



Release Notes

Version 4.4.3



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1 Introduction

These release notes highlight new functionality, enhancements, software and hardware dependencies, and include upgrade instructions for UC Server (all editions). This document is to be used in conjunction with product documentation and training for the preparation of new and existing software installations and is intended for Objectworld Technical Professionals who are providing support services for UC Server. For information on how to become an Objectworld Technical Professional see section 7.2, Training.

For general product information please visit our Web site at <http://www.objectworld.com/>.



WARNING: It is strongly recommended that the contents of this document be reviewed before any installation or upgrade, no matter how familiar the installer may be with the product, to ensure that current installation and upgrade procedures are followed. These procedures may change from release to release, including maintenance releases. Failure to follow the upgrade procedures in this document may result in non-operational systems.

2 Summary of Changes

This section describes a summary of new functionality introduced in this UC Server release, along with issues resolved in each release and any release-specific actions that are required as part of upgrading. Each maintenance or “dot” release is identified separately. More detailed descriptions for major new functionality follow in section 3, New Functionality Details. Internal tracking numbers are noted (e.g. [1234]).

For newly introduced functionality and issues resolved in previous major releases, please consult the release notes or product documentation for the respective releases.

Where functionality or issues resolved do not apply to all editions, the applicable additions are noted (e.g. **SIP**, **CEBP**).

Note: Be sure to review all upgrade actions for all releases between your current release and the release you are upgrading to. Sub-sections in the sections below identify required actions, including information about client upgrades.

2.1 Release 4.4.3

Release 4.4.3 is a maintenance release that resolves issues identified in Release 4.4.2 and also provides BLF support on snom phones, Connect+ support for some Aastra and Polycom Kirk Wireless Server devices, as well as firmware updates for some Aastra phones.

2.1.1 New Functionality

The new functionality included in this release includes:

- BLF support on snom phones. See section 3.6 for more details. [8361] **SIP, CEBP**
- 3rd Party Compatibility Additions and Upgrades
 - Support for Dialogic SR 6.0 SU 229, supporting Windows Server 2008 [8295]
 - Telephone terminal support for: **SIP, CEBP**
 - Connect+ support for Aastra 6756i CT, 9143i, 9480i, and 9480i CT [8380]
 - Connect+ support for Aastra 6730i and 6731i [8311]

- Connect+ support for Polycom Kirk Wireless Servers (KWS300, KWS6000) and associated handsets [8304, 8305]
- Connect support for Polycom Spectralink 8002 [8310]
- Telephone terminal firmware updates:
 - Aastra 675xi series (6751i, 6753i, 6755i and 6757i): v2.5.1 [8380]
 - Aastra 675xi: v2.5.0 [8306]

SIP, CEBP

2.1.2 Issues Resolved

Tracking #	Summary
6078	Fax Receive service not invoked for attendant services on admin profile.
8291	Aastra 6730i and 6731i default configurations did not have support for multi-cast paging enabled. SIP, CEBP
8336	When e-mail notifications are enabled for a user, and the user has a large number of e-mails in their Inbox (>10000), then the Application Server can restart due to delays accessing Exchange Server mailbox data. With this change, e-mail notifications will no longer include counts related to the number of e-mails if the mailbox summary option is set to "Quick" (and thus doesn't indicate the number of new e-mails over the TUI).
8338	Default snom configuration did not allow access to web UI. SIP, CEBP
8351	Server install pre-requisite installer incorrectly wants to install Enhanced Desktop feature when installing on Windows 7. Windows 7 is not yet officially supported in this release.
8352	Auto-answer for SIP paging does not always work after clean install or after phones re-register. SIP, CEBP
8354	Microsoft SQL Server 2005 Express Edition SP3 required to install server components on Windows 7 or Windows Server 2008 R2. Windows 7 and Windows Server 2008 R2 are not yet officially supported in this release.
8358	In some circumstances, the Application Server restarts while modify user mailbox settings.
8363	Long calls may be dropped while processing a re-INVITE. SIP, CEBP
8367	SIP Paging service does not start when Event Viewer log is full. SIP, CEBP
8375	snom configuration files missing <code>user_outbound</code> parameter not allowing users to return calls from the call history. SIP, CEBP
8378	Polycom call recording technical note (TN114) update to correct minor issues. SIP, CEBP
8383	Vegastream integration documentation updated to include correct configuration for calls with hyphens in the caller name information. SIP, CEBP
8409	Incorrect audio played in some circumstances when using data sources that allow selection of a number of rows containing audio.
8414	Printing not working in various user interface components where it previously had worked.
8423	Application Server restarts when sending messages to large distribution lists where large numbers of users have e-mail notification options enabled.
8424	PowerShell Set-UcAuthentication command does not change the password when using the <code>NewPassword</code> parameter.

Tracking #	Summary
8436	Polycom phones do not display Join and Split soft keys required for on-phone conferencing capabilities. SIP, CEBP
8437	After completing a transfer for an external caller, the caller's number is displayed incorrectly in ucCompanion – Live Attendant. SIP, CEBP
8441	Send E-mail element configured as "Custom" does not send audio file attachments to recipients other than the first recipient.
8458	Dial-by-name error path results in incorrect prompt being played to caller.

2.1.3 Client Upgrade Actions

In general, client software does not need to be upgraded for this release. The following exceptions apply:

- For administrators experiencing resolved issue [8424], client software MUST be upgraded to obtain the issue resolution.

2.1.4 Other Upgrade Actions

No additional actions are required beyond those listed for other maintenance releases.

Additional instructions have been provided to supplement product documentation related to Exchange Server 2003 integration. Please see section 4.2.2, Mail/Messaging Servers for Unified Messaging, for more details.

2.2 Release 4.4.2

Release 4.4.2 is a maintenance release that resolves issues identified in Release 4.4.1 and also provides Windows PowerShell support for administering users, identities, phones and authentications from the command line.



WARNING: Outlook 2007 SP2 (recently released) is not compatible as a server MAPI connector with UC Server and installing it will cause UC Server to be unable to connect to Exchange Server. Please see section 4.2.2, Mail/Messaging Servers for Unified Messaging, for more details.

2.2.1 New Functionality

The new functionality included in this release includes:

- Support for administering user related objects using Windows PowerShell v1.0. Please see section 3.5, Windows PowerShell Snap-In, for more information. [8300]

2.2.2 Issues Resolved

Tracking #	Summary
6414	In some circumstances, the server install "boot strapper" would remain on the "Install UC Server" page after installation. Instead, it should have requested a system restart to complete installation of files that were in use at the time of install or upgrade.

Tracking #	Summary
8243	In some circumstances, UC Server caller information properties are not retained by Exchange Server and caller hears "unknown caller" when caller information was available on the call. Workaround uses caller information stored in the message subject to determine caller information if the special message property is absent. [Previously addressed, however, new circumstance was discovered and corrected under same tracking number.]
8297	EyeBeam would not receive calls immediately after re-registering. Problem was intermittent and timing related and may not always have occurred. SIP, CEBP
8307	Polycom call recording soft keys cause ending a call or transferring a call to be awkward. Call recording soft keys have been moved to later in soft key list to keep more commonly used keys accessible. SIP, CEBP
8308	When playing back a message where caller information was not available, silence or "clicks" may be heard instead of "an unknown caller".
8318	UC Client could be installed over top of UC Server, causing upgrade problems and difficulty removing the client. Warnings have been added to installer, along with directly preventing installing UC Client into the same folder as the server software.
8320	Pre- and Post- Update scripts failing on 64-bit platforms. SIP, CEBP
8323	Server may require a reboot after upgrading if services not manually stopped before upgrade.
8327	Unable to reply to message or call back caller of message if caller information properties are not retained by Exchange Server. Caller is told that no phone number is available.
8328	In some circumstances, Outlook voice and fax forms crash when compositing To, CC, and BCC lists during a forward.
8331	PBX database upgrade script fails to correctly modify a table causing SIP peering to not function. This only affects systems upgraded to 4.4.1. Installing 4.4.2 or later will correct the database table.
8332	Uninstall prompts to manually close services that it is removing.

2.2.3 Client Upgrade Actions

In general, client software does not need to be upgraded for this release. The following exceptions apply:

- If system administrators want to be able to remotely administer UC Server using Windows PowerShell v1.0, the client software MUST be upgraded. After upgrading the client software, the PowerShell Snap-In feature of UC Client must be installed using the Programs and Features (or Add/Remove Programs) control panel for it to become available. Please see section 3.5, Windows PowerShell Snap-In, for more information.

2.2.4 Other Upgrade Actions

Objectworld now recommends the use of the most recent release of Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 instead of Microsoft Outlook and encourages all customers to switch to this MAPI connector instead of Outlook on the server system. This does not apply to client systems. Please see section 4.2.2, Mail/Messaging Servers for Unified Messaging, for more details.

2.3 Release 4.4.1

Release 4.4.1 is a maintenance release that resolves issues identified in Release 4.4.0 and provides additional SIP telephone support, including Connect+ support for current Aastra 675xi series phones, Connect support for Polycom Kirk Wireless Servers and Interoperable support for Atlas Sound paging devices.

2.3.1 New Functionality

The new functionality introduced in this release includes:

- 3rd Party Compatibility Additions and Upgrades
 - Telephone terminal support for: SIP, CEBP
 - Connect+ support for Aastra 675xi series (6751i, 6753i, 6755i and 6757i) [5286]
 - Connect+ support for snom 820 [8183]
 - Connect+ support for Grandstream Budgetone 201 [8267]
 - Connect+ support for Polycom VVX 1500 [8264]
 - Connect+ support for Atlas Sound VoIP Speakers (I8S, I8SC, I8SCM, IHVP and I128SYS) and VoIP Zone Controllers (IPS-ZC1 and IPS-ZC1) [8284]
 - Connect support for Polycom Kirk Wireless Servers: KWS300, KWS600v3, KWS6000 and associated handsets (2010, 3040, 4020, 4040, 5020 and 5040) [7853, 8241, 8242]
 - Telephone terminal firmware updates: SIP, CEBP
 - snom 300, 320, 360 and 370: v7.3.14 [8177]
 - Aastra 9xxi and 4xxi: v1.4.3 [8239]
 - Polycom SoundPoint IP and SoundPoint IP (all models): v3.1.2 [8264]
- Support for call recording using Polycom phones (see **TN114 – Call Recording with Polycom Phones** for more information) [8279] SIP, CEBP

2.3.2 Issues Resolved

Tracking #	Summary
7646	Some SIP telephones will emit a beep in addition to the paging tone emitted by UC Server. SIP, CEBP
8146	SIP services fail to reconnect to database after unmounting the database during a backup. SIP, CEBP
8157	Calls from CISCO CME over SIP trunk to UC Server conference server may fail. SIP, CEBP
8161	Multicast paging and auto-answer do not work on snom 370 SIP phone. SIP, CEBP
8232	Deleting messages from the integrated messaging client takes a long time when there are a large number of messages in the mailbox.
8234	Sent faxes failed to get delivered to "Sent Mail" folder for Google Mail (Gmail) IMAP accounts.
8238	Dialogic Media Gateway configuration documentation updated to reflect settings required to reliably sent and receive faxes.
8243	In some circumstances, UC Server caller information properties are not retained by Exchange Server and caller hears "unknown caller" when caller information was available on the call. Workaround uses caller information stored in the message subject to determine caller information if the special message property is absent.

