

Strata[®]



Remote Call Control

Administrator Guide

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Introduction

This guide provides instructions on using the Remote Call Control (RCC) application. This book contains the following chapters:

- **Chapter 1 – Overview** describes details regarding RCC and Microsoft Office Communications Server.
- **Chapter 2 – Licenses** contains information regarding obtaining the appropriate RCC licenses.
- **Chapter 3 – Software Installation.**
- **Chapter 4 – Configure MS OCS and RCC** contains procedures to configure the Office Communications Server.
- **Chapter 5 – Configure Users** contains procedures to configure User accounts.
- **Chapter 6 – Troubleshooting**

Conventions

Conventions	Description
Note	Elaborates specific items or references other information. Within some tables, general notes apply to the entire table and numbered notes apply to specific items.
Important!	<i>Calls attention to important instructions or information.</i>
Arial Bold	Represents telephone buttons.
Tilde (~)	Means “through.” Example: 350~640 Hz frequency range.
See Figure 10	Grey words within the printed text denote cross-references. In the electronic version of this document (Library CD-ROM or FYI Internet download), cross-references appear in blue hypertext.
➤	Denotes a procedure.
➤	Denotes the step in a one-step procedure.

Related Documents/Media

Some documents listed here may appear in different versions on the CD-ROM or in print. To find the most current version, check the version/date in the Publication Information on the back of the document’s title page.

Refer to the following for more information:

- Strata CIX Remote Call Control Administrator Guide
- Microsoft Documents:
 - Microsoft Office Communicator 2007 Getting Started Guide
 - Microsoft Office Communications Server 2007 Active Directory Guide
 - Microsoft Office Communications Server 2007 Technical Overview
 - Microsoft Office Communications Server 2007 Standard Edition Deployment Guide.

Note The above Microsoft documents can be found on the Microsoft website.

This document contains System Administrator and software installation instructions for Remote Call Control (RCC) supported by the Strata CIX telephone system. The RCC software must be installed in conjunction with Microsoft Office Communications Server (OCS) 2007 and the Strata CIX Computer Supported Telecommunications Application (CSTA) services.

Important! *Refer to the Microsoft Office Communications Server 2007 Standard Edition Deployment and the Technical Overview guides for all other implementation details.*

Note The Microsoft Office Communications Server 2007 Technical Overview document states that features such as ringing an additional number or redirecting unanswered calls is not supported. However, if you are using RCC with the Strata CIX, it can be configured to support this features.

Remote Call Control (RCC)

RCC is a SIP based server that connects the Strata CIX Telephone System to the Microsoft OCS 2007. The two main advantages of using the RCC server are to complete telephone call handling and for enhanced telephone presence.

The Microsoft Office Communicator (OC) client is a Microsoft Windows application that allows the user to communicate with other OC users using any combination of Instant Messaging (IM), audio, and video, in both point-to-point and conferencing scenarios. For voice communications, each OC client may be configured as an Enterprise Voice (EV) or a Remote Call Control (RCC) client.

- Enterprise Voice – With Enterprise Voice, OCS 2007 offers full unified communication capabilities, including the ability to make single-party and multi-party VoIP calls, configure robust call forwarding features and receive Voice Mail

in your Microsoft Outlook mailbox. Enterprise Voice does not need a connection to the Strata CIX and RCC server.

- Remote Call Control – With Remote Call Control, the Strata CIX becomes an integral part of Microsoft Unified Communications (UM) solution. The Strata CIX is integrated with OCS 2007 for Call Control and Enhanced Presence. Microsoft technical documentation specifically mentions that with RCC, features such as ringing an additional number or redirecting unanswered calls is not supported. To determine if Communicator is set up for Remote Call Control, click the arrow to the right of the Call button. If you see a Preferred Calling Device option, the OC is configured for Remote Call Control.

Requirements

The RCC application can be installed on an existing MAS or Micro MAS.

The RCC is a JAVA application designed to monitor Strata CIX extensions (devices). The RCC installation will install the JRE 1.60_03 distribution. The web based administration console provides configuration of RCC parameters necessary for interfacing to OCS and the Strata CIX. The RCC installation also distributes the Apache Tomcat web server so there is an embedded web server for the admin console. The web based admin console is tested to work with Microsoft Internet Explorer.

The RCC software requires 300MB of hard drive space and 30MB RAM. More RAM is required when there are active devices being monitored. It requires an additional 25MB per 50 devices being monitored.

The following are the user requirements for RCC:

- Strata CIX phone system
 - Microsoft Office Communications Server installed and integrated with the Company's Active Directory.
 - Office Communicators installed at users' PC and verified
- **To determine if Microsoft Office Client (OC) is set up for RCC**
- Click the arrow to the right of the Call button. If you see a Preferred Calling Device option, the OC is configured for Remote Call Control.

Considerations

The following are considerations when installing the RCC server.

- The RCC software must be installed on a MAS or MicroMAS.
- Networked-OCS (RCC software plus Unifier software) is not supported.
- The RCC software is compatible with Microsoft OCS 2007. MS OCS 2007 R2 is not currently supported.

System Architecture

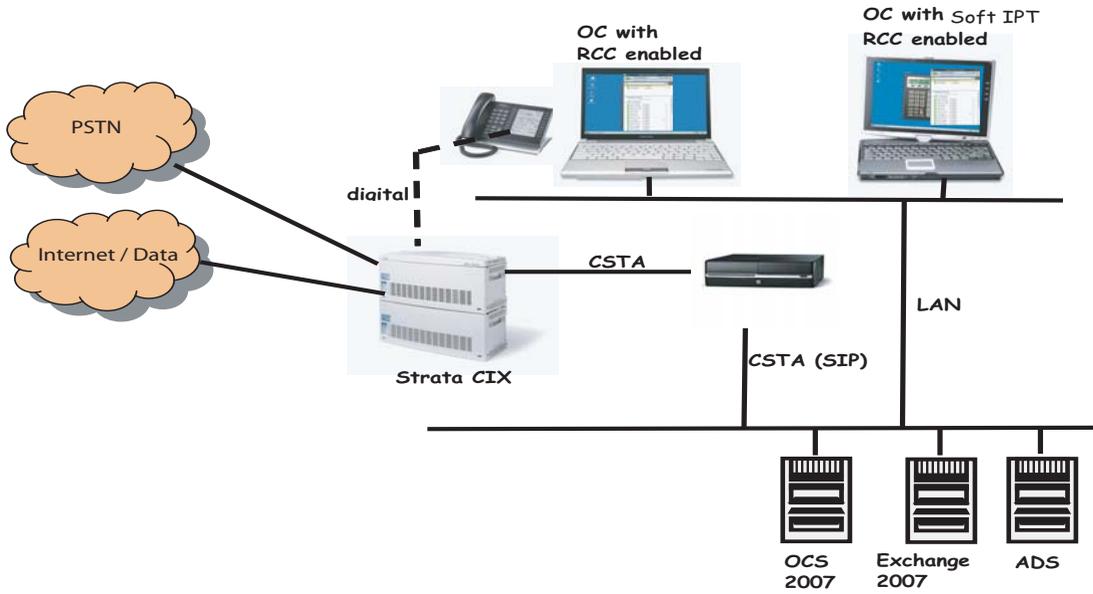
The Remote Call Control application enables the Microsoft Office Communications Server 2007 to communicate with all models of Strata CIX systems. With this configuration, Office Communicator (OC) users will be able to make and receive calls via Strata CIX telephones and perform other useful telephony features directly from the Office Communicator application, such as hold/transfer, etc. Telephony statuses of Strata CIX users in your Office Communicator contacts are also added to the Office Communicator to complete its enhanced presence presentation. For example, if one of your contacts is talking on the telephone, then his presence status will be set to “In a call” with the icon color red.

