Snell Advanced Media

User Manual

RollCall IP Proxy

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Contents

1. Introduction

1.1 Description

RollCall IP Proxy is installed as part of the RollCall V4 Suite and RollCall Lite. There are two versions of the RollCall IP Proxy, depending on which version of RollCall is installed.

1.2 RollCall IP Proxy with RollCall Lite

The version of RollCall IP Proxy supplied with the free RollCall Lite package is designed to aggregate connections from multiple TCP/IP enabled IQ chassis and provide a single connection list within the RollCall Control Panel. This version does not provide capability for logging data of totally fault tolerant control networks.

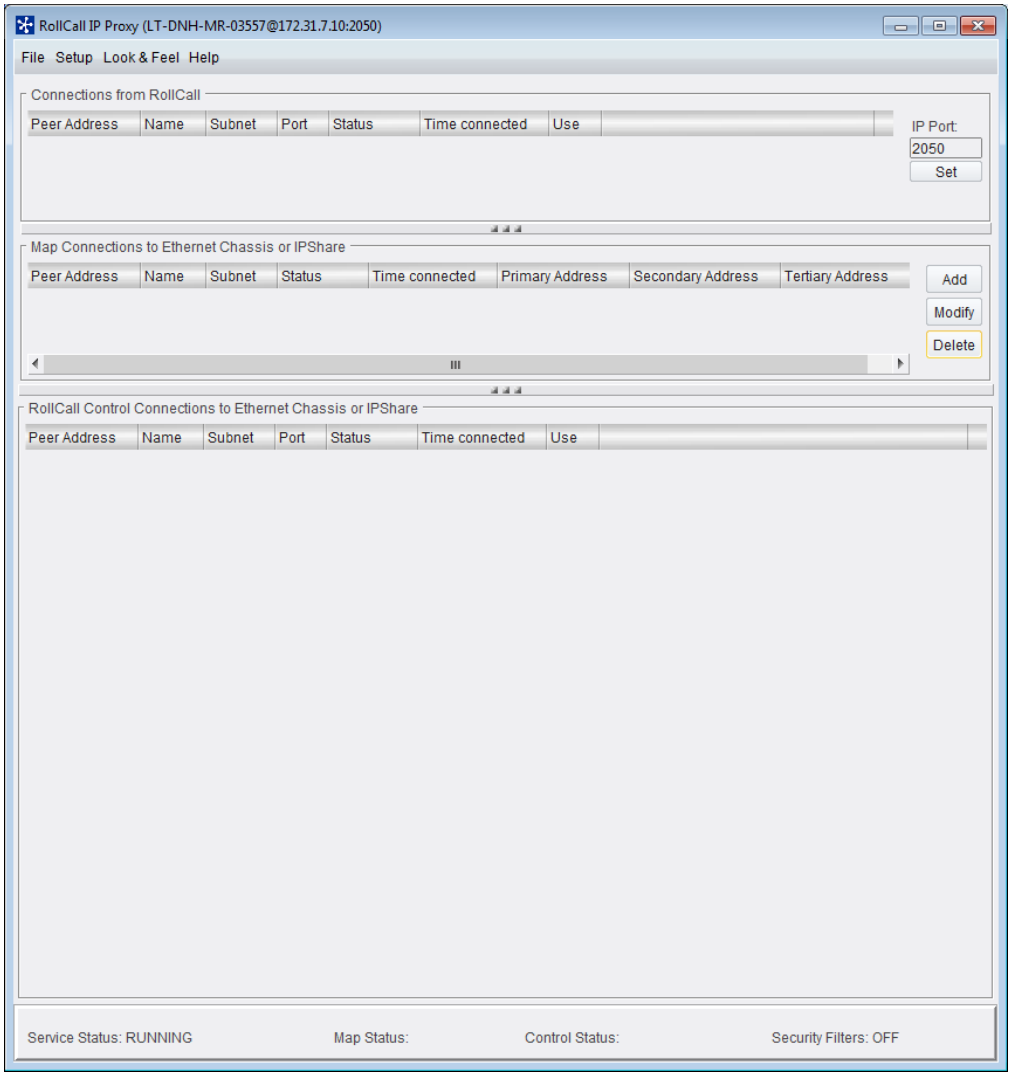

Fig 1. RollCall IP Proxy with RollCall Lite

1.3 RollCall IP Proxy with RollCall V4 Suite

This version is supplied with the full RollCall V4 Suite. It can perform multiple functions, including the aggregation of separate networks, providing complete fault tolerant control, combining separate LogServer datasets as well as all the capabilities of the free version of the RollCall IP Proxy.

