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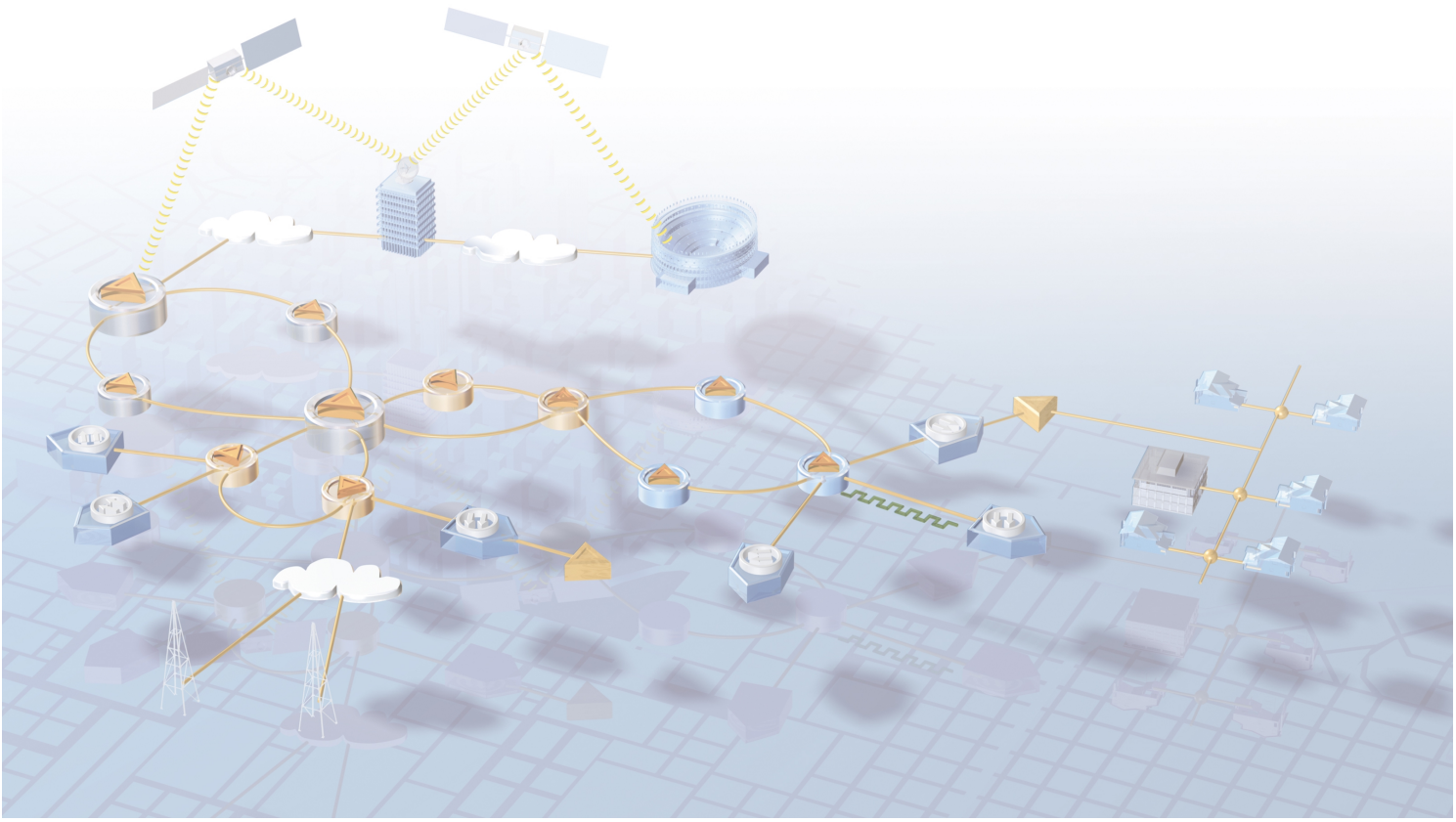
IIOP Protocol Driver User's Guide

Protocol Driver for ROSA 3.0



Please Read This Entire Guide

Important

Please read this entire guide before you install or operate this product. Give particular attention to all safety statements.