These features offer the benefits of Unified Communications and communications enabled business process integration, resulting in increased employee efficiency and productivity. Businesses can bring their business processes, team and workgroup collaboration to a new level with the integration of the Remote Call Control application with the Strata CIX and Microsoft OCS.

Remote Call Control was the PBX integration mechanism that initially shipped with Microsoft Live Communications Server 2005 and Office Communicator 1.0. Microsoft has now extended this integration to OCS 2007 and Office Communicator 2007.

In this RCC integration scenario users can issue commands (e.g. click to call) from Office Communicator to the Strata CIX system for their telephone extension. Office Communicator is not acting as a “soft phone” in this scenario, but sending commands to Strata CIX to carry out actions on the calls routed to the user’s extension and telephone device. The Telephone state is also added to Office Communicator presence so the status will be set to “In a Call” when the user is busy in a call.

The protocol used for this integration is the CSTA over SIP standard TR/87 supported by the RCC application. The advantage of CSTA as an integration mechanism is that it enables a powerful addition to user functionality without having to affect Strata CIX installation or configuration.



Features

Product Features

The Remote Call Control integration solution provides many valuable features:

- **Strata CIX Telephony Integration:** Strata CIX telephony services supported by Office Communicator 2007 via click to call, using a Strata CIX telephone device (DP5000, IP5000, DKT, IPT or SoftIPT).
- **Telephony Status:** Telephony status (e.g. In a call, available) are added to Office Communicator 2007 Enhanced Presence.
- **Microsoft Office System integration:** Click to Dial service and user telephony presence status is available from within Microsoft Office and Outlook applications. Consult the Microsoft Solutions provider regarding this integration.
- **Multi nodes:** Optional Unifier can be installed to support Multiple Strata CIX nodes configuration.

Telephony Services

The following are the Telephony Services supported by Office Communicator 2007 when used with Strata CIX system:

Make a call

Answer a call

Disconnect a call

Redirect a call

Hold / Retrieve a call

Retrieve call

Consultation and Screened/Unscreened transfer

Generate digits (DTMF)

Set Call forwarding

The RCC license must be generated using the Toshiba Internet FYI. The procedures below are required to generate and register licenses.

The following licenses are required for the RCC Server:

- A Strata CIX CSTA port license
- Appropriate quantities of device monitor licenses activated on RCC. Each device represents a Strata CIX end point. RCC server monitors the telephony status of all the devices created at RCC.
- RCC Support License activated on RCC. This is a per-site annual renewal support license.

Refer to the Price book or product bulletin for the Part number description. Initial system license package had been set up to make your order easy.

➤ **To generate a license from FYI**

- Refer to Chapter 3 - Licenses of the Strata CIX Programming Manual (Vol. 1) for instructions on generation a license from FYI.

➤ **To register a license**

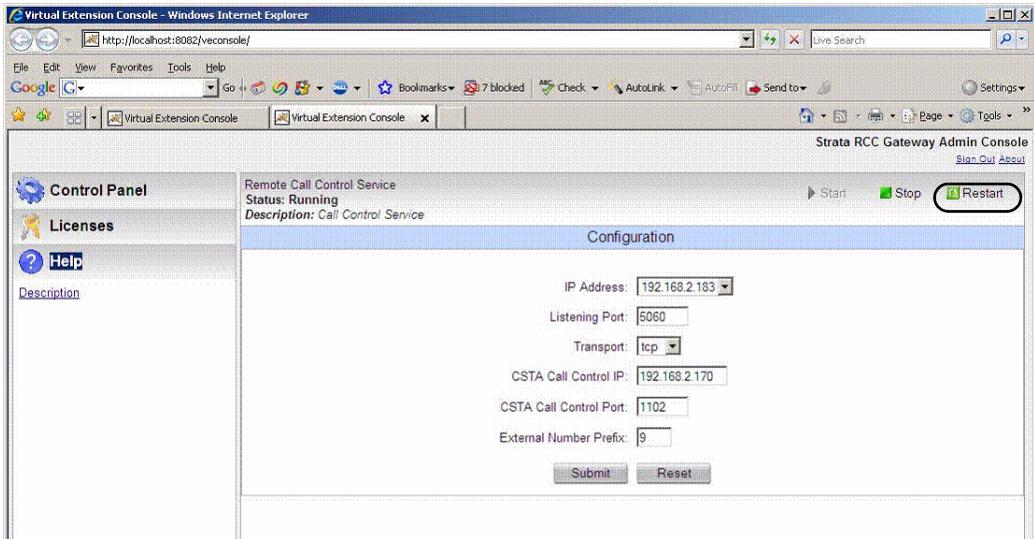
- Upload and activate the license obtained from FYI using Network eManager. Refer to the Network eManager chapter in the *Strata CIX Programming Manual (Vol. 1)*.

➤ **License Verification using RCC Software**

1. For a brand new installation, license can be deployed by Network eManager prior to the installation and configuration of RCC. Once the configuration for RCC is applied, RCC will start running and acquire the already deployed license.

2. If RCC is already configured and running, after deploying the license using Network eManager, RCC needs to be restarted.

