

- 9 Select **Client Analytics** to display analytic level data for connected wireless clients. This data is the same client analytic data available at the system level of the user interface, only displayed for the selected RF Domain as opposed to the entire system. For more information on client analytics, see *System Analytics on page 16-1*.



NOTE: When trending client analytics, be sure to select the **Search** button adjacent to the **Search for Wireless Client** parameter to ensure the tables are populated with detected wireless clients. Client analytics are trended every 75 minutes.

- 10 Select **Smart RF**.

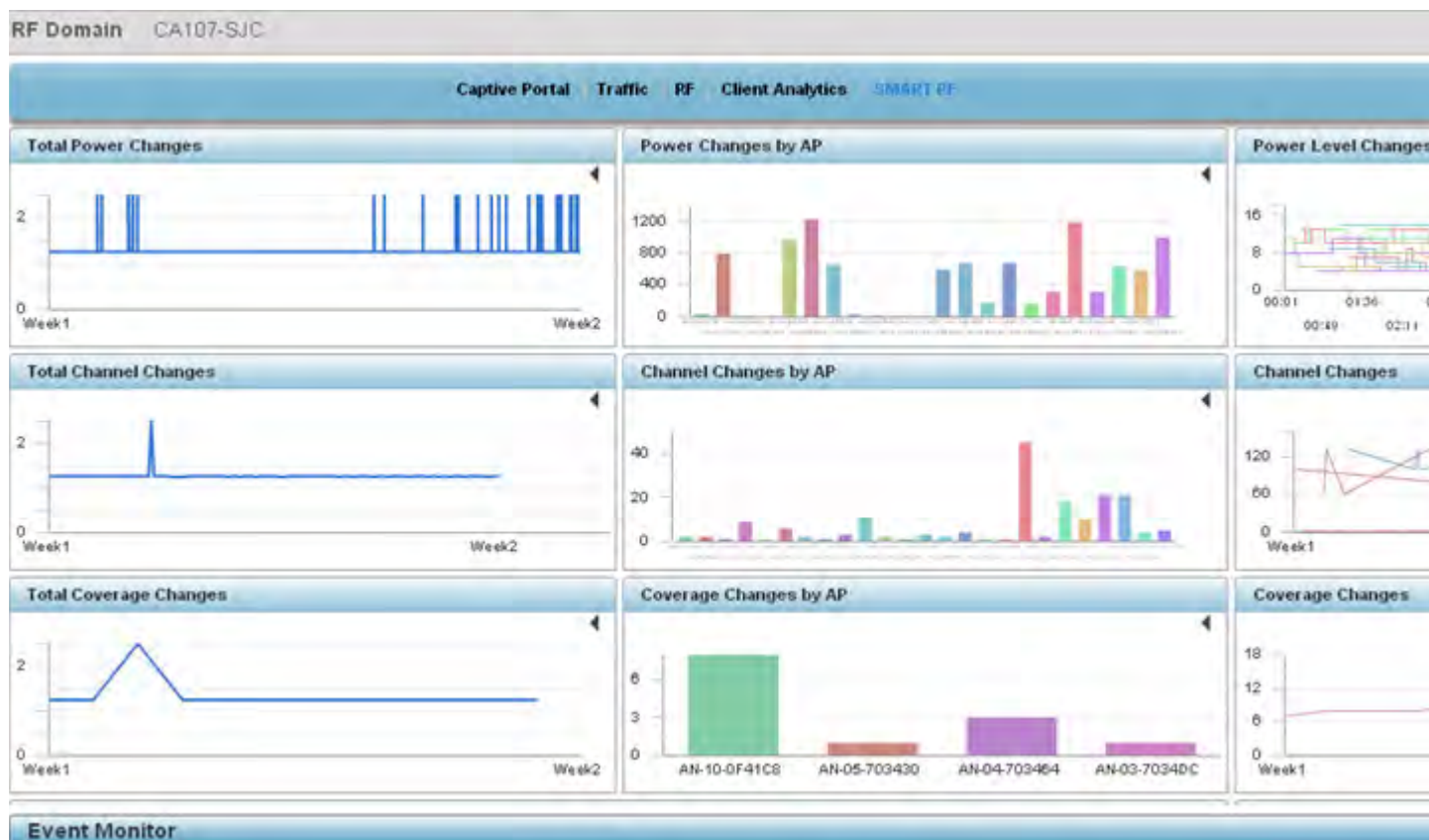


Figure 16-9 RF Domain Analytics - Smart RF screen

- 11 Refer to the following RF Domain power level, channel and coverage adjustment **Smart RF** analytics:

Total Power Changes	Lists the total trended number of power compensations required by RF Domain member radios to account for the power load requirements of offline or poor performing radios.
Total Channel Changes	Lists the total trended number of channel compensations required by RF Domain member radios to account for the channel support requirements of offline or poor performing radios.
Total Coverage Changes	Displays the total trended number of coverage compensations required by RF Domain member radios to account for the load requirements of offline or poor performing radios.
Power Changes by AP	Lists the total trended number of power compensations made by individual RF domain member Access Points to account for the power load requirements of offline or poor performing radios.

Channel Changes by AP	Lists the total trended number of channel compensations made by individual RF domain member Access Points to account for the channel support requirements of offline or poor performing radios.
Coverage changes by AP	Displays the total trended number of coverage compensations made by individual RF domain member Access Points to account for the load requirements of offline or poor performing radios.
Power Level Changes	Lists all the power level changes made by RF Domain member radios separately within the same to graph help administrators assess periods of power compensations by numerous devices within the same RF Domain.
Channel Changes	Provides a timeline (using the selected trending period) when channel changes occur amongst RF Domain member connected clients. Use this data to assess whether multiple device channel changes occur at the same time and whether the channel changes are to the same channel. RF Domain channel analytics are trended every 90 minutes.
Coverage Changes	Provides a timeline (using the selected trending period) when coverage changes occur amongst RF Domain member connected clients. Use this data to assess whether multiple device coverage changes occur at the same time.
Channel Distribution	Displays a chart for both the 2.4 and 5 GHz radio bands showing the channels currently being utilized by RF Domain member devices. This is helpful to assess whether devices are utilizing channels properly spaced to avoid interference. RF Domain channel analytics are trended every 90 minutes.
Coverage Changes by Client	Lists the factory encoded MAC addresses of connected clients that have made Smart RF initiated coverage changes with RF Domain member devices.

16.3 Wireless Controller Analytics

Refined analytics are available at the individual controller or service platform level of the user interface for trending data for specific controllers or service platforms undergoing configuration updates. Wireless controller analytics are trended every 75 minutes. For information on monitoring analytic events, refer to [Analytic Event Monitoring](#).

A facility is also available for the comparison of configuration files to assess the specific updates made to configurations.

To review analytics for individual controllers or service platforms:

- 1 Select **Statistics** from the Web UI.
- 2 Select the **Analytics** menu item directly to the right of the System menu item within Statistics.
- 3 Expand the System hierarchy on the left-hand side of the user interface, expand a RF Domain and select a wireless controller.

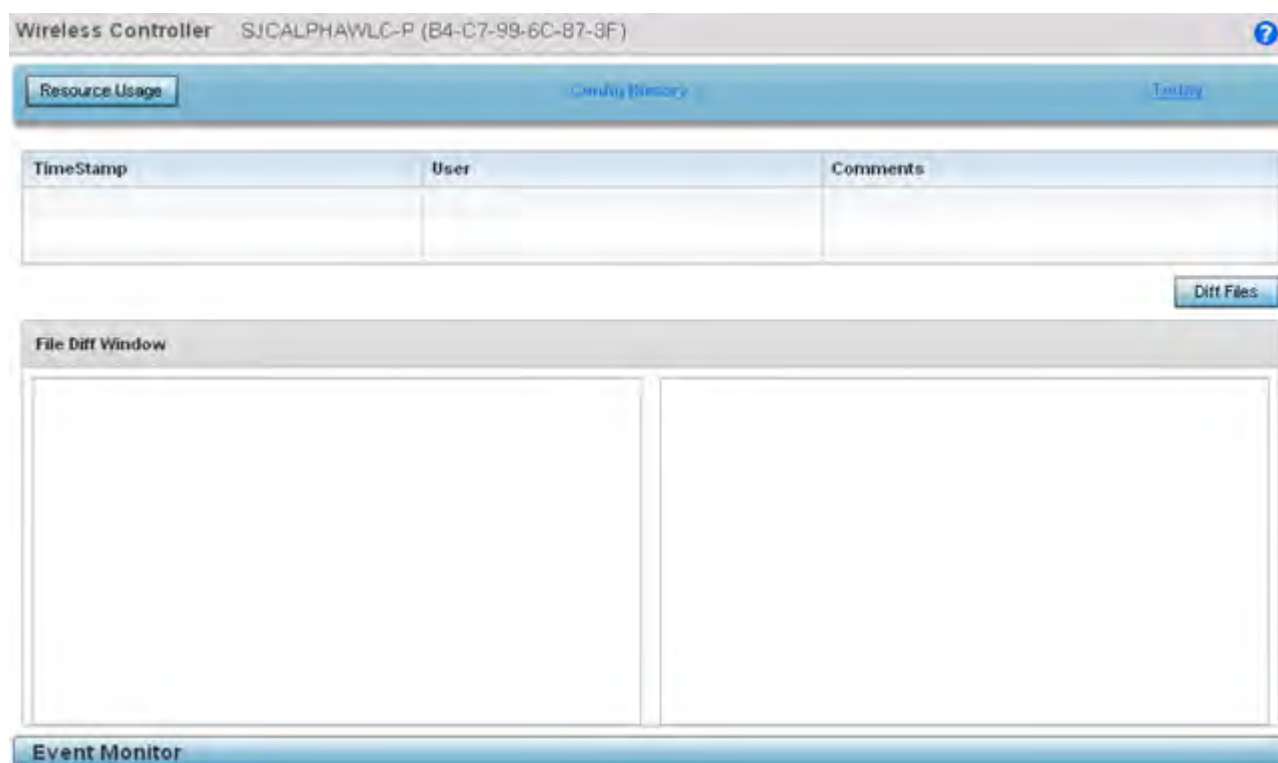


Figure 16-10 *Wireless Controller Analytics screen*

- 4 Optionally select the **Resource Usage** button to display a subscreen trending the service platform's **RAM Usage** (in MB) and **Disk Usage** (in GB). Periodically revisit the service platform's resource usage to assess whether resources are jeopardized at certain times of the day or repeatable patterns are observable that can assist in administration.

- 5 Refer to the following analytic data trended for the selected controller or service platform:

Timestamp	Displays a timestamp when an update was made to the selected controller or service platform's configuration.
User	Lists the user name initiating the controller update.
Comments	Lists any comments made relative to a configuration update.

