CiscoWorks Blue Maps Daemons

The heart of each CiscoWorks Blue Maps application is a set of database tables and daemons. For the RSRB Map application, this appendix describes the command line syntax for starting its daemons and the the relationship of its daemons to the database tables.

Starting and Stopping an RSRB or DLSw Daemon

You can control each related daemon in the **Admin> Process Control** window of the Map application, or from the command line as follows:

```
cwbmonitord       [-s] [-f] [-h] [-d] [-v] [-c] UDPport
cwbrsrbpollerd    [-s] [-f] [-h] [-d] [-v] PollingInterval
cwbdlswpollerd    [-s] [-f] [-h] [-d] [-v] PollingInterval
cwbsyncd          [-s] [-f] [-h] [-d] [-v] SyncInterval
cwbrsrbdiscoverd  [-s] [-f] [-h] [-d] [-v] DiscoverInterval
cwbdlswdiscoverd  [-s] [-f] [-h] [-d] [-v] DiscoverInterval
cwbrsrbtrapd      [-s] [-f] [-h] [-d] [-v]
```

-s stops a running instance.

-f force-starts the daemon.

-h displays a help message.

-d enables debug mode.

-v displays the version number of this daemon.

-c starts with an empty client list. Without this option, the Monitor daemon re-establishes the list of GUI application clients that were registered when it was last run. See "Client List Table" in the "CiscoWorks Blue Maps and SNA View Database Tables" appendix.

UDPport is the User Datagram Protocol port to which a GUI application listens. The default is 6000. If a GUI application will be instructed to listen to a non-default port number, enter that number here.

Intervals are in seconds.

RSRB Daemons and Database Tables

This is an introduction to the role of tables and daemons in the operation of RSRB Map, followed by a detailed description of each daemon.

In the first phase of operation, a table of IP devices is populated by the Sync daemon from the network management system, or the user creates a seed file of IP devices and populates the table by using either of the following methods:

- the **Admin> Discover** menu option
- the **cwbrsrbdiscover** process.

In the second phase of operation, the Discovery daemon collects the list of IP devices and communicates with each device to determine which ones are RSRB-enabled routers.

In the third phase of operation, the Poller daemon queries known RSRB routers, and the Trap daemon receives unsolicited messages from those routers (via the NMS), and management information is forwarded to tables in the RSRB Maps application. When the Monitor daemon detects a change in the tables, it updates the graphical map accordingly.

The following daemon descriptions contain references to the database tables in the "CiscoWorks Blue Maps and SNA View Database Tables" appendix. Daemons labeled *CWB* are used by more than one CiscoWorks Blue Map application. Daemons labeled *RSRB, APPN,* or *DLSw* are application-specific.

The status of every daemon is stored in the Process table.

Table B-1   Daemons in CiscoWorks Blue Maps

Daemon	Name
cwbmonitord	Monitor daemon
cwbrsrbpollerd	Poller daemon

Daemon	Name
cwbsyncd	Sync daemon
cwbrsrbdiscoverd	Discovery daemon
cwbrsrbtrapd	Trap daemon

CWB Monitor Daemon

The Monitor daemon updates the graphical map when it detects a change in a database table. Primarily, the Monitor daemon relies on the Poller daemon to update the database. Traps detected by the Trap daemon can also cause changes to the database. The Monitor daemon must be running for changes to appear on the graphical map.

RSRB Poller Daemon

The Poller daemon continuously polls the MIBs in discovered routers for their ever-changing status. For the Poller daemon to operate, the:

- Sync daemon must have been executed at least once or a seed file must have been passed to the Discover daemon, and

- Discover daemon must have been executed at least once and it must have discovered at least one RSRB-enabled router.

The Poller daemon queries the following MIB variables in known RSRB-enabled devices (those in the Devices table flagged *discovered*):

- *rsrbRemotePeerEncapsulation*

- *rsrbRemotePeerIPAddr*

- *rsrbRemotePeerState*

If a known RSRB-enabled (discovered) device does not respond to the Poller's SNMP query, the Poller daemon sets that device to Inactive in the Devices table. If the device responds with its current peer table, the Peer table is updated in the database.