To restart RCC, use the RCC web GUI by clicking Start > Programs > TOSHIBA > RCC > Admin, then click RCC Service from the Left pane. The Window shown below will display. Then click the restart button on the right hand side (above the configuration title bar, shown below).



3. You can view license information from the RCC web GUI by clicking Licenses on the left pane and then select “License information”. If there is valid license, the license details will be shown. If not, it will display “no license information” on the right pane.



Note If there is no license, a user starting Office Communicator with RCC option will get the indicator that there is “No Phone System Connection” (shown below).



Installation Checklist

Before installing the RCC server, the following must be installed in the order mentioned below:

1. Install and deploy Microsoft Office Communications Server (OCS)
2. Install and deploy Microsoft Office Communicator on users PC's
3. Install and deploy Toshiba CIX
4. Deploy CIX phones
5. Set up the I/O Device Port using Network eManager (see [page 22](#)).
6. Install Strata RCC software
7. Generate RCC licenses
8. Configure OCS and Strata RCC software
9. Configure users

Use Microsoft documentation for steps 1 and 2 above and Toshiba CIX documentations for step 3 and 4.

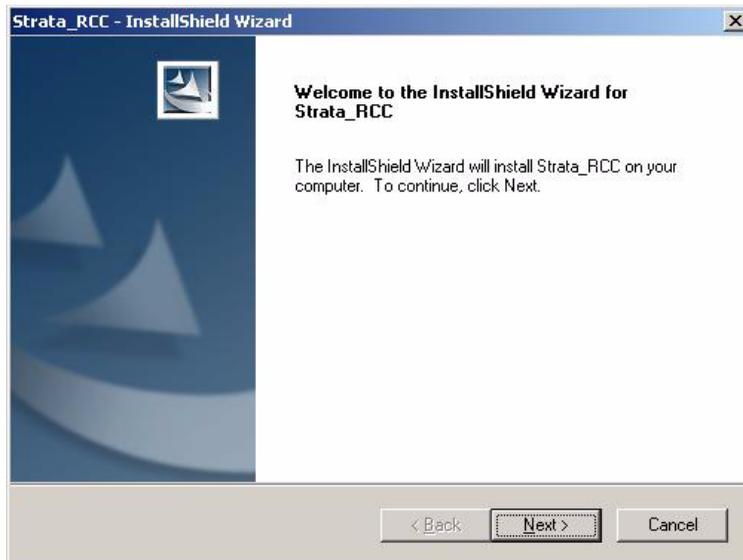
Install RCC on an Existing MAS

To install RCC software, download the RCC software from Internet FYI > Software (Strata Sys.) > CIX Applications and Utilities.

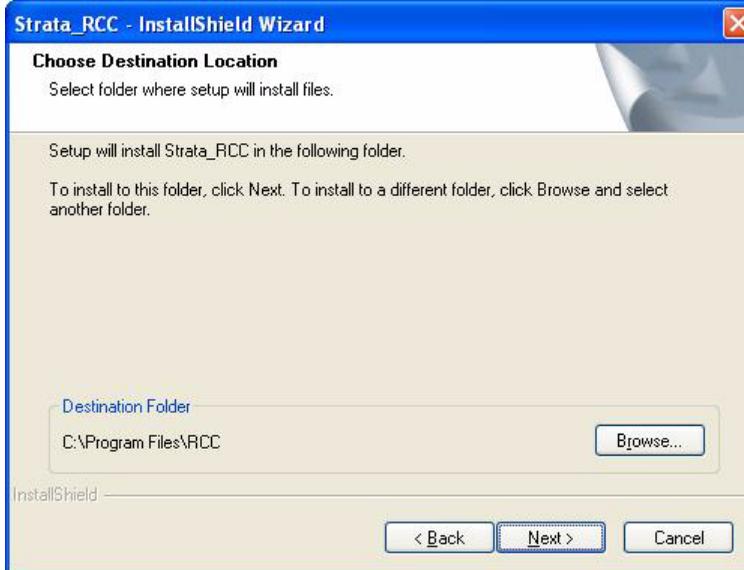
The installation will install the RCC and the Apache Tomcat as the web server and the appropriate JRE distribution.

► To install the RCC software:

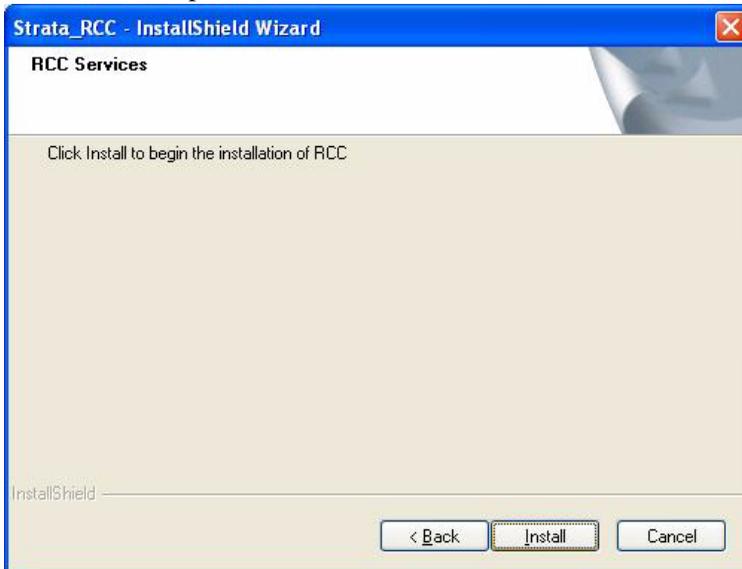
1. Download the software from Internet FYI > Software (Strata Sys.) > CIX Applications & Utilities.
2. Double-click setup.exe to start the installation and follow the screens as described below.
3. Click Next to start the installation (shown below).