- 6 Select the **Diff Files** button to display the updates made to the selected controller or service platform's configuration versus the previous configuration utilized.

16.4 Access Point Analytics

Refined analytics are available at the individual Access Point level of the user interface for trending data for specific Access Points. For information on monitoring analytic events, refer to *Analytic Event Monitoring*.

To review analytics for individual Access Points:

- 1 Select **Statistics** from the Web UI.
- 2 Select the **Analytics** menu item directly to the right of the System menu item within Statistics.

- Expand the System hierarchy on the left-hand side of the user interface, expand a RF Domain and select an member Access Point.

The Access Point analytics screen displays with **Traffic** tab displayed by default.

- Use the **Radio** drop-down menu to refine whether traffic statistics are reported an Access Point's 2.4 or 5 GHz radio.

Refer to the arrow icon located in the top, right-hand, side of each panel to define whether the display is in Chart format, a Table or whether you would like the output for that parameter saved as a PDF report at a user specified location.

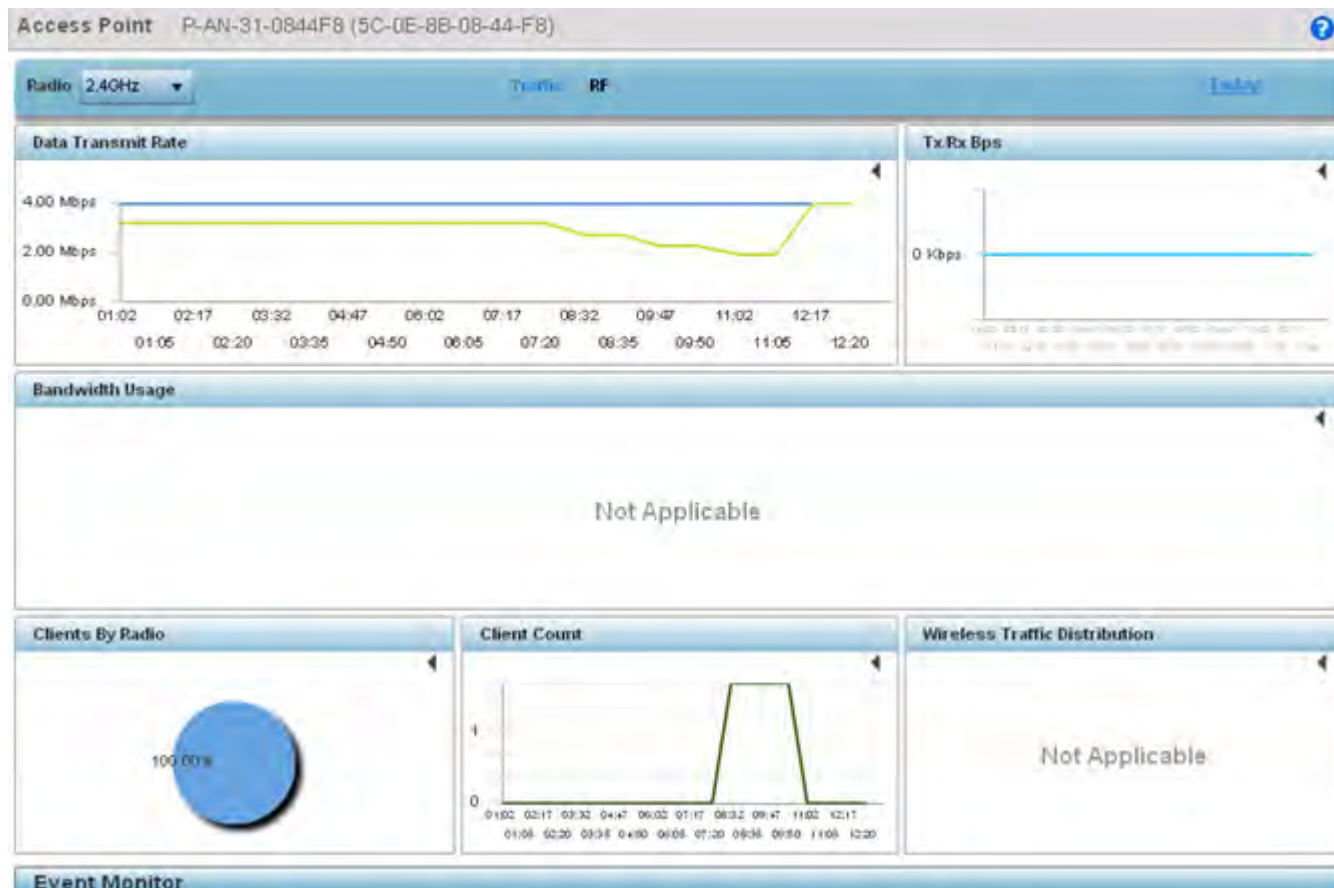


Figure 16-11 Access Point Analytics - Traffic screen

- Refer to the upper, right-hand, portion of the analytics interface and define the trending period for the data displayed. Options include *Last 1 Day*, *Last 3 Days*, *Last 1 Week*, *Last 2 Weeks*, *Last 3 Weeks*, *Last 1 Month*, *Last 2 Months* or *Last 3 Months*. Today is the default setting for trending analytics data.
- Refer to the following **Traffic** analytic data trended for the selected Access Point:

Data Transmit Rate	Lists the selected Access Point's throughput (in Mbps) as an indicator of RF traffic activity on the selected 2.4 or 5 GHz radio.
Tx/Rx BPs	Displays <i>transmit</i> and <i>receive</i> data (in Bps) for the selected Access Point radio over the defined trending period.
Bandwidth Usage	Lists Access Point radio bandwidth utilization (in Kbps) to help an administrator assess periods of sustainable versus unsustainable activity for the selected 2.4 or 5 GHz Access Point radio.

Clients by Radio	Displays a pie chart depicting the ratio of clients operating on different 802.11 bands (11BGN, 11AN etc.). This client data is trended every 75 minutes.
Client Count	Lists the selected Access Point's connected client count. Use this trending data to assess periods of high versus low client connection activity, and whether this particular Access Point is properly load balanced.
Wireless Traffic Distribution	Displays a chart depicting the ratio of unicast versus management frames transmitted by the selected Access Point.

- 7 Select **RF** to display Access Point RF quality analytics.

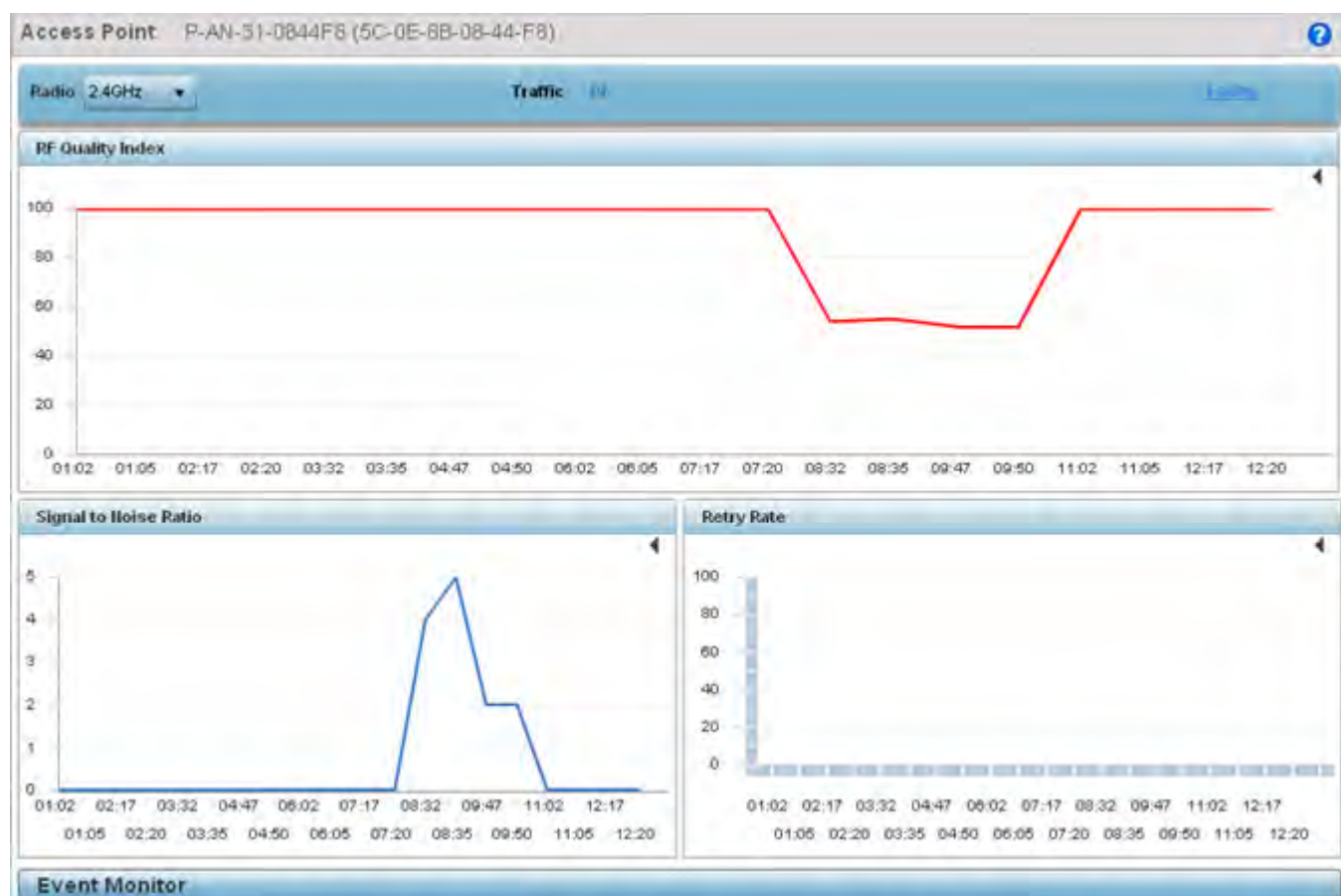


Figure 16-12 Access Point Analytics - RF screen

- 8 Refer to the following **RF** analytics trended for a selected Access Point:

RF Quality Index	Displays the trended graph of the effectiveness of a selected Access Point's RF environment as a percentage of the connect rate in both directions. The RF quality index value can be interpreted as: 0 - 20 (<i>Very low utilization</i>) 20 - 40 (<i>Low utilization</i>) 40 - 60 (<i>Moderate utilization</i>) 60 and above (<i>High utilization</i>).
Signal to Noise Ratio	Displays a selected Access Point's connected client <i>signal to noise ratio</i> (SNR) and a time stamp of its reporting. A high SNR could warrant power compensation to account for poorly performing Access Point radios.