Tracking #	Summary
8244	Inbound calls from Mediatrix gateway transferred by auto-attendant get dropped. SIP, CEBP
8251	Application services may restart during Active Directory synchronization if network is slow of Active Directory server is slow to respond.
8255	Audio messages are truncated if they are terminated by silence and silence suppression is being performed by the SIP gateway. SIP, CEBP
8256	Performance improvement for generating message summary information over TUI when used with large Exchange mailboxes (>10000 messages) where majority of messages are e-mail messages.
8257	Stuttering of audio when administration client is used on server system on single core CPU. SIP, CEBP
8277	Application server restarts if identity is deleted at the same time as a user is edited from another administration client.
8278	Memory leak eventually causing application server restart or unrecoverable hang during prolonged continuous server operation.
8293	Active Directory synchronization messages are emitted to the admin logs even when changes do not occur in Active Directory.

2.3.3 Client Upgrade Actions

In general, client software does not need to be upgraded for this release. The following exceptions apply:

- If using the Windows Essential Business Server 2008 Console Plug-in, client software MUST be upgraded on systems using the EBS Console.
- For users experiencing resolved issue [8232], client software SHOULD be upgraded to obtain complete benefits of the issue resolution.

2.3.4 Other Upgrade Actions

For upgrades of SIP and CEBP editions, scripts MUST be run before and after upgrading to properly upgrade phone configuration files. Any customizations to phone configuration files and phone image files MUST be manually re-applied using the information and backups made by the scripts. See section 5.2.2, Upgrading UC Server from any 4.x.x Release for more information on this procedure.

2.4 Release 4.4.0

Release 4.4.0 is a major release of UC Server that introduces support for SIP paging, adds a number of service enhancements and new service elements, provides updated firmware for both snom and Polycom phones, and adds a Windows Essential Business Server 2008 plug-in for user management.

2.4.1 New Functionality

The new functionality introduced in this release includes:

- SIP Paging [7101] **SIP, CEBP**
- Service environment improvements and new elements
 - New Elements
 - Generates Tones [7272]

- Execute Program [7325]
- Queue Outdial [7292]
- Detect Remote Party [7358]
- Wait for Silence [7367]
- Other Improvements
 - Temporary audio file capability [7349]
 - Enhanced comparison methods in Compare Data element [7335]
 - Send E-mail element can attach recorded audio files [7351]
- Additional support for saving and forwarding fax messages as PDF files [7887, 7945, 7946]
- Windows Essential Business Server 2008 Console Plug-in [7838]
- Windows Small Business Server 2008 Console alert support [7844]
- Advanced Call Queuing Enhancements:
 - Option for controlling automatic logout of agents [5445] **SIP, CEBP**
 - Option for controlling overflow timeout [5447] **SIP, CEBP**
- Other improvements:
 - Administrative UI action to resynchronize message waiting lights [6665]
- 3rd Party Compatibility Additions and Upgrades
 - Telephone Terminal Support for:
 - snom firmware updated to 7.3.7 allowing automated firmware updated to snom phones via TFTP [7578] **SIP, CEBP**
 - Polycom SoundPoint IP firmware updated to 3.1.0¹ [7583] **SIP, CEBP**
 - Support for Polycom SoundPoint IP 450, 560, 670 [7583] **SIP, CEBP**
 - Support for Polycom SoundStation 6000, 7000 [7463, 7581] **SIP, CEBP**
 - Integration guides or technical notes have been added for the following products and services:
 - TN101 - Quintum Survivable SIP Gateway Installation and Configuration [7315] **SIP, CEBP**
 - TN104 - Aastra 5xi Installation and Configuration [7727] **SIP, CEBP**
 - TN105 - Ensuring Compatible PCI Slots for Dialogic Media Cards [7599]
 - TN106 – Polycom Kirk Wireless Server 300 Installation and Configuration [7853] **SIP, CEBP**
 - TN107 - Quintum Tenor AF Gateway Installation and Configuration [8051] **SIP, CEBP**
 - TN108 - Best Practices for Integrating UC Server with Microsoft Exchange Server [8086]

2.4.2 Issues Resolved

Tracking #	Summary
5781	IP address changes of SIP phones located on a different subnet from the UC Server are not registered. SIP, CEBP
7197	Dial-by-name audio prompts do not tell caller how to exit the dial-by-name process.
7274	When the client queried contacts for a user, more information than was necessary is pulled from Microsoft Exchange Server. This has been optimized to minimize the information to only that which is required.
7331	Corrupt archive logs cause runtime error while trying to log to UC Client in as admin.

¹ Older model Polycom sets, including the Polycom SoundPoint IP 301, are no longer supported with this version of the firmware.

Tracking #	Summary
7585, 7586	Improved handling of network adapter changes to include more obvious identification in the network adapter selection dialog and in warning logs. SIP, CEBP
7706	With SIP phones other than Polycom, the part initiating a blind transfer must manually hang up the call. SIP, CEBP
7886	TNo37 and TNo69 for Quintum gateway integration did not include information on setting up incoming caller name. SIP, CEBP
7910	Numbers restricted by dialing restrictions are not listed in warning logs.
7923	If a user's Active Directory association was changed, the UC Server synchronizer would revert the association to the previous user.
7937	"Last Unique ID" should be allowed In field assignment in Add Data and Update Data elements.
7957	CODECs presented during music on hold did not reflect the ability of the music-on-hold service's ability to stream audio in the presented formats. SIP, CEBP
7970	Application server could restart when a user's client was open with Integrated Messaging, and the administrator changes their message store to Exchange Server and a new message arrives and the user tries to move the message to a new folder.
7999	Music on hold is not provided when Polycom sets are set to only use G.722 CODEC. SIP, CEBP
8045	Systems not licensed for TTS would issue a warning notification if users did not have mailbox identifiers recorded.
8069	CODEC negotiation would fail using CBeyond when calls directed to conference bridge. SIP, CEBP
8075	Grandstream GXP 1200 phones do not attempt to re-register for 1 hour if registration fails. SIP, CEBP
8092	IP addresses associated with phones on different subnets from UC Server are not maintained after initial detection of the phone. SIP, CEBP
8096	When skipping to the end of a message within the last 3 seconds of the message, no prompt would be heard for the end-of-message menu. (Affected SIP-based integrations only)
8112	Memory allocation would fail while querying network adapters causing application server to restart. SIP, CEBP
8125	Inter-digit timeout for "directory assistance" within mailbox management was not long enough. Timeouts have been increased to 5 seconds between digits and 7,5 seconds for the first digit. Additional, other digit related timeouts have been increased slightly from 1.25 seconds to 2.5 seconds.
8126	Faxes sent over noisy lines using T.38 would fail when error correction took place or when page was longer than one 255 T.30 frames.
8127	Users "disappear": Additional recovery, diagnostics and administrator notifications have been added to mitigate and diagnose related issues.
8144	ACQ agent does not receive call as agent appears to be "stuck on a call".

Tracking #	Summary
8208	Fax transmission results report "Unspecified error" when destination line is busy when using SIP gateways.
8215	snom configuration templates had unnecessary configuration attributes causing users to be unable to modify the ringer type.
8216	Connect delay for outgoing SIP calls capped at 20 seconds causing fax connection failures.
8218	Unable to enter single digit as operator destination for per-user operators.
8222	TTS would not read e-mail messages when playing back more than one e-mail when mailbox management occurs as a result of outgoing Active Message Delivery (AMD) call.
8224	Early releases of 4.4.0 did not allow Polcom phones to persist their audio settings. SIP, CEBP
8228	TFTP service leaves sockets open longer than necessary after file requests are complete, potentially leading to shortage of resources. SIP, CEBP

Note that all fixes included in 4.3.1, 4.3.2, 4.3.3, 4.3.4 and 4.3.5 are included in release 4.4.0. Please consult the release notes for 4.3.5 for details on issues resolved in those releases.

2.4.3 Upgrade Requirements

Prior to upgrading an existing UC Server system, be sure that the hardware platform and operating system software meet the minimum requirements; otherwise, you will not be able to upgrade the software. Ensure that both client and server requirements are met. See section 4.2, System Requirements for more information.

2.4.4 Client Upgrade Actions

Client software **MUST** be upgraded for all users of the UC Server system. More information on client deployment techniques, including automated deployment can be found in section 5.3, Installing or Upgrading UC Client Software.

2.4.5 Other Upgrade Actions

For upgrades of SIP and CEBP editions, scripts **MUST** be run before and after upgrading to properly upgrade phone configuration files. Any customizations to phone configuration files must be manually re-applied using the information and backups made by the scripts. See section 5.2.2, Upgrading UC Server from any 4.x.x Release for more information on this procedure.

`RestartOverrides.cfg` **MUST** be updated on the UC Server to include updated settings provided in `RestartOverrides.cfg.original`.



WARNING: Backup procedures have changed from releases prior to 4.3.3. The UC Server SQL database instance **MUST** be backed up for **ALL** editions and installations to ensure proper recovery of failed systems. Please review **TNo66 - Backup and Restore Procedures** and adjust backup procedures accordingly. Failure to do so may result in data loss or extended system outages in the case of hardware or software failures.



WARNING: Due to fixes related to MWI behavioral inconsistencies introduced in release 4.3.1, when a system is upgraded to 4.4.x from a release prior to 4.3.1, users's may experience a change in behavior of the MWI if their preferences (or system-wide settings) for MWI behavior are not set as they would prefer. Please ensure that system defaults are correctly set and that users are aware of how to change their MWI preferences.

3 New Functionality Details

This section describes more significant portions of the new functionality introduced in this UC Server release.

Where functionality does not apply to all editions, the applicable additions are noted (e.g. **SIP, CEBP**).

3.1 SIP Paging

UC Server SIP Paging and public address systems are supported in UC Server SIP and CEBP Editions. SIP Paging includes the creation of paging groups (paging zones) which include simultaneous support for SIP Phones and IP Multicast IP addresses. UC Server will support any combination of Connect+ SIP Phones and supported overhead SIP Paging Speakers, SIP Paging Gateways, and SIP Zone controllers.

SIP Paging can be accessed by directly dialing the paging service feature access code followed by a configured paging group identifier. SIP Paging is also integrated as part of the service environment. Two new elements (Page Live and Page Recorded) elements are introduced that allow for paging control through a service. The flexibility of the service environment allow for service rule creation for sophisticated paging applications that rely on time-of-day, calling / called number validation or database enabled applications. The Page Live element will transfer the caller to a paging service so that the caller can speak directly to a zone selected in the service. The Page Recorded element will allow callers to review the audio prior to queuing the page to be played to the selected paging group.

Additional licenses are required to be purchased to enable multicast IP addresses, or adding unicast paging members beyond the number of SIP users in a system.

3.2 Service Environment Improvements and New Elements

This version of UC Server improves the service environment to include enhanced capability for Value Added Resellers to created applications for inbound and outbound call campaigns. UC Server now includes the ability to distinguish between live answered calls and answering machines – which allow UC Server to deliver notifications and reminders with the ability to interact with callers or leave messages on answering machines.

UC Server now has the ability to execute programs from within the service environment allowing Objectworld Value Added Resellers to create line of business middleware applications that can be used with UC Server's inbound and outbound call services.