4. Click Next to accept the default installation directory (shown below).



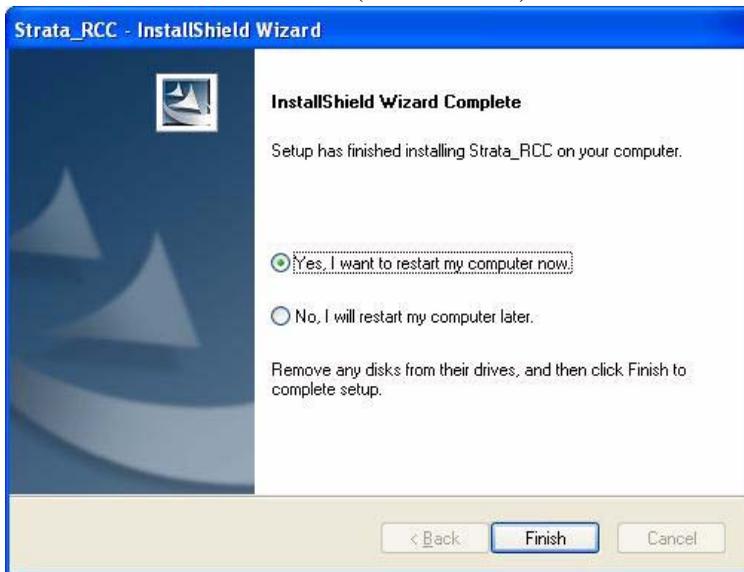
5. Click Install to proceed with the installation (shown below).



Software Installation

Install RCC on an Existing MAS

6. Click Finish to restart the PC (shown below).



Upgrading the RCC Software

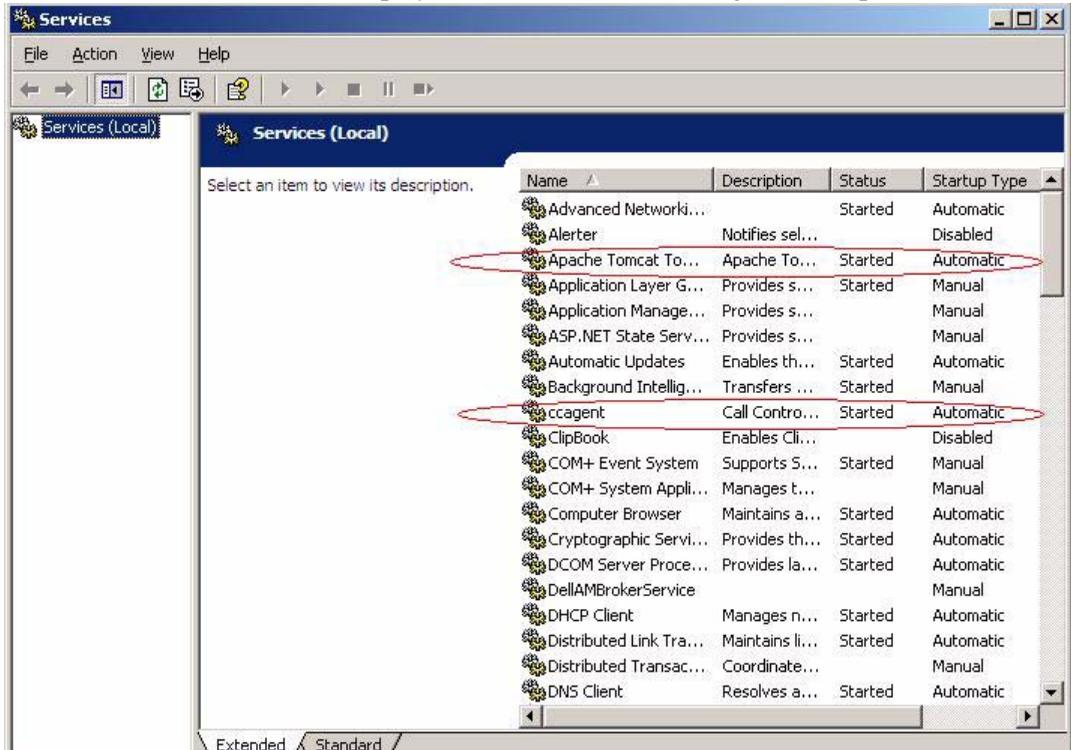
If you already have an older version of the RCC software on the MAS, then follow the steps below to upgrade to a newer version.

CAUTION! Do not install the new version of RCC software without stopping the Apache Tomcat and ccagent (RCC) services. Then remove the existing version of RCC software from the MAS.

► **To stop ccagent and Apache Tomcat services**

1. Click Start > Settings > Control Panel. Then click Administrative tools.
2. Click on Services.

The Services screen displays (shown below) with ccagent and Apache Tomcat.



► To remove the existing RCC software

1. Click Start > Settings > Control Panel. Then click Add or Remove Programs. The Add or Remove screen displays.
2. Select the RCC Software, then click Remove.
3. Install the new version of RCC software. Follow the procedures on [“Install RCC on an Existing MAS”](#) on page 12.

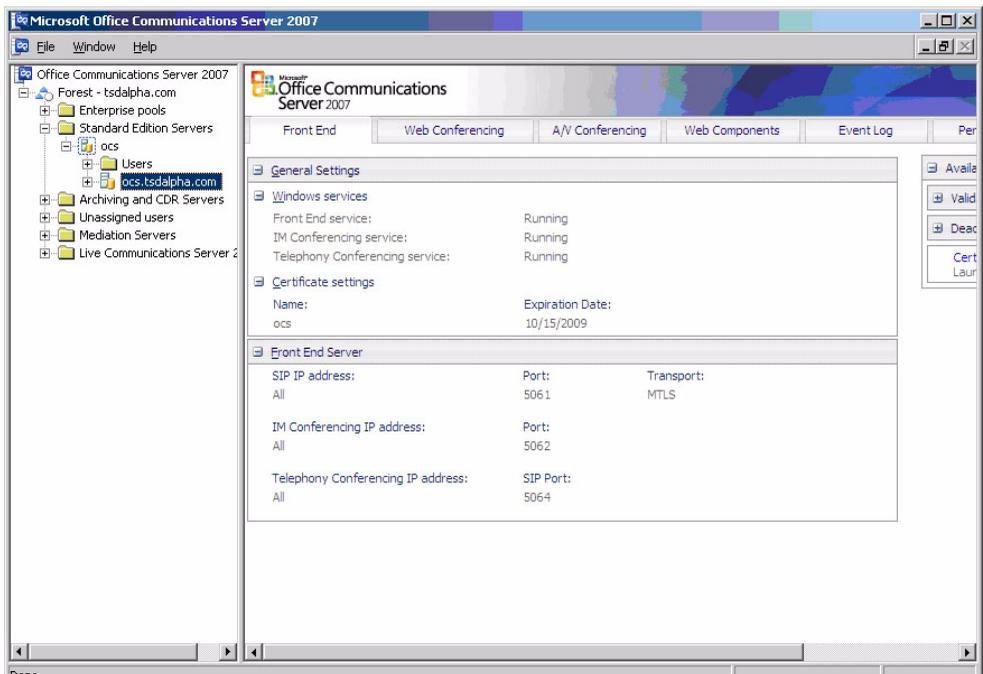
Configure MS OCS and RCC

4

The Microsoft Office Communications Server (OCS) 2007 must be configured to statically route messages for it to communicate with the Strata RCC Server.

