

User Manual

RollCall IP Proxy

Information and Notices

Copyright and Disclaimer

Copyright protection claimed includes all forms and matters of copyrightable material and information now allowed by statutory or judicial law or hereinafter granted, including without limitation, material generated from the software programs which are displayed on the screen such as icons, screen display looks etc.

Information in this manual and software are subject to change without notice and does not represent a commitment on the part of SAM. The software described in this manual is furnished under a license agreement and can not be reproduced or copied in any manner without prior agreement with SAM, or their authorized agents.

Reproduction or disassembly of embedded computer programs or algorithms prohibited.

No part of this publication can be transmitted or reproduced in any form or by any means, electronic or mechanical, including photocopy, recording or any information storage and retrieval system, without permission being granted, in writing, by the publishers or their authorized agents.

SAM operates a policy of continuous improvement and development. SAM reserves the right to make changes and improvements to any of the products described in this document without prior notice.

Contact Details

Customer Support

For details of our Regional Customer Support Offices please visit the SAM web site and navigate to Support/Contact Support.

www.s-a-m.com/support/contact-support/

Customers with a support contract should call their personalized number, which can be found in their contract, and be ready to provide their contract number and details.

Contents

Information and Notices 2 Copyright and Disclaimer 2 Contact Details 2
1 Introduction 4 1.1 Description 4 1.2 RollCall IP Proxy with RollCall Lite 4 1.3 RollCall IP Proxy with RollCall V4 Suite 5
2 Configuration 6 2.1 Configuring RollCall IP Proxy (RollCall Lite Version) 6 2.1.1 Connection Model 1:Single RollCall Client 6 2.1.2 Connection Model 2: Multiple RollCall Clients - with connection redundancy 7 6 2.1.3 Connection Model 3: Multiple RollCall Clients - efficient/security model 8 2.1.4 Connection Model 4: RollCall Control Panel - with RollNet redundancy 9 2.2 Configuring RollCall IP Proxy (Full RollCall V4 Suite Version) 10 2.2.1 Adding a LogServer to Proxy 10
3 Operation 11 3.1 Starting and Stopping the RollCall IP Proxy Service 11 3.2 Connecting RollCall IP Proxy to an IQ Chassis or IP Share 13 3.3 Connecting to RollCall IP Proxy from the RollCall Control Panel 14 3.4 Naming Network Nodes 14 3.5 RollCall IP Proxy Security 15 3.5.1 Add a New Rule 16 3.5.2 Viewing Control and Logging Connections (Full version only) 16 3.6 Color Themes 16

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.

ile Setun Loo	k & Feel H	lein						
		ioip						
Connections fro	om RollCa							
Peer Address	Name	Subnet	Port Sta	atus Time conr	lected Use			IP Port: 2050 Set
Mar Oracation		on the change is						
Map Connection	ns to Ether	met Chassi	s or iPSnare					
Peer Address	Name	Subnet	Status	Time connected	Primary Address	Secondary Address	Tertiary Address	Add Modi
4				Ш			•	Delet
					444			
RollCall Control	Connectio	ons to Ether	net Chassis	or IPShare				

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.

	y (LT-DN⊦	I-MR-03557	@172.31.	7.10:2053:2050))				
File Setup Lool	k&Feel H	lelp							
Connections fro	m RollMa	o or RollViev	N						
Peer Address	Name	Subnet	Port	Status	Time connecte	ed Use			IP Port 2053 Set
						a -			
Connections to	RollLog -								
Peer Address	Name	Subnet	Port	Status	Time connecto	ed Use	Use CurStat File	CurStat File Name	Add Modii Delet
					a a	а			
Connections fro	om RollCa								
Peer Address	Name	Subnet	Port	Status	Time connect	ed Use			IP Port 2050 Set
Map Connection	ns to Ether	net Chassi:	s or IPSł	nare	33	ы			
Peer Address	Name	Subnet	Status	Time	connected P	rimary Addre	ss Secondary A	dress Tertiary Add	ress Add
									Modif
						4			
				ania ar IDOhar					
RollCall Control	Connectio	ons to Ether	net Cha.	ssis or iPonar	e				
RollCall Control Peer Address	Name	Subnet	Port	Status	e Time connecte	ed Use			
RollCall Control Peer Address	Name	Subnet	Port	Status	e Time connect	ed Use			

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 2051.





