



APPENDIX **D**

Troubleshooting

This appendix lists system messages that can appear on the Cisco UWN Solution interfaces, describes the LED patterns on controllers and lightweight access points, and provides CLI commands that can be used to troubleshoot problems on the controller. It contains these sections:

- [Interpreting LEDs, page D-2](#)
- [System Messages, page D-2](#)
- [Using the CLI to Troubleshoot Problems, page D-5](#)

Interpreting LEDs

Interpreting Controller LEDs

Refer to the quick start guide for your specific controller for a description of the LED patterns. You can find the guides at this URL:

<http://www.cisco.com/en/US/products/hw/wireless/index.html>

Interpreting Lightweight Access Point LEDs

Refer to the hardware installation guide for your specific access point for a description of the LED patterns. You can find the guides at this URL:

<http://www.cisco.com/en/US/products/hw/wireless/index.html>

System Messages

Table D-1 lists system messages and descriptions.

Table D-1 System Messages and Descriptions

| Error Message | Description |
|---|--|
| apf_utils.c 680: Received a CIF field without the protected bit set from mobile xx:xx:xx:xx:xx:xx | A client is sending an association request on a security-enabled WLAN with the protected bit set to 0 (in the Capability field of the association request). As designed, the controller rejects the association request, and the client sees an association failure. |
| dtl_arp.c 480: Got an idle-timeout message from an unknown client xx:xx:xx:xx:xx:xx | The controller's network processing unit (NPU) sends a timeout message to the central processing unit (CPU) indicating that a particular client has timed out or aged out. This normally occurs when the CPU has removed a wireless client from its internal database but has not notified the NPU. Because the client remains in the NPU database, it ages out on the network processor and notifies the CPU. The CPU finds the client that is not present in its database and then sends this message. |
| STATION_DISASSOCIATE | Client may have intentionally terminated usage or may have experienced a service disruption. |
| STATION_DEAUTHENTICATE | Client may have intentionally terminated usage or it could indicate an authentication issue. |
| STATION_AUTHENTICATION_FAIL | Check disable, key mismatch or other configuration issues. |
| STATION_ASSOCIATE_FAIL | Check load on the Cisco Radio or signal quality issues. |

Table D-1 System Messages and Descriptions (continued)

| Error Message | Description |
|--|---|
| LRAD_ASSOCIATED | The associated Cisco 1000 Series lightweight access point is now managed by this Cisco Wireless LAN Controller. |
| LRAD_DISASSOCIATED | Cisco 1000 Series lightweight access point may have associated with a different Cisco Wireless LAN Controller or may have become completely unreachable. |
| LRAD_UP | Cisco 1000 Series lightweight access point is operational, no action required. |
| LRAD_DOWN | Cisco 1000 Series lightweight access point may have a problem or is administratively disabled. |
| LRADIF_UP | Cisco Radio is UP. |
| LRADIF_DOWN | Cisco Radio may have a problem or is administratively disabled. |
| LRADIF_LOAD_PROFILE_FAILED | Client density may have exceeded system capacity. |
| LRADIF_NOISE_PROFILE_FAILED | The non-802.11 noise has exceed configured threshold. |
| LRADIF_INTERFERENCE_PROFILE_FAILED | 802.11 interference has exceeded threshold on channel -- check channel assignments. |
| LRADIF_COVERAGE_PROFILE_FAILED | Possible coverage hole detected - check Cisco 1000 Series lightweight access point history to see if common problem - add Cisco 1000 Series lightweight access points if necessary. |
| LRADIF_LOAD_PROFILE_PASSED | Load is now within threshold limits. |
| LRADIF_NOISE_PROFILE_PASSED | Detected noise is now less than threshold. |
| LRADIF_INTERFERENCE_PROFILE_PASSED | Detected interference is now less than threshold. |
| LRADIF_COVERAGE_PROFILE_PASSED | Number of clients receiving poor signal are within threshold. |
| LRADIF_CURRENT_TXPOWER_CHANGED | Informational message. |
| LRADIF_CURRENT_CHANNEL_CHANGED | Informational message. |
| LRADIF_RTS_THRESHOLD_CHANGED | Informational message. |
| LRADIF_ED_THRESHOLD_CHANGED | Informational message. |
| LRADIF_FRAGMENTATION_THRESHOLD_CHANGED | Informational message. |
| RRM_DOT11_A_GROUPING_DONE | Informational message. |
| RRM_DOT11_B_GROUPING_DONE | Informational message. |
| ROGUE_AP_DETECTED | May be a security issue. Use maps and trends to investigate. |