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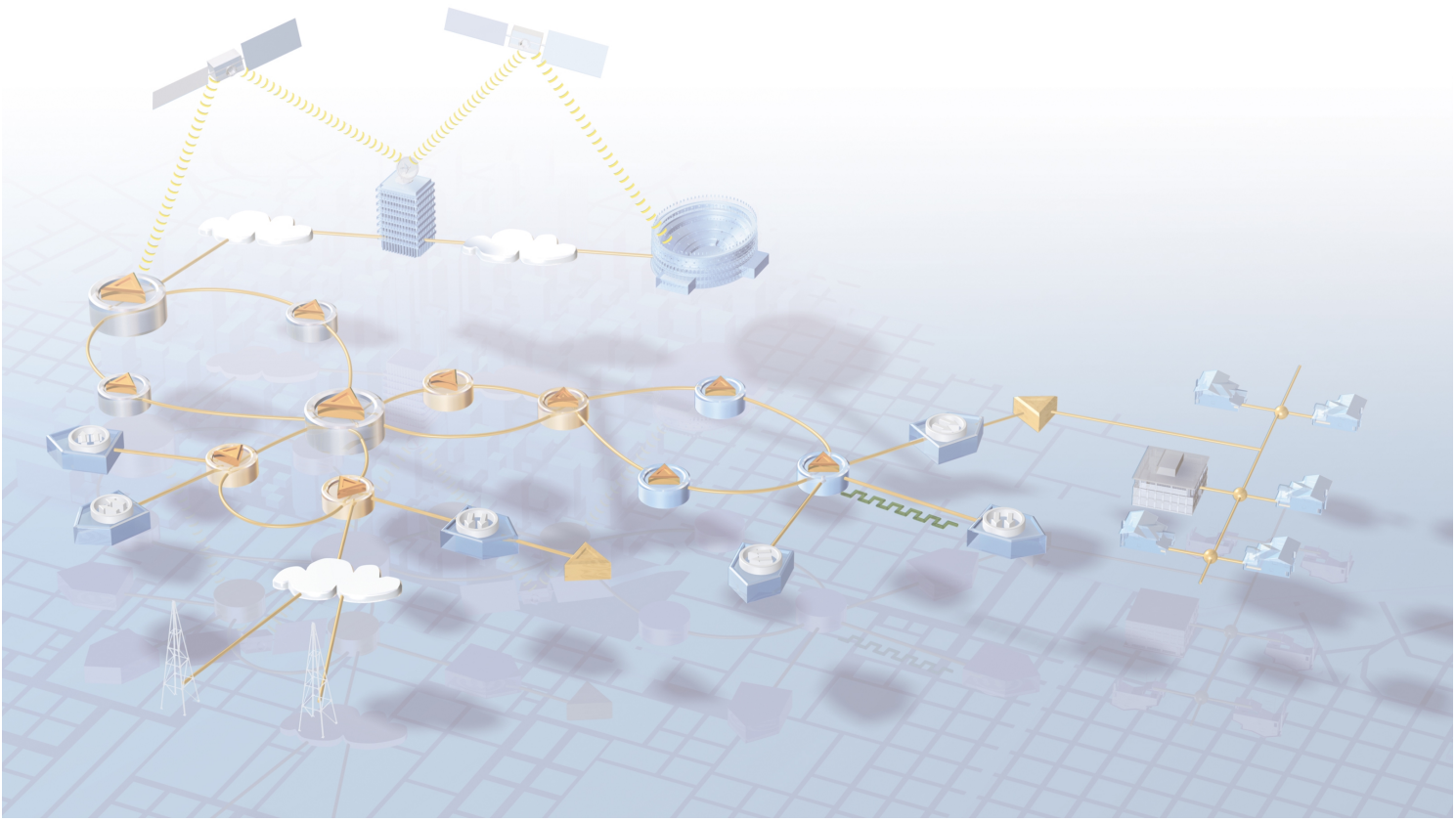

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Contents

Preface

About This Guide

Introduction

This guide provides information for installing the IIOP Protocol Driver in ROSA, Scientific-Atlanta's Network Management System (NMS) and explains how to operate the IIOP Protocol Driver User Interface.

Audience

This guide is intended for users (operators) who are responsible for the remote control and monitoring of IIOP devices using ROSA.

Related Publications

Further helpful information is available in the following Scientific-Atlanta technical publications.

- *ROSA 3.0 Client User's Guide*, part number 6984888
- *ROSA 3.0 Single User User's Guide*, part number 6984882
- *ROSA 3.0 Device Configuration Shell User's Guide*, part number 6984885
- *Copernicus MKIII User's Guide*, part number 6985110
- *Copernicus MKIV User's Guide*, part number 4005590

Software Version

This guide applies to the IIOP Protocol Driver 3.0.22.

Document Version

This is the second release of this guide. In addition to minor text changes, the following table provides the technical changes to this guide.

Description	See Topic
Changed layout	Global changes throughout text and diagrams

Chapter 1
Installation

Overview

Introduction

This chapter provides information for installing the IIOP protocol driver in ROSA.

In This Chapter

This chapter contains the following topics.