Retry Rate	Lists the number of retry attempts for requesting client connections to the selected Access Point's radios.
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16.5 Analytic Event Monitoring

Display the **Event Monitor** on the bottom portion of the analytic display, at any time or place in the user interface hierarchy, to review individual analytic events by their severity, originating device, reporting module and timestamp (occurrence).



Severity	Message	From	Module	Mnemonic	Time
Info	Client '3C-43-8E-41-FF-72' associated to wlan 'GUEST'	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOCIATE	Mon 9 Sep 2013 at 01:15:20 PM
Info	Client '40-FC-89-FF-09-62' associated to wlan 'GUEST'	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOCIATE	Mon 9 Sep 2013 at 01:15:06 PM
Warning	Client 'C8-AA-21-A7-C7-F4' failed WPA2-AES handshake	00:23:68:0F:41:C8	DOT11	WPA_WPA2_FAIL	Mon 9 Sep 2013 at 01:15:04 PM
Info	Client 'C8-AA-21-A7-C7-F4' disassociated from wlan 'GUEST'	00:23:68:0F:41:C8	DOT11	CLIENT_DISASSOCIATE	Mon 9 Sep 2013 at 01:15:04 PM
Info	Client 'C8-AA-21-A7-C7-F4' associated to wlan 'STOCK'	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOCIATE	Mon 9 Sep 2013 at 01:15:02 PM
Info	Client '3C-43-8E-41-FF-72' ignored association on radio	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOC_IGNORE	Mon 9 Sep 2013 at 01:14:19 PM
Info	Client '3C-43-8E-41-FF-72' ignored association on radio	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOC_IGNORE	Mon 9 Sep 2013 at 01:14:19 PM
Info	Client '3C-43-8E-41-FF-72' ignored association on radio	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOC_IGNORE	Mon 9 Sep 2013 at 01:14:19 PM
Info	Client 'B0-79-84-F1-D6-73' ignored association on radio	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOC_IGNORE	Mon 9 Sep 2013 at 01:11:38 PM
Info	Client 'B0-79-84-F1-D6-73' ignored association on radio	00:23:68:0F:41:C8	DOT11	CLIENT_ASSOC_IGNORE	Mon 9 Sep 2013 at 01:11:27 PM

Figure 16-13 Analytic Event Monitor

Review the following within the Event Monitor to assess if an individual event requires further administration to improve network performance:

Severity	Lists the severity for each analytic event. Severity levels include <i>Emergency</i> , <i>Alert</i> , <i>Critical</i> , <i>Errors</i> , <i>Warning</i> , <i>Notice</i> , <i>Info</i> and <i>Debug</i> .
Message	Displays an event description to assist the administrator in assessing the significance of the event and (in conjunction with the severity) whether corrective action is immediately needed.
From	Displays the hardware encoded MAC address of the device impacted by the listed event.
Module	Lists the module from which analytic events are tracked and reported.
Mnemonic	Lists the service platform or controller mnemonic that translates the listed event into a string that's meaningful to the network administrator.
Time	Displays the date and time when each listed event was detected within the network.

17 WiNG Events

WiNG outputs an event message for configuration changes and status updates to enable an administrator to assess the success or failure of specific configuration activities. Use the information in this chapter to review system generated event messages and their descriptions.

Each listed event can have customized notification settings defined and saved as part of an event policy. Thus, policies can be configured and administrated in respect to specific sets of client association, authentication/encryption and performance events. Once policies are defined, they can be mapped to device profiles strategically as the likelihood of an event applies to particular devices. By default, there's no enabled event policy and one needs to be created and implemented.

For more information on the UI's descriptions of events, refer to [Fault Management on page 13-1](#).

17.1 Event Messages

To review event history messages:

- 1 Select **Configuration > Diagnostics > Fault Management > Event History** to display the Event History screen.
- 2 Select **Fetch Historical Events** to display the diagnostic events in the Event History table.
- 3 Refer to the following (read only) information to assess logged diagnostic events.

ADOPT-SERVICSNMP_SUCCESS6	SNMP framework success
ADOPT-SERVICSNMP_FAILURE6	SNMP framework failure
ADOPT-SERVICETUT_TEMPERATURE_ALARM_RAISED ([str])	Temperature alarm raised on sensor
ADOPT-SERVICETUT_TEMPERATURE_ALARM_CLEARED([str])	Temperature alarm cleared on sensor
ADOPT-SERVICETUT_TEMPERATURE_ALARM_CLEARED([str])	Temperature alarm cleared on sensor
ADOPT-SERVICETUT_FAN_ALARM_CLEARED5IPX ([str])	Fan alarm cleared on ID
ADOPT-SERVICETUT_PWRCTRL_ALARM_RAISED5IPX ([str])	Power controller alarm raised
ADOPT-SERVICETUT_PWRCTRL_ALARM_CLEARED5IPX ([str])	Power controller alarm cleared
ADOPT-SERVICETUT_LINE_POWER_ALARM_RAISED5IPX ([str]) Line power alarm raised on id [str]	Line power alarm raised
ADOPT-SERVICETUT_LINE_POWER_ALARM_CLEARED5IPX ([str]) Line power alarm cleared on id [str]	Line power alarm cleared
ADOPT-SERVICETUT_WLAN_CLIENT_ASSOC6IPX ([str]) Client [str] on interface index [str] associated	Client associated

ADOPT-SERVICETUT_WLAN_CLIENT_DISASSOC6IPX ([str]) Client [str] on interface index [str] disassociated with status code [str], [str]	Client disassociated
ADOPT-SERVICETUT_WLAN_CLIENT_ASSOC_FAILURE3IPX ([str]) Association failed for Client [str] on interface index [str] with status code [str], [str]	Association failed for client on specified interface index
ADOPT-SERVICETUT_WLAN_CLIENT_AUTH6IPX ([str])	Client on interface index authenticated
ADOPT-SERVICETUT_WLAN_CLIENT_DEAUTH6 IPX ([str])	Client on interface index deauthenticated with status code
ADOPT-SERVICETUT_WLAN_CLIENT_AUTH_FAILURE3IPX ([str])	Authentication failed for client on interface index with status code
ADOPT-SERVICETUT_RADIO_ADAPTIVE_POWER_CHANGE5 IPX ([str])	Interface with operational status and power levels
ADOPT-SERVICETUT_RF_MONITOR_MODE_CHANGE5 IPX ([str])	RF monitor status changed to on interface
ADOPT-SERVICEIPX_EVENT_FAILURE3IPX ([str])	Failed to raise WiNG event
AP NO_IMAGE_FILE [str] firmware image is not present on controller	Access Point firmware not on controller
AP IMAGE_PARSE_FAILURE Format of [str] firmware image on controller is invalid	Invalid Access Point firmware file
AP LEGACY_AUTO_UPDATE Legacy Access Point [str] [mac] being updated	Legacy Access Point updated
AP AP_ADOPTED [str] [mac] adopted	Access Point adopted
AP AP_UNADOPTED [str] [mac] un-adopted	Access Point unadopted
AP AP_RESET_DETECTED 6 [str] [mac] reset itself	Access Point reset detected
AP AP_RESET_REQUEST 6 [str] [mac] reset request	Access Point user requested reset
AP AP_TIMEOUT 6 str] [mac] timed out, reset sent to AP	Access Point timed out
AP ADOPTED Access Point([qstr]/[qstr]/[dev]) at rf-domain:[qstr] adopted and configured. Radios: Count=[str], Bss: [str]	Access Point adopted and configured
AP UNADOPTED Access Point([qstr]/[qstr]/[dev]) at rf-domain:[qstr] unadopted. Radios: Count=[str], Bss: [str]	Access Point unadopted
APADOPTED_TO_CONTROLLER Joined successfully with controller [qstr]([str])	Access Point adopted to controller
APONLINE Access Point [dev] is now online. Offline Reason is [str]. Offline count is [int]	Access Point online
APOFFLINE Access Point [dev] is now offline. Offline Reason is [str]. Offline count is [int]	Access Point offline

APOFFLINE Device [dev]([str]) is offline, last seen:[int] minutes ago on switchport [str]	Adopted device offline
APRESET Reset Access Point mac [dev], [str]	Access Point reset
APADOPTION_REDIRECTED Access Point([qstr]/[qstr]/[dev]) cdp:[qstr] lldp:[qstr] redirected to the controller host/pair [qstr] - [qstr]	Access Point redirected
APAP_AUTOUP_TIMEOUT4 AUTOUPGRADE: [str] mac [str] Autoupgrade timed out	Time out while auto upgrading an AP
APAP_AUTOUP_REBOOT5 AUTOUPGRADE: [str] mac [str] Autoupgrade rebooting	Rebooting AP after upgrade
APAP_AUTOUP_NO_NEED6 AUTOUPGRADE: [str] mac [str] ver [str] Autoupgrade not required or not available	Auto upgrade not initiated
APAP_AUTOUP_NEEDED6 AUTOUPGRADE: [str] mac [str] ver [str] Autoupgrade will be applied	Auto upgrade is initiated on AP
APAP_AUTOUP_DONE5 AUTOUPGRADE: [str] mac [str] Autoupgrade complete	Auto upgrade successful
APAP_AUTOUP_FAIL4 AUTOUPGRADE: [str] mac [str] Autoupgrade failed	Failed auto upgrade attempt
APAP_AUTOUP_VER6 AUTOUPGRADE: version [str] available for [str] equipment	Available Access Point firmware versions for auto upgrade
AAA RADIUS_DISCON_MSG Received Radius dynamic authorization Disconnect Message for [qstr] from server [qstr]	Received RADIUS disconnect request
AAA RADIUS_VLAN_UPDATE6 Assigning Radius server specified vlan [uint] to client [qstr] on wlan [qstr]	Client VLAN updated by RADIUS
AAA RADIUS_SESSION_NOT_STARTED5 Radius server indicates session time has not started for client [qstr]	Start time from RADIUS resource not yet valid
AAA RADIUS_SESSION_EXPIRED5 Radius server indicates session has already expired for client [qstr]	Session time from RADIUS resource already expired
ADV-WIPS ADV-WIPS-EVENT-14 Detected DoS Deauthentication attack against [mac] [str]	DoS Deauthentication attack
ADV-WIPS ADV-WIPS-EVENT-24 Detected DoS Disassociation attack against [mac] [str]	DoS disassociation attack
ADV-WIPS ADV-WIPS-EVENT-34 Detected DoS EAP failure spoof attack by [mac] [str]	EAP failure spoof attack
ADV-WIPS ADV-WIPS-EVENT-104 Detected ID-Theft out of sequence attack for [mac] [str]	ID theft out of sequence attack
ADV-WIPS ADV-WIPS-EVENT-114 Detected possible ID-Theft EAPoL Success spoof attack by [mac] [str]	Possible ID theft EAPoL success spoof attack
ADV-WIPS ADV-WIPS-EVENT-124 Detected possible WLAN-Jack attack by [mac] [str]	Possible WLAN jack attack
ADV-WIPS ADV-WIPS-EVENT-134 Detected possible ESSID-Jack attack against [mac] [str]	Possible ESSID jack attack