Applications enabled with the new functionality include, but are not limited to:

- Electronic control systems
- Outbound dialers that differentiate between humans and answering machines
- Integration with third party applications

The following new elements (not including the SIP Paging elements) have been added:

- Generates Tones

- Execute Program
- Queue Outdial
- Detect Remote Party
- Wait for Silence

In addition, the following improvements have also been made:

- Temporary audio file capability
- Enhanced comparison methods in Compare Date element
- Send E-mail element can attach recorded audio files

3.3 Windows Essential Business Server 2008 Console Plug-in

UC Server now provides a Windows Essential Business Server 2008 Console Plug-in that is installed as part of the UC Client install. This plug-in enables system administrators to administer UC Server users directly from within the Windows Essential Business Server 2008 Console.

3.4 Windows Small Business Server 2008 Console Alert Support

UC Server now provides notifications of warnings and alerts within the Windows Small Business Server 2008 Console. Alerts are raised when either an error or a warning occurs in UC Server, and are cleared when the administrator acknowledges or clears the warnings in the logs.

3.5 Windows PowerShell Snap-In

UC Server now provides support for a Windows PowerShell snap-in that allows management of users, identities (extensions), phones and authentications. This allows IT administrators to more easily integrate external systems such that those systems can affect changes to these objects in UC Server. Additionally, the advanced scripting functionality of Windows PowerShell allows IT administrators to easily export, import, migrate and otherwise make bulk changes to user related data on UC Server.

Windows PowerShell v1.0 needs to be installed on the relevant computer system **before** upgrading or installing the UC Client or UC Server feature. It can be downloaded from Microsoft from the following location:

<http://www.microsoft.com/windowsserver2003/technologies/management/powershell/download.mspx>.

The Windows PowerShell snap-in is installed as feature of the client components (disabled by default) and as a feature of the server components (enabled by default). After upgrading either the client or server, use Programs and Features (Vista, Server 2008) or Add/Remove Programs (XP, Server 2003) to modify the UC Client or UC Server installed program to install the PowerShell snap-in feature on the system. Once installed, a new shortcut appears in the Start | Programs menu, UC Server Management Shell. Launching this shortcut will open a Windows PowerShell session with the UC Server snap-in loaded.

More general information on using Windows PowerShell can be obtained from:

<http://www.microsoft.com/powershell>.

More getting started information related to using Windows PowerShell with UC Server is provided when you launch the UC Server Management Shell. Each command provides help information and examples of potential usage. In release 4.4.2, the documentation is not yet 100% complete, but will be updated in subsequent releases.

3.6 BLF Support on snom Phones

UC Server SIP and CEBP Editions now provide support for Busy Lamp Fields (BLF) on snom phones. Other devices that correctly implement RFC 4235 from a monitoring and being monitored perspective may also work, but have not been tested or certified to work correctly. In addition to snom phones being supported, snom phones may also monitor (i.e. show a BLF) for an identity on a Polycom phone; showing a BLF on a Polycom phone is not supported.

To enable a BLF on the snom phones, configure an available function key on the snom phone using the web user interface. Use either the "Extension" or the "BLF" modes. Refer to snom documentation for more information (http://wiki.snom.com/Web_Interface/V7/Function_Keys#Free_Function_Keys).

4 Installation Requirements

This section describes the environmental prerequisites required for the correct operation of UC Server, including operating systems, server/client platforms, messaging servers, and mail clients. In addition, it describes any required steps that need to take place prior to installing UC Server software, including obtaining the license key.

4.1 Preserving Installation and Upgrade Media

If physical installation media (a CD or DVD) was received, please store this media in a safe place so that the software may be reinstalled at a later date should that be necessary (for example, in the event of a hardware failure).

If the software was downloaded, please ensure that a separate copy of the installation media is made to CD or DVD and this media is stored in a safe place so that the software may be reinstalled at a later date should that be necessary (for example, in the event of a hardware failure). Do not store the downloaded media on the same physical disks as the operational server as a single disk failure may cause this media to be permanently lost.

Ensure that if software upgrades are performed, new versions are also stored on separate media in a safe place. Support personal may require a copy of the installation media to reinstall software at a later date.



WARNING: Failure to preserve installed software release media properly may result in the inability to rebuild a failed server at a later date. Copies of non-current software versions may not be readily available from Objectworld Technical Support or your reseller and thus delays may be incurred if this media is not available to support technicians rebuilding failed servers.

4.2 System Requirements

4.2.1 Server Components

This section describes the required operating systems, hardware requirements and third-party integration platforms for the server components of UC Server. This applies to both upgrades and new installations. If existing server hardware does not meet these requirements, it must be upgraded or migrated to new hardware prior to upgrading to this release of UC Server.

4.2.1.1 Operating Systems

The server components of UC Server support the following Microsoft® Windows™ Operating Systems:

- Microsoft® Windows Small Business Server 2008 (x64)

The recommended deployment for optimal performance and reliability is to install UC Server on the additional Windows Server 2008 license that is part of the Premium Edition of Windows Small Business Server 2008. UC Server can also be installed on the Windows Small Business Server 2008 platform with suitable hardware. See section 4.2.1.2, Hardware Requirements, for more information.

- Microsoft® Windows Essential Business Server 2008 (x86, x64)

UC Server should be deployed on the additional Windows Server 2008 license that is part of the Premium Edition of Windows Essential Business Server. Do not install UC Server on the Security Server. It is not recommended to install UC Server on either the Management Server or the Messaging Server.

- Microsoft® Windows™ Server 2008 (x86, x64)
 - Foundation, Standard, Enterprise, and Data Center editions are supported.
 - Deployment on Server Core or Hyper-V is not supported.
- Microsoft® Windows™ Server 2003 R2 SP1, SP2 (x86)
- Microsoft® Windows™ Server 2003 SP1, SP2 (x86)
- Microsoft® Windows™ Small Business Server 2003 SP1 (x86)
- Microsoft® Windows™ XP SP2, SP3 (Professional) (x86) **(Warning: see known limitation [8282])**

Other software platforms are not supported.

Installation of the server components into a virtualization environment (Virtual Server, Hyper-V, Virtual PC, VMware, Virtual Box, etc.) is not supported in production deployments. This is due to the real-time nature of telecommunications – audio problems will be experienced in these environments.

Objectworld recommends using a server operating system for all installations of UC Server. While the client platforms mentioned above (such as Microsoft® Windows™ XP) are supported, they are designed by Microsoft for desktop use not server use. Known limitation [8282] is also known to affect the reliability of Windows XP installations and may cause system outages in certain circumstances. See section 9, Known Software Limitations for more details.



WARNING: At this point in time, many third-party drivers and applications may not yet support Windows Server 2008 and derived platforms (SBS 2008, EBS 2008). When using TAPI integrations, or other integrations requiring use of CTI drivers, please review driver documentation for those products BEFORE proceeding with plans to use Windows Server 2008 as the server platform for those deployments.

4.2.1.2 Hardware Requirements

To install UC Server, the server hardware platform must meet the minimum requirements in the table below. The minimum requirements are for a minimal installation. The recommended requirements are a guideline for more robust, reliable and “future-proofed” systems.

Product engineering guidelines and recommendations should be consulted and followed for anything other than a minimal installation (i.e. installations with more than 25 users). Sizing of the server hardware is dependent on the number of users, the traffic levels and application services used. Selection of hardware should also take into account such things as redundant power supplies, uninterruptable power supplies (UPS) and redundant disk

arrays (i.e. RAID) such that the end-users needs and expectations are met, along with any future growth requirements.

Consult **TN102 - Hardware Platform Recommendations** and the **Planning and Deployment Guide** for more information on correctly selecting the hardware.

Hardware Component	Minimum	Recommended
Processor	Intel Pentium Dual-Core (E2140)	Intel Xeon Quad-Core (E5310)
RAM	2 GB 4 GB on Windows Small Business Server 2003 6 GB on Windows Small Business Server 2008	4 GB 6 GB on Windows Small Business Server 2008
Disk space	80 GB (usable space) 7200 RPM	146 GB (usable space) SAS – RAID 1 or RAID 5

4.2.2 Mail/Messaging Servers for Unified Messaging

UC Server supports the following e-mail servers for Unified Messaging:

- Microsoft® Exchange™ Server 2000, 2003 SP1*, 2007
- IBM® Domino™ Server 6.0.x, 6.5.x, 7.0, 8.0 (via IMAP)
- Google Mail (via IMAP using stunnel)
- University of Washington IMAPd
- Any 100% compliant IMAP4rev1 (RFC3501) message store (different servers may require different query optimization techniques – consult product documentation for query optimization technique determination procedures)

* Requires service pack 1 or later.

Integration with Microsoft® Exchange™ Server requires a MAPI connector to be installed on the UC Server platform. The supported MAPI connectors, of which only one should be installed on the server platform, are the following:

- Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1
[Version: 6.5.8069.0, 2009-Feb-16 – older versions are not be compatible with all platforms]
This is available for download free of charge from:
<http://www.microsoft.com/downloads/details.aspx?familyid=e17e7f31-079a-43a9-bff2-0a110307611e&displaylang=en>
- Microsoft® Outlook™ 2003 SP3



WARNING: Failure to use SP3 with Microsoft® Outlook™ 2003 will cause unreliability of the integration with Microsoft® Exchange™ Server and may cause system outages.

- Microsoft® Outlook™ 2007 SP1 (SP2 is not Supported)



WARNING: Outlook 2007 SP2 (recently released) is not compatible as a server MAPI connector with UC Server and installing it will cause UC Server to be unable to connect to Exchange Server.

Objectworld now recommends the use of Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 instead of Microsoft Outlook and strongly encourages all customers to switch to this MAPI connector instead of Outlook. The benefits of doing this are as follows:

- No Outlook license is required for the UC Server system. The MAPI/CDO package is available at no charge.
- The MAPI/CDO package is a minimal installation that requires fewer Microsoft Updates.
- This component is designed and provided by Microsoft explicitly for the purpose of allowing applications such as UC Server to access Exchange Server and does not include many of the client-side nuances of Outlook versions of MAPI.

On Exchange Server 2003, additional steps are required after following the manual integration instructions in Appendix A of the Server Configuration Guide:

Delegate “Exchange View Only Administrators” control to the UC Server service account:

1. Open **Exchange System Manager** on an Exchange Server in the enterprise, or an administrative workstation.
2. Select the enterprise level object (the root object in the tree).
3. Select **Delegate control...** from the **Action** menu. This will open the **Exchange Administration Delegation Wizard**.
4. Click **Next**.
5. In the **Users or Groups** page of the wizard, click **Add** to open the **Delegate Control** dialog.
6. Select the role **Exchange View Only Administrators** from the list of roles.
7. Click **Browse...** and select the service account used by UC Server for Exchange Server and network integration.
8. Click **OK** in the **Select Users, Computers or Groups** dialog.
9. Click **OK** in the **Delegate Control** dialog.
10. Click **Next** in the **Users or Groups** page of the **Exchange Administration Delegation Wizard**.
11. Click **Finish** to complete and close the wizard.

4.2.3 Client Components

This section describes the required operating systems and hardware requirements for the client components of UC Server. Most installations will deploy client software to some or all of the end users of the system. Some installations may not require deployment of the client software depending on how UC Server will be used.

4.2.3.1 Operating Systems

The client components of UC Server (UC Client and ucCompanion - Live Attendant) support the following Microsoft® Windows™ Operating Systems:

- Microsoft® Windows™ Vista, SP1 (Business, Ultimate or Enterprise Edition) (x86, x64)
- Microsoft® Windows™ XP SP2, SP3 (Professional or Tablet PC Edition) (x86)
- Microsoft® Windows™ Server 2008 (x86, x64)
- Microsoft® Windows™ Server 2003 R2, SP2 (x86)
- Microsoft® Windows™ Server 2003 SP1, SP2 (x86)

Other software platforms are not supported.