► To configure Microsoft Office Communications Server

1. From the start menu, select Programs > Administrative Tools > and open Office Communications Server 2007 (screen shown below).



Configure MS OCS and RCC

Upgrading the RCC Software

2. Locate your OCS server name.

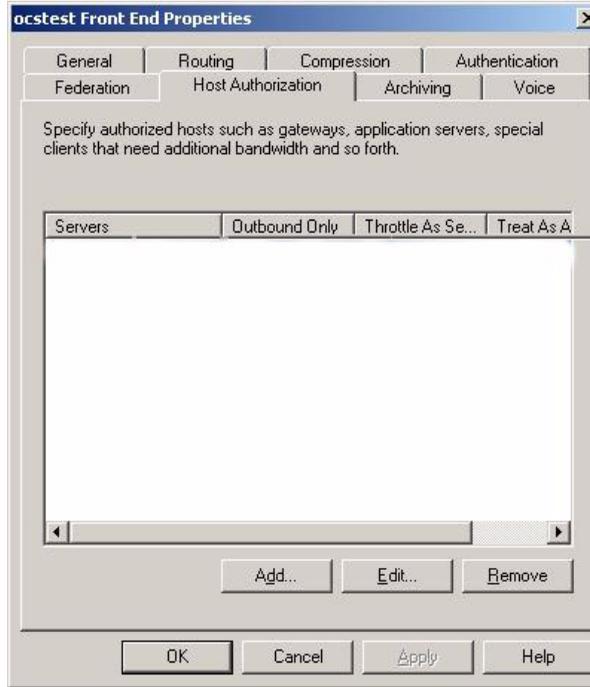
Depending on the Server installed, from the left pane, right click on the Server name under the Standard Edition Servers heading or Enterprise Edition Servers heading.

Note The Server name is the one directly under the Server name.

3. Right click your server name, then select Properties > Front End Properties (as shown below).



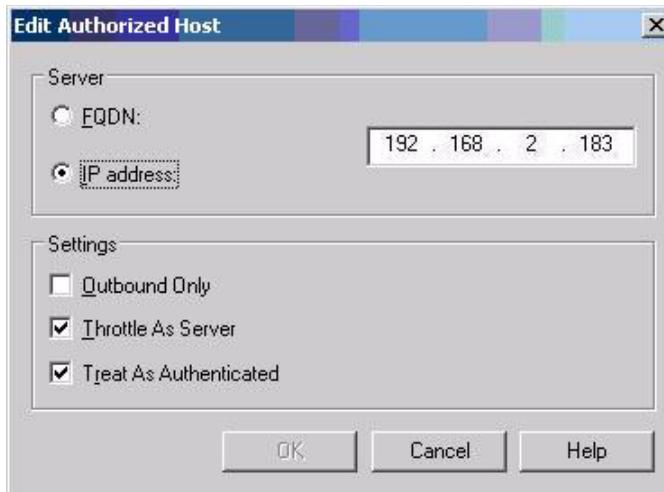
4. The Front End Properties screen displays. Click the Host Authorization tab. (shown right).



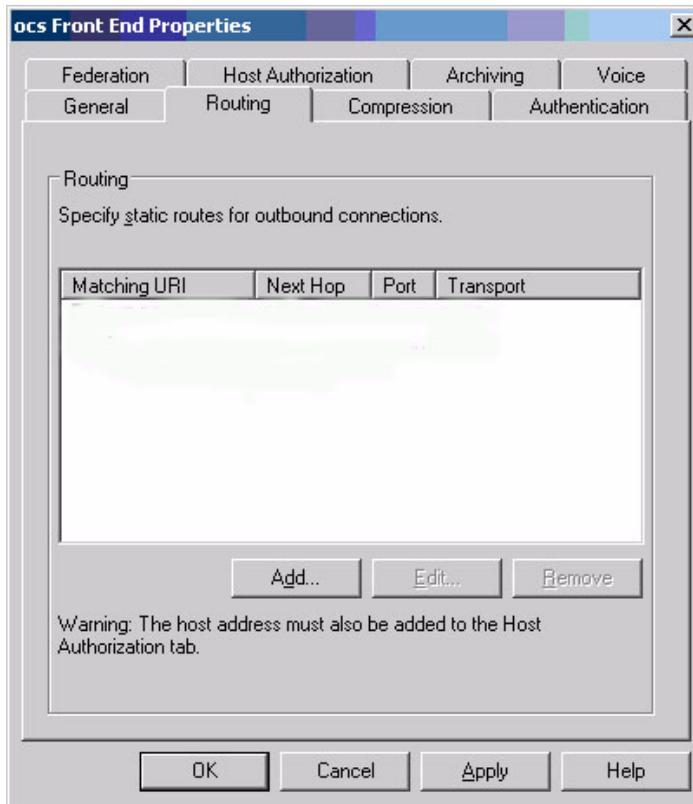
Configure MS OCS and RCC

Upgrading the RCC Software

5. Click the Add button to add the RCC Server IP address. The Edit Authorized Host screen displays (shown right).
6. Select the IP address radio button and enter the IP address of the MAS where the RCC resides.
7. Check the boxes:
 - Throttle As Server
 - Treat as Authenticated
8. Click OK. You will now see the IP address in the Host Authorization box.



9. Click the Routing tab.



10. Click the Add button.

Configure MS OCS and RCC

Upgrading the RCC Software

11. Add a static route for the Strata RCC Server.
 - In the Domain field Enter the Fully Qualified Domain Name (FQDN) of the MAS where the RCC resides.
 - The IP address radio button is selected by default. In the IP address field, enter the IP address of the MAS where the RCC resides.
 - Select TCP as the Transport.
 - The Port is the SIP port used for OCS and RCC. Default is 5060.
 - Check the box “Replace host in request URI”.