ADV-WIPSADV-WIPS-EVENT-144 Detected possible Monkey-Jack attack by [mac] [str]	Possible monkey jack attack
ADV-WIPSADV-WIPS-EVENT-164 Detected possible NULL Probe Response attack by [mac] [str]	Possible NULL probe response attack
ADV-WIPSADV-WIPS-EVENT-1054 Sanctioned MU [mac] detected associated with unsanctioned/ neighboring AP [str]	Sanctioned MU detected associated with unsanctioned/neighboring AP
ADV-WIPSADV-WIPS-EVENT-1094 Multicast all systems traffic found from [mac] [str]	Multicast all systems traffic
ADV-WIPSADV-WIPS-EVENT-11044 Multicast all routers traffic found from [mac] [str]	Multicast all routers traffic
ADV-WIPSADV-WIPS-EVENT-1114 Multicast OSPF all traffic found from [mac] [str]	Multicast OSPF all traffic
ADV-WIPSADV-WIPS-EVENT-1124 Multicast OSPF Designated Routers traffic found from [mac] [str]	Multicast OSPF designated routers traffic
ADV-WIPSADV-WIPS-EVENT-1134 Multicast RIP-2 Routers traffic found from [mac] [str]	Multicast RIP 2 routers traffic
ADV-WIPSADV-WIPS-EVENT-1144 Multicast IGRP Routers traffic found from [mac] [str]	Multicast IGRP routers traffic
ADV-WIPSADV-WIPS-EVENT-1154 Multicast DHCP Server Relay Agent traffic found from [mac] [str]	Multicast DHCP server relay agent traffic
ADV-WIPSADV-WIPS-EVENT-1164 Multicast VRRP Agent traffic found from [mac] [str]	Multicast VRRP agent traffic
ADV-WIPSADV-WIPS-EVENT-1174 Multicast HSRP Agent traffic found from [mac] [str]	Multicast HSRP agent traffic
ADV-WIPSADV-WIPS-EVENT-1184 Multicast IGMP traffic found from [mac] [str]	Multicast IGMP traffic
ADV-WIPSADV-WIPS-EVENT-1194 Detected NETBIOS traffic from [mac] [str]	Detected NETBIOS traffic
ADV-WIPSADV-WIPS-EVENT-1204 Detected STP traffic from [mac] [str]	Detected STP traffic
ADV-WIPSADV-WIPS-EVENT-1134 Multicast RIP-2 Routers traffic found from [mac] [str]	Multicast RIP 2 routers traffic
ADV-WIPSADV-WIPS-EVENT-1214 Detected IPX traffic from [mac] [str]	Detected IPX traffic
ADV-WIPSADV-WIPS-EVENT-1424 Detected possible Probe Response attack by [mac] [str]	Possible probe response attack
ADV-WIPSADV-WIPS-EVENT-2214 Detected Invalid Management Frames from [mac] [str]	Invalid management frames
ADV-WIPSADV-WIPS-EVENT-264 Detected DoS RTS flood attack against [mac] [str]	DoS RTS flood attack
ADV-WIPSADV-WIPS-EVENT-2224 Detected Invalid Channel Advertisement for [mac] [str]	Invalid channel advertisement
ADV-WIPSADV-WIPS-EVENT-634 Detected Windows ZERO Configuration Memory Leak on [mac] [str]	Windows ZERO configuration memory leak

ADV-WIPSADV-WIPS-EVENT-2204 Detected Unauthorized Bridge [mac] [str]	Unauthorized bridge
APSW_CONN_LOST0 Lost connectivity with controller after config update. Rebooting and reverting to older working configuration	Controller connectivity lost
AAARADIUS_DISCON_MSG5 Received Radius dynamic authorization Disconnect Message for [qstr] from server [qstr]	Received RADIUS disconnect request
AAA RADIUS_VLAN_UPDATE6 Assigning Radius server specified vlan [uint] to client [qstr] on wlan [qstr]	Client VLAN updated by RADIUS resource
AAA RADIUS_SESSION_NOT_STARTED5 Radius server indicates session time has not started for client [qstr]	Start time from RADIUS resource not yet valid
AAA RADIUS_SESSION_EXPIRED5 Radius server indicates session has already expired for client [qstr]	Session time from RADIUS resource already expired
CAPTIVE-PORTAL AUTH_SUCCESS6 Captive-portal authentication success for client [mu] ([qstr-ip]) user [qstr]	Authentication success
ADV-WIPSADV-WIPS-EVENT-264 Detected DoS RTS flood attack against [mac] [str]	DoS RTS flood attack
ADV-WIPSADV-WIPS-EVENT-2224 Detected Invalid Channel Advertisement for [mac] [str]	Invalid channel advertisement
ADV-WIPSADV-WIPS-EVENT-634 Detected Windows ZERO Configuration Memory Leak on [mac] [str]	Windows ZERO configuration memory leak
ADV-WIPSADV-WIPS-EVENT-2204 Detected Unauthorized Bridge [mac] [str]	Unauthorized bridge
APSW_CONN_LOST0 Lost connectivity with controller after config update. Rebooting and reverting to older working configuration	Controller connectivity lost
AAA RADIUS_DISCON_MSG5 Received Radius dynamic authorization Disconnect Message for [qstr] from server [qstr]	Received RADIUS resource disconnect request
AAA RADIUS_VLAN_UPDATE6 Assigning Radius server specified vlan [uint] to client [qstr] on wlan [qstr]	Client VLAN updated by RADIUS
AAA RADIUS_SESSION_NOT_STARTED5 Radius server indicates session time has not started for client [qstr]	Start time from RADIUS resource not yet valid
AAA RADIUS_SESSION_EXPIRED5 Radius server indicates session has already expired for client [qstr]	Session time from RADIUS resource already expired
CAPTIVE-PORTAL AUTH_SUCCESS6 Captive-portal authentication success for client [mu] ([qstr-ip]) user [qstr]	Authentication success
CAPTIVE-PORTAL AUTH_FAILED6 Captive-portal authentication failed for client [mu] ([qstr-ip])	Authentication failed
CAPTIVE-PORTAL SESSION_TIMEOUT6 Captive-portal session timed out for client [mu] ([qstr-ip])	Session timed out

CAPTIVE-PORTAL CLIENT_DISCONNECT6 Captive-portal session disconnected for client [mu] ([qstr-ip])	Client disconnected
CAPTIVE-PORTAL PURGE_CLIENT6 Captive-portal: Purge client [mu] by new client [mu] for user [qstr]	Client purged
CAPTIVE-PORTAL FLEX_LOG_ACCESS6 [qstr]: [qstr] allowed access for client [mu] ([qstr-ip])	Flex log access granted for client
CAPTIVE-PORTAL INACTIVITY_TIMEOUT6 Captive-portal session cleared for client [mu] ([qstr-ip]) after inactivity timeout	Client timed out due to inactivity
CAPTIVE-PORTAL ALLOW_ACCESS6 Captive-portal allow access for client [mu] ([qstr-ip])	Client allowed access
CAPTIVE-PORTAL CLIENT_REMOVED6 Captive-portal session removed for client [mu] ([qstr-ip]) on policy change/admin action	Client removed due to admin changes
CAPTIVE-PORTAL PAGE_CRE_FAILED3 Page creation failed for policy [qstr], file [qstr], Error [qstr]	Page creation failure
CAPTIVE-PORTAL DATA_LIMIT_EXCEED6 Data limit exceed, Usage:[int] KBytes, Action:[str], client [mu] ([ip])	Client data limit exceeded
CAPTIVE-PORTAL VLAN_SWITCH6 Client [mu] ([ip]) switching from vlan [int] to vlan [int]	Client VLAN switch
CAPTIVE-PORTAL SERVER_MONITOR_STATE_CHANGE6 Captive-portal policy [qstr]: service monitor [str] server status changing from [qstr] to [qstr]	Captive portal server monitor state changed
CAPTIVE-PORTAL NO_SERVICE_PAGE_SENT6 Captive-portal sent no service page to client [mu] ([ip]) as [str] server is down	No service page sent to client
CERTMGRRSA_KEY_ACTIONS_SUCCESS6 [str] of RSA key [str] successful	Successful completion of RSA key related actions (import, export etc.)
CERTMGRRSA_KEY_ACTIONS_FAILURE3 [str] of RSA key [str] failed: [str]	Failure of RSA key related actions (import, export etc.)
CERTMGRCA_CERT_ACTIONS_SUCCESS6 [str] of CA certificate for trustpoint [str] successful	Successful completion of CA certificate related actions (import, export etc.)
CERTMGRCA_CERT_ACTIONS_FAILURE3 [str] of CA certificate for trustpoint [str] failed: [str]	Failure of CA certificate actions (import, export etc.)
CERTMGRSRV_CERT_ACTIONS_SUCCESS6 [str] of Server Certificate of trustpoint [str] successful	Successful completion of server certificate actions (import, export etc.)
CERTMGRSVR_CERT_ACTIONS_FAILURE3 [str] of Server Certificate of trustpoint [str] failed: [str]	Failure of server certificate actions (import, export etc.)
CERTMGRCSR_EXPORT_SUCCESS6 Export of Certificate Signing Request for [str] successful	Successful export of certificate signing request
CERTMGRCSR_EXPORT_FAILURE3 Export of Certificate Signing Request for [str] failed: [str]	Failed to export certificate signing request
CERTMGRCRL_ACTIONS_SUCCESS6 [str] of CRL for trustpoint [str] successful	Successful completion of certificate revocation list action