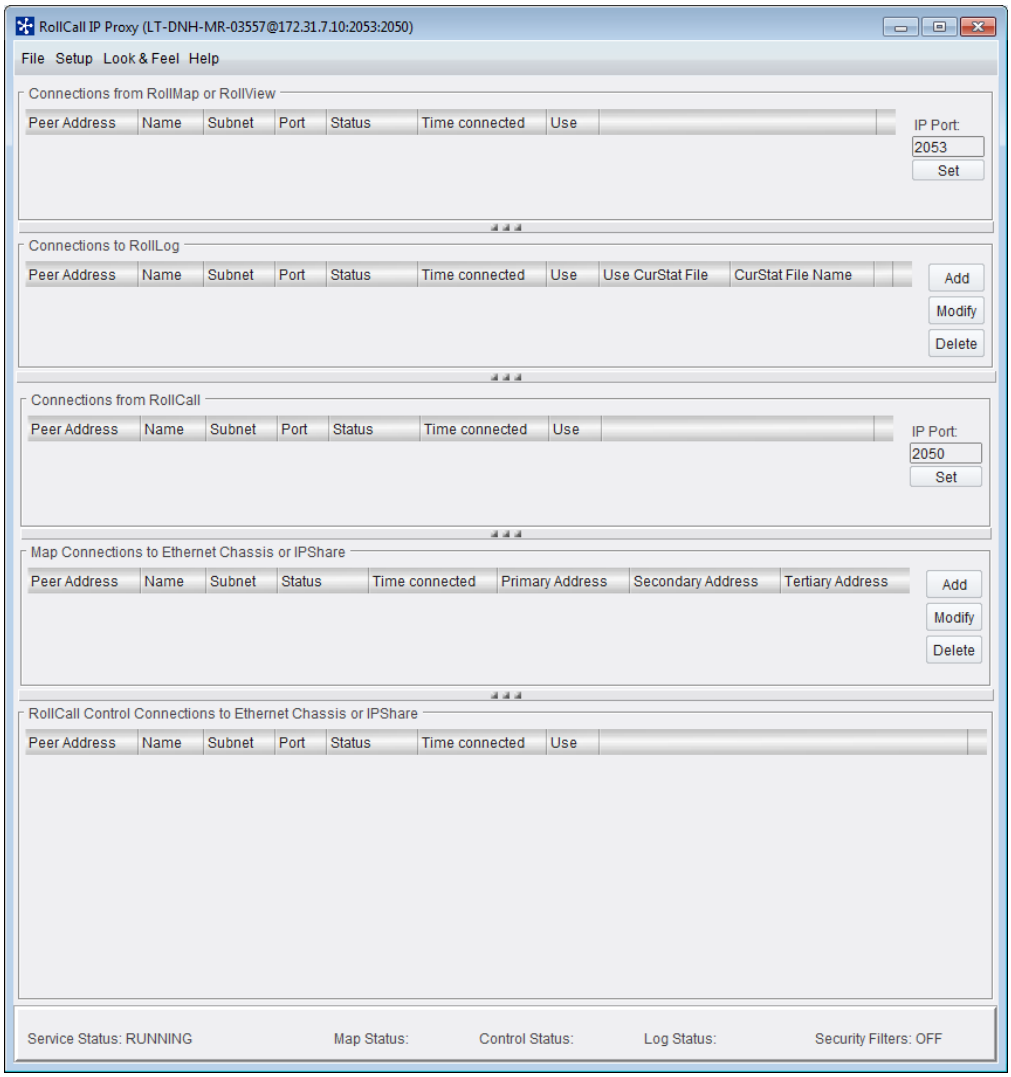

Fig 2. RollCall IP Proxy with RollCall V4 Suite

2. Configuration

2.1 Configuring RollCall IP Proxy (RollCall Lite Version)

This section covers the configuration of the Proxy service provided with RollCall Lite.

There are four modes of configuration that should be considered, dependent on the number of RollCall Control Panel Clients required in a network system.

- Single RollCall Client, Multiple Ethernet IQ chassis
- Multiple RollCall Clients, with connection redundancy
- Multiple RollCall Clients, efficient / security model
- RollCall Control Panel - with RollNet redundancy

2.1.1 Connection Model 1:Single RollCall Client

A standard Ethernet Gateway provides connectivity via one TCP/IP connection to all modules within the chassis, and also any other SAM devices connected to the Chassis via RollNet. RollCall IP Proxy is needed in a system to enable connection to more than one Ethernet enabled IQ chassis.

These chassis may be geographically separate, however, if they are present within the same physical building, then a RollNet network can also be present between the IQ chassis providing a redundant control link. This link is capable of tolerating a failure of any of the IP links on an IP chassis with connection to all other boxes being present on the RollNet through each remaining IP link.