The screenshot shows the 'Edit Static Route' dialog box. It is divided into two main sections: 'Matching URI' and 'Next hop'.
In the 'Matching URI' section, the 'Domain' field contains 'rccgateway.ocs.abc.com'. The 'Phone URI' checkbox is unchecked.
In the 'Next hop' section, the 'IP address' radio button is selected, and the IP address field contains '192.168.2.183'. The 'Transport' dropdown menu is set to 'TCP'. The 'Port' field contains '5060'. The 'Replace host in request URI' checkbox is checked.
At the bottom of the dialog, there are three buttons: 'OK', 'Cancel', and 'Help'.

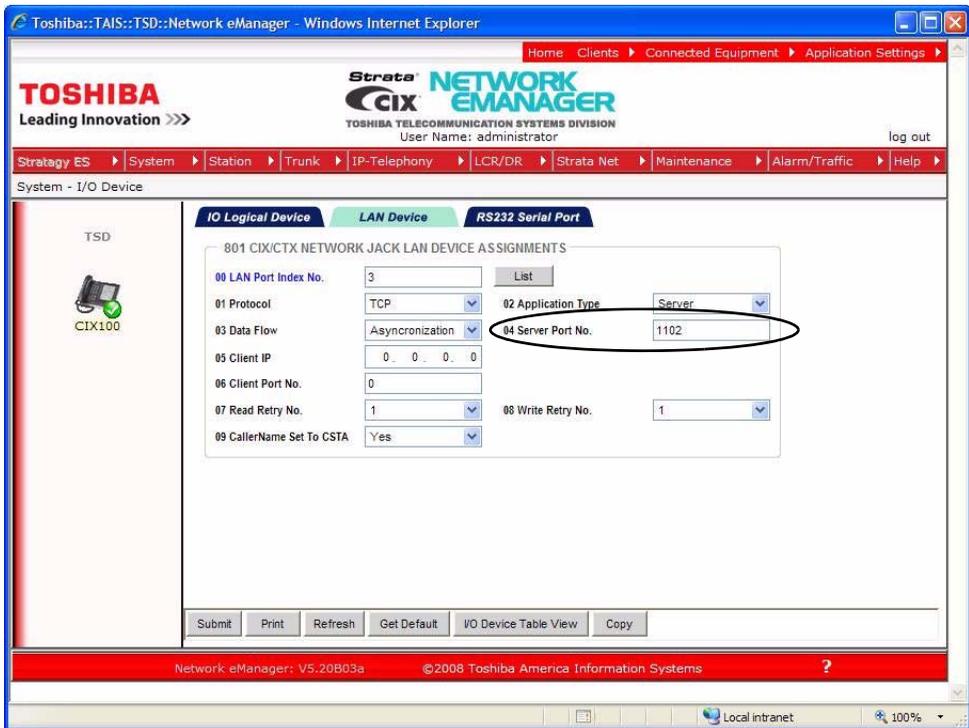
12. Click OK.

13. Click OK again in the Front End Properties box to close.

► Set up I/O Device Port using Network eManager

1. Click System > I/O Device.
2. Click the LAN Device tab.
3. Enter the Server Port No. in Parameter 4. This port number should be the same as CSTA Call Control Port when you configure the RCC server (shown in [page 23](#)).

4. Click Submit.



► **To configure the RCC server**

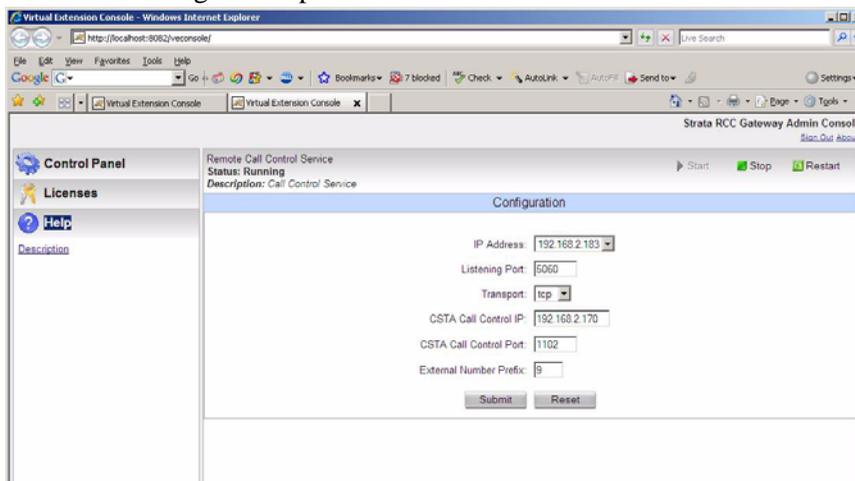
The RCC server can be configured via the web based administrator console.

1. Click Start > Programs > TOSHIBA > RCC > Admin console.

Configure MS OCS and RCC

Upgrading the RCC Software

2. After the web page appears, click Control Panel from the left pane to the RCC server and configuration parameters.



Here is the description for each of the parameters:

Field	Description
IP Address	IP address of RCC Server. This is for the SIP communication with Microsoft OCS
Listening Port	Port number for SIP communication with Microsoft OCS
Transport	Transport protocol used for communication with Microsoft OCS – default is TCP
CSTA Call Control IP	IP address of CSTA communication interface for the Strata CIX
CSTA Call Control Port	Port number of CSTA communication interface the Strata CIX. This should be the port number created in Network eManager I/O Device, parameter 4.
External Number Prefix	Access code for calling external phone number