CERTMGRCL_ACTIONS_FAILURE3 [str] of CRL for trustpoint [str] failed: [str]	Certificate revocation list action failure
CERTMGRDELETE_TRUSTPOINT_ACTION6 Deletion of trustpoint [str] successful	Deletion of trustpoint
CERTMGRIMPORT_TRUSTPOINT6 Import of Trustpoint [str] [str]	Import of trustpoint
CERTMGREXPORT_TRUSTPOINT6 Export of Trustpoint [str] [str]//	Export of trustpoint
CERTMGRCERT_EXPIRY4 [str] certificate for trustpoint [str] [str]	Certificate expiration
CERTMGRCA_KEY_ACTIONS_SUCCESS6 [str] of CA private key for trustpoint [str] successful	Successful completion of CA private key actions
CERTMGRCA_KEY_ACTIONS_FAILURE3 [str] of CA private key for trustpoint [str] failed: [str]	Failure of CA private key actions
CLUSTERCMaster_CFG_UPDATE_FAIL3 Cluster master config update to [str] failed, Err: [str]	Cluster master config update failed
CLUSTERMAX_EXCEEDED4 Max cluster members ([uint]) exceeded, clustering will not function properly until corrected	Max cluster count exceeded
CLUSTERSTATE_CHANGE4 Active cluster member changed. Present active [str]. Previous active [str].	Active cluster membership change
CLUSTERSTATE_CHANGE_INACTIVE4 Member [str] (load[int]) changing state from Active to Standby. New member [str] standby load [int].	Cluster member change from active to standby
CLUSTERSTATE_CHANGE_ACTIVE4 Member [str] (load[int]) changing state from Standby to Active. New member [str] standby load [int]	Cluster member change from standby to active
CLUSTERSTATE_RETAIN_ACTIVE4 Member [str] (load[int]) retaining Active state. New member [str] standby load [int]	Cluster member retaining active state
CRM CRITICAL_RESOURCE_UP5 Critical Resource [str] is UP	Critical resource is up
CRM CRITICAL_RESOURCE_DOWN 5 Critical Resource [str] is DOWN	Critical resource is down
CERTMGR-LITE INVALIDCACERT5 CA Certificate imported for the trustpoint [str] is invalid	CA certificate is invalid
CERTMGR-LITE INVALIDSERVCERT5 Server Certificate imported for the trustpoint [str] is invalid	Server certificate is invalid
CERTMGR-LITE INVALIDCERTCRL5 Certificate Crl Imported for trustpoint [str] is invalid	CRL is invalid
CERTMGR-LITE CERTEXPIRED5 [str] Certificate of trustpoint [str] is expired//	Certificate is expired
CERTMGR-LITE INVALIDCERTKEY5 Private key imported for trustpoint [str] is not valid	Private key is invalid
CERTMGR-LITE INVALIDRSAKEY5 Rsakey imported is not valid [str] is invalid//	RSA key import operation

CERTMGR-LITE KEYDECRYPTFAILE4 Rsa key cannot be decrypted with the password provided	RSA key cannot be decrypted with provided password
CERTMGR-LITE CERTIMPORTED6 [str] Certificate imported for the trustpoint [str]	Certificate imported for trustpoint
CERTMGR-LITE CERTKEYIMPORTED6 Private key imported for the trustpoint [str]	Private key imported for trustpoint
CERTMGR-LITE RSAKEYIMPORTED6 Rsa key imported with the name [str]	RSA key imported
CERTMGR-LITE DELETETRUSTPOINT6 Trustpoint [str] is deleted	Trustpoint deleted
CERTMGR-LITE DELETERSAKEY6 Rsa key [str] is deleted	RSA Key deleted
CERTMGR-LITE CERTREQUESTGEN6 Certificate request generated for the trustpoint [str]	Certificate requested generated
CERTMGR-LITE CERTSELFsignedGEN6 Self signed certificate generated for the trustpoint [str]	Self signed certificate generated
CERTMGR-LITE RSAKEYGEN6 Rsa key [str] generated	RSA key generated
CERTMGR-LITE ERROR5 [str]	Certificate manager general error
CERTMGR-LITE CERT_EXPIRY4 [str] certificate for trustpoint [str] [str]	Certificate about to expire
CERTMGR CERT_RENEW_FAILED1 Certificate renew in field failed reason [str]	Certificate renew failure reason
DHCPDVRDHCPDVR_STOP6 DHCP server is stopped	DHCP server stopped
DIAGWD_RESET_SYS2 The system has been RESET by the Watchdog	Log watchdog reset
DIAGCPU_USAGE_TOO_HIGH4 CPU Usage too high. Limit of [int]*(0.1%) exceeded. Current CPU usage is [int]*(0.1%)	Log CPU load detected as too high
DIAGCPU_USAGE_TOO_HIGH_RECOVER4 CPU Usage too high recover. Limit is [int]*(0.1%)	Current CPU usage is too high
DIAGCPU_LOAD4 [str] minute average load limit exceeded, value is [str]% limit is [str]% (top processes: [str])	CPU average load limit exceeded
DIAGRAM_USAGE6 [str], pid [uint], has exceeded ram usage limit [uint].[uint]%, now using [uint].[uint]%	Log processor RAM usage has exceeded RAM limit
DIAGMEM_USAGE_TOO_HIGH6 Memory Usage too high. Current Usage is [int]*(0.1%). Memory Usage Threshold is [int]*(0.1%)	Memory usage too high
DIAGMEM_USAGE_TOO_HIGH_RECOVER6 Memory Usage too high recover. Current Usage is [int]*(0.1%). Memory Usage Threshold is [int]*(0.1%)	Memory usage detected as too high
DIAGBUF_USAGE6 [uint] byte buffer usage greater than expected, [uint] used, warning level [uint]	Log buffer usage greater than anticipated

DIAGHEAD_CACHE_USAGE6 socket buffer head cache usage is greater than expected, usage [uint], warning level [uint]	Log head cache usage greater than anticipated
DIAGIP_DEST_USAGE6 IP destination cache usage is greater than expected, usage [uint], warning level [uint]	Log destination cache usage greater than anticipated
DIAGFREE_RAM6 Free RAM, [str]% is less than limit [str]%. Top Memory process: [str]/[uint] using [uint].[uint]%, [str]/[uint] using [uint].[uint]%, [str]/[uint] using [uint].[uint]%	Log RAM space less than limit
DIAGFREE_FLASH_DISK4 Free [str] file system space, [str]% is less than limit [str]%	Log free disk space less than limit
DIAGDISK_USAGE4 Disk usage too high	Log disk usage too high
DIAGNEW_LED_STATE6 LED state message [str] from module [str]	Log LED message from module
DIAGFREE_FLASH_INODES4 [uint] Free INodes on [str] file system is less than limit [uint]	Log INodes less than system limit
DIAGFREE_NVRAM_DISK4 Free [str] file system space, [str]% is less than limit [str]%	Log file system space less than limit
DIAGFREE_NVRAM_INODES4 [uint] Free INodes on [str] file system is less than limit [uint]	Log free INodes on file system less than limit
DIAGFREE_RAM_DISK4 Free [str] file system space, [str]% is less than limit [str]%	Log free file system space less than limit
DIAGFREE_RAM_INODES4 [uint] Free INodes on [str] file system is less than limit [uint]	LOG_FREE_VARFS_INODES
DIAGFD_COUNT4 FD Usage [uint] is over limit [uint]	HUMM
DIAGDISK_USAGE4 Disk usage too high	Log disk utilization usage too high
DIAGNEW_LED_STATE6 LED state message [str] from module [str]	Log LED state message from module
DIAGLED_IDENTIFY6 LED identify sequence [str]	Log identification sequence
DHCPVRRELAY_NO_IFACE4 Dhcp relay cannot be allowed on interface [str] as it does not exist	No interface for DHCP relay
DHCPVRRELAY_IFACE_NO_IP4 Dhcp relay cannot be allowed on interface [str] as it does not have an IP address	No IP address on DHCP relay interface
DHCPVRRELAY_START6 DHCP relay agent started on [str]	DHCP relay agent started
DHCPVRRELAY_STOP6 DHCP relay agent stopped	DHCP relay agent stopped
DHCPVRDHCPVR_START6 DHCP server is started	DHCP server started
DIAGFAN_UNDEERSPEED4 Fan [str] under speed: [uint] RPM is under limit [uint] RPM	Fan speed under set RPM limit
DIAGELAPSED_TIME7 Elapsed time since last diag run appears to be zero	Log elapsed time since last diagnostic run
DIAGAUTOGEN_TECH_SPRT6 Auto generated tech-support dump file [str] [str]	Log generation of tech support dump file

DIAGPOE_INIT_FAIL3 Could not initialize the PoE manager	Log PoE manager initialization failure
DIAGPOE_POWER_LEVEL4 POE power consumption is [uint]W which exceeds [uint]% of [uint]W power budget	Log power consumption exceeds power budget limit
DIAGPOE_READ_FAIL3 Could not read from the PoE	Log PoE read failure
DIAGPOE_STATE_CHANGE4 port [uint] POE state changed to [str]	Log PoE state change
DIAGRAID_DEGRADED4 RAID array is degraded	Log RAID array degraded
DIAGRAID_ERROR4 RAID array management error [uint]	Log RAID array management error
DIAGPWRSPPLY_FAIL4 Power supply failure, no longer redundant	Log power supply failure
DIAGHDD_FAILING4 HDD is failing	Log HDD failure
DIAGUNDER_VOLTAGE4 Voltage [str]V under low limit [str]V	Log voltage sensor under low limit
DIAGOVER_VOLTAGE4 Voltage [str]V over high limit [str]V	Log voltage sensor over high limit
DIAGLOW_TEMP6 Temp sensor [str] [str]C under low limit [str]C	Log temperature sensor under low limit
DIAGHIGH_TEMP4 Temp sensor [str] [str]C over high limit [str]C	Log temperature sensor over high limit
DIAGOVER_TEMPO Temp sensor [str] [str]C over maximum limit [str]C Shutdown switch	Log temperature sensor over max limit
DIAGWD_STATE_CHANGE6 Watchdog is now [str]	Log watchdog state
DOT1X DOT1X_SUCCESS 6 Client [qstr] 802.1x/EAP authentication success on interface [qstr]//802.1x authentication successful	802.1X authentication successful
DOT1X DOT1X_FAILED 5 Client [qstr] failed 802.1x/EAP authentication on interface [qstr]//802.1x authentication failure	802.1X authentication failed
DOT11COUNTRY_CODE 5 Country of operation configured to [str]	Country of operation configured
DOT11 COUNTRY_CODE_ERROR 1 Error setting country of operation. [str]	Error setting country of operation
DOT11CLIENT_ASSOCIATED 6 Client [qstr] associated to wlan [qstr] ssid [qstr] on radio [qstr]	Client associated event
DOT11CLIENT_DISASSOCIATED 6 Client [qstr] disassociated from wlan [qstr] radio [qstr]: [str] (reason code:[uint])	Client disassociated
DOT11CLIENT_DENIED_ASSOC 5 Client [qstr] denied association on radio [qstr] [str]: [str]	Client denied association
DOT11CLIENT_ASSOC_IGNORED 6 Client [qstr] ignored association on radio [qstr] [str]: [str]	Client ignored association
DOT11WPA_WPA2_SUCCESS 6 Client [qstr] completed [str] handshake on wlan [qstr] radio [qstr]	Client completed WPA/WPA2 handshake

