APPENDIX E

Status Definitions

This appendix defines the default status settings for all Cisco Mobile Wireless Transport Manager (MWTM) network objects.

This appendix contains:

General Status Definitions

The following status definitions apply to both ITP and RAN-O networks:

Status Definitions for Nodes

Possible values for the current status of the node are:

- **Active (green)**—The node is currently fully functional.
- **Discovering (cyan)**—The node is being discovered, and Simple Network Management Protocol (SNMP) queries have been sent to the node.
- **Polling (cyan)**—The node is being polled.
- **Unknown (red)**—The node failed to respond to an SNMP request. The MWTM sets all associated signaling points, linksets, or links to Unknown.

- **Unmanaged (gray)**—One of these situations exists:
  - The node is known indirectly by the MWTM. In other words, the MWTM knows the node exists but there is no known SNMP stack on the node for the MWTM to query.
  - An MWTM user has set the node to Unmanaged status, to prevent the MWTM from polling the node.

    (ITP only) If the associated signaling points are referenced via linksets to other signaling points, the MWTM automatically sets all associated signaling points to Unmanaged, and deletes all associated linksets and links, as well as all linksets and links that reference the node as an adjacent node.

    (ITP only) If the associated signaling points are not referenced to other signaling points, the MWTM automatically deletes the signaling points, all associated linksets and links, and all linksets and links that reference the node as an adjacent node.
- **Waiting (gray)**—The node is in the Discovery queue but is not currently being discovered.
- **Warning (yellow)**—The node is active, but one or more associated objects are in Failed, Unavailable, Unknown, or Warning status and are not Ignored.

Status Definitions for Views

Possible values for the current status of the view are:

- **Active (green)**—All objects in the selected view are currently Active and fully functional.
- **Unmanaged (gray)**—All objects in the selected view are currently Unmanaged.
- **Warning (yellow)**—One or more objects in the selected view is currently not Active.

Status Definitions for Folders

Possible values for folders (such as Physical and Mgmt Interfaces) are:

- **Active (green)**—All objects in the selected folder are currently Active and fully functional.
- **Warning (yellow)**—At least one object is not Active.

ITP Status Definitions

ITP status definitions include this information:

Status Definitions for Application Servers

Possible values for the current status of the application server are:

- **Active (green)**—The application server is available and application traffic is active. At least one application server process serving this application server is Active.
- **Down (red)**—The application server is not available. All application server processes that serve this application server are Down. This is the initial status for application servers.
- **Inactive (red)**—The application server is available, but no application traffic is active (that is, at least one application server process is Inactive, and no application server process is Active).
- **Pending (red)**—The last remaining Active application server process serving this application server has become Inactive or Down. The next status for this application server will be Active, Inactive, or Down, depending on the recovery timer, and whether an application server process can become Active.
- **Shutdown (blue)**—An administrator has forced the application server to an unavailable state.
- **Unknown (red)**—The MWTM cannot determine the current status of the application server.
- **Warning (yellow)**—The application server is Active, but one of these conditions exists:
  - At least one application server process association for this application server is not fully functional.
  - A signaling gateway-mated pair has been defined for this signaling point, but no application server exists on the mate.
  - The mate's application server is not Active.

Status Definitions for Application Server Processes

Possible values for the current status of the application server process are:

- **Unknown (red)**—The MWTM cannot determine the current status of the application server process.
- **Unmanaged (gray)**—The MWTM cannot determine the status of the application server process because there is no known SNMP stack on the node that hosts this application server process for the MWTM to query.

Status Definitions for Application Server Process Associations

Possible values for the current status of the application server process association are:

- **Active (green)**—The remote peer at the application server process association is available and application traffic is active.
- **Blocked (red)**—The application server process association cannot receive normal data traffic, but it can send and receive control messages.
- **Down (red)**—The remote peer at the application server process association is not available, or the related SCTP association is down. This is the initial status for application server process associations.
- **Inactive (red)**—The remote peer at the application server process association is available, and the related SCTP association is up, but application traffic has stopped. The application server process association should not receive any data or SNMP messages for the application server.

- **Pending (red)**—The last remaining Active application server process serving this application server process association has become Inactive or Down. The next status for this application server process association will be Active, Inactive, or Down, depending on the recovery timer, and whether an application server process can become Active.
- **Shutdown (blue)**—An administrator has forced the application server process association to an unavailable state.
- **Unknown (red)**—The MWTM cannot determine the current status of the application server process association.
- **Warning (yellow)**—The application server process association is Active, but some underlying facility is not fully functional.