4.2.3.2 Hardware Requirements

To install UC client, the platform must meet the following minimum requirements for the specified Microsoft Windows operating systems listed below.

Client	XP, Server 2003	Vista, Server 2008
Processor	x86 compatible processor 600 MHz or higher	x86 or x64 compatible processor 1 GHz
RAM	256 MB	1 GB
Free Disk space	500 MB	500 MB
Video	Super VGA (800 x 600) or higher-resolution video adapter and monitor	Support for DirectX 9 graphics with: <ul style="list-style-type: none"> • WDDM Driver • Minimum 128 MB graphics memory • Pixel Shader 2.0 in hardware • 32 bits per pixel

4.2.3.3 E-Mail Clients for Unified Messaging

UC Client integrates with the following e-mail clients for Unified Messaging:

- Microsoft® Outlook™ 2000, 2002/XP, 2003 SP3, 2007
- IBM® Lotus Notes™ 6.0x, 6.5.x, 7.0, 8.0

4.3 Product Licensing (License Key)

All UC Server product editions must be correctly licensed to enable the product to operate. The license key obtained from Objectworld is specific to each installation and defines the exact functionality licensed by the end-user for their installation.

4.3.1 New Installs

When installing UC Server for the first time, you must obtain a License Key to install and activate the software.

4.3.2 Upgrades

To upgrade UC Server from a previous major or minor release, you must obtain a new License Key **prior to starting** the upgrade. The existing License Key, found in the License Information dialog in the administrative UC Client must be updated to the new License Key prior to starting the upgrade. After the new key is installed, you may continue to upgrade the server software. You do not need a new license key for maintenance (patch or "dot") releases.

Upgrade license keys are only available to customers who have an active Software Assurance subscription. Please see section 6, Product Support.

4.3.3 Obtaining a New License Key

To obtain a new or upgrade license key, fill out a license key request in the support area of the Objectworld Web site (<http://www.objectworld.com/support>).

Note: Please allow enough time to obtain the license key – at least one (1) business day should be allocated to ensure the license key is obtained before installation or upgrade.

You will need the following information:

- a. Contact information

- b. Product Keys
 - New installs: available from materials that shipped with the product
 - Upgrades: available for a user with Administrator privileges. From UC Client select the Help menu > License Information.
- c. Purchase Key
 - New installs: available from materials that shipped with the product
 - Upgrades – available:
 - For a user with Administration privileges. From UC client select the Help menu > License Information. Click Modify license.
 - Via the Product Licensing Wizard dialog of step 1 of UC Server Configuration Wizard
- d. Machine ID
 - New installs: available within the Product Licensing Wizard dialog of step 1 of the UC Server Configuration Wizard
 - Upgrades – available:
 - For a user with Administration privileges. From UC client select the Help menu > License Information. Click Modify license.
 - Via the Product Licensing Wizard dialog of step 1 of UC Server Configuration Wizard
- e. Platform specifications: CPU speed, RAM and Server OS – available from the System control panel in the Windows Control Panel.
- f. Product version and edition you will be installing or upgrading to – available from the materials shipped with the product
- g. Message store type (Microsoft Exchange Server, Lotus Domino/Notes, IMAP4, or local machine) and version
- h. Legacy PBX interconnection, if applicable: PBX Type, Firmware version

4.4 Prerequisite Components

UC Server requires that prerequisite components be installed prior to installation of the UC Server software. The installer will detect which components are missing from the system and prompt accordingly. Many of the prerequisite components are included on the CD and can be installed automatically by the installer. However, some have redistribution restrictions and must be obtained directly from the vendor. Links to the relevant web-sites will be provided by the installer to any components that need downloading.

Not all prerequisites are required on all operating systems; specifics are noted below. Except where indicated, the prerequisites are installed automatically by the installer. The prerequisite components are:

- **Microsoft Windows Server 2003 Service Pack 1 Administration Tools Pack** (download link provided in installer) [*Windows XP only*]
- **Microsoft .NET Framework 2.0** [*Windows XP only*]
- **Visual Studio 2005 SP1 Redistributable Files**
- **Objectworld Software Logging Tools**
- **Windows Server 2008 Enhanced Desktop Feature** (a reboot is required after installation) [*Windows Server 2008-based systems only*]
- **Microsoft SQL Server 2005 Express Edition** (SP3 version is installed, older service packs are supported except on some OS platforms)



WARNING: UC Server will only work correctly with the version of Microsoft SQL Server that is provided on the distribution media. Other instances of SQL Server cannot be used by UC Server.

5 Installation and Upgrade Instructions

Please review section 4, Installation Requirements, before proceeding with this section. It contains important information about product licensing, system requirements, and the versions of external software components that are required.



WARNING: Failure to comply with the installation requirements, or properly follow the installation or upgrade instructions will result in an inoperable or poorly performing system.

5.1 New Install of UC Server

This section contains an overview of the installation for UC Server; for detailed installation procedures consult the **Install Guide**. To facilitate installation and configuration, have the following reference material available during installation (located on the distribution media):

- **Release Notes** (this document)
- **Planning and Deployment Guide**
- **Install Guide**
- **UC Server Presence and Control Components Guide** (for ucCompanion - Live Attendant)
- **Configuration Guide**
- **Administrator Manual**

To ensure that all the required information is available during the installation and configuration process, it is recommended that customers fill in the **Pre-Installation Checklist** (located on the distribution media).

5.1.1 Installing the Server Software

The installation software will automatically verify the prerequisites for software installation. Make sure that you run the installation from a Windows logon that has the ability to install software on the UC Server system (i.e. Administrator privileges).

To install UC Server:

1. If the UC Server Software was downloaded from the Objectworld Web site follow step (a), if the UC Server CD-ROM was shipped to you, go to step (b)
 - a. Unzip the contents of the file you downloaded to a temporary folder on UC Server (you will need to provide a location and name for the folder). Start the installation by double clicking on **CAAutoRun.exe** (the Objectworld Unified Communications Server CD Menu will appear).
 - b. Insert the UC Server CD-ROM - the Auto run application will start and the UC Server installation screen will appear.
2. Install the applications to the UC Server platform by clicking on the **"Install Server"** button on the installation screen and following the prompts on the subsequent screens.
 - a. Ensure that all prerequisites are installed. These will vary depending upon your platform and the components purchased, such as the Presence and Control components and the Windows 2003 Server Administration Tool Pack. The UC Server Installation Wizard will ensure that all prerequisite components are installed before proceeding.
 - b. After all the prerequisite components are successfully installed, the wizard allows you to install the UC Server software.
3. Run the Server Configuration Wizard, **"Configure UC Server"**. The Server Configuration Wizard allows you to specify server properties such as message store, UC Server administrator password, PBX information, and

dialing properties. The wizard guides you through the Server configuration process. The wizard does most of the configuration tasks automatically, however, site specific information about the network and server needs to be entered at various steps.

- When installing UC Server for the first time, you **must** obtain a **License Key**. To obtain a license key, please refer to section 4.3, Product Licensing (License Key).

5.1.2 Installing the Client Software

In order for users of UC Server to take full advantage of its functionality, client software should be deployed to their desktop or laptop computers. See section 5.3, Installing or Upgrading UC Client Software, for installation options and procedures.

5.2 Upgrading/Cross-grading of UC Server



WARNING: Backup procedures have changed from previous releases. Please review **TNo66 - Backup and Restore Procedures** and adjust backup procedures accordingly. Failure to do so may result in data loss or extended system outages in the case of hardware or software failures.

5.2.1 Upgrade/Cross-grade Matrix

The following table describes which versions of UC Server are upgradable to newer versions and which versions of CallAttendant Office are cross-gradable to UC Server.

To From	4.0.x (UC Server)	4.4.x (UC Server)
Pre 3.2.x (CallAttendant Office)	unsupported via direct upgrade – upgrade to 3.2.x first, then to 4.0.x	unsupported via direct upgrade – upgrade to 3.2.x first, then to 4.0.x
3.2.x (CallAttendant Office)	√	unsupported via direct upgrade – upgrade to 4.0.x first
4.0.x (CallAttendant Office)	√	√
4.2.x (CallAttendant Office)		√
4.0.x (UC Server)		√
4.1.x (UC Server)		√
4.2.x (UC Server)		√
4.3.x (UC Server)		√
4.4.x (UC Server)		√

In order to upgrade from older versions, interim upgrade steps must be followed. Locate the correct section in this below for more details.

5.2.2 Upgrading UC Server from any 4.x.x Release



WARNING: The existing version of UC Server must NOT be un-installed prior to upgrading. The installation process requires that the existing implementation be available in order to perform the upgrade correctly.

The following is a summary of the upgrade procedure from any UC Server 4.x.x release; please consult the **UC Server Installation Guide** for detailed instructions on installing this component.



WARNING: Failure to follow the steps below, exactly as described, may result in a system that does not upgrade or operate correctly after upgrade.

Perform the following steps:

1. If performing a major or minor upgrade, obtain a new license key. Please refer to the instructions in section 4.3, Product Licensing (License Key).
 2. Backup the UC Server using the instructions found in technical note **TNo66 - Backup and Restore Procedures** to preserve the following data:
 - a) Users (greetings, services, announcements)
 - b) Port configuration
 - c) Attendant data
 - d) System configuration
 - e) Routing data
 - f) Telephone data
 - g) Gateway data
 - h) PBX configuration data
-



WARNING: Failure to backup the data as per the instructions above and in the Technical Note **will** result in the inability to restore the system to the original system configuration should the upgrade process be unsuccessful or aborted. **Always backup the system prior to upgrading.**

3. If a new license key was obtained in step 1, modify the current license key using the following procedure:
 - a) Open UC Client using the current installed product version and log in as a user with administrative privileges.
 - b) Select **License Information...** under the Help Menu on the main toolbar.
 - c) Click the **Modify license...** button to open the Modify License dialog box.
 - d) Enter the new license key in the space provided.
 - e) Click **OK** to close the Modify License Dialog box.
 - f) Click **Close** to close the License Information Dialog box.
 - g) Close UC Client by clicking the top right corner "x" icon or selecting **Close** from the **File** menu.
4. If the UC Server software was downloaded from the Objectworld Web site follow step (a), if the UC Server CD-ROM was shipped to you, go to step (b)
 - a. Unzip the contents of the file you downloaded to a temporary folder on UC Server (you will need to provide a location and name for the folder).
 - b. Insert the UC Server CD-ROM. The **CAAutoRun** application will start and the "Objectworld Unified Communications Server CD Menu" will appear – leave this open for now, you will use it later.
5. For SIP and CEBP editions, run the `Pre-Update.bat` script file as follows:
 - a) Click the **Start** menu and select **Run...**

- b) Type `cmd.exe` and click **OK** to open a command prompt window
- c) Navigate to the script folder on the installation media using the `CD` command. This is located in the `Utility\Scripts` subfolder of the installation media.

e.g.: `CD /d C:\UCServerInstallMedia\Utility\Scripts`

- d) Run the `Pre-Update.bat` script, supplying any appropriate parameters relevant to your installation:

Syntax: `Pre-Update.bat [/V | /?] [PhoneTypes Folder] [Backup Folder]`

- If your UC Server installation is not located at `C:\Program Files\Objectworld\UC Server\`, you must specify the location of the `PhoneTypes` system data folder as shown below in the example.
- If backups should be written to a location other than `C:\Backup\PhoneTypes`, then you must specify a backup folder as shown below.
- The `/?` Option provides help on the script; the `/V` option provides more detailed output and logging.

e.g.: `Pre-Update.bat "C:\Program Files\Objectworld\UC Server\Data\System\PhoneTypes\" "C:\Backup\PhoneTypes\"`

- e) When the script prompts to continue, confirm the information displayed, and type `Y`, then press Enter.
 - f) Examine the output of the script to ensure it ran correctly. The output is placed a file called `Pre-Log.txt` in the backup location, which defaults to `C:\Backup\PhoneTypes`.
 - g) Leave the command window open as it will be used later
6. The Application Services may be unable to be started during the upgrade due expiry of the service account password. This can also occur spontaneously on some Windows XP installations or in networks where account passwords have to be changed regularly, but will not be detected until the machine is restarted or the Application Services are restarted. Be sure to have the service account password accessible so as to be able to reset it immediately.