Installing the IIOP Protocol Driver

Introduction

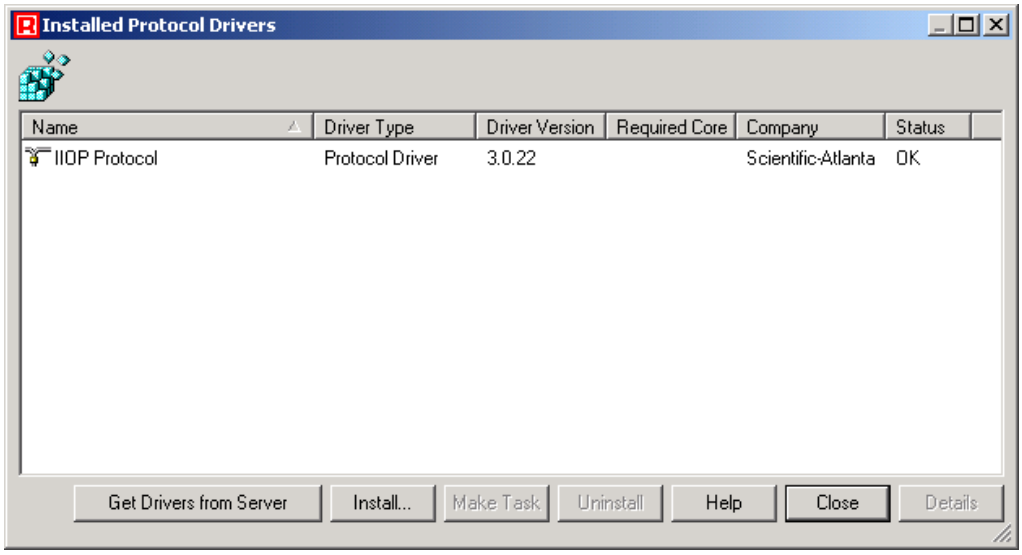
The IIOP Protocol driver is a protocol driver for communication with IIOP devices. The driver scans for IIOP devices and allows mapping of IIOP devices to ROSA resources.

To Install the IIOP Protocol Driver

Follow these steps for installing the IIOP Protocol driver.

1. Right-click the **Protocol Drivers** node in the Server Explorer and select **Properties**.

   Result: The Installed Protocol Drivers dialog displays.



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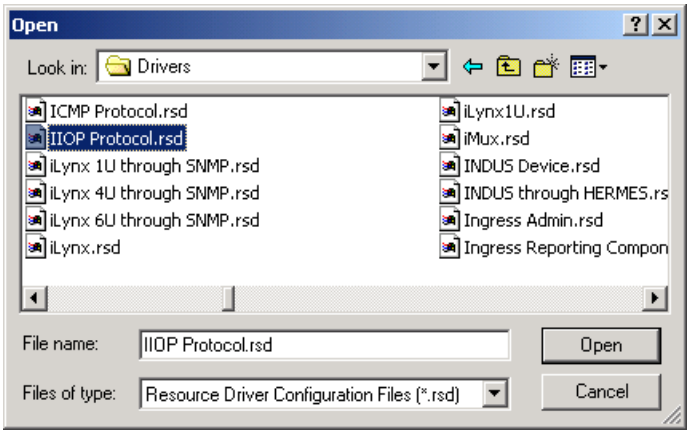
2. Click **Install**.

   Result: The Open dialog displays.



3. Browse to the directory where the IIOP protocol driver file is installed and select the IIOP Protocol.rsd file.

4. Click **Open**.

   Result: The file is installed.

   Note: It is possible that a dialog pops up with the message 'You must reboot the Server machine (via ROSA) in order for the changes to take effect'. If so, select the Server>Manage>Reboot Server.... ROSA menu, wait until the server is rebooted and continue.