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.

Network Name:				
Substitution Addre	ess (Hex):			
0000	eg., 1000, 1200, 1230, 12	234		
IPShare Address:			IP Port	
			2052	
Use External C	Current Status File			
Current Status Fil	e Name:			
	OK	Cancel		



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

Services					[- • ×
<u>File Action View</u>	<u>H</u> elp					
) 🛃 🛛 📷 🛛 🖉 🖬 🔹 🕨					
Services (Local)	Services (Local)	_				
	RollIPProxy	Name	Description	Status	Startup Type	Log On As 🔺
		🔍 Remote Desktop S	Allows user	Started	Manual	Network S
	Stop the service	Remote Desktop S	Allows the r	Started	Manual	Local Syste
	Restart the service	🔍 Remote Procedur	The RPCSS	Started	Automatic	Network S
		🧟 Remote Procedur	In Windows		Manual	Network S
	Description:	🔍 Remote Registry	Enables rem		Manual	Local Service
	Connect multiple RollCall segments	RollCall LogServer	Collects Rol	Started	Automatic	Local Syste
	Into a single network	🔍 RollIPProxy	Connect m	Started	Automatic	Local Syste
		Routing and Remote	Access puti		Disabled	Local Syste
		🔍 RPC Endpoint Ma	Resolves RP	Started	Automatic	Network S
		🌼 Secondary Logon	Enables star		Manual	Local Syste
		🎑 Secure Socket Tun	Provides su	Started	Manual	Local Service
		🎑 Security Accounts	The startup	Started	Automatic	Local Syste
		🎑 Security Center	The WSCSV	Started	Automatic (D	Local Service
		🔍 Server	Supports fil	Started	Automatic	Local Syste
		🎑 Shell Hardware De	Provides no	Started	Automatic	Local Syste
		🔍 Smart Card	Manages ac	Started	Automatic	Local Service
		🎑 Smart Card Remo	Allows the s		Manual	Local Syste
		🔍 SmartSVN Status		Started	Automatic	Local Syste
		SMS Agent Host	Provides ch	Started	Automatic	Local Syste
		SNMP Service	Enables Sim	Started	Automatic	Local Syste 🖕
		<		III	•••••	•
	Extended Standard /					
	· · · · ·					

Figure 8 Services

2. Double-click on the RollIPProxy service.

The properties dialog displays.

RollIPProxy Properties (Local Computer)
General Log On Recovery Dependencies
Service name: RollIPProxy
Display name: RollIPProxy
Description: Connect multiple RollCall segments into a single network
Path to executable: "C:\Program Files (x86)\Snell\RollCallSuite\RollProxyService.exe"
Startup type: Automatic
Help me configure service startup options,
Service status: Started
Start Stop Pause Resume
You can specify the start parameters that apply when you start the service from here.
Start parameters:
OK Cancel Apply

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.

map Connection	ns to Ether	net Chassis	or iPSnare					
Peer Address	Name	Subnet	Status	Time connected	Primary Address	Secondary Address	Tertiary Address	Add
								Modify
								Delete

Figure 11 Map Connections to Ethernet Chassis or IP Share

The Add New Control Client dialog displays.

dd New Control Client	
Network Name:	
Subnet Address (Hex): 0000 eg., 1000, 1200, 1230, 1234	V Enabled
Primary IPShare Address:	IP Port
Secondary IPShare Address:	IP Port 2050
Tertiary IPShare Address:	IP Port 2050
OK	

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.

Build Network		
The ip address can be one of If no port is specified, the defa Note that rebuilding the netwo	two formats: ipAd ault port (2050) is ork will close all cu	ddress or ipAddress@port used. urrent control connections.
☑ Auto Reconnect		Configure Redundancy
IP Address: 172.31.10.6		T
Serial Connection C	COM1 V	38400 💎
0	Cancel	

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**.

	quad notation. wirdcard	. are and	weareg., n		
	Allowed Addresses	Control	Logging	Subnet Filters	Subnet Filters
	****	1	\mathbf{V}		1000 172.19.230.30
	192.169.10.*	V		1000,1200	✓ 1200 Something
	192.169.10.20	7	\checkmark		
Move Up					
Move Down					
more bound					
					31
Add	Modify	Delete			

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.