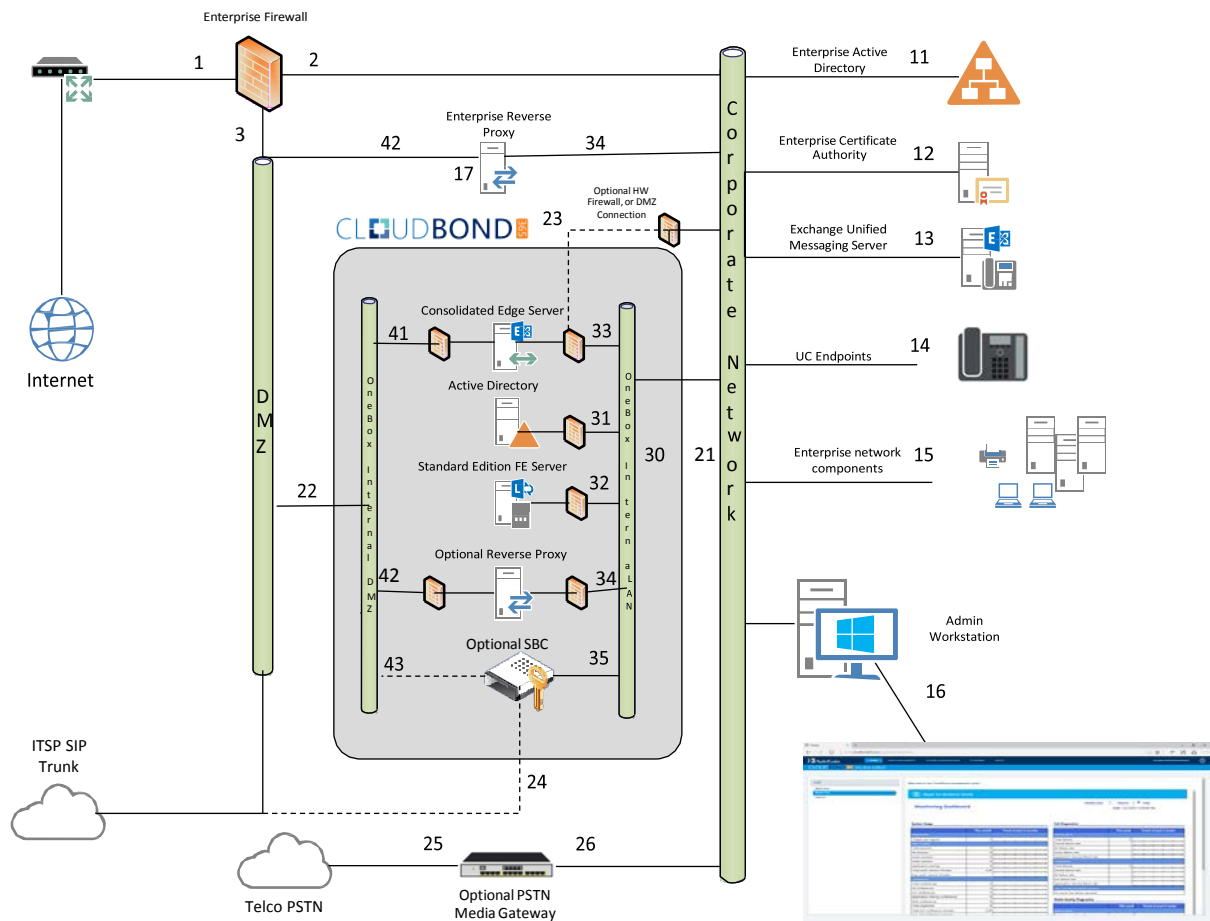
This step describes how to configure Skype for Business for external user access and Federation.

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

1. Change or add SIP Domain.
See chapter 'Changing or Adding a SIP Domain' in the *CloudBond 365 Installation Manual*.
2. Obtain public certificates.
3. Setup external access policies.
4. Configure enhanced federation.
5. Configure Reverse Proxy server.

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.

- 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 192.168.0.101
33. Skype for Business Standard Edition Front End Server (UC-FE):
 - Used for all Skype for Business processing
 - Default 192.168.0.102
 - 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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