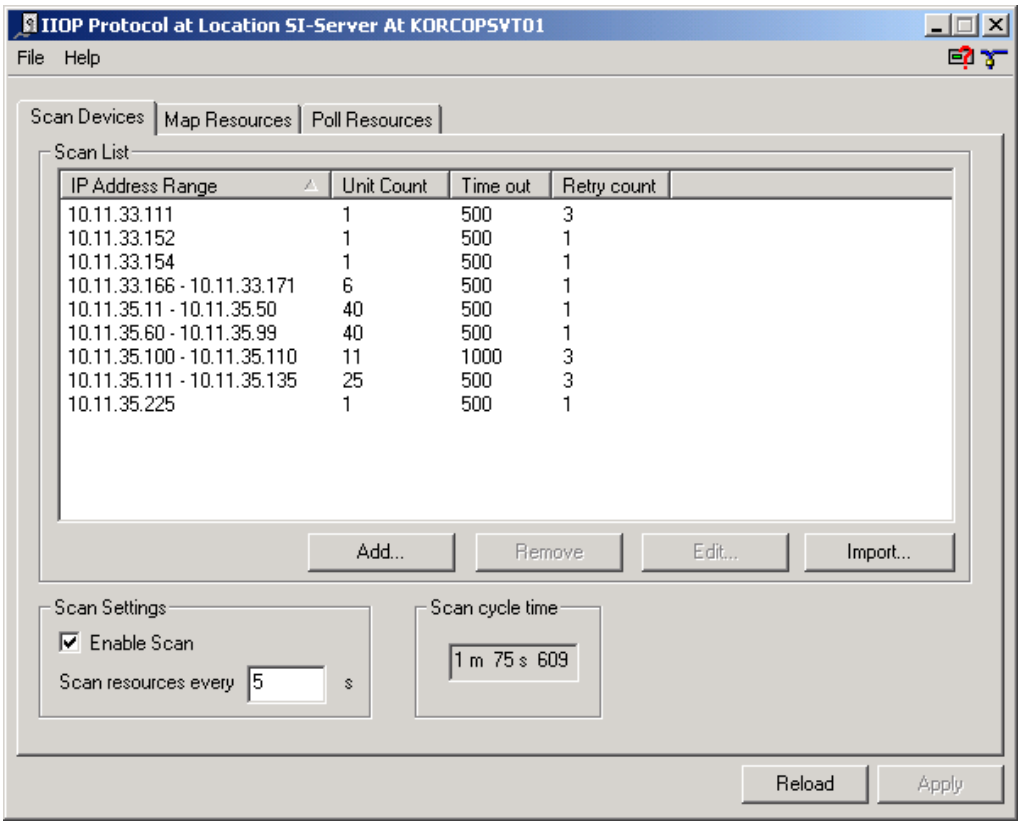
Opening the User Interface

To Open the User Interface

Follow these steps to open the user interface of the IIOP protocol driver.

1. Under the **Protocol Drivers** node, right-click the **IIOP Protocol Driver**.
2. Click **Properties**.

   Result: The IIOP protocol driver user interface displays.



Notes:

- Click **Apply** to confirm new settings and to send them to the server. You may change settings on different tabs and click Apply to activate them all at once
- Click **Reload** to restore previous settings. Click Reload after accidentally changing settings on the user interface or to update the settings.
- Click to minimize the user interface to a taskbar button. To restore the minimized user interface, click its taskbar button.
- A question marked device icon at the upper right corner of the user interface indicates that at least one new device has been detected.

Continued on next page

Opening the User Interface, Continued

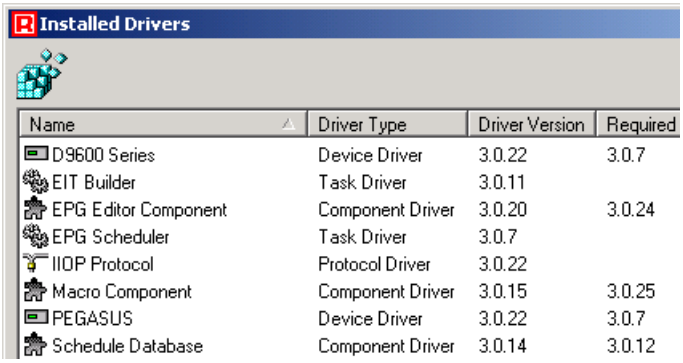
- You can close the user interface in one of the following three ways:
  - On the File menu, click **Exit**
  - Press [Alt] + F4
  - Click ✕ at the far right end of the title bar to close the user interface

Viewing the IIOP Protocol Driver Version

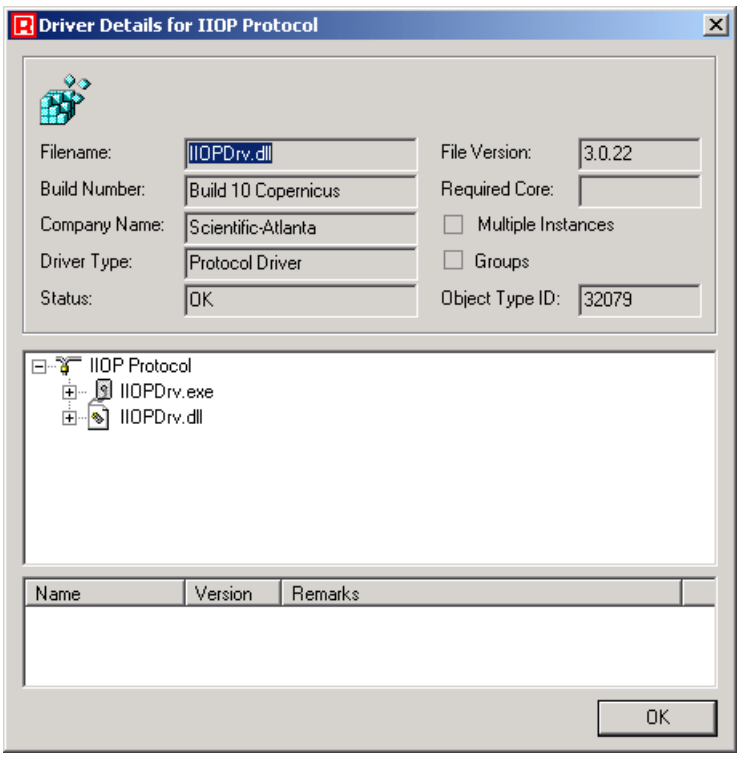
To View the IIOP Protocol Driver Version

You can view the IIOP Protocol Driver version in the following three ways:

- In the **Installed Drivers** dialog, check the 'Driver version' column.



- In the **Installed Drivers** dialog, select the IIOP Protocol driver and click **Details**. To see the version of the driver files in the bottom list, click a file in the driver file tree.