To verify that the service account password has not expired, do the following:

- a) Open the **Services** administration tool from **Start | Control Panel | Administrative Tools**.
- b) Locate the service named **Objectworld UC Server Application Services**.
- c) Right click on the service, and select **Restart** from the context menu.
- d) If the service fails to start, right click on the service, and select **Properties** from the content menu.
- e) Select the **Log On** tab. Re-enter the service account password in the provided fields and click **OK**.
- f) Attempt to start the service again by right-clicking on the service, and selecting **Start** from the context menu. If the service again fails to start, verify that the service account is operating correctly and is not locked out.

Failure to perform this step will cause the install to fail with a 1920 error if there is a problem with the service account or its password. This can be corrected by following the same steps while the 1920 error is displayed. Do not cancel the 1920 error dialog as it will fail to upgrade and your system will have to be restored from backups. When you have corrected the service account password, click **Retry** in the 1920 error dialog.

7. If the UC Server software was downloaded from the Objectworld Web site follow step (a), if the UC Server CD-ROM was shipped to you, go to step (b)

- c. Locate the temporary folder where you extracted the files in a previous step. Start the upgrade by double clicking on **CAAutoRun.exe** (the "Objectworld Unified Communications Server CD Menu" will appear).
- d. From the "Objectworld Unified Communications Server CD Menu" will appear (opened when the CD was inserted in a previous step), click the **Install Server** button to prepare the UC Server upgrade.
8. On an upgrade from previous releases, you may be required to install or update prerequisite components. Click on the button "Verify or automatically install remaining components" button to proceed. Some components may need to be downloaded from the vendor's web sites.
9. Adding the Presence and Control Components:
 - a) If you are using UC Server Standard Edition, or if you do not plan on using ucCompanion - Live Attendant, then disable the following option:
 - "Install Presence Components to provide ucCompanion - Live Attendant client's connectivity to UC Server".
 - Click **Next**.
 - b) If you are upgrading the Presence and Control Components from a 4.2.x, 4.3.x or 4.4.x version:
 - Click the **Install Presence Components** button in the "Preparing UC Server Installation" dialog.
 - Click **Install** on the "Resuming the Objectworld UC Server Presence and Control Components Setup Wizard" screen.
 - Click **Finish** when complete.
 - Click **Yes** when prompted to restart the system for the configuration changes to take effect.
 - c) If you are upgrading the Presence and Control Components from a 4.1 Trial version:
 - Click the **Install Presence Components** button in the "Preparing UC Server Installation" dialog.
 - Click **Next** on the Welcome page of the "Objectworld UC Server Presence and Control Components Setup" wizard and follow the prompts on subsequent screens until finished. Consult the **UC Server Presence and Control Components Guide** for additional installation documentation.
10. Upgrading the UC Server.
 - a) If upgrading from 4.2.x, 4.3.x or 4.4.x:
 - The "Objectworld Unified Communications Server Setup" welcome page will appear briefly as the upgrade does various checks on the system.
 - Click the **Install** button when the page titled "Resuming the Objectworld Unified Communications Server Setup Wizard" appears and follow the prompts to complete the upgrade.
 - Click the **Finish** button to close the setup wizard and return to the "Preparing UC Server Installation" dialog.
 - b) If upgrading from 4.0.x or 4.1.x Trial:
 - Install the Server application to the UC Server platform by clicking on the **Install UC Server** button.
 - The "Objectworld Unified Communications Server Setup" Welcome page will appear briefly as the upgrade does various system checks.
 - Click the **Install** button when the page titled "Resuming the Objectworld Unified Communications Server Setup Wizard" appears.
 - Continue clicking the prompts to complete the upgrade.
 - Click the **Finish** button to return to the "Preparing UC Server Installation" dialog.
11. Click the **Configure UC Server** button to launch the Server Configuration Wizard.

Note: If all the steps in the server configuration were completed prior to the upgrade, you will be presented with three options (Change Service Account, add Users, specify Phone Types). You may be

required to perform the first option, "Change Service Account" to reset the service account to what had previously been configured prior to the upgrade.

12. In an upgrade from 4.0.x you need to complete Gateway configuration in the Server Configuration Wizard then reset the service account:
 - a) Click on the **Configure UC Server** to launch the "Server Configuration Wizard".
 - b) When prompted to login, login as a user with UC Server administrative privileges.
 - c) Complete the Gateways portion of the wizard. (Select **Next**, select **None** then **Next**, then click **Finish** to close the Gateway wizard).
 - d) Click **Exit** to close the "Server Configuration Wizard".
 - e) Click the **Configure UC Server** button in the "Preparing UC Server Installation" dialog.
 - f) Login as a user with UC Server administrative privileges when prompted.
 - g) Click on the **Change Service Account** option and proceed to configure the service account.
 - h) Select the service account that was configured prior to the upgrade.
 - i) Click **Close** to exit the Server Configuration Wizard.
 - j) Click **Close** to exit the "Preparing UC Server Installation."

13. For SIP and CEBP editions, run the `Post-Update.bat` script file as follows:

- a) Locate the command window opened in step 5
- b) Run the `Post-Update.bat` script, supplying any appropriate parameters relevant to your installation:

Syntax: `Post-Update.bat [/V | /?] [PhoneTypes Folder] [Backup Folder]`

- If your UC Server installation is not located at `C:\Program Files\Objectworld\UC Server\`, you must specify the location of the PhoneTypes system data folder as shown below in the example.
- If backups were written to a location other than `C:\Backup\PhoneTypes`, then you must specify the same backup folder as specified in step 5.
- The `/?` Option provides help on the script; the `/V` option provides more detailed output and logging.

e.g.: `Post-Update.bat "C:\Program Files\Objectworld\UC Server\Data\System\PhoneTypes\" "C:\Backup\PhoneTypes\"`

- c) When the script prompts to continue, confirm the information displayed, and type `Y`, then press Enter.
 - d) Examine the output of the script to ensure it ran correctly. The output is placed in a file called `Post-Log.txt` in the backup location, which defaults to `C:\Backup\PhoneTypes`.
 - e) When the script completes, it will indicate if any site-specific customizations have been made. Details of the customizations will be output to a file called `FileComparison.txt` in the backup location, which defaults to `C:\Backup\PhoneTypes`.
 - f) Re-apply site-specific customizations to the relevant phone configuration files. Refer to phone vendor documentation if needed. Once any customizations have been re-applied, restart the Objectworld UC Server Application Services service using the Services administrative tool.
14. Update the `RestartOverrides.cfg` file (located in `...\UCServer\Data\System\Recovery\`) according to the following conditions:
 - a. If manual changes have been made to this file, then you must manually copy any entries from `RestartOverrides.cfg.original` to `RestartOverrides.cfg` that are not present in the latter file.
 - b. If no manual changes have been made to this file, then replace the contents of `RestartOverrides.cfg` with the contents of `RestartOverrides.cfg.original`. It is not necessary to restart the 'Objectworld UC Server Application Services' service. However, if the file has

been appended to instead of being replaced then the Application service must be restarted for the changes to take effect.

15. If "Install Presence Components" was selected in step 9, you will be required to configure these components at this time. Please consult the "UC Server Presence and Control Components Guide" for configuration documentation. If this is an upgrade from 4.2.x, 4.3.x or 4.4.x, then the Presence and Control Components may have already been configured.
16. For optimal performance, disable the Indexing Service provided by Windows. For detailed instructions, please see section 3.7 Configuring Services of the **Installation Guide**.
17. For SIP and CEBP editions, re-apply phone configurations to all phones in the system as follows:
 - a) Open UC Client and log in as a user with administrative privileges.
 - b) Click on the **Administration** navigation bar.
 - c) Click on the **Phones** folder in the **Administration** navigation bar.
 - d) In the contents pane, select all phones by clicking on the first phone, then pressing Shift-Ctrl-End on the keyboard. All phones should now be selected.
 - e) Right-click on one of the selected phones, and select **Reload Configuration** from the menu. This will cause all phone configuration files to be regenerated and phones to reload their configuration data (rebooting most phone types).

5.2.3 Cross-grading from CallAttendant Office Server 4.0.x/4.2.x to UC Server (all editions)



WARNING: The existing version of CallAttendant Office must NOT be uninstalled prior to cross-grading. The installation process requires that the existing implementation be available in order to perform the upgrade correctly.

The following is a summary of the procedure for cross-grading your CallAttendant Office release 4.0.x/4.2.x software, please consult the **UC Server Installation Guide** for detailed instructions on installing the UC Server component. If the CallAttendant Office software is currently below the 4.0 Software versions, you must first upgrade to Release 4.0.x version.

This upgrade will take significantly longer as the UC Server installation program will make a complete copy of the data for the upgraded installation. For large installations where voice and fax messages are stored on locally, it can take 1-2 hours to copy the data during the upgrade. Do not cancel the upgrade during this process. As a result, this upgrade will require at least twice as much disk space as the Data folder occupies in order to perform the upgrade.

Prior to upgrading to Release 4.0.x do the following:

1. Backup the CallAttendant Office using the instructions found in technical note **TNo71 – Backup and Restore Procedures for CallAttendant Office** to preserve the following data:

a. Users (greetings, services, announcements)	d. System configuration
b. Port configuration	e. Routing data
c. Attendant data	f. Telephone data
	g. Gateway data



WARNING: Failure to backup the data as per the instructions above and in the Technical Note **will** result in the inability to restore the system to the original system configuration should the upgrade process be unsuccessful or aborted. **ALWAYS** backup the system prior to upgrading.

2. Record the CallAttendant Office service account username and password. This can be done using the Services Control Panel application. Select the CallAttendant Office service and record the username. The password must already be known as it cannot be viewed in the Services Control Panel.
3. You must have an up-to-date license key to support the latest release of CallAttendant Office 4.0.x and UC Server (in some circumstances, you may receive two (2) license keys that will be used to support the upgrade). To obtain a new license key, please refer section 4.3.3, Obtaining a New License Key.
4. Ensure that you enter the new license key in the CallAttendant Office administrator application (Help > License Information) menu prior to upgrading the software.



WARNING: If an existing PBX is being replaced with UC Server PBX, please contact support@objectworld.com for additional instructions.