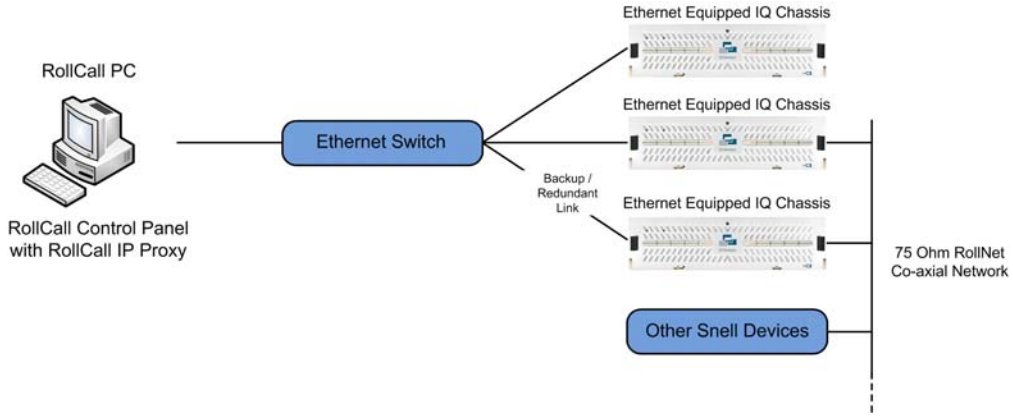

Figure 3 Connection Model 1: Single RollCall Client

2.1.2 Connection Model 2: Multiple RollCall Clients - with connection redundancy

This model caters for a failure of the RollProxy Service by running an autonomous copy per RollCall client workstation. This model is less efficient than the previous multiple clients model as there are more connections across the network into the IQ chassis. The configuration of this model is identical to the Single RollCall Client model, but with multiple installations.

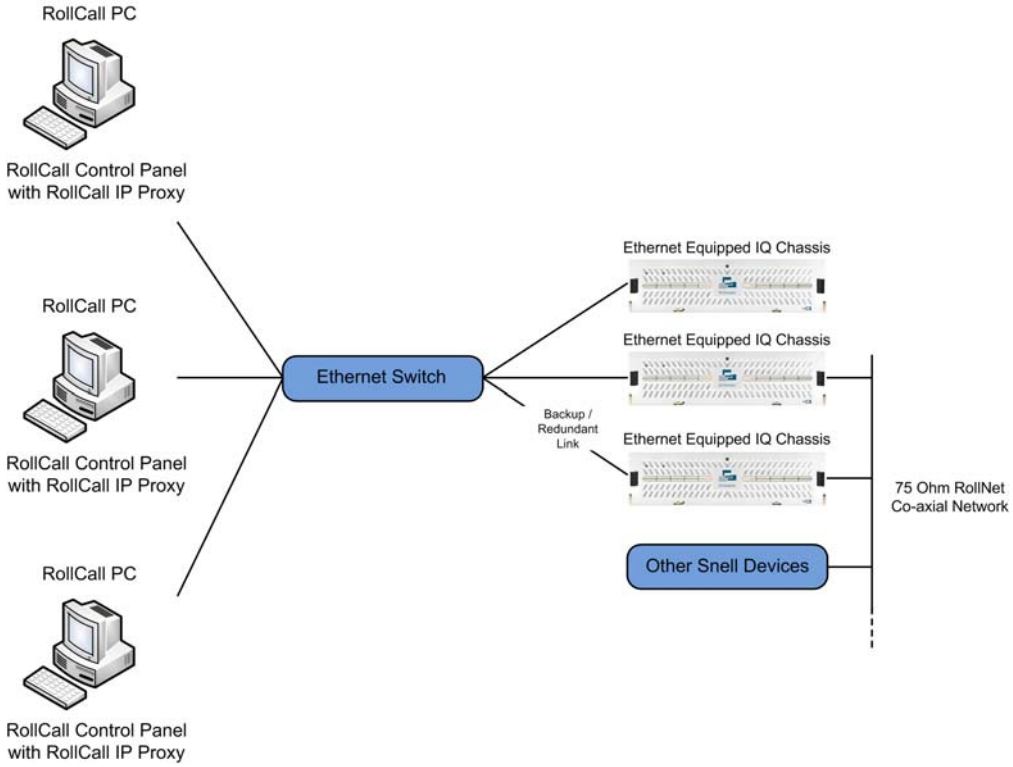

Figure 4 Connection Model 2: Multiple RollCall Clients - with connection redundancy.

2.1.3 Connection Model 3: Multiple RollCall Clients - efficient/security model

This model differs from the previous models by funneling all traffic destined for the IQ Chassis / RollCall network through a single connection. This can be desirable for security reasons where only one machine is given direct access to the Infrastructure network, but accessed by many clients that do not have any other access to the Infrastructure network apart from control requirements.