DOT11WPA_WPA2_FAILED 5 Client [qstr] failed [str] handshake on wlan [qstr] radio [qstr]	Client failed WPA/WPA2 handshake
DOT11WPA_WPA2_KEY_ROT 6 Rotating wpa/wpa2 group keys on wlan [qstr] /	Rotating WPA/WPA2 group keys on WLAN
DOT11TKIP_MIC_FAIL_REPORT 5 TKIP message integrity check failure reported by [mac] on wlan [qstr]	TKIP MIC failure report
DOT11TKIP_MIC_FAILURE 5 TKIP message integrity check failed in packet from [mac] on wlan [qstr]	TKIP MIC check failed
DOT11TKIP_CNTRMEAS_START 4 Initiating TKIP countermeasures on wlan [qstr] ssid [qstr]	TKIP countermeasures initiated
DOT11TKIP_CNTRMEAS_END 4 TKIP countermeasures ended on wlan [qstr] ssid [qstr] //	TKIP countermeasures ended
DOT11EAP_SUCCESS 6 Client [qstr] 802.1x/EAP (type:[str]) authentication success on wlan [qstr] radio [qstr] username [str]	EAP authentication success
DOT11EAP_FAILED 5 Client [qstr] failed 802.1x/EAP authentication on wlan [qstr] radio [qstr]	EAP authentication failure
DOT11EAP_CLIENT_TIMEOUT 5 Client [qstr] timeout attempting 802.1x/EAP authentication on wlan [qstr] radio [qstr]	EAP authentication timed out
DOT11EAP_SERVER_TIMEOUT 5 Radius server [str] timeout authenticating client [qstr] on wlan [qstr] radio [qstr]	RADIUS server timed out
DOT11EAP_CACHED_KEYS 6 Key Cache used for client [qstr] on wlan [qstr] radio [qstr]. Skipping 802.1x	Key cache used for authentication
DOT11EAP_OPP_CACHED_KEYS 6 Opportunistic Key Cache used for client [qstr] on wlan [qstr] radio [qstr]. Skipping 802.1x.	Opportunistic key caching used for authentication
DOT11EAP_PREAUTH_SUCCESS 6 Client [qstr] 802.1x/EAP (type:[str]) pre-authentication success on wlan [qstr] bss [mac]	EAP pre authentication success
DOT11EAP_PREAUTH_FAILED 5 Client [qstr] failed 802.1x/EAP pre-authentication on wlan [qstr] bss [mac]	EAP pre-authentication failed
DOT11EAP_PREAUTH_CLIENT_TIMEOUT 5 Client [qstr] timeout attempting 802.1x/EAP pre-authentication on wlan [qstr]	EAP pre-authentication client timeout detected
DOT11EAP_PREAUTH_SERVER_TIMEOUT 5 Radius server [qstr] timeout pre-authenticating client [qstr] on wlan [qstr]	EAP pre-authentication server timeout detected
DOT11_FT_ROAM_SUCCESS 6 Client [qstr] fast bss transition roam to wlan [qstr] ssid [qstr] on radio [qstr]	Client fast BSS transition roam to WLAN SSD ID on radio
DOT11_GAL_RX_REQUEST 6 Received request to validate [qstr] on global assoc-list [qstr] from [qstr] on rf-domain [qstr]	Received request to validate global association request for RF Domain

DOT11 GAL_TX_RESPONSE 6 Sending global assoc-list [qstr] response for [qstr] to [qstr] on rf-domain [qstr], result: [str]	Sending global association response for RF Domain
DOT11 GAL_VALIDATE_REQ 6 Sending global assoc-list validation request to controller for [qstr]	Sending global association list validation to controller
DOT11 GAL_VALIDATE_FAILED 6 Received global assoc-list validation failure for [qstr]	Received global association list validation failures
DOT11 GAL_VALIDATE_SUCCESS 6 Received global assoc-list validation success for [qstr]	Received global association list validation successes
FWUFWUDONE6Firmware update successful, new version is [str]	Update successfully completed
FWUFWUABORTED6Firmware update aborted	Update aborted
FWUFWUNONEED6Firmware update not required, running and update versions same [str]	Update not required, running and update version are the same
FWUFWUSYSERR3Firmware update unsuccessful, system cmd [str] failed	Update unsuccessful, system cmd failed
FWUFWUBADCONFIG3Firmware update unsuccessful, unable to read configuration file	Update unsuccessful, unable to read config file
FWUFWUSERVERUNDEF3Firmware update unsuccessful, update server undefined	Update unsuccessful, server undefined
FWUFWUFILEUNDEF3Firmware update unsuccessful, update file undefined	Update unsuccessful, update file undefined
FWUFWUSERVERUNREACHABLE3 Firmware update unsuccessful, server [str] unreachable	Update unsuccessful, server unreachable
FWUFWUCOULDNTGETFILE3 Firmware update unsuccessful, couldn't get file, [str] //	Update unsuccessful, could not get file
FWUFWUVERMISMATCH3 Firmware update unsuccessful, version mismatch, expected [str], actual [str] //	Update unsuccessful, version mismatch
FWUFWUPRODMISMATCH3 Firmware update unsuccessful, product mismatch, expected [str], actual [str]	Update unsuccessful, product mismatch
FWUFWUCORRUPTEDFILE3 Firmware update unsuccessful, corrupted firmware file	Update unsuccessful, corrupted file
FWUFWUSIGNMISMATCH3 Firmware update unsuccessful, signature mismatch, [str]	Update unsuccessful, signature mismatch
FWUFWUUNSUPPORTEDHW 3 Firmware update unsuccessful, unsupported hardware	Update unsuccessful, unsupported hardware version
FWU FWUUNSUPPORTEDMODELNUM 3 Firmware update unsuccessful, unsupported FIPS model number	Update unsuccessful, unsupported FIPS model number
ISDN_EMERG 0 Emergency: [str]	ISDN emergency
ISDN_ALERT 1 Alert: [str]	ISDN alert
ISDN_CRIT 2 Critical: [str]	ISDN critical
ISDN_ERR 3 Error: [str]	ISDN error

ISDN_WARNING 4 Warning: [str]	ISDN warning
ISDN_NOTICE 5 Notice: [str]	ISDN notice
ISDN_INFO 6 Info: [str]	ISDN information
ISDN_DEBUG 7 Debug: [str]	ISDN debug
L2TPV3 L2TPV3_TUNNEL_UP 5 L2TPV3 tunnel [str] is UP	L2TPV3 tunnel is up
L2TPV3 L2TPV3_TUNNEL_DOWN 5 L2TPV3 tunnel [str] is DOWN	L2TPV3 tunnel is down
LICMGR LIC_INSTALLED6 [str] license installed	License installation
LICMGR LIC_INSTALL_DEFAULT6 [str] default license installed, count: [int]	Default license installation
LICMGR LIC_INSTALL_COUNT6 [str] license installed, count: [int]	License count
LICMGR LIC_REMOVED6 [str] license removed	License removed
LICMGR LIC_INVALID3 [str] license invalid Error: [str]	License installation failed
MESH MESH_LINK_UP 5 Mesh link up between radio [qstr] and radio [qstr]	Mesh link up
MESH MESH_LINK_DOWN 5 Mesh link down between radio [qstr] and radio [qstr]	Mesh link down
MGMTLOG_KEY_DELETED 4 Rsakey [str] associated with ssh is deleted so ssh is restarted with default rsa key	RSA key associated with SSH is deleted
MGMTLOG_KEY_RESTORED6Rsakey [str] associated with ssh is added so ssh is restarted with new key	RSA key associated with SSH is added
MGMTLOG_TRUSTPOINT_DELETED4 Trustpoint [str] associated with https is deleted or expired so https is restarted with default trustpoint	Trustpoint associated with HTTPS is deleted
MGMTLOG_HTTP_START5 [str] started in external mode	Web server started in external mode
MGMTLOG_HTTP_LOCAL_START5 thttpd started in localhost mode	Web server started in local mode
MGMTLOG_HTTPS_START5 stunnel started	Secure Web server started
MGMTLOG_HTTPS_WAIT5 waiting for thttpd to start	Waiting for Web server to start
MGMTLOG_HTTP_INIT5[str] status started is [uint] and external mode is [uint]	Web server started
MESH MESHPOINT_LOOP_PREVENT_ON 4 Meshpoint [qstr] loop prevention on (port [str]), wired traffic is blocked	Wired traffic is blocked
MESH MESHPOINT_LOOP_PREVENT_OFF 4 Meshpoint loop prevention off (port [str]), all wired traffic is allowed	Wired traffic is allowed
MESH MESHPOINT_ROOT_CHANGE 6 Meshpoint [qstr] root changed from [mac] to [mac] via next hop [mac]	Meshpoint root changed

MESH MESHPOINT_PATH_CHANGE 6 Meshpoint [qstr] next hop changed from [mac] to [mac] for [mac]	Meshpoint next hop changed
NSM IFUP4 Interface [str] is up	Interface up
NSM IFDOWN4 Interface [str] is down	Interface down
NSM DHCPIP6 Interface [str] acquired IP address [ip]/[uint] via DHC	Interface assigned DHCP IP address
NSM DHCPDEFRT6 Default route with gateway [ip] learnt via DHC	Default route learnt via DHCP
NSM DHCPCHG5 Interface [str] changed DHCP IP - old IP: [ip]/[uint], new IP: [ip]/[uint]	DHCP Interface IP changed
NSM DHCPNODEFRT5 Interface [str] lost its DHCP default route	Interface no default route
NSM IFIPCFG3 Interface [str] IP address [str] Interface [str]	Interface IP address
NSM DHCPERR3 Both, DHCP client and server are configured for interface [str]. DHCP Client has been enabled on the interface and dhcp server is shut down	DHCP server-client config conflict
NSM DHCPIPNOADD5 Interface [str] lost its DHCP IP address to interface [str]'s overlapping static configured IP address	DHCP IP overlaps static IP address
NSM DHCPLEASEXP5 Interface [str] lost its DHCP IP address [ip] due to lease expiration	Interface DHCP lease expired
NSM DHCPNAK5 Interface [str] lost its DHCP IP address [ip], DHCP NAK response from server	DHCP Server returned DHCP NAK response
NSM NSM_NTP6 Look up host [str] [str]//	Translate host name
NSM IF_FAILOVER5 Interface [str] failover to Interface [str]	Interface failover
NSM IF_FAILBACK5 Interface [str] failback to Interface [str]	Interface failback
PM PROCSTART6 Starting process [str]	Process started
PM PROCRTST3 Process [str] is not responding. Restarting process	Process restarted
PM PROCMAXRSTRT1 Process [str] reached its maximum number of allowed restarts	Process reached max number of restarts
PM PROCSYSRSTRT0 Process [str] reached its maximum number of allowed restarts. Rebooting the system.	Process reached max restarts. Rebooting system.
PM PROCSTOP5 Process [str] has been stopped	Process has been stopped
PM PROCID5 Process [str] changed its PID from [int] to [int]	Process changed PID
PM STARTUPCOMPLETE5 System startup complete	System startup completed
PM PROCNORESP4 Process [str] is not responding ([uint]/[uint])	Process is not responding