To install UC Server:

1. **Rename** all of the configuration files in the `.\Data\System` by appending `.old` to the existing filename :

e.g. `C:\Program Files\Objectworld\CallAttendant Office Server\Data\System\DefinityPBXDefinition.cfg` to `DefinityPBXDefinition.cfg.old`
2. If the UC Server software was downloaded from the Objectworld Web site follow step (a), if the UC Server CD-ROM was shipped to you, go to step (b)
 - a. Unzip the contents of the file you downloaded to a temporary folder on UC Server (you will need to provide a location and name for the folder). Start the installation by double clicking on **CAAutoRun.exe** (the UC Server installation screen will appear). Preserve a copy of the installation media accordingly. See section 4.1, Preserving Installation and Upgrade Media.
 - b. Insert the UC Server CD-ROM - the Auto run application will start and the UC Server installation screen will appear.
3. If you plan on using ucCompanion – Live Attendant, install or update the UC Server Presence and Control components at this time. Consult the **UC Server Presence and Control Components Guide** for installation documentation, which is provided on the distribution media.
4. Install the Server applications to the UC Server platform by clicking on the **Install UC Server** buttons on the UC Server installation screen and following the prompts on the subsequent screens until finished.
5. For optimal performance, disable the Indexing Service provided by Windows. For detailed instructions, please see section 3.7 Configuring Services of the **Installation Guide**.
6. Once the installation has completed, select the “Configure UC Server” button to run the **Server Configuration Wizard** but do not add anything if it has already been configured. From the set of options, at a minimum, complete the following tasks:
 - a. Enter the UC Server License key to enable SIP functionality
 - b. Configure the “Windows Network Integration” and select from one of the following:
 - i. If the service account was previously configured for “Local System” account, you must create a Windows account on the local machine. Operating the “Application Services” service on the “Local System” account is no longer supported.
 - ii. If the service account was previously configured with a Windows Active Directory™ account, then configure the “Existing Service Account.”
7. Open the **Windows Services application** and ensure that the **Objectworld UC Server Application Services** is set to start automatically. Note, you may have to refresh (F5) the Services application in order to get a current view of the status. From the **Windows Services applications**, start the **Objectworld UC Server Application Services** if it is not already started.

8. Complete the remaining steps in the **Server Configuration Wizard**. If appropriate add any additional configuration changes required such as adding UC Server as a new communication system, adding new phone types or new gateways.

5.2.4 Cross-grading from CallAttendant Office Server 3.2.x to UC Server (all editions)

Note: It is not possible to upgrade directly from 3.x to 4.2 and later releases (see section 5.2.1, Upgrade/Cross-grade Matrix). An upgrade from CallAttendant Office 3.x to CallAttendant Office 4.0.x must be performed as an intermediate step. Once this is completed, an upgrade to the latest UC Server 4.x release can be completed.

To upgrade 3.x to 4.0.x:

1. Backup the CallAttendant Office using the instructions found in technical note **TN071 – Backup and Restore Procedures for CallAttendant Office** to preserve the following data:
 - a. Users (greetings, services, announcements)
 - b. Port configuration
 - c. Attendant data
 - d. System configuration
 - e. Routing data
 - f. Telephone data
 - g. Gateway data



WARNING: Failure to backup the data as per the instructions above and in the Technical Note **will** result in the inability to restore the system to the original system configuration should the upgrade process be unsuccessful or aborted. **ALWAYS** backup the system prior to upgrading.

2. Stop the **CallAttendant Office Service** from the **Windows Services application**.
3. **Rename** the following files:
 - a. C:\Program Files\Objectworld\CallAttendant Office Server\Data\System\Announcements folder to Announcements.old
 - b. C:\Program Files\Objectworld\CallAttendant Office Server\Data\System\DefinityPBXDefinition.cfg to DefinityPBXDefinition.cfg.old
 - c.
4. If the CallAttendant Office software was downloaded from the Objectworld Web site follow step (a), if the CallAttendant Office CD-ROM was shipped to you, go to step (b)
 - a. Unzip the contents of the file you downloaded to a temporary folder on the CallAttendant Office server (you can create a CallAttendant Office folder). Start the installation by double clicking on **CAAutoRun.exe** (the CallAttendant Office installation screen will appear). Preserve a copy of the installation media accordingly. See section 4.1, Preserving Installation and Upgrade Media.
 - b. Insert the CallAttendant Office CD-ROM - the Auto run application will start and the CallAttendant Office installation screen will appear.
5. Install the Server applications to the CallAttendant Office platform by clicking on the **Install CallAttendant Office Server** buttons on the CallAttendant Office installation screen and following the prompts on the subsequent screens until finished. Do not choose to reboot the computer at this point.
6. Open the **Windows Services application** and set the **CallAttendant Office Service** to start **automatically**. Note: you may have to refresh (F5) the Services application in order to get a current view of the status.
7. From the **Windows Services applications**, start the **CallAttendant Office service**.
8. Convert the system audio. If the software was upgraded from Release 3.1 or earlier, you must convert the audio from the pre-existing 11 kHz-8bit audio format to the newly supported 8 kHz mu-law audio. Although the CallAttendant Office server will change the audio format "on-the-fly" the conversion will introduce latency in playing audio files or messages.

To perform the audio conversion:

- a. **Caution:** Ensure that you perform this conversion during the maintenance window – typically after normal business hours.
- b. From **My Computer**, navigate to the `C:\Program Files\Objectworld\CallAttendant Office Server\Bin` directory
- c. Double-click on the `ConvertAudio.exe` application.

5.2.5 Upgrading Client Software

If anything other than a minor server upgrade has taken place, client software will also need to be updated on end user computers; only 4.4.x client software is supported with 4.4.x server software. See section 5.3, Installing or Upgrading UC Client Software, for installation options and procedures.

5.3 Installing or Upgrading UC Client Software

This section documents manual installation procedures, and presents other techniques for automated client deployment.



WARNING: Only release 4.4.x UC Client software is compatible with UC Server 4.4.x software (the patch revision value 'x' does not need to be identical). All incompatible clients must be upgraded after the UC Server has been upgraded.

5.3.1 Manual Installation or Upgrade Instructions

Note: The user installing UC Client software MUST have administrative privileges on that desktop computer.

1. If the UC Server software was downloaded from the Objectworld Web site follow step (a), if the UC Server CD-ROM was shipped to you, go to step (b)
 - a. Unzip the contents of the file you downloaded to a temporary folder on UC Server (you will need to provide a location and name for the folder). Start the installation by double clicking on **CAAutoRun.exe** (the Objectworld Unified Communications Server CD Menu will appear). Preserve a copy of the installation media accordingly. See section 4.1, Preserving Installation and Upgrade Media.
 - b. Insert the UC Server CD-ROM - the Auto run application will start and the UC Server installation screen will appear.
2. Install the client applications to a client computer by clicking on the **"Install Client"** button on the installation screen and following the prompts on the subsequent screens.
 - a. If a minor UC Client upgrade is being performed, click on the **Install** button to begin the upgrade and continue to follow the prompts on the subsequent screens until finished.
 - b. If a major UC Client upgrade is being performed, click **Next** on the Welcome page of the "Objectworld Unified Communications Setup".



Installing UC Client directly on the UC Server platform is not supported. Ensure that the client is installed on a separate platform meeting the minimum requirements (see section 0, Objectworld now recommends the use of Microsoft Exchange Server MAPI Client and Collaboration Data Objects 1.2.1 instead of Microsoft Outlook and strongly encourages all customers to switch to this MAPI connector instead of Outlook. The benefits of doing this

are as follows:

- No Outlook license is required for the UC Server system. The MAPI/CDO package is available at no charge.
- The MAPI/CDO package is a minimal installation that requires fewer Microsoft Updates.
- This component is designed and provided by Microsoft explicitly for the purpose of allowing applications such as UC Server to access Exchange Server and does not include many of the client-side nuances of Outlook versions of MAPI.

On Exchange Server 2003, additional steps are required after following the manual integration instructions in Appendix A of the Server Configuration Guide:

Delegate “Exchange View Only Administrators” control to the UC Server service account:

12. Open **Exchange System Manager** on an Exchange Server in the enterprise, or an administrative workstation.
13. Select the enterprise level object (the root object in the tree).
14. Select **Delegate control...** from the **Action** menu. This will open the **Exchange Administration Delegation Wizard**.
15. Click **Next**.
16. In the **Users or Groups** page of the wizard, click **Add** to open the **Delegate Control** dialog.
17. Select the role **Exchange View Only Administrators** from the list of roles.
18. Click **Browse...** and select the service account used by UC Server for Exchange Server and network integration.
19. Click **OK** in the **Select Users, Computers or Groups** dialog.
20. Click **OK** in the **Delegate Control** dialog.
21. Click **Next** in the **Users or Groups** page of the **Exchange Administration Delegation Wizard**.
22. Click **Finish** to complete and close the wizard.

WARNING: Client Components).

5.3.2 Other Techniques for Installing and Upgrading Client Software

Client software may be deployed using automated techniques including:

- GPO-based MSI installation. See **TNo34 - Client Software Installation Guide** for more information on this option.
- GPO-based login scripts that invoke either `SETUP.EXE` or `MSIEXEC.EXE` with appropriate parameters. Prerequisites components may already need to have been successfully installed. Consult standard Microsoft documentation for more information on those techniques.

6 Product Support

For information on available support programs, policies and procedures for obtaining technical support, please visit: <http://www.objectworld.com/support/>. Please be sure to have read and understood the Objectworld Services Program prior to engaging Objectworld Support Services.

End users and untrained professionals have the following options for obtaining technical support with UC Server:

- Contact the reseller who sold or installed your solution (a support agreement with your reseller may be required).
- Visit the Objectworld web site for self-help material: <http://www.objectworld.com/support/>
- Contact Objectworld Technical Support (Service Vouchers are required). Visit the Objectworld web site for more information: <http://www.objectworld.com/support/>
- Contact Objectworld Professional Services to contract installation, upgrade or other services: proservices@objectworld.com or call 1 (888) 398-9698 or +1 (613) 599-9698

Objectworld Technical Professionals have the following options for obtaining technical support with UC Server:

- Visit the Objectworld web site for self-help material: <http://www.objectworld.com/support/>
- Contact Objectworld Technical Support (a Software Assurance subscription is required or Service Vouchers will be required). Visit the Objectworld web site for more information: <http://www.objectworld.com/support/>
- Contact Objectworld Professional Services to contract installation, upgrade or other services: proservices@objectworld.com or call 1 (888) 398-9698 or +1 (613) 599-9698

To purchase Service Vouchers, you have the following options:

- Contact the reseller who sold or installed your solution.
- Purchase online from the Objectworld web site. See <http://www.objectworld.com/support/> for more information.