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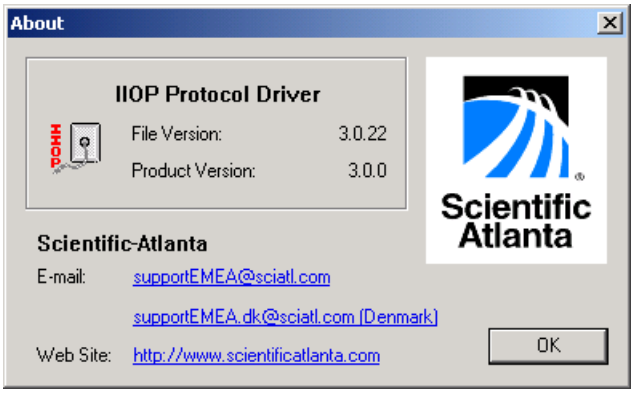
Viewing the IIOP Protocol Driver Version, Continued

- On the user interface, click **About** on the **Help** menu.



Chapter 2
Operation

Overview

Introduction

This chapter describes the controls and parameters available on the IIOP Protocol Driver user interface.

Note: Some user interface menus or parameters may have been disabled (grayed) by your ROSA System Administrator for security reasons. Contact your ROSA System Administrator or see the ROSA documentation and online help for more information about security.

In This Chapter

This chapter contains the following topics.

Scanning for IIOP Devices

Introduction

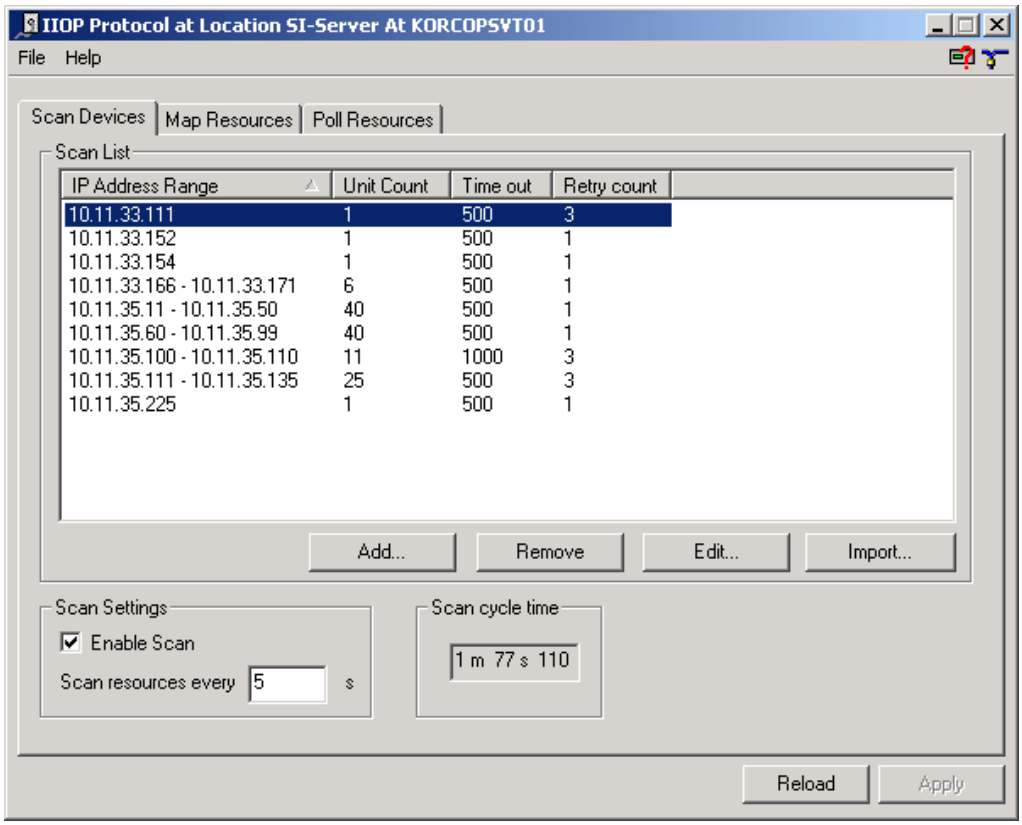
The IIOP Protocol driver scans for IIOP devices on the TCP/IP network connected to the ROSA NMS server.

To Scan for IIOP Devices

Follow these steps to scan for IIOP devices.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.



3. To add IIOP devices to the scan list, click **Add….**

   Result: The Add devices to scan dialog displays.

   Go to **To Add IIOP Devices** for more information.

4. To remove IIOP devices from the scan list, click **Remove**.

Continued on next page

5. To edit IIOP device parameters, select the IIOP device in the scan list and click **Edit**.

   Result: The Edit Device… dialog displays.

   Go to **To Edit IIOP Device Parameters** for more information.

6. To import a host file, click **Import**.

   Result: The Open dialog displays.

7. Under **Scan Settings**, select the **Enable Scan** check box, to enable IIOP device scanning.

8. Under **Scan Settings**, type the scan interval time in the **Scan resources every** box.

   Note: Compare the scanning cycle time with the scan interval time. If the scanning cycle time is higher than the scan interval time, increase the scan interval time. The scanning cycle time is high when scanning a large number of IIOP devices or when the network load is high.