RADCONFRADIUSDSTART6 Radius Server Started	RADIUS server started
RADCONFRADIUSDSTOP6 Radius Server Stopped	RADIUS server stopped
RADCONF COULD_NOT_STOP_RADIUS3 radiusd could not be stopped	RADIUS server failed to stop
RADIORADIO_STATE_CHANGE 5 Radio [qstr] changing state from [qstr] to [qstr]	Radio state changed
RADIORADAR_SCAN_STARTED 6 Radar scan on primary channel [uint] freq [uint] MHz for a duration [uint] secs on radio [qstr]	Radar scan started
RADIORADAR_SCAN_COMPLETED 6 Radar scan done on primary channel [uint] freq [uint] MHz on radio [qstr]	Radar scan completed
RADIORADAR_DETECTED 4 Radar found on channel [uint] freq [uint] MHz	Radar detected
RADIORADAR_DET_INFO 4 Radar info: Radio: [qstr]. New channel: [uint] freq [uint] MHz. Scan time: [uint] secs	Radar info
RADIORESUME_HOME_CHANNEL 6 Operation on home channel [uint] freq [uint] MHz resumes on radio [qstr] after earlier radar detect	Radio resuming on home channel
RADIO_ACS_SCAN_STARTED 6 ACS scan started on radio [qstr]	ACS scan started
RADIO_ACS_SCAN_COMPLETE 6 ACS scan done, channel [uint] selected on radio [qstr]	ACS scan complete
RADIO_ANTENNA_ERROR 3 antenna type [str] in is not supported on radio [uint] of device [str]	Invalid (unsupported) antenna detected on this radio
RADIOCHANNEL_COUNTRY_MISMATCH3 Channel [str] not valid in country of operation [str] for [str] [str]	Channel and country of operation mismatch
SYSTEM HTTP_ERR3 [str] did not start	Web server did not start
SYSTEMLOGIN_FAIL_BAD_ROLE3 Log-in failed - [qstr] is an undefined user role - user [qstr] from [qstr]	Failed login attempt - no such user role
SYSTEMLOGOUT6 Logged out user [qstr] with privilege [qstr] from [qstr]	Logout event
SYSTEMWARM_START6 System Warm Start Reason : [str] Timestamp: [str]	System warm start
SYSTEMWARM_START_RECOVER6 Warm Start Recover. Reason: [str] Timestamp: [str]	System wam start recovery
SYSTEMCOLD_START6 System Cold start. System came up at [str]	System cold start
SYSTEMSERVER_UNREACHABLE5 Server not reachable, trying authentication using local database.	Authentication using the local database
SYSTEMPERIODIC_HEART_BEAT3Periodic Heart Beat. Interval:[int]. Ip address [str].	Periodic heartbeat detected

SYSTEMCONFIG_COMMIT6 Configuration commit by user [qstr] ([str]) from [qstr]	Configuration commit
SYSTEMCONFIG_REVISION6 Configuration revision updated to [str] from [str]	Configuration updated
SYSTEMSYSTEM_AUTOUP_ENABLE6 Autoupgrade enabled for [str]	Auto upgrade module is enabled
SYSTEMSYSTEM_AUTOUP_DISABLE6 Autoupgrade disabled for [str]	Auto upgrade module is disabled
SYSTEMMAAT_LIGHT5 MAAT Light module [str]	Notice on action on RIM radio(s) from Maat Light module
SYSTEMDEVUP_RFD_FAIL4 Upgrade failed on mac [str] in RF domain [str]	Upgrade for device failed on rf-domain manager
SMTPNOT SMTPAUTH5 Authentication failure for user: [str] on server [str].//	User authentication failure
SMTPNOT NET 5 Network error contacting server: [str].	Cannot contact server
SMTPNOT SMTPINFO6 [str].	SMTP information notice
SMTPNOT CFG5 Error reading configuration file.	Cannot read configuration
SMTPNOT CFGINC5 Incomplete Configuration.	Incomplete configuration
SMTPNOT SMTPERR5 [str].	SMTP 5XX errors
SMTPNOT PROTO5 Protocol Error: [str].	SMTP protocol errors
SYSTEMPROC_STOP6 Stopping process [qstr]	Stopping process
SYSTEMCLOCK_RESET6 System clock reset, Time: [str]	System clock reset
SYSTEMLOGIN5 Successfully logged in user [qstr] with privilege [qstr] from [qstr]	Successful login
SYSTEMLOGIN_FAIL3 Log-in failed for user [qstr] from [qstr]	Failed login attempt - user authentication failed
SYSTEMLOGIN_FAIL_ACCESS3 Log-in failed - user [qstr] is not allowed access from [qstr]	Failed login attempt - access violation
VRRP VRRP_STATE_CHANGE 5 [str]: VRRP Group [uint] transitioned to [str] state	VRRP state transition
VRRP VRRP_VIP_SUBNET_MISMATCH 2 VRRP Group [uint] VIP [ip] does not overlap with any of the interface addresses	VRRP IP not overlapping with interface addresses
VRRP VRRP_MONITOR_CHANGE 5 [str]: VRRP Group [uint] monitored [str] state change to [str]; priority change from [uint] to [uint]	VRRP monitor link state change
WIPSUNSANCTIONED_AP_ACTIVE 6 Unsanctioned AP [mac] vendor [str] on channel [int] with rssi [int] active from [str]	Unsanctioned AP active
WIPSUNSANCTIONED_AP_INACTIVE 6 Unsanctioned AP [mac] vendor [str] inactive from [str]	Unsanctioned AP inactive

WIPSUNSANCTIONED_AP_STATUS_CHANGE 6 Unsanctioned AP [mac] vendor [str] status has been administratively changed	Unsanctioned AP changed state
WIPSROGUE_AP_ACTIVE 4 Rogue AP [mac] vendor [str] on channel [int] with vlan [int] and rssi [int] active from [str] //	Rogue AP active
WIPSROGUE_AP_INACTIVE 4 Rogue AP [mac] vendor [str] inactive from [str]	Rogue AP inactive
WIPSAIR_TERMINATION_INITIATED 4 Air termination of [mac] vendor [str] on channel [int] initiated	Air termination initiated
WIPSAIR_TERMINATION_ENDED 4 Air termination of [mac] vendor [str] ended	Air termination ended

A PUBLICLY AVAILABLE SOFTWARE

A.1 General Information

This document contains information regarding licenses, acknowledgments and required copyright notices for open source packages used in the following products:

Access Points

- AP6521, AP6522, AP6522M, AP6532, AP6562, AP7161, AP7502, AP7522, AP7532, AP7562, AP7602, AP7612, AP7622, AP7632, AP7662, AP8122, AP8132, AP8163, AP8232, AP8432 and AP8533.

Wireless Controllers and Service Platforms

- Wireless Controllers – RFS4000, RFS6000
- Service Platforms – NX5500, NX5500E, NX7500, NX75XX, NX7510E, NX9500, NX9510, NX9600, NX9610, VX9000, VX9000E

A.2 Open Source Software Used

The Support site, located at www.extremenetworks.com/support provides information and online assistance including developer tools, software downloads, product manuals, support contact information and online repair requests.

Name	Version	URL	License
Apache Web Server	1.3.41	http://www.apache.org/	<i>Apache License, Version 2.0</i>
Asterisk	1.2.24	http://www.asterisk.org/	<i>GNU General Public License 2.0</i>
accepts	1.2.10	http://registry.npmjs.org/accepts/-/accepts-1.2.10.tgz	<i>MIT License</i>
advas	0.2.3	http://advas.sourceforge.net/	<i>GNU General Public License, version 2</i>
alivepdf	0.1.4.9	https://code.google.com/p/alivepdf/	<i>MIT License</i>
apscheduler	3.0.1	https://pypi.python.org/pypi/APScheduler/	<i>MIT License</i>
async	1.3.0	http://registry.npmjs.org/async/-/async-1.3.0.tgz	<i>MIT License</i>
autoconf	2.69	http://www.gnu.org/software/autoconf/	<i>GNU General Public License, version 2</i>
automake	1.11.6	http://www.gnu.org/software/automake/	<i>GNU General Public License, version 2</i>
bash	4.2	http://www.gnu.org/software/bash/	<i>GNU General Public License, version 2</i>
binutils	2.23	http://www.gnu.org/software/binutils/	<i>GNU General Public License, version 2</i>
bison	2.3	http://www.gnu.org/software/bison/	<i>GNU General Public License, version 2</i>
bluez	5.7	http://www.bluez.org/	<i>GNU General Public License, version 2</i>
body-parser	1.13.2	http://registry.npmjs.org/body-parser/-/body-parser-1.13.2.tgz	<i>MIT License</i>
bridge	1.0.4	http://www.linuxfoundation.org/collaborate/workgroups/networking/bridge/	<i>GNU General Public License, version 2</i>
bridge-utils	1.0.4	http://sourceforge.net/projects/bridge/	<i>GNU General Public License, version 2</i>
buffer-crc32	0.2.5	http://registry.npmjs.org/buffer-crc32/-/buffer-crc32-0.2.5.tgz	<i>MIT License</i>
busybox	1.14.4	http://www.busybox.net/	<i>GNU General Public License, version 2</i>

Name	Version	URL	License
bytes	2.1.0	http://registry.npmjs.org/bytes/-/bytes-2.1.0.tgz	MIT License
colors	1.1.2	http://registry.npmjs.org/colors/-/colors-1.1.2.tgz	MIT License
compression	1.5.1	http://registry.npmjs.org/compression/-/compression-1.5.1.tgz	MIT License
conect-mongo	0.8.2	http://registry.npmjs.org/connect-mongo/-/connect-mongo-0.8.2.tgz	MIT License
cookie	0.1.3	http://registry.npmjs.org/cookie/-/cookie-0.1.3.tgz	MIT License
cookie-parser	1.3.5	http://registry.npmjs.org/cookie-parser/-/cookie-parser-1.3.5.tgz	MIT License
cookie-signature	1.0.6	http://registry.npmjs.org/cookie-signature/-/cookie-signature-1.0.6.tgz	MIT License
cuint	0.2.0	http://registry.npmjs.org/cuint/-/cuint-0.2.0.tgz	MIT License
cycle	1.0.3	https://registry.npmjs.org/cycle/-/cycle-1.0.3.tgz	MIT License
czjson	1.0.8	https://pypi.python.org/pypi/czjson/1.0.8	GNU Lesser General Public License 2.1
dash	0.5.7	http://gondor.apana.org.au/~herbert/dash/	The BSD License
debug	2.2.0	https://registry.npmjs.org/debug/-/debug-2.2.0.tgz	MIT License
depd	1.0.1	http://registry.npmjs.org/depd/-/depd-1.0.1.tgz	MIT License
dfu-util	0.8	http://dfu-util.gnumonks.org/	GNU General Public License, version 2
dhcp	3.0.3	http://www.isc.org/software/dhcp	ISC License
diffutils	2.8.1	http://www.gnu.org/software/diffutils/	GNU General Public License, version 2
dmalloc	5.5.2	http://dmalloc.com/	None
dmidecode	2.11	http://savannah.nongnu.org/projects/dmidecode/	GNU General Public License, version 2
dnsmasq	2.47	http://www.thekelleys.org.uk/dnsmasq/doc.html	GNU General Public License, version 2
dosfstools	2.11	http://www.daniel-baumann.ch/software/dosfstools/	GNU General Public License, version 2
dropbear	0.55	http://matt.ucc.asn.au/dropbear/dropbear.html	DropBear License
e2fsprogs	1.41.13	http://e2fsprogs.sourceforge.net/	GNU General Public License, version 2