To obtain a Software Assurance Subscription, you have the following options:

- Contact the reseller who sold or installed your solution.
- Contact the Objectworld Sales Department: sales@objectworld.com or 1 (888) 398-9698 or +1 (613) 599-9698

7 Documentation and Training

7.1 Product Documentation

Detailed product documentation is included on the distribution media. These are located in the \Docs folder of the distribution media. Documentation is provided for installers, administrator and end users. The following types of documents are included:

- Release Notes (this document)
- Planning, Deployment, Installation, Configuration, Administration and User Guides
- Technical and Application Notes
- Third Party Integration Guides
- SIP Telephone User Guides
- Training materials

7.1.1 Technical and Application Notes

Detailed technical notes about UC Server and integration with third-party products are included on the distribution media. There are located in the `\Docs\TechnicalNotes` folder of the distribution media. The following types of technical and application notes are included:

- Backup and Restore
- PBX integration
- 911 and Enhanced 911
- Lotus Notes/Domino integration
- SIP Gateway configuration (including sample configuration files)
- Troubleshooting
- Out-dialing application notes and example automation/database application
- SIP trunking
- List of products certified under the Objectworld Connect™ Plus Interoperability Programs and the Objectworld Interoperable™ Program.
- Additional phone configuration for SIP phones that are not Objectworld Connect™ Plus products
- Paging deployment
- Call recording

7.1.2 Training Course Materials

The UC Server distribution media now includes the technical training course handout from our leader-led course, aimed at professional IT administrators and technicians.

The media also includes training for end users. There are several Flash-based, self-study training modules, and a printable course handout that a user of our system can go through at their own pace to learn how to get the most from their UC Server system.

These can be found in the `\Docs\TechnicalTraining` and in the `\Docs\EndUserTraining` folders of the distribution media respectively.

Additional training material is also provided in the support area of our web site:

<http://www.objectworld.com/support/>.

7.2 Training

Objectworld offers training for qualified professional IT administrators and technicians. This course is provided at Objectworld's corporate location in Ottawa, Canada. Contact the Objectworld Sales Department at sales@objectworld.com or 1 (888) 398-9698 or +1 (613) 599-9698 to enroll. With successful completion of this training, participants are granted an Objectworld Technical Professional designation.

Objectworld also offers end-user training through its professional services group. Contact Objectworld Professional Services at proservices@objectworld.com or call 1 (888) 398-9698 or +1 (613) 599-9698.

Information on current training programs and materials can be found in the support area of the Objectworld web site: <http://www.objectworld.com/support/>.

7.3 Product Downloads and Third Party Drivers

Product downloads and third party drivers and patches are available in the support area of the Objectworld web site: <http://www.objectworld.com/support/>. A user id and password are required to access this material.

8 Third-party Interoperability



WARNING: At this point in time, many third-party drivers and applications DO NOT support Windows Server 2008 and derived platforms. When using TAPI integrations, or other integrations requiring the use of CTI drivers, please review driver documentation for those products BEFORE proceeding with plans to use Windows Server 2008 as the server platform for those deployments.

8.1 UC Server with a PBX Integration (Hybrid Configuration)

8.1.1 Supported Private Branch Exchanges (PBX)

UC Server has the native capability to connect to multiple traditional PBXs and IP PBXs while simultaneously supporting SIP services (SIP Edition only). UC Server can be deployed as a voicemail, unified message server, database IVR platform and fax server behind a traditional PBX while also simultaneously supporting SIP Telephony (SIP Edition only). This provides a useful transition strategy for companies looking to migrate to VoIP but who still want to leverage their existing infrastructure. UC Server users that employ a traditional PBX for telephony can still take advantage of Active Directory™ integration for user management; the telephony features will be managed through their PBX configuration interface.

UC Server integrates with a wide variety of traditional PBX and IP PBXs using Dialogic 1000 and 2000 Media Gateways. The following PBXs are now supported using the Dialogic Media Gateway:

- Alcatel Omni PCX 4400
- Avaya Communications Manager
- Avaya Definity G3
- Avaya Legend
- Avaya Merlin Magix
- Avaya Partner
- Ericsson BusinessPhone
- Ericsson MD110
- Intecom PointSpan M6880
- Mitel 3300
- Mitel SX-2000
- Mitel SX-200D Family
- NEC NEAX2400
- Nortel CS-1000
- Nortel DMS 10
- Nortel DMS 100
- Nortel Meridian 1
- Phillips Sopho
- Rolm (Siemens) 8000
- Rolm (Siemens) 9000
- Rolm (Siemens) 9751
- Siemens HiCom 150E
- Siemens HiCom 300
- Siemens HiPath 4000
- Toshiba CTX

For more details on specifically which PBX editions and interfaces are supported, please consult the Dialogic Media Gateway documentation available from Dialogic's web site:

<http://www.dialogic.com/support/helpweb/mg/integration.htm>.

UC Server also integrates with the PBXs listed in the table below using one of the following techniques:

- Analog port integration with in-band tones using Dialogic® D/4PCIUF and D/120JST-LS Media Boards
- Digital set emulation using Dialogic® D/82JCT-U and D/42JCT-U PBX Integration Boards
- CTI link/analog port integration using Dialogic® D/4PCIUF and D/120JST-LS Media Boards
- PBX Vendor supplied Microsoft TAPI/WAVE Service Providers

PBX Vendor/Model	Minimum Software Release	Technical Note (TN) Reference Number	Integration Type	3rd Party Hardware/Software (Recommended)
Avaya Communications Manager	1.0 and above	TN016	Digital set emulation: - 7434D emulation - 8434D emulation - 7434ND emulation	Dialogic 6.0 SU 229
Avaya Definity (no CLID)	6.3 and above	TN009	Analog port using mode codes; Mode code option is required	Dialogic 6.0 SU 229
Avaya Definity/Multi-Vantage (with CLID)	4 and above	TN010	Digital set emulation: - 7434D emulation - 8434D emulation - 7434ND (7.5 and above)	Dialogic 6.0 SU 229
Avaya IP Office	2.0 and above	TN012	CTI link/analog port using TAPI	- IP 400 CTI link - IP 400 TAPI-WAVE Dialogic 6.0 SU 229
Avaya Merlin Legend	3.1 and above		Analog port using mode codes	Dialogic 6.0 SU 229
Avaya Merlin Magix (with CLID)	2.1 and above	TN008	Analog port using mode codes	Magix CTI link bundle Dialogic 6.0 SU 229
Avaya Merlin Magix (no CLID)	2.1 and above	TN008	CTI link/analog port using mode codes /TSAPI	Dialogic 6.0 SU 229
Avaya Partner ACS	3.0 and above		Analog port using mode codes	Dialogic 6.0 SU 229
Cisco Call Manager	4.2	TN039	Cisco-supplied Microsoft TAPI/WAVE Service Provider	
Mitel SX200 (family)	G1005/LW16 F41.0.2	TN011	Analog port using enhanced in-band DTMF tones	Dialogic 6.0 SU 229

PBX Vendor/Model	Minimum Software Release	Technical Note (TN) Reference Number	Integration Type	3rd Party Hardware/Software (Recommended)
Mitel 3300 (IVR only)	Any version that requires ONS voicemail support		Analog port using in-band DTMF tones	Dialogic 6.0 SU 229
Nortel Norstar	4.2 and above	TN003	Digital set emulation: - M7324 set emulation	Dialogic 5.1.1 with PTR.31016 **
Generic in-band	PBX dependent		Analog port using in-band DTMF tones	Dialogic 6.0 SU 229

** UC Server ONLY supports Dialogic Release 5.1.1 software with PTR.31016 (LIBFAXMT.DLL) for Norstar PBX's as the Do Not Disturb feature does not work with Dialogic Release 6.0 for Nortel Norstar PBX.

8.1.2 New Installation of Dialogic Software

To install Dialogic software (available on the distribution media) on the new UC Server:

1. Install the Dialogic System Software compatible with the PBX make and model.
 - a. Run SETUP.EXE from Windows Explorer.
 - i. When prompted to select features, select "**Core Runtime Package**"; select **Next**.
 - ii. When advised that the installation will install third party software, select **Yes**. The installation will detect and remove any existing Dialogic system software.
 - iii. The first stage of the installation will require a reboot. When prompted to restart the system, select **Yes**.
2. Verify through the Windows Hardware Device Manager that all of the Dialogic cards reside in the "Dialogic Springware Devices section".

Note: If any of your cards appear to be improperly configured (i.e. Caution symbol or otherwise) then you will have to update the driver

 - a. To update the driver:
 - i. Locate and configure the Dialogic card from Device Manager.
 - ii. Select **Driver** tab and select "**Update Driver**".
 - iii. Choose the "**Search for suitable driver for my device (recommended)**" and click **Next**.
 - iv. The driver update will locate the Dialogic Card; click **Next**.
 - b. Repeat steps i through iv for each Dialogic card that appears improperly installed or configured.
3. Run **Dialogic Configuration Manager** (Start > Programs > Dialogic System Release > Configuration Manager – DCM. DCM will detect any Dialogic hardware installed on the machine hosting UC Server software.
 - a. Ensure that the board settings match your PBX type. (The default configuration is Nortel Norstar.)
 - b. For digital set emulation, open each card and ensure the **MISC** tab > **PBXSwitch** parameter is configured according to your integration.
 - c. See the relevant configuration guide
4. Configure the Dialogic service to start automatically; Select Settings > System Device Autostart to "**Start System**". It is normal to encounter the error message "Failed to set the Device Autostart setting. Requested data not found in NCM data storage."
5. Proceed with UC Server installation instructions.

6. Verify the Dialogic board ordering by running UC Client as an administrator and call each port. If the ports are not answering in the correct order, switch the Dialogic cables on the back of the machine hosting UC Server software.

8.1.3 To upgrade Dialogic software on existing UC Server (if required)

Once you have determined that the Dialogic software version needs to be upgraded then perform the following steps:

1. Remove existing Dialogic system software.
 - a. Stop the existing UC Server and Dialogic services
 - b. Launch the Microsoft® Windows Service control application (Start > Settings > Control Panel > Administrative Tools > Services)
 - i. **Stop** the service labeled “UC Server” and change the service **Startup type** from Automatic to manual.
 - ii. **Stop** the service labeled “Dialogic System Service”
 - c. Remove Dialogic System Software
 - i. Locate the Add/Remove Programs from the Windows Control Panel. (Start > Settings > Control Panel > Add/Remove programs)
 - ii. **Select and Remove** the Dialogic software.
 - d. Reboot the system as indicated
2. **Note:** In rare instances you may need to run an Dialogic utility to clean up the old Dialogic Release 5.1.1 installation files, directories and registry settings. This batch file can be located in `\cleanup\dlgc_rel_clean.bat` in the Dialogic installation directory. This will be apparent if the Dialogic DCM – configuration management application is not installed.
3. Install the Dialogic System Software.
 - a. Follow the procedure in the section above (New Installation of Dialogic) to install the required version of Dialogic applicable to your PBX.

8.2 Gateway Interoperability

UC Server has the native capability to connect to multiple gateways to provide access between the customer’s network and other service providers using either analog or digital trunk connections. Please see technical note **TN051– UC Server Interoperable SIP Devices and Services** – for complete feature compatibility.

8.2.1 Analog Gateways

UC Server integrates with the following analog gateways:

Vendor	Partner Level	Model	Software Release
Mediatrix	Connect	1204	5.0.15.92
Quintum	Connect	Tenor AS, AF	P104-12-17
Vegastream	Connect	50 6x4	11.02.07.5R075S009

8.2.2 Digital Gateways

UC Server integrates with the following digital gateways:

Vendor	Partner Level	Model	Software Release
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Vendor	Partner Level	Model	Software Release
AudioCodes	Connect	M1000	4.80A.033.004
Quintum	Connect	Tenor DX	P104-12-17
Vegastream	Connect	400	10.02.07.25R072S018

8.3 SIP Firewall / SIP ALG Interoperability

UC Server has the native capability to interoperate with a third-party firewall for IP address translation on the SIP Services between the customer's network and other service providers. Please see technical note **TN051 – UC Server Objectworld Interoperable SIP Devices and Services** – for complete feature compatibility.