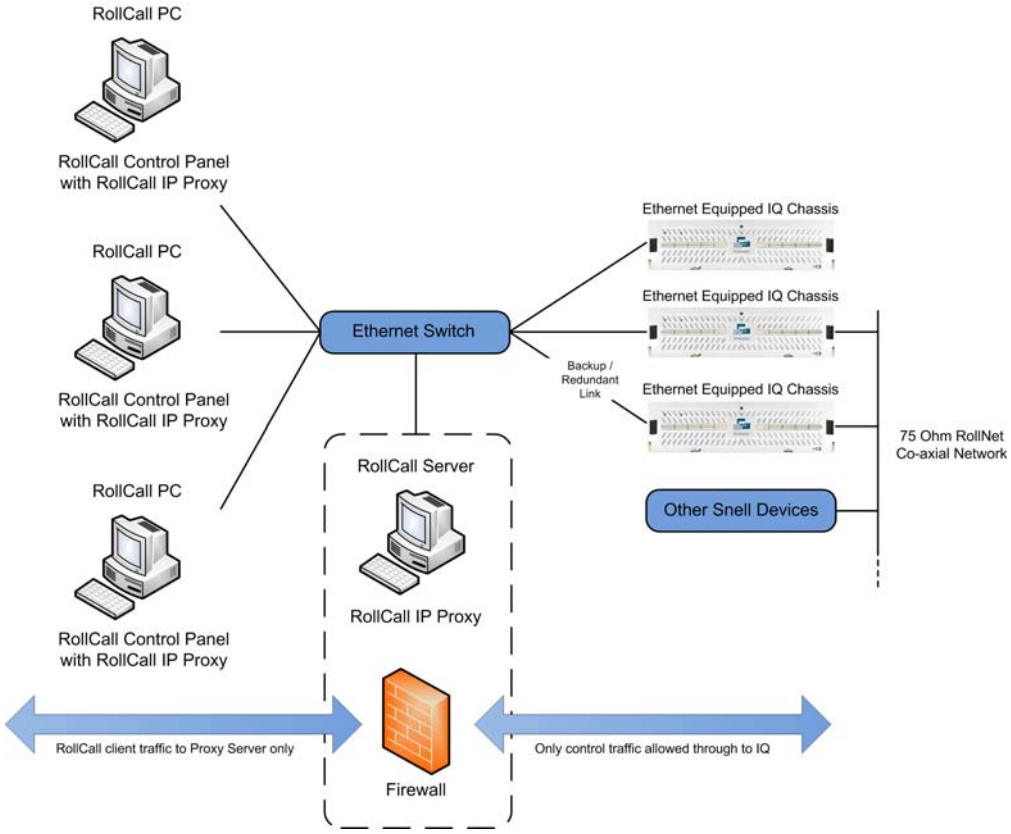

Figure 5 Connection Model 3: Multiple RollCall Clients - efficient/security model

2.1.4 Connection Model 4: RollCall Control Panel - with RollNet redundancy

In this model, every IQ chassis is connected via IP to the RollCall IP Proxy and is also provided with RollNet redundancy.

If the default port of 2050 is used as the primary Ethernet connection to each chassis, the redundant RollNet will cause every chassis (and anything else connected to RollNet) to be displayed for every RollCall Network, creating a somewhat confusing view in the RollCall Control Panel. However, the port 2051 connection only shows the local gateway and the modules contained in that chassis. Therefore, it is recommended to configure the primary Ethernet connection to each chassis on port 2051, and the secondary Ethernet connection to each chassis on port 2050.