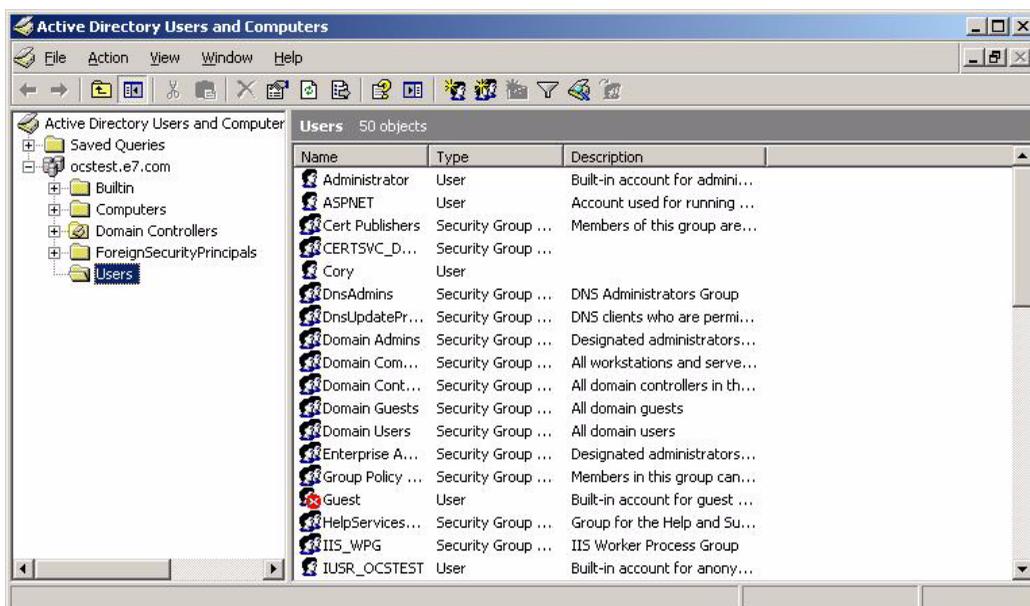
Configure Users

5

Each Microsoft Office Communicator user must have an account programmed in the Active Directory server. For more information, please refer to the Microsoft documentation at <http://www.microsoft.com/uc/products/ocs2007.msp>.

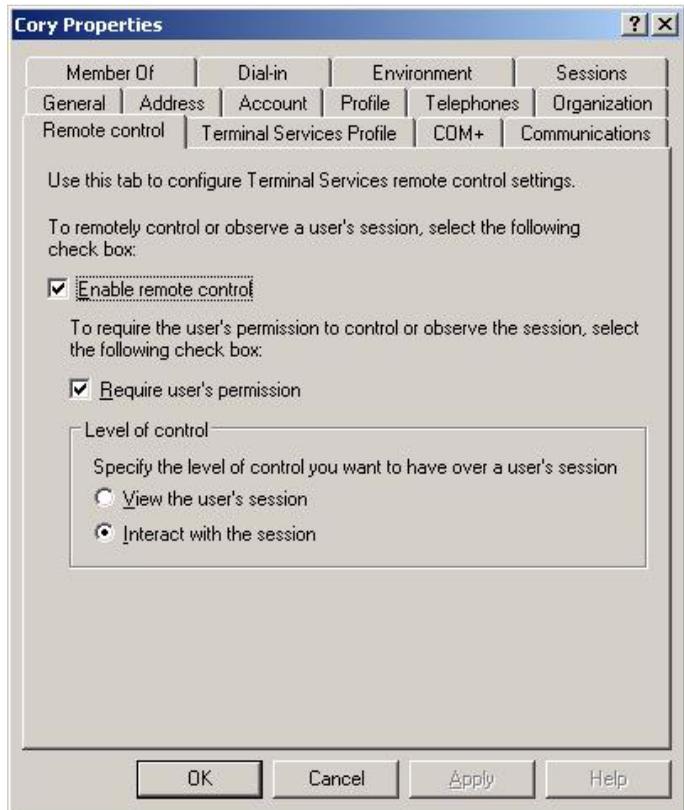
► To program a user account

From the Start menu, click Programs > Administrative Tools > Active Directory Users and Computers.



► To program a specific user account

1. Click the User folder to display the Users list.
 2. Double-click the User in the User list for the User Properties (shown right).
 3. Click the Remote control tab.
 4. Check Enable remote control.
 5. Select the Communications tab, then select the Configure button.
- The User Options screen displays.



6. Select Enable Remote Control radio button.
7. Program the server URI for the Strata RCC Server and the user URI for the extension to be monitored.

The image shows a 'User Options' dialog box with the following sections and settings:

- Telephony:** Select a telephony option. These settings affect only those calls that are routed through IP-PSTN or remote call control gateways.
 - Enable PC-to-PC communication only
 - Enable Remote call control
 - Enable Enterprise Voice
 - Enable PBX integration

Note: To enable both remote call control and PBX integration, you must specify a Server URI below.

Policy:

Server URI:

Line URI:
- Federation:**
 - Enable federation
 - Enable remote user access
 - Enable public IM connectivity
- Archiving:**
 - Archive internal IM conversations
 - Archive federated IM conversations

Note: Archiving settings cannot be changed unless the global setting allows per user configuration.
- Enable enhanced presence
- Note: Enhanced presence cannot be changed once it has been set.

Buttons:

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This chapter discusses Feature interactions and procedures to identify and correct errors that may occur when using RCC. Once errors are identified, you may have to make alterations, such as upgrades or configuration modifications to the software.

Feature Interaction

Limited Call Features

The call features are limited when using the RCC application with Microsoft OC 2007. The Strata CIX is the core voice platform.

Single Line Telephone Model

The call status of the PDN will be published and reflected on the enhanced presence indicator of the Office Communicator in RCC mode.

CO Line Key

For small Key Telephone Systems, it is popular to have CO Line appearance that can be selected from the key telephone. Instead of using ARS/LCR features, these users simply press the CO Line button to start or receive a PSTN call. However, CO Lines are shared and do not accurately represent the “Presence Status” of neither a given phone nor its assigned user.

To reflect the “Presence Status” of the assigned phone user, the Prime DN should be selected and used for phone calls.

OCS can only interoperate with a single primary extension of a telephone.

Ignore Call

On an incoming call comes through, Ignore Call option is offered in the Communicator's Invitation popup dialog box. In OCS, this feature is not integrated with RCC per the Microsoft specifications. When the user makes a selection, the "invitation" dialog box will disappear and an alert sent to the OC is stopped. The Strata CIX extension will still be alerting. User can select DND on the phone to stop the call presentation.

Set DND

When a call Delivered, Set DND is offered in the Communicator's Invitation popup dialog box. In OCS, this feature is not integrated to RCC as specifically mentioned in the Microsoft document. Upon selection by the user, the "Invitation" dialog box will disappear and the alert sent to the OC is stopped. The CIX extension will still be alerting. User can select DND on the phone to also activate DND on the Strata CIX extension.

Intercom

Voice Announce is a popular intercom feature. However, the Strata CIX when terminating an incoming call, skipped sending out the "Call Delivered" event notification to the OCS RCC server. Therefore, the screen-pop of an incoming call dialog box will not be displayed at the OC device.

To use the RCC capability, the phone should be configured to "Tone First" instead of "Voice First."

Advanced CIX Telephony Features

Since OCS/OC only supports limited basic Telephony features, call features that are not supported by Microsoft, such as Call Intrusion, Divert Call, Paging, and Conference may not be handled with conversation dialog and correct presence status in the MOC for that call session. The user may have to manually close the OC's dialog boxes.