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ejs	2.3.3	http://registry.npmjs.org/ejs/-/ejs-2.3.3.tgz	Apache License, Version 2.0
engine.io	1.5.2	http://registry.npmjs.org/engine.io/-/engine.io-1.5.2.tgz	MIT License
escape-html	1.0.2	http://registry.npmjs.org/escape-html/-/escape-html-1.0.2.tgz	MIT License
ethtool	2.6.35	http://www.kernel.org/pub/software/network/ethtool/	GNU General Public License, version 2
event-loop-lag	1.1.0	http://registry.npmjs.org/event-loop-lag/-/event-loop-lag-1.1.0.tgz	MIT License
express	4.13.1	http://registry.npmjs.org/express/-/express-4.13.1.tgz	MIT License
express-session	1.11.3	http://registry.npmjs.org/express-session/-/express-session-1.11.3.tgz	MIT License
eyes	0.1.8	http://github.com/cloudhead/eyes.js	MIT License
finalhandler	0.4.0	http://registry.npmjs.org/finalhandler/-/finalhandler-0.4.0.tgz	MIT License
flashrom	0.9.4	http://flashrom.org/Flashrom	GNU General Public License, version 2
flex	4.5.1.21328	http://flex.sourceforge.net/	The BSD License
fluks	0.2	https://github.com/markuspeloquin/fluks	MIT License
freedos	4.5.1.21328	http://www.freedos.org/download/	GNU General Public License, version 2
freeipmi	1.1	http://www.gnu.org/software/freeipmi/	GNU General Public License, version 3
fresh	0.3.0	http://registry.npmjs.org/fresh/-/fresh-0.3.0.tgz	MIT License
futures	2.2.0	https://github.com/agronholm/pythonfutures	The BSD License
gcc	4.1.2	http://gcc.gnu.org/	GNU General Public License, version 2
gdb	7.2	http://www.gnu.org/software/gdb/	GNU General Public License, version 3
gdbm	1.8.3	http://www.gnu.org/s/gdbm/	GNU General Public License, version 2
genext2fs	1.4.1	http://genext2fs.sourceforge.net/	GNU General Public License, version 2
glib2	2.30.2	http://www.gtk.org/	GNU Lesser General Public License 2.1
glibc	2.7	http://www.gnu.org/software/libc/	GNU General Public License, version 2

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has-binary-data	0.1.5	http://registry.npmjs.org/has-binary-data/-/has-binary-data-0.1.5.tgz	MIT License
hdparm	9.38	http://sourceforge.net/projects/hdparm/	GNU General Public License, version 2
hooks	0.3.2	http://registry.npmjs.org/hooks/-/hooks-0.3.2.tgz	MIT License
hostapd	0.6.9	http://hostap.epitest.fi/hostapd/	GNU General Public License, version 2
hotplug	1.3	http://sourceforge.net/projects/linux-hotplug/	GNU General Public License, version 2
hotplug2	0.9	http://isteve.bofh.cz/~isteve/hotplug2/	GNU General Public License, version 2
i2ctools	3.0.3	http://www.lm-sensors.org/wiki/I2CTools	GNU General Public License, version 2
iconv-lite	0.4.11	http://registry.npmjs.org/iconv-lite/-/iconv-lite-0.4.11.tgz	MIT License
igb	5.2.9.4	http://sourceforge.net/projects/e1000/	GNU General Public License, version 2
ipaddr	2.1.0	http://code.google.com/p/ipaddr-py/	Apache License, Version 2.0
ipkg-utils	1.7	http://www.handhelds.org/sources.html	GNU General Public License, version 2
ipmitool	1.8.11	http://ipmitool.sourceforge.net/	The BSD License
iproute2	050816	http://www.linuxfoundation.org/collaborate/workgroups/networking/iproute2	GNU General Public License, version 2
iptables	1.4.3	http://www.netfilter.org/projects/iptables/index.html	GNU General Public License, version 2
ipxe	1.0.0	http://ipxe.org/	GNU General Public License, version 2
isstream	0.1.2	https://registry.npmjs.org/isstream/-/isstream-0.1.2.tgz	MIT License
js-yaml	3.3.1	http://registry.npmjs.org/js-yaml/-/js-yaml-3.3.1.tgz	MIT License
kerberos	None	http://web.mit.edu/Kerberos/	GNU General Public License, version 2
kexec-tools	2.0.3	http://kernel.org/pub/linux/utils/kernel/kexec/	GNU General Public License, version 2
libbson	1.1.0	http://github.com/mongodb/libbson	Apache License, Version 2.0
libcares	1.7.1	http://c-ares.haxx.se/	The BSD License

Name	Version	URL	License
libcurl	7.30.0	http://curl.haxx.se/libcurl/	<i>The BSD License</i>
libdevmapper	2.02.66	ftp://sources.redhat.com/pub/lvm2/old	<i>GNU Lesser General Public License 2.1</i>
libexpat	2.0.0	http://expat.sourceforge.net/	<i>MIT License</i>
libffi	3.0.7	http://sourceware.org/libffi/	<i>MIT License</i>
libgcrypt	1.4.5	ftp://ftp.gnupg.org/GnuPG/libgcrypt/	<i>GNU Lesser General Public License 2.1</i>
libgmp	4.2.2	http://gmplib.org/	<i>GNU Lesser General Public License, version 3.0</i>
libgnutls	3.2.12	ftp://ftp.gnupg.org/GnuPG/gnutls/v3.0/	<i>GNU Lesser General Public License, version 3.0</i>
libgpg-error	1.6	ftp://ftp.gnupg.org/GnuPG/libgpg-error/	<i>GNU Lesser General Public License 2.1</i>
libharu	2.1.0	http://libharu.org/	<i>MIT License</i>
libhttp-parser	None	<i>None</i>	<i>MIT License</i>
libiconv	1.14	http://savannah.gnu.org/projects/libiconv/	<i>GNU General Public License 2.0</i>
libjson	0.10	http://sourceforge.net/projects/libjson/	<i>The BSD License</i>
libkerberos	0.1	http://web.mit.edu/kerberos/dist/	<i>The BSD License</i>
libncurses	5.4	http://www.gnu.org/software/ncurses/	<i>MIT License</i>
libnettle	2.7	http://www.lysator.liu.se/~nisse/nettle/	<i>GNU Lesser General Public License 2.1</i>
libnuma	2.0.10	https://github.com/humactl/humactl/	<i>GNU Lesser General Public License, version 2.0</i>
libpam	1.1.1	http://www.kernel.org/pub/linux/libs/pam/	<i>The BSD License</i>
libpcap	1.0.0	http://www.tcpdump.org/	<i>The BSD License</i>
libpcre	8.21	ftp://ftp.csx.cam.ac.uk/pub/software/programming/pcre/	<i>The BSD License</i>
libpopt	1.14	http://freecode.com/projects/popt	<i>MIT License</i>
libraryopt	1.01	http://sourceforge.net/projects/libraryopt/	<i>GNU General Public License, version 2</i>
libreadline	4.3	http://cnswww.cns.cwru.edu/php/chet/readline/rltop.html	<i>GNU General Public License, version 2</i>
libtool	2.4.2	http://www.gnu.org/software/libtool/	<i>GNU General Public License, version 2</i>

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libusb	0.1.12	http://www.libusb.org/	GNU Lesser General Public License, version 2.0
libusb	1.0.18	http://www.libusb.org/	GNU Lesser General Public License, version 2.0
libvirt	0.9.11	http://libvirt.org/sources/	GNU Lesser General Public License 2.1
libxml2	2.8.0	http://xmlsoft.org/	MIT License
libxslt	1.1.26	http://xmlsoft.org/xslt/	MIT License
lighttpd	1.4.37	http://www.lighttpd.net/	MIT License
lilo	22.6	http://lilo.alieth.debian.org/	The BSD License
linux	2.6.28.9	http://www.kernel.org/	GNU General Public License, version 2
linux	2.6.35.9	http://www.kernel.org/	GNU General Public License, version 2
lodash	3.10.0	http://registry.npmjs.org/lodash/-/lodash-3.10.0.tgz	MIT License
log-timestamp	0.1.2	http://registry.npmjs.org/log-timestamp/-/log-timestamp-0.1.2.tgz	MIT License
ltp	20130904	https://github.com/linux-test-project/ltp	GNU General Public License, version 2
lxml	2.3beta1	http://lxml.de/	The BSD License
lzma	4.32	http://www.7-zip.org/sdk.html	GNU Lesser General Public License, version 2.0
lzma	4.57	http://www.7-zip.org/sdk.html	GNU Lesser General Public License, version 2.0
lzo	2.03	http://www.oberhumer.com/opensource/lzo/	GNU General Public License, version 2
M2Crypto	0.21.1	http://chandlerproject.org/bin/view/Projects/MeTooCrypto	The BSD License
m4	1.4.16	http://www.gnu.org/software/m4/	GNU General Public License, version 2
madwifi	trunk-r3314	http://madwifi-project.org/	The BSD License
mdadm	3.2.2	http://neil.brown.name/blog/mdadm	GNU General Public License, version 2
media-typer	0.3.0	http://registry.npmjs.org/media-typer/-/media-typer-0.3.0.tgz	MIT License
memtester	4.0.8	http://pyropus.ca/software/memtester/	GNU General Public License, version 2

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merge-descriptors	1.0.0	http://registry.npmjs.org/merge-descriptors/-/merge-descriptors-1.0.0.tgz	MIT License
method-override	2.3.4	http://registry.npmjs.org/method-override/-/method-override-2.3.4.tgz	MIT License