Status Definitions for ITP Interfaces

This section provides definitions for these statuses:

- Admin Status, page E-8
- Operational Status, page E-8
- Status, page E-9

Admin Status

Possible values for the administrative status of the interface are:

- **Unknown (red)**—Unknown administrative status
- **Up (green)**—Administratively up
- **Shutdown (blue)**—Administratively down
- **Testing (blue)**—Administrator is testing the interface

Operational Status

Possible values for the operational status of the interface are:

- **Unknown (red)**—Unknown operational status.
- **Up (green)**—Interface is up.
- **Down (red)**—Interface is down.
- **Testing (blue)**—Interface is in test mode.
- **Dormant (red)**—Interface is dormant.
- **Not Present (red)**—An interface component is missing.
- **Lower Layer Down (red)**—An interface is down because of a lower-layer interface.

Status

Possible values for the status of an interface are:

- **Active (green)**
- **Down (red)**
- **Unknown (red)**
- **Warning (yellow)**

Status Definitions for Links

Possible values for the current status of the link are:

- **Active (green)**—The link is currently fully functional.
- **Blocked (red)**—Traffic on this link is disabled by protocol.
- **Failed (red)**—An error is preventing traffic from flowing on this link, or the associated linkset has been set to Shutdown status.

  A link can be Failed from an MTP3 perspective, but control messages might still be sent or received on the link, resulting in changing packet/second and bit/second rates. The rates might also be different at each end of the link, depending on the reason for the failure and the timing related to each endpoint.
- **InhibitLoc (blue)**—A local ITP administrator has set the link to prevent traffic from flowing.
- **InhibitRem (blue)**—A remote ITP administrator has set the link to prevent traffic from flowing.
- **Shutdown (blue)**—An ITP administrator has set the link to prevent traffic from flowing.
- **Unknown (red)**—Either the node associated with this link has failed to respond to an SNMP request, or the MWTM found that the link no longer exists.

  When you physically delete a link, the Status field shows Unknown until you delete the link from the MWTM database.
- **Warning (yellow)**—The link is active and traffic is flowing, but one or more of these situations has occurred:
  - The link is congested.
  - The link has exceeded the defined Receive Utilization % or Send Utilization %.
  - One or more of the local or remote IP addresses defined for SCTP is not active.

Status Definitions for Linksets

Possible values for the current status of the linkset are:

- **Active (green)**—The linkset is currently fully functional.
- **Shutdown (blue)**—An ITP administrator has set the linkset to prevent traffic from flowing. When a linkset is set to Shutdown, all its associated links are set to Failed by Cisco IOS.
- **Unavailable (red)**—An error is preventing traffic from flowing on this linkset.
- **Unknown (red)**—Either the node associated with this linkset has failed to respond to an SNMP request, or the MWTM found that the linkset no longer exists.
- **Warning (yellow)**—The linkset is active, but one or more links in the linkset is congested or is in Failed, Unknown, or Warning status, and is not Ignored. At least one link is available and can carry traffic.

Status Definitions for Signaling Gateway Mated Pairs

Possible values for the current status of the signaling gateway-mated pair are:

Active (green)—The signaling gateway-mated pair is available and application traffic is active.

Down (red)—The signaling gateway-mated pair is not available.

Inactive (red)—The signaling gateway-mated pair is available, but application traffic has stopped.

Shutdown (blue)—An administrator has forced the signaling gateway-mated pair to an unavailable state.

Unknown (red)—The MWTM cannot determine the current status of the signaling gateway-mated pair.

Warning (yellow)—The signaling gateway-mated pair is Active, but some underlying facility is not fully functional.

Status Definitions for Signaling Points

Possible values for the current status of the signaling point are:

Active (green)—The signaling point is currently fully functional.

Unknown (red)—The MWTM cannot poll the node associated with the signaling point.

Unmanaged (gray)—The MWTM cannot discover the signaling point. It is not an ITP node.

Warning (yellow)—The signaling point is active, but one or more associated links or linksets is in Failed, Unavailable, Unknown, or Warning status and is not flagged as Ignored.

