APPENDIX E

ISC Runtime Configuration Information

This chapter explains the following ISC information for runtime configuration:

Default TCP Port Values and Protocol Directions Used by ISC

ISC uses various Transmission Control Protocol (TCP) ports during its operation. Most TCP ports are configured during the installation. Table E-1 and Table E-2 specify the most vital TCP primary and optional ports, respectively, their default values, and the direction.

Table E-1 ISC Primary TCP Ports, Their Default Values, and Direction

TCP Primary Ports (listed alphabetically)	Default Values	Direction	Notes
HTTP	8030	Web browser to ISC	Used for Web GUI and NBI
Tibco RVA	7600	ISC to web browser	used by some applications
Tomcat	8031	Web browser to ISC	HTTP port value + 1

Table E-2 ISC Optional TCP Ports, Their Default Values, and Direction

TCP Optional Ports (listed alphabetically)	Default Values	Direction	Notes
HTTPS	8443	Web browser to ISC	if HTTPS activated
Oracle	1521	ISC to Oracle Server	if Oracle database is used
Tibco RVA Admin	7630	Web browser to ISC	if RVA config required
Tibco RVD or RVRD	7530	bi-directional between ISC and Cisco Configuration Engine server	if using CNS transport mechanism for device access
Tibco RVRD Admin	7580	Web browser to ISC	if RVRD config required

The values selected during the installation can be retrieved from the file **$ISC_HOME/etc/install.cfg**. Most of these ports only need to be allowed if you are allowing users to access ISC from outside your firewall.

ISC uses or can us the protocols specified in Table E-3 to communicate with the routers under its configuration control.

Note The selected protocol for each of the following categories must be able to pass through any firewalls between ISC and the devices:
1. Terminal Session Protocol - **default: Telnet**; SSH; CNS*; rsh
2. Configuration Access Protocol - **default: selected Terminal Session Protocol**; TFTP; FTP; rcp
3. SNMP - **default: SNMPv1/v2c**; SNMPv3
* CNS is a transport mechanism that uses the TIB/Rendezvous event bus to communicate with a Cisco Configuration Engine server..

Table E-3 Protocols and Directions with ISC

Protocols (listed alphabetically)	Directions
FTP	Devices to FTP server
NFS	Between ISC and TFTP or FTP server if server is on a different machine. (Can be blocked if you do not use FTP or TFTP.)
rcp	ISC to devices
rsh	ISC to devices
SSH	ISC to devices
SSHv2	ISC to devices
SNMP	ISC to devices
SNMPv3	ISC to devices
Telnet	ISC to devices
TFTP	Devices to TFTP server

Note Device creation is explained in the chapter Service Inventory—Inventory and Connection Manager, in the *Cisco IP Solution Center Infrastructure Reference, 6.0.*

Command-Line Interfaces Used by ISC

This section specifies the command-line interfaces (CLIs) used by ISC. This list gives commands supported in IOS and IOS XR unless otherwise indicated:

- commit (not supported in IOS)
- configure exclusive (not supported in IOS)
- config term
- copy (many variations)
- enable (not supported in IOS XR)

- end
- exit
- ping [vrf]
- reload
- show diag (not supported in IOS XR)
- show diags (not supported in IOS)
- show etherchannel port (not supported in IOS XR)
- show interfaces switchport (not supported in IOS XR)
- show modules (not supported in IOS XR)
- show port (not supported in IOS XR)
- show running
- show startup (not supported in IOS XR)
- show ver
- term (length, width, editing) (editing not supported in IOS XR)
- write mem (not supported in IOS XR)
- [no] logging console

Note The CLIs used by the MPLS Diagnostics Expert (MDE) are listed in the *Cisco IP Solution Center MPLS Diagnostics Expert User Guide, 6.0.*