RSRB Sync Daemon

The Sync daemon is responsible for synchronizing the RSRB database with the network management system's database. The Sync daemon obtains a list of all IP routers in the network from the NMS and stores these in the RSRB database. The routers in this list will subsequently be queried by the Discovery daemon to discover which ones are RSRB-enabled. (If a list of IP routers is not available from the NMS, the list can be supplied directly to the Discovery daemon. This alternative to using the Sync daemon is explained in the section "RSRB Discover Daemon.")

Depending on how often you expect the NMS to have new routers in its own database, you can set the Sync daemon to run at various intervals or not at all.

Before you execute the Sync daemon, you should discover your network by using your network management's discovery feature or auto management feature. In addition, the Sybase database must be configured.

Note   If you are using SunNet Manager, the Sync daemon retrieves a list of *all* IP devices, not just IP routers. The list of IP devices is added to the RSRB Devices table, but non-routers eventually fail the discovery process (the SNMP query for RSRB-enabled routers).

If started, the Sync daemon continuously executes in the background and retrieves a complete list of IP devices or routers periodically. If a device already exists in RSRB's database when the Sync daemon operates, the Sync daemon does not alter information about that device. If information about an IP device is absent from the Sybase table, the Sync daemon lists that device in the Sybase table and flags the entry as *not discovered*.

You can control the frequency with which the Sync daemon performs synchronization, or whether it runs at all. For example, if you know that no new devices are being added to your network, you do not need to run the Sync daemon.

To ensure that the Sybase tables contain the most current information about the IP devices or routers in your network, run the auto management feature of your network management system. Otherwise, your network management database will be static and the Sync daemon need not update RSRB's database.

The Sync daemon does not detect the removal of IP devices from the network. The RSRB database is not affected by device removal until the Discover daemon operates and marks nonexistent routers as inactive due to lack of response to SNMP. Inactive devices remain in the RSRB database until you remove them by using **Edit> Delete Device** in the GUI.

RSRB Discover Daemon

You use the Discover daemon for RSRB networks to identify if each IP device in your network is active and to verify which routers are RSRB-enabled. In addition to discovering the RSRB devices, the Discover daemon also sets the status and protocol fields in the devices table.

If you have a dynamic network and expect to configure new or existing routers with RSRB, run both the Sync daemon and the Discover daemon to ensure that the database used for RSRB maps reflects your current RSRB network topology.

When executed, the Discover daemon queries all IP devices in the RSRB database that are flagged *not discovered*. A device is set to *not discovered* if:

- The device is newly added to the database, because RSRB has never discovered whether it is RSRB-enabled

- A trap received from the device causes the Peer table to be updated.

For each device that is *not discovered*, the Discover daemon queries the device to identify if it is configured with following RSRB MIB variables:

- *rsrbVirtRingIPAddr*

- *rsrbRemotePeerEncapsulation*

- *rsrbRemotePeerIPAddr*

- *rsrbRemotePeerState*

- *rsrbRingBridge*

- *rsrbRingLocal*

- *rsrbRingType*

If the device responds to the RSRB query, the Discover daemon updates the RSRB Devices table to indicate that the node is an RSRB node. If the device responds to an SNMP query, it is flagged as *discovered* in the devices table.

Note   If your network topology changes frequently, we recommend that the Discover daemon be executed more frequently. You need not run the Discover daemon if the Sync daemon is not running, your network is stable with no additions or deletions of devices, or you have not enabled the automatic discovery of your network in the network management application.

RSRB Trap Daemon

The Trap daemon registers with the network management system's trap process to receive unsolicited status messages from routers. It should run at all times. When a device generates a trap, the Trap daemon updates device information in the database.

DLSw Poller Daemon

The MIB variables used by the DLSw Poller daemon are:

- *ciscoDlswTConnOperLocalTAddr*
- *ciscoDlswTConnOperState*
- *ciscoDlswTConnOperConfigIndex*
- *ciscoDlswTConnConfigTDomain*
- *ciscoDlswTConnConfigLocalTAddr*
- *ciscoDlswTConnConfigRemoteTAddr*
- *ciscoDlswTConnConfigSetupType*

DLSw Discover Daemon

The MIB variables used by the DLSw Discover daemon are:

- *ciscoDlswTConnOperLocalTAddr*
- *ciscoDlswTConnOperState*
- *ciscoDlswTConnOperConfigIndex*
- *ciscoDlswTConnConfigTDomain*
- *ciscoDlswTConnConfigLocalTAddr*
- *ciscoDlswTConnConfigRemoteTAddr*
- *ciscoDlswTConnConfigSetupType*