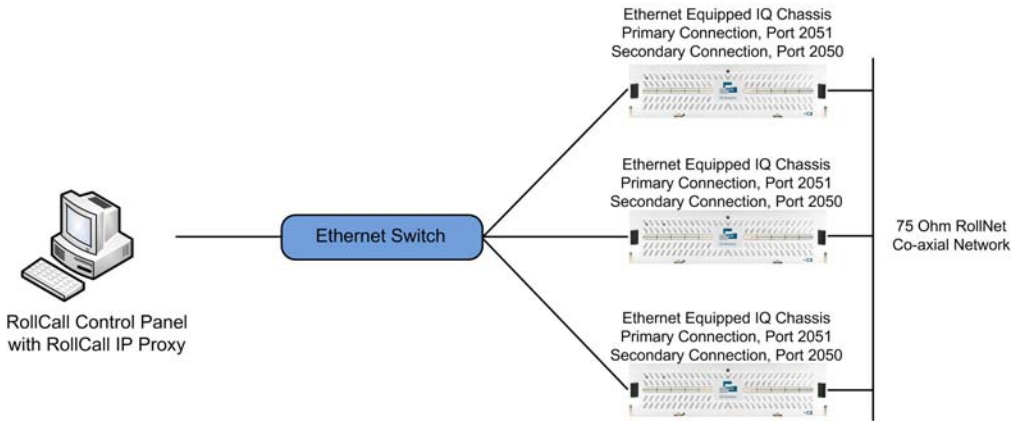

Figure 6 Connection Model 4: RollCall Control Panel - with RollNet redundancy

2.2 Configuring RollCall IP Proxy (Full RollCall V4 Suite Version)

The major difference between the control only (RollLite) version of the proxy service supplied with RollCall Lite, and the full version supplied with the RollCall V4 Suite, is the addition of Logging connection aggregation.

All of the configuration information provided for the Control only version of the service is applicable for the Full version, please refer to previous section.

The following details the additional options available in the full version. The visible difference is the addition of two new sections on the service GUI, related to logging.

The first section, "Connections from RollMap or RollView" details all currently active connections from Logging clients.

NOTE: By default, if the Proxy Service is installed and running on the same PC as the RollCall LogServer, the default port for connections from RollMap will conflict with the standard port for the RollCall LogServer.

In order to ensure correct functionality within the system, it is necessary to either:

- Change the default port number for Connections from RollMap to a value other than "2052". The recommended value to set this port to is "2053".
- Change the Port number on RollCall LogServer to a non-default value. (Only do this if you aware of the configuration requirements of LogServer IP ports within the LogServer & the RollCall IP Proxy).
- The second section

2.2.1 Adding a LogServer to Proxy

To add a connection to a LogServer, click the Add button in the "Connections to RollLog" section of the screen.

The Add New Log Client dialog displays.

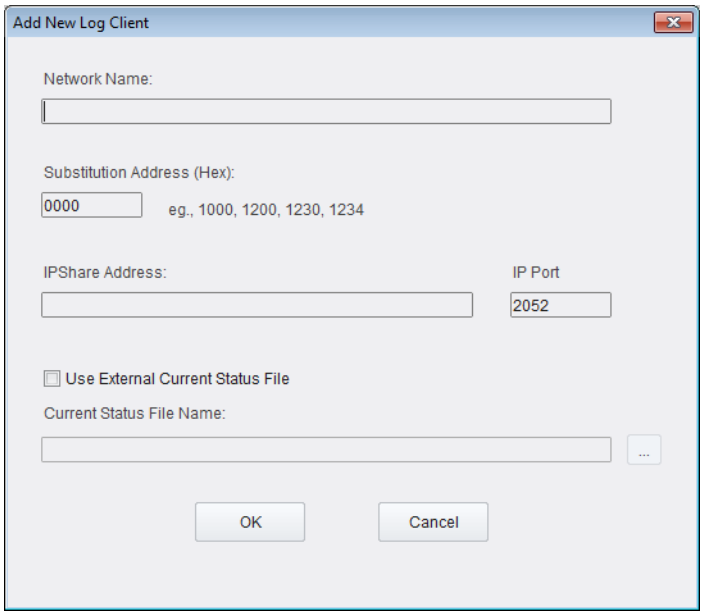

Figure 7 Add New Log Client

Enter the IP Address and TCP port number and a RollCall substitution address. This should be the same substitution address as entered for the IPShare that matches this LogServer.

3. Operation

3.1 Starting and Stopping the RollCall IP Proxy Service

RollCall IP Proxy is installed as a Windows service when the RollCall Suite is installed. The RollCall IP Proxy service is configured to start automatically.

The service can be controlled either by means of the Windows Service Manager, where it is shown as the RollIPProxy service, or via a shortcut that is installed in the Windows Start menu.

Windows Service Manager

To open the Windows Service Manager, select:

1. **Start > Control Panel > Administrative Tools > Services**

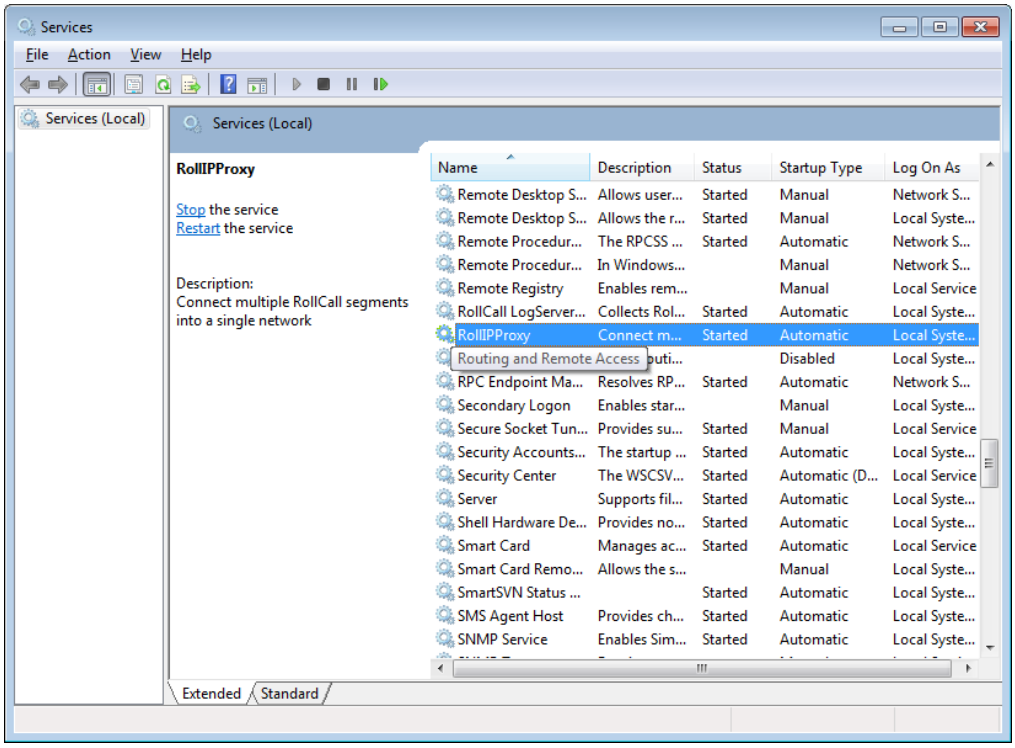

Figure 8 Services

2. Double-click on the RollIPProxy service.

   The properties dialog displays.

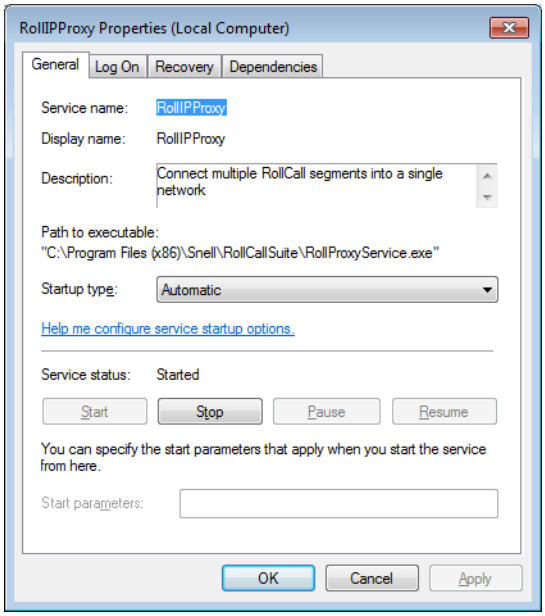

Figure 9 Roll IP Proxy Properties

3. Click **Start** to start the service. To configure the service to start automatically, select Automatic from the Startup Type drop-down list.

Start Menu Shortcut

A shortcut is also created in the Start menu that can be used to start the RollCall IP Proxy service.

- **Start > All Programs > SAM > RollCall > RollCall Proxy Service**

Once the RollCall IP Proxy Service is running, its icon displays in the System Tray.

Figure 10 Roll IP Proxy Service

- Double-click on the icon in the System Tray to open the RollCall IP Proxy configuration GUI.

To stop the service from the RollCall IP Proxy configuration GUI, from the File menu select Stop Service!

3.2 Connecting RollCall IP Proxy to an IQ Chassis or IP Share

To add a connection to an IQ Chassis or a RollNet IP Share, click the Add button in the "Map Connections to Ethernet Chassis or IP Share" section of the screen.

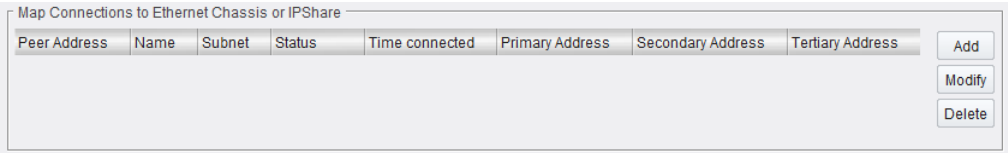

Figure 11 Map Connections to Ethernet Chassis or IP Share

The Add New Control Client dialog displays.