Continued on next page

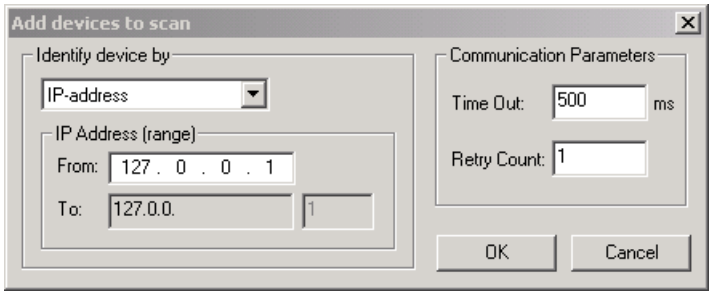
To Add IIOP Devices

Follow these steps to add IIOP devices to the scan list.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Click **Add....**

   Result: The Add devices to scan dialog displays.



4. Under **Identify device by**, select how to identify the device.
   - IP address
   - IP address range
5. If Identify Agent By IP address is selected, then type the IP address in the **From** box under **IP-address (range)**.
6. If Identify Agent By IP address range is selected, then type the IP address range values in the **From** and **To** box under **IP-address (range)**.
7. Under **Communication Parameters**, type a communication timeout value between 10 and 60000 ms in the **Time Out** box.
8. Under **Communication Parameters**, type a communication retry value between 1 and 5 in the **Retry Count** box.
9. Click **OK** to confirm or **Cancel** to abort.

Continued on next page

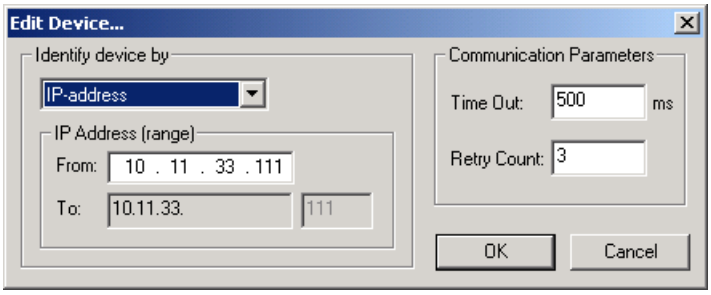
To Edit IIOP Device Parameters

Follow these steps to edit IIOP device parameters.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Select a IIOP device in the scan list.
4. Click **Edit….**

   Result: The **Edit Device** dialog displays.



5. Under **Identify device by**, select how to identify the device.
   - IP address
   - IP address range
6. If Identify device by IP address is selected, then type the IP address in the **From** box under **IP-address (range)**.
7. If Identify device by IP addres range is selected, then type the lower limit of the address range in the **From** and **To** box under **IP-address (range)**.
8. Under **Communication Parameters**, type a communication timeout value between 10 and 60000 ms in the **Time Out** box.
9. Under **Communication Parameters**, type a communication retry value between 1 and 5 in the **Retry Count** box.
10. Click **OK** to confirm or **Cancel** to abort.

Continued on next page

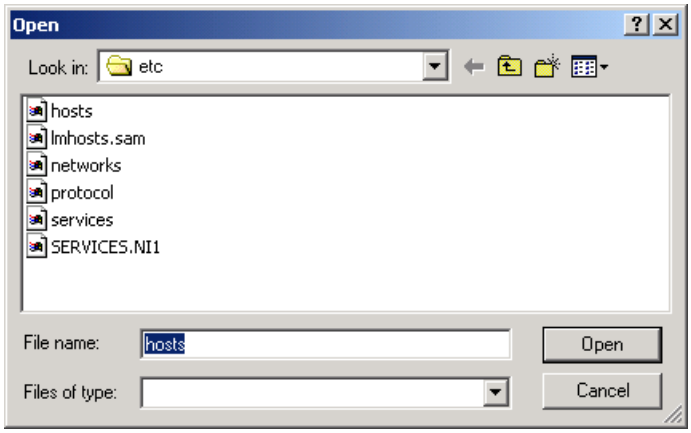
To Import a Host File

Follow these steps to import a host file.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Click **Import….**

   Result: The Open dialog displays.



4. Browse to the host file location and select the host file.
5. Click **Open** to import the host file or **Cancel** to abort.

Mapping New Resources

Introduction

You can map or remap IIOP devices to the Server Explorer.