RAN-O Status Definitions

RAN-O status definitions include this information:

Status Definitions for RAN-O Interfaces

This section provides definitions for these statuses:

Admin Status

Possible values for the administrative status of the interface are:

Unknown (red)—Unknown administrative status

Up (green)—Administratively up

Shutdown (blue)—Administratively down

Testing (blue)—Administrator is testing the interface

Operational Status

Possible values for the operational status of the interface are:

Unknown (red)—Unknown operational status.

Up (green)—Interface is up.

Down (red)—Interface is down.

Testing (blue)—Interface is in test mode.

Dormant (red)—Interface is dormant.

Not Present (red)—An interface component is missing.

Lower Layer Down (red)—An interface is down because of a lower-layer interface.

Connect State for GSM Abis

Possible values for the connect state of a Global System for Mobile Communications (GSM) interface are:

Connected (green)—The node is monitoring local and remote alarm status.

Disconnected (red)—The system ignores the local alarm status. The local transmitter on the short-haul is disabled. Capability messages are transmitted to the remote describing the provisioning. The system stays disconnected until the remote capabilities are known and the peer state transitions to connected.

Send Connect (yellow)—One or more attempts have been made to connect to remote peer.

Receive Connect (yellow)—The local peer has received a connect request from the remote peer.

Connect Rejected (yellow)—Connection was rejected.

ACK Connect (yellow)—The initial connect request was sent and acknowledged by remote peer. The local peer is now waiting for a connect request from the remote peer.

Check Connect (yellow)—The local peer has reason to believe its remote peer has failed. Additional tests are being processed to verify peer's state.

Connect State for UMTS Iub

Possible values for the connect state of a Universal Mobile Telecommunications System (UMTS) interface are:

Initialized (yellow)—The connection is starting initialization.

Starting (red)—The shorthaul interface is administratively active, but the backhaul interface is down.

Closed (blue)—The backhaul interface is active, but the shorthaul is administratively closed.

Stopped (red)—Unable to connect to peer in specified time interval. Additional attempts will be tried based on peer request or restart timers.

Closing (blue)—Connection closed by administration request.

Stopping (yellow)—Connection shut down by peer's Term-Request. Will transition to stopped state.

Connect Sent (yellow)—Connection request sent to peer.

ACK Received (yellow)—Connection request sent and acknowledgement has been received from peer. Now waiting for peer's connection request.

ACK Sent (yellow)—Connection request received and acknowledgement has been sent to peer. Connection request sent and waiting for peer's acknowledgement.

Open (green)—Connection open and available for traffic.

Alarm States

The alarm states for a UMTS Iub interface include:

- Local Receive Alarm State
- Local Transmit Alarm State
- Remote Receive Alarm State
- Remote Transmit Alarm State

Possible values for these alarm states are:

Remote Alarm (blue)—Indicates a problem at the remote end. The alarm generated by the remote interface in the E1/T1 data stream is sent and no other action is required.

No Alarm (green)—No alarm is present.

Local Alarm (red)—Indicates local interface problem. The interface has not received synchronization from the GSM node. The node stops transmitting backhaul samples.

Received Alarm (yellow)—Indicates receive problem in the local node. The remote node stops transmitting backhaul data and indicates a blue alarm.

Alarm State Unavailable (red)—Indicates the alarm state is not available. This state only applies to the remote and occurs when the peer connection is inactive.

Redundancy State

Possible values for the redundancy state of GSM Abis or UMTS Iub interfaces are:

Active (green)—Active owner of interface.

Standby (green)—Active owner of interface.

Status

Possible values for the status of an interface are:

Active (green)—The interface is currently fully functional.

Down (red)—The interface is not available.

Unknown (red)—The MWTM cannot determine the current status of the interface.

Warning (yellow)—The interface is Active, but some underlying object is not fully functional.

Status Definitions for Cards

Possible values for cards within Cisco Optical Networking System (ONS) nodes are:

Active (green)—The card is currently fully functional.

Not Present (red)—Preconfigured but not inserted in the ONS chassis

Failed (red)—Not functional

Warning (yellow)—Not in configured protection state

Unknown (red)—Failed SNMP

Status Definitions for RAN-O Backhauls

Possible values for RAN backhauls are:

Active (green)—The RAN backhaul is currently fully functional.

Unknown (red)—The MWTM cannot determine the current status of the RAN backhaul.

Warning (yellow)—At least one of the shorthaul interfaces or IP backhaul interfaces is not active

Failed (red)—None of the shorthaul or IP backhaul interfaces are active