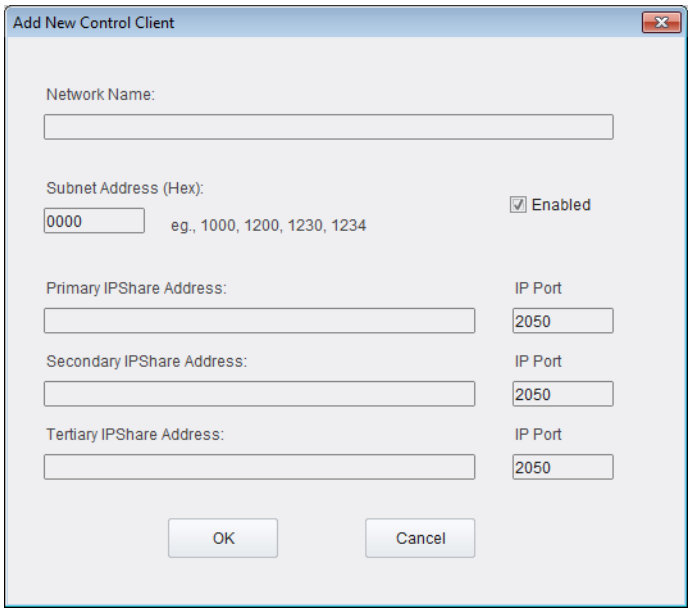

Figure 12 Add New Control Client

This dialog box enables configuration of the IP Address of the IQ chassis, the IP port number that the RollCall control service is provided on (by default all IQ chassis provide these services on port 2050) and the RollCall Substitution Address for the Chassis.

The substitution address is the first four numbers of the RollCall address and this number must be set to a non-zero value. The substitution address must contain only non-zero values from the leftmost digit. For example, 1000, 1200, 1230, and 1234 are valid substitution addresses, whereas 0100 is not.

The IP Address may be supplied either as a numeric entry such as "192.168.10.10" or a qualified hostname such as "Iqchassis21.sam.com" providing a host entry or DNS service exists to resolve the hostname.

Secondary and Tertiary IP addresses can be added to function as backups in the event of a lost IP connection or chassis.

After the information has been entered, click **OK**. Providing the IP Address is correct, the entry displays a status of "Connected". If the IQ chassis cannot be found, the status is "Calling".

Repeat adding in the chassis until all units are present in the proxy list.

Note: If units are connected via RollNet to an Ethernet enabled IQ chassis, these units display in the network tree underneath the Chassis.

Unless using Connection Model 4 (see page 8), create only one IP connection per RollNet group. If there is a redundant IQ Gateway, set this as the Secondary IPShare Address.

3.3 Connecting to RollCall IP Proxy from the RollCall Control Panel

After RollCall IP Proxy is configured, the RollCall Control Panel must be configured to point to the proxy service.

Start the RollCall Control Panel and then click the **Build Network** toolbar button to open the Build Network dialog.

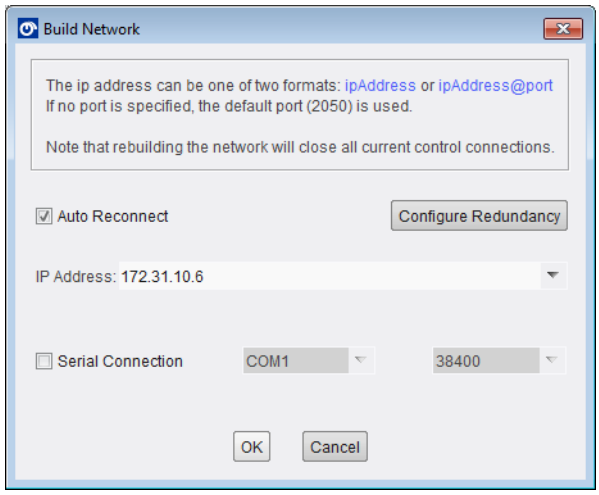

Figure 13 Build Network Dialog

- Enter the IP address of the RollCall IP Proxy (Connection to the RollCall IP Proxy cannot be made by means of a Serial Connection).

If the RollCall IP Proxy is running on the same computer as the Control Panel, configure the Control Panel to connect to 127.0.0.1 or local host. These loopback addresses provide a more efficient connection to the local network services than the computer's full IP address.

By default, all connections are made on port 2050. If the IQ Chassis has been configured to connect on a different port, append @port to the end of the IP Address. For example, 123.4.5.6@2053.

After the Control Panel is connected to the proxy service, all connection IQ frames and any other devices connected to them will be shown under the Address node given to the frame in the RollCall IP Proxy.

3.4 Naming Network Nodes

When connections are first set up, the nodes are all called "Network" followed by the substitution address. It is useful to rename the connections to indicate their location or network type so that they can be more easily identified.

To change the names of the network nodes:

1. From the **Setup** menu, click on **Names**.

   The Configure Names dialog displays.