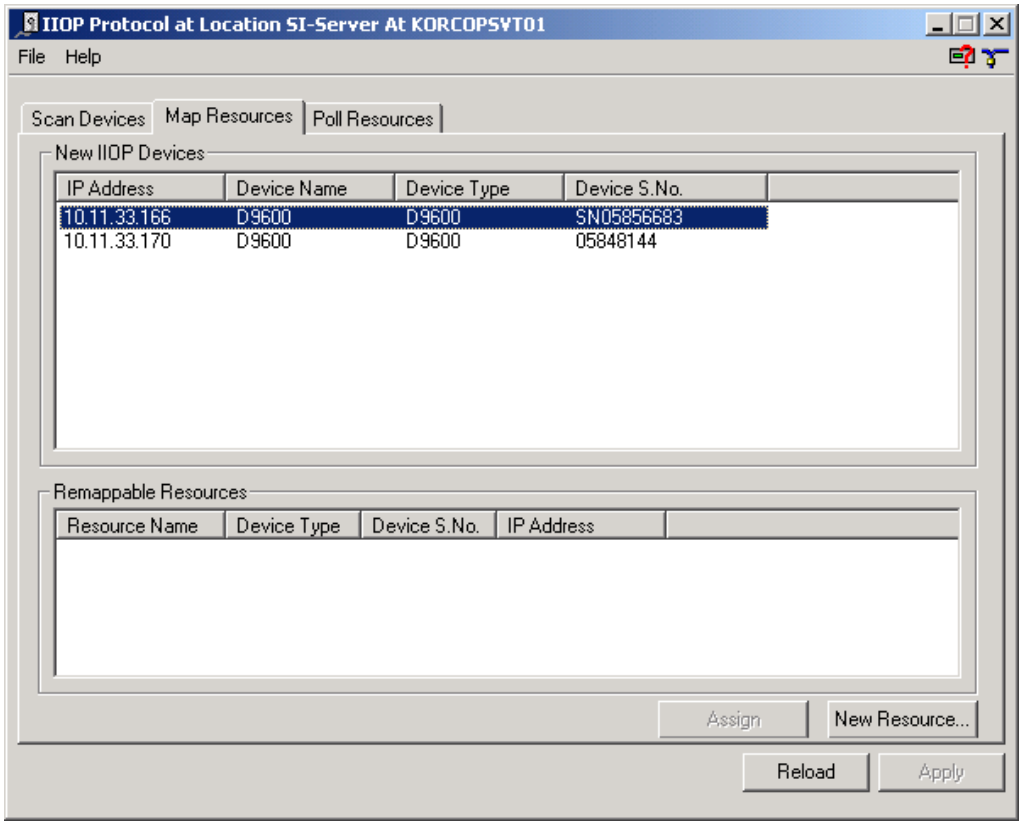
To Map IIOP Devices

Follow these steps to map a new IIOP device to a ROSA resource that is not already in the Server Explorer.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Click the **Map Resources** tab.

   Result: The Map Resources page displays.

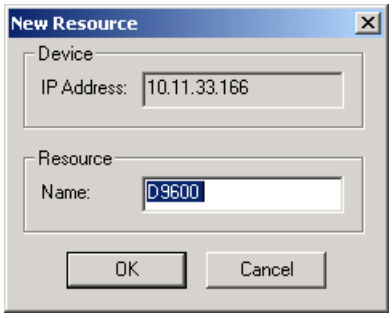


4. In the **New IIOP Devices** table, select the new IIOP device to be mapped.

Continued on next page

5. Click **New Resource….**

   Result: The New Resource dialog displays.



6. Under **Resource**, type the resource name in the **Name** box.
7. Click **OK** to confirm or **Cancel** to abort.

Continued on next page

To Remap IIOP Devices

Follow these steps to remap IIOP devices to ROSA resources that were mapped in the past but are not available anymore.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Click the **Map Resources** tab.

   Result: The Map Resources page displays.
4. In the **New IIOP Devices** table, select the new IIOP device to be remapped.
5. In the **Remappable Resources** table, select the resource to be remapped.
6. Click **Assign**.

   Result: The remapping action is being completed.

Note: Remappable resources are displayed in the Server Explorer with a red line across the device icon.

Polling IIOP Resources

Introduction

The IIOP Protocol driver is able to poll known IIOP resources and to check their availibility. A 'Unit not responding' alarm message is generated for resources that no longer respond. The resource in the Server Explorer becomes red colored and a red line through the resource icon indicates that the agent is no longer responding.