UC Server integrates with the following SIP Firewalls:

Vendor	Partner Level	Model	Software Version
Edgewater	Interoperable	4200, 4300, 5300, 5300LF, 6400, 6400LF Series	6.7.4
Ingate	Connect	Firewalls: 1190, 1500, 1550, 1590, 1900	4.6.1
		SIParators: 19, 50, 59, 90	4.6.1
Intertex	Interoperable	IX66, IX67, IX68	4.02

8.4 ITSP Interoperability

UC Server has the native capability to connect to multiple Internet Telephony Service Providers (ITSP). ITSPs are used to provide access between the customer's network and other service providers using SIP trunking. Please see technical note **TN051 – UC Server Interoperable SIP Devices and Services** – for complete feature compatibility.

Note: ITSP interconnections are only supported via an Ingate Firewall and SIParator, see **TN095 – Objectworld ITSP Configuration** – for more information.

Provider	Partner Level	Services
AGN	Interoperable	Inbound DID Calling, 800 Inbound Calling, 911 and E911, Incoming Caller ID
babyTEL	Interoperable	Inbound DID Calling, Incoming Caller ID
BandTel	Connect	Inbound DID Calling, 800 Inbound Calling, 911 and E911, Incoming Caller ID
Bandwidth	Connect	Inbound DID Calling, 800 Inbound Calling, 911 and E911, ENUM Number Delivery, Incoming Caller ID
Broadvox	Connect	Inbound DID Calling, 800 Inbound Calling, Incoming Caller ID
Clarity Voice	Interoperable	Inbound DID Calling, 800 Inbound Calling, 911 and E911, Incoming Caller ID
VocalNet	Connect	Inbound DID Calling, 800 Inbound Calling, 911 and E911, Incoming Caller ID

8.5 Telephone Terminal Interoperability

The following telephone terminal hardware and software are supported. Before selecting and purchasing telephone terminal devices, please consult technical note **TNo51– UC Server Interoperable SIP Devices and Services** for complete feature descriptions of each device and for complete compatibility information.

Vendor	Partner Level	Model	Software Version
Aastra	Connect+	9112i, 9133i, 480i, 480iCT	1.4.3
		6751i, 6753i, 6755i, 6757i	2.4.1
Cisco	Interoperable	7940, 7960	POS3-08-8-00
		7912	8.0.1 (060412A)
Grandstream	Connect	BT101, BT102	1.1.0.3
	Connect+	BT200, BT201	1.1.6.16
		GXP 280	1.1.6.27
		GXP1200, GXP2000, GXP2010, GXP2020	1.1.6.16
		GXV3000	1.0.1.27
Linksys	Interoperable	SPA941	5.1.8
Mitel	Interoperable	5220, 5224, 5235, 5330, 5340	R7.0.01.01.01.09
Polycom	Connect+	SoundPoint IP 320, 330, 430, 450, 501, 550, 560, 601, 650, 670	3.1.0.0084 ²
		SoundStation 4000, 6000, 7000	3.1.0.0084
		VVX 1500	3.1.2.0750
snom	Connect+	300, 320, 360, 370	7.3.14 ³
		820	8.1.3

8.6 Softphone Interoperability

The following softphones are supported. Please see technical note **TNo51– Objectworld Interoperable SIP Devices and Services** – for complete feature compatibility.

Vendor	Partner Level	Model	Software Version
CounterPath	Connect	eyebeam	1.5.5
		X-lite	3.0.41150

² Older model Polycom sets, including the Polycom SoundPoint IP 301, are no longer supported with this version of the firmware.

³ Upgrades from V_{3,4,5}, (to V7) require a special upgrade path: <http://wiki.snom.com/Firmware/V7/Update>

Vendor	Partner Level	Model	Software Version
SJ Labs	Interoperable	SJphone	1.65.377a

8.7 SIP Wireless Servers

The following wireless servers are supported. Please see technical note **TN051– Objectworld Interoperable SIP Devices and Services** – for complete feature compatibility.

Vendor	Partner Level	Model	Software Version
Polycom	Connect	Kirk Wireless Server KWS300	PCS03A
		Kirk Wireless Server KWS600v3	PCS05Ac
		Kirk Wireless Server KWS6000	PCS03A

8.8 SIP Paging Speakers, Controllers, Amplifiers and Intercoms

The following paging speakers, controllers, amplifiers and intercoms are supported. Please see technical note **TN051– Objectworld Interoperable SIP Devices and Services** – for complete feature compatibility.

Vendor	Partner Level	Model	Software Version
CyberData	Connect	VoIP Speaker	4.0.2
		VoIP Paging Server	1.12
		VoIP Zone Controller	1.06
		VoIP Paging Amplifier	3.02
		VoIP Loudspeaker Amplifier	3.02
		VoIP Intercom	2.04
Atlas Sound	Connect+	VoIP Speakers I8S, I8SC, I8SCM, IHVP and I128SYS	E286p54
		VoIP Zone Controllers IPS-ZC1 and IPS-ZC2	E286p54

8.9 Software Product Interoperability

The following other software products have been tested and are known to work with UC Server:

Vendor	Partner Level	Product/Service	Software Version
Research In Motion (RIM)	Interoperable	BlackBerry Enterprise Server for Microsoft Exchange	4.1 or newer
		BlackBerry Handheld Devices	4.2.1 rev 163, 4.2.2 or newer
PhoneTag	Interoperable	PhoneTag (formerly SimulScribe)	n/a

Vendor	Partner Level	Product/Service	Software Version
Google	Interoperable	Google Mail (Gmail) <i>using stunnel (SSL proxy)</i>	n/a stunnel 4.24

9 Known Software Limitations

The following limitations are known in this UC Server release:

Tracking #	ISSUE	Workaround
4325	Silent Installation of ucCompanion – Live Attendant (installation fails using command line with parameters: /S /v/qn)	Use Install Wizard
4503	UC Server implementations on a Microsoft Windows Small Business Server (SBS) will not be able to view voice or fax messages from the local machine or through the terminal services client connected to the same Small Business Server. The Microsoft MAPI version that is installed with Microsoft Exchange Server does not support the same capabilities as the MAPI driver that is installed with Microsoft Outlook. Installing Outlook on the SBS server will not resolve this issue, nor is it supported by Microsoft.	Please contact the Objectworld Communications Technical Support department if this is critical to your deployment or demonstration scenario. Note that this is not a supported deployment scenario.
4614	There is currently a known issue with the Windows Installer on Windows Vista platforms. During uninstall of UC Server, the "User Account Control" dialog indicates that the publisher is 'unidentified'. This issue is caused when the Windows Installer caches a copy of the MSI package in the Installer folder during the installation process. Windows Installer removes some data from the cached copy of the MSI in an effort to reduce the size consumed by the copied MSI. As a result, the embedded digital signature becomes invalid.	Accept the warning and continue
5020	Call Swap on ucCompanion – Live Attendant is not supported	None
5124	On Windows Vista, the Objectworld fax printer driver will not successfully execute if UC Client is installed by either the administrator or by a user that has used the "Run as administrator" option. Note that this scenario does not apply to a user installing UC Client that has elevated their privileges to administrator to install UC Client.	In both cases, after installing UC Client it will be necessary to log out and log back in to Windows (as the appropriate user).

Tracking #	ISSUE	Workaround
5204	On Windows Vista, The Objectworld fax printer driver will not successfully execute if UC Client is first launched directly from Outlook or by running the executable directly from the "bin" folder.	The first time that UC Client is run it must be launched from the Start Menu.
5571	Three-way conference initiators do not pass DTMF tones generated by conference participants.	Have the conference initiator generate the DTMF tones.
5742	Windows services automatic recovery processes hinder diagnosis of any startup issue and could result in unnecessary entries added to the system or application event logs.	Ensure the recovery settings for the UC Server Application Services service are set to "Take no Action" in all cases (First failure, Second failure, and subsequent failures). These settings should not be changed.
5859	Minor non-compliance related to Request URI in ACK and BYE SIP Messages under very specific circumstances involving specialized equipment. SIP, CEBP	None
5862	Incorrect call status displayed on ucCompanion – Live Attendant UI occurs infrequently and then usually only on low end or overloaded systems and immediately after an installation.	Restart the Objectworld UC Server SIM service in the Services control panel.
5878	Windows XP and Windows Server 2003 system performance – Indexing service uses large amount of page file space (larger than 1.2 GB) and CPU time	Turn off the Indexing service. See the UC Server installation manual for instructions.
5966	Creating a UC user from within Active Directory, it is possible to neglect creating an associated identity at the same time. This has the side effect of not creating a temporary PIN for the user.	The administrator can explicitly set the PIN from within the AD pages.
6073	Service account password is not preserved on upgrade from 4.0.x to 4.2.x if the "current account" option is selected in the Select Service Account dialog. This specifies that the currently configured service is to be used as the service login account. If selected, then the UC Server Application Service will fail to restart.	The upgrade instructions included in this document describe the necessary steps to restore the service account. Please ensure you follow these instructions.
6256	On an upgrade from pre 4.2.1, the ucCompanion – Live Attendant "Calls" menu does not automatically use the new shortcuts as described in the documentation. SIP, CEBP	The Calls menu shortcut assignments are customizable, so to preserve these custom settings, the new shortcut mappings are not automatically registered. To manually reset the shortcuts to the new mappings perform the following action: Within the View menu select Toolbars > , then Customize.... In the Customize dialog box, select the Keyboard tab then click the Reset All button.

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Tracking #	ISSUE	Workaround
6614	In some cases, caller information may not be received in distributed IP Office TAPI integrations.	None.
6797	Uninstalling UC Server from Windows Server 2008 does not automatically stop the OBJECTWORLD instance of SQL Server.	After uninstalling UC Server, manually stop the OBJECTWORLD SQL Server Express service, and then manually uninstall the OBJECTWORLD SQL Server Express instance.
6978	After upgrade to Windows Vista Service Pack 1, UC Server MMC plug-in is no longer available. Reinstalling UC Client does not resolve the problem.	Reinstalling the Microsoft's Windows Server Administration Tools will resolve the problem.
7074	Fax printer driver cannot send faxes when My Documents folder is redirected to network share.	This appears to be an issue with the Microsoft Universal Printer driver supplied in Windows Vista and used by the Objectworld Fax Printer Driver. Workaround is to disable My Documents redirection.
7376	Sending faxes to the Fax Printer Driver in A4 format causes the fax document to be generated incorrectly and the fax will fail to be sent.	Print using Letter format instead.
7700	AMD systems running Windows Server 2003 or Windows XP may experience choppy or corrupt audio with some phones. SIP, CEBP	Follow instructions in Microsoft KB article 895980: http://support.microsoft.com/kb/895980
8149	Active Message Delivery may fail when all ports on an Avaya IP Office are busy.	Increase the number of ports to improve port availability.
8282	On Windows XP, the service account used for the Application Services may spontaneously become lost or invalid. This can occur when the system is restarted, the Application Services are restarted, or UC Server is upgraded (causing a 1920 error).	Use Windows Server-based platforms instead of Windows XP. Additional instructions have been added to upgrade procedure to mitigate the 1920 problem during upgrade caused by this issue.
8374	snom phones do not register on networks with spanning tree enabled. Consult snom support material for more details.	Enable fast spanning tree or disable spanning tree on the network. Consult snom support material for more details.