2. Select a Network node and click Edit Name.

3. Type a new name for the node. The substitution address at the end of the name is optional and may be removed if desired.

4. Repeat with any other nodes to be renamed, and then click **OK**.

3.5 RollCall IP Proxy Security

Roll IP Proxy supports TCP/IP Guest lists to restrict access to the RollCall network. Guest lists can be defined as individual IP Addresses or as ranges of IP Addresses using wild cards. A wild card is represented by an asterisk, e.g., 192.168.10.* will match all IP addresses in the range 192.168.10.0 to 192.168.10.255.

To access the security settings, from the **Setup** menu, select **Access List**.

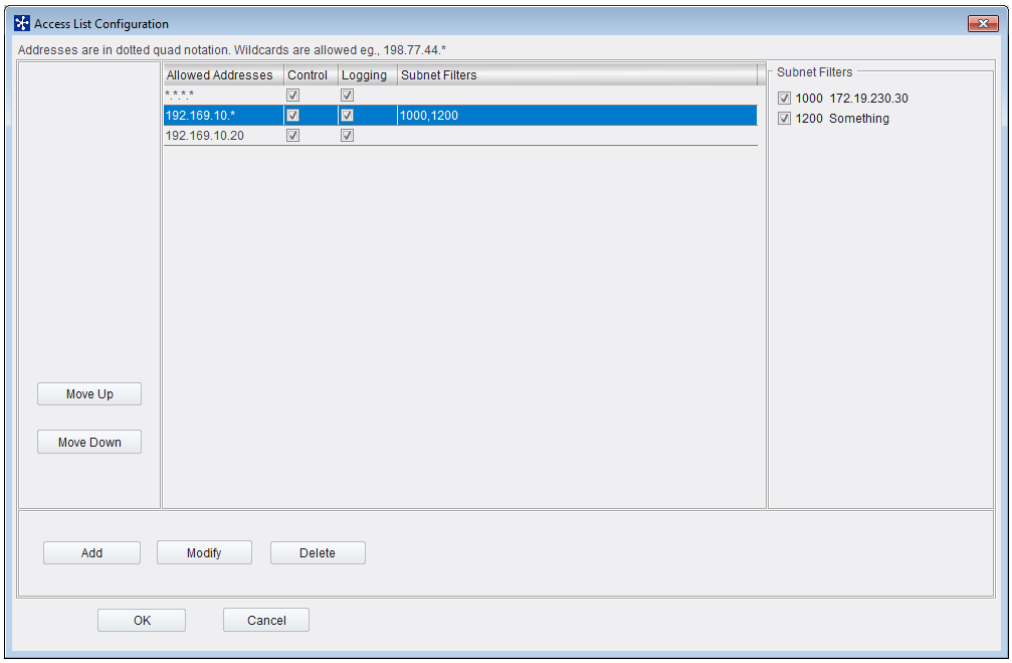

Figure 14 Access List Configuration

The default rule in Proxy allows all IP Addresses full access to the network. Rules are evaluated in the same order as they display in the table. For example:

Client connection from 192.168.10.75

If the Access List displays:

192.168.10.75
192.168.10.*

then the client address is matched with 192.168.10.75

If the list is reordered to:

192.168.10.*
192.168.10.75

then the client address is matched with 192.168.10.*

3.5.1 Add a New Rule

To add a new rule:

1. Click the **Add** button on the dialog.
2. In the new row that is added, type an IP address, and check the Control and Logging checkboxes, as required.
3. Subnet filters can also be added, if required, by checking the appropriate checkboxes on the right of the screen, to specify which part of a network a particular client address has access to.

   If no subnet filters are selected, the client address can see all of the network.
4. Click **OK**.

3.5.2 Viewing Control and Logging Connections (Full version only)

The Fully configured Roll IP Proxy service will now be providing RollCall and RollMap with an aggregated network view of all the control and logging services in the system. This enables complete control of discrete networks and real time monitoring of multiple autonomous networks.

It is recommended that advice is sought from the SAM projects team when setting up the LogServer to work with RollCall IP Proxy.

3.6 Color Themes

Color themes are available from the Look & Feel menu.

1. From the menu select the appropriate theme.

   A dialog box prompting that the application must be restarted displays.

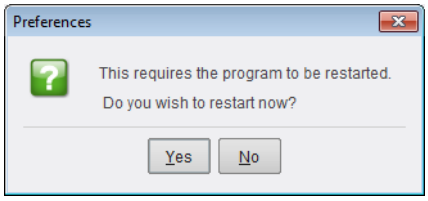

Figure 15 Restart

2. Click **Yes** to restart the program with the selected color theme, or click No to cancel.