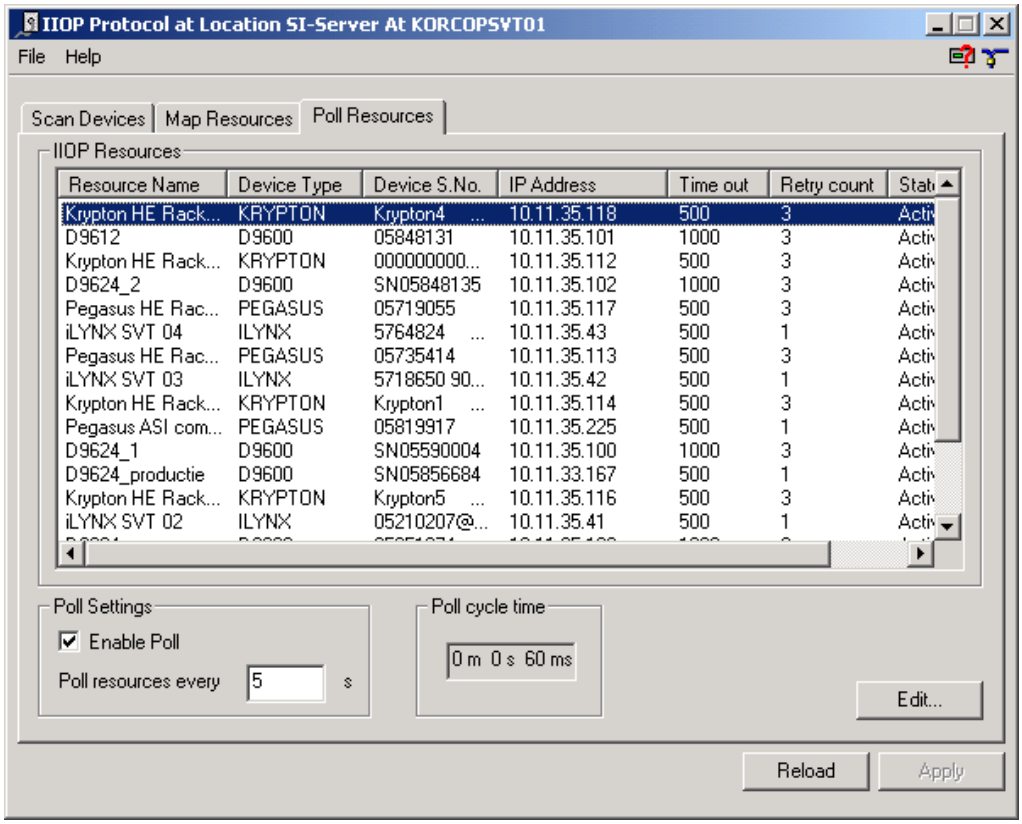
To Poll IIOP Resources

Follow these steps to poll IIOP resources.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Click the **Poll Resources** tab.

   Result: The Poll Resources page displays.



4. Under **Poll Settings**, select the **Enable Poll** check box to enable polling.

Continued on next page

5. Under **Poll Settings**, type the time interval between consecutive poll cycles in the Poll **resources every** box.

   Notes:

   - Increase the poll interval to reduce traffic or when the connection between the ROSA NMS server and IIOP device is slow.
   - Compare the polling cycle time with the poll interval time. If the polling cycle time is longer than the poll interval, increase the poll interval. The polling cycle time is high when polling a large number of IIOP devices or when the network load is high.

6. To edit IIOP resource parameters, select the IIOP device in the table and click **Edit….**

   Go to **To Edit IIOP Resource Parameters** for more information.

7. Click **Apply** to confirm or **Reload** to reload the previous settings.

Continued on next page

To Edit IIOP Resource Parameters

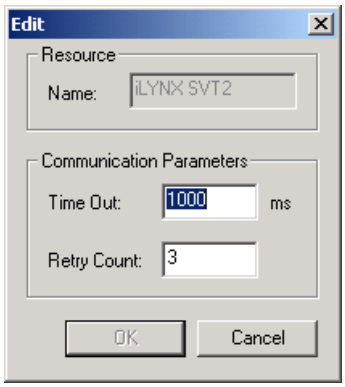
Follow these steps to edit IIOP resource parameters.

1. Right-click the IIOP Protocol driver in the **Server Explorer**.
2. Click **Properties**.

   Result: The IIOP Protocol driver user interface displays.
3. Click the **Poll Resources** tab.

   The Poll Resources page displays.
4. Select an IIOP resource in the table.
5. Click **Edit….**

   Result: The Edit dialog displays.



6. Under **Communcation Parameters**, type a communication timeout value between 10 and 60000 ms in the **Time Out** box.
7. Under **Communication Parameters**, type a communication retry value in between 1 and 5 in the **Retry Count** box.
8. Click **OK** to confirm or **Cancel** to abort.

Messages

Introduction

The IIOP Protocol driver generates messages for viewing in the ROSA Message Viewer.

For more information about viewing messages in ROSA, refer to the ROSA user documentation.

Message List

The following table provides a list with the messages that the IIOP protocol driver can generate.

Message	Severity	Description
Found new unit	Warning	New IIOP device was found
Message buffer overflow	Minor	Too many messages were received in a short time period
Unit not responding	Major	**Cause**: unit does not answer when polled **Solution:** • Check the IP address and try to ping the unit • Try to increase the time-out and retry count communication parameters • The protocol uses socket ports 5003 to 5010. Check if your network routers do not block packets for these ports or use these ports themselves
Unable to receive/log messages	Critical	**Cause:** driver failed to initialise the listening port for notifications **Solution:** • The protocol uses socket ports 5003 to 5010. Check if your network routers do not block packets for these ports or use these ports themselves

Glossary

Term, Acronym, Abbreviation	Meaning
IP	Internet Protocol
NMS	Network Management System
ROSA	RCDS Open System Architecture
TCP	Transmission Control Protocol

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