Table D-1 System Messages and Descriptions (continued)

| Error Message | Description |
|-----------------------------|--|
| ROGUE_AP_REMOVED | Detected rogue access point has timed out. The unit might have shut down or moved out of the coverage area. |
| AP_MAX_ROGUE_COUNT_EXCEEDED | The current number of active rogue access points has exceeded system threshold. |
| LINK_UP | Positive confirmation message. |
| LINK_DOWN | Port may have a problem or is administratively disabled. |
| LINK_FAILURE | Port may have a problem or is administratively disabled. |
| AUTHENTICATION_FAILURE | Attempted security breach. Investigate. |
| STP_NEWROOT | Informational message. |
| STP_TOPOLOGY_CHANGE | Informational message. |
| IPSEC_ESP_AUTH_FAILURE | Check WLAN IPsec configuration. |
| IPSEC_ESP_REPLAY_FAILURE | Check for attempt to spoof IP Address. |
| IPSEC_ESP_POLICY_FAILURE | Check for IPsec configuration mismatch between WLAN and client. |
| IPSEC_ESP_INVALID_SPI | Informational message. |
| IPSEC_OTHER_POLICY_FAILURE | Check for IPsec configuration mismatch between WLAN and client. |
| IPSEC_IKE_NEG_FAILURE | Check for IPsec IKE configuration mismatch between WLAN and client. |
| IPSEC_SUITE_NEG_FAILURE | Check for IPsec IKE configuration mismatch between WLAN and client. |
| IPSEC_INVALID_COOKIE | Informational message. |
| RADIOS_EXCEEDED | Maximum number of supported Cisco Radios exceeded. Check for controller failure in the same Layer 2 network or add another controller. |
| SENSED_TEMPERATURE_HIGH | Check fan, air conditioning and/or other cooling arrangements. |
| SENSED_TEMPERATURE_LOW | Check room temperature and/or other reasons for low temperature. |
| TEMPERATURE_SENSOR_FAILURE | Replace temperature sensor ASAP. |
| TEMPERATURE_SENSOR_CLEAR | Temperature sensor is operational. |
| POE_CONTROLLER_FAILURE | Check ports — possible serious failure detected. |
| MAX_ROGUE_COUNT_EXCEEDED | The current number of active rogue access points has exceeded system threshold. |
| SWITCH_UP | Controller is responding to SNMP polls. |
| SWITCH_DOWN | Controller is not responding to SNMP polls, check controller and SNMP settings. |

Table D-1 System Messages and Descriptions (continued)

| Error Message | Description |
|-----------------------|--|
| RADIUS_SERVERS_FAILED | Check network connectivity between RADIUS and the controller. |
| CONFIG_SAVED | Running configuration has been saved to flash - will be active after reboot. |
| MULTIPLE_USERS | Another user with the same username has logged in. |
| FAN_FAILURE | Monitor Cisco Wireless LAN Controller temperature to avoid overheating. |
| POWER_SUPPLY_CHANGE | Check for power-supply malfunction. |
| COLD_START | Cisco Wireless LAN Controller may have been rebooted. |
| WARM_START | Cisco Wireless LAN Controller may have been rebooted. |

Using the CLI to Troubleshoot Problems

If you experience any problems with your controller, you can use the commands in this section to gather information and debug issues.

1. **show process cpu**—Shows how various tasks in the system are using the CPU at that instant in time. This command is helpful in understanding if any single task is monopolizing the CPU and preventing other tasks from being performed.