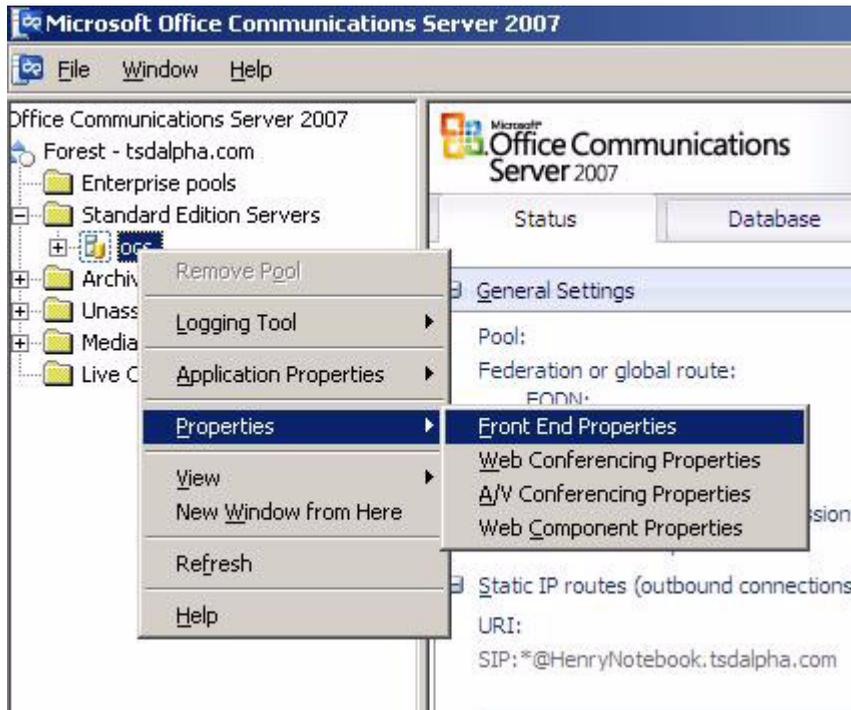
Troubleshooting

The following are some troubleshooting tips:

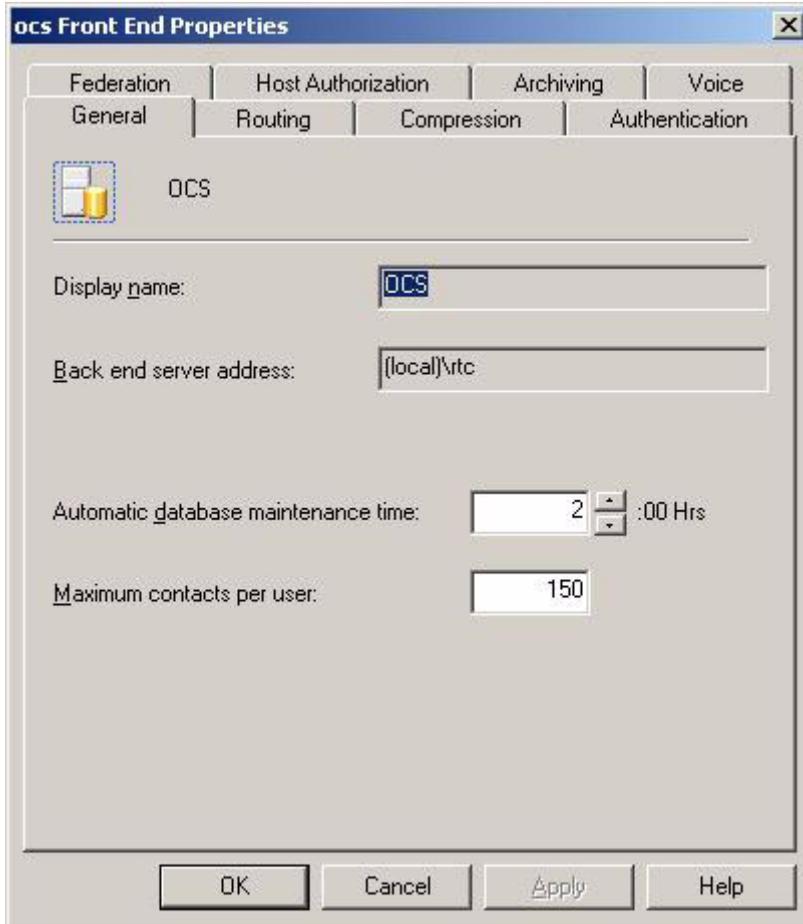
RCC Service

If the Office Communicator client has the error message “Telephone Integration error.” Check the following:

1. The RCC service may not be configured properly with the correct Strata CIX IP address and the CSTA Port. Make sure these two are correct and the Strata CIX has the CTI license.
2. Make sure the Windows’ Firewall is turned off on the PC that runs the RCC service.
3. Make sure the RCC service license is valid.
4. Check the OCS server’s Front End Properties by right clicking on the OCS Server name > Properties > Front End Properties.



- The following screen displays:



5. Make sure the 'Routing' and 'Host Authorization' are set up with correct IP addresses of the PC where the RCC service is running.
 - Click the Routing tab and then the Edit button. The following screen displays.

Edit Static Route

Matching URI

Wildcard characters can be used in the domain names.

Domain:

Phone URI

Next hop

EODN:

IP address:

Transport:

Port:

Replace host in request URI

OK Cancel Help

- From the Front End Properties screen, also click the Host Authorization tab, then Edit.



OC

If an OC user cannot see the phone numbers of people in his/her OC Contact List:

1. Log out OC client.
2. Go to C:\Documents and Settings\User Name\Local Settings\Application Data\Microsoft\Communicator directory on the PC that runs OC, delete the file 'GalContact.db'

Performing this step will delete the current local 'Address Book' of this user and force it to resync with the Active Directory the next time OC runs.

3. Go to the Server that has Active Directory running, open a Command Prompt, change directory to:

CD C:\Program Files\Microsoft Office Communications Server 2007\Server\Core

Type: Absolver.exe -RegenUR then <Enter> (Wait for about 5 minutes for this operation to complete).

Type: Absolver.exe -SyncNow then <Enter> (Wait for about 5 minutes for this operation to complete).

Doing this step enables the Active Directory to re-synchronize its database with all the Users in its Database.

4. Log onto the OC again. The problem should be solved.

NT Service

To check if the RCC Server (NT service) is running, you can use the web admin GUI or "Services" control panel.

This is the last page of this document.