Information similar to the following appears:

| Name | Priority | CPU Use | Reaper |
|---------------|----------|---------|----------------|
| reaperWatcher | (3/124) | 0 % | (0/ 0)% I |
| osapiReaper | (10/121) | 0 % | (0/ 0)% I |
| TempStatus | (255/ 1) | 0 % | (0/ 0)% I |
| emWeb | (255/ 1) | 0 % | (0/ 0)% T 300 |
| cliWebTask | (255/ 1) | 0 % | (0/ 0)% I |
| UtilTask | (255/ 1) | 0 % | (0/ 0)% T 300 |

In the example above, the following fields provide information:

- The Name field shows the tasks that the CPU is to perform.
- The Priority field shows two values: 1) the original priority of the task that was created by the actual function call and 2) the priority of the task divided by a range of system priorities.
- The CPU Use field shows the CPU usage of a particular task.
- The Reaper field shows three values: 1) the amount of time for which the task is scheduled in user mode operation, 2) the amount of time for which the task is scheduled in system mode operation, and 3) whether the task is being watched by the reaper task monitor (indicated by a “T”). If the task is being watched by the reaper task monitor, this field also shows the timeout value (in seconds) before which the task needs to alert the task monitor.



Note If you want to see the total CPU usage as a percentage, enter the **show cpu** command.

2. **show process memory**—Shows the allocation and deallocation of memory from various processes in the system at that instant in time.

Information similar to the following appears:

| Name | Priority | BytesInUse | BlocksInUse | Reaper |
|---------------|----------|------------|-------------|----------------|
| reaperWatcher | (3/124) | 0 | 0 | (0/ 0)% I |
| osapiReaper | (10/121) | 0 | 0 | (0/ 0)% I |
| TempStatus | (255/ 1) | 308 | 1 | (0/ 0)% I |
| emWeb | (255/ 1) | 294440 | 4910 | (0/ 0)% T 300 |
| cliWebTask | (255/ 1) | 738 | 2 | (0/ 0)% I |
| UtilTask | (255/ 1) | 308 | 1 | (0/ 0)% T 300 |

In the example above, the following fields provide information:

- The Name field shows the tasks that the CPU is to perform.
 - The Priority field shows two values: 1) the original priority of the task that was created by the actual function call and 2) the priority of the task divided by a range of system priorities.
 - The BytesInUse field shows the actual number of bytes used by dynamic memory allocation for a particular task.
 - The BlocksInUse field shows the chunks of memory that are assigned to perform a particular task.
 - The Reaper field shows three values: 1) the amount of time for which the task is scheduled in user mode operation, 2) the amount of time for which the task is scheduled in system mode operation, and 3) whether the task is being watched by the reaper task monitor (indicated by a “T”). If the task is being watched by the reaper task monitor, this field also shows the timeout value (in seconds) before which the task needs to alert the task monitor.
3. **show tech-support**—Shows an array of information related to the state of the system, including the current configuration, last crash file, CPU utilization, and memory utilization.
4. **show running-config**—Shows the full current configuration of the controller. Access point configuration settings are not included. This command shows only values configured by the user. It does not show system-configured default values. This command is different from the **show run-config** command, which outputs a portion of the current configuration plus a lot of extra dynamic information. In contrast, the **show running-config** command provides a clean configuration output of the controller in command format.

Here is a brief sample of the output:

```
radius auth add 1 10.50.3.104 1812 ascii ****

radius backward compatibility enable

radius admin-authentication disable

radius cred-cache enable

radius callStationIdType macAddr

radius acct retransmit-timeout 1 4

radius acct network 1 disable

radius auth rfc3576 enable 1

radius auth retransmit-timeout 1 6
```

```
radius auth network 1 disable  
radius auth management 1 disable  
radius auth ipsec enable
```



Note If you want to see the passwords in clear text, enter **config password-cleartext enable**. To execute this command, you must enter an admin password. This command is valid only for this particular session. It is not saved following a reboot.



Note You cannot use TFTP to upload the output of this command. Rather, you can cut and paste the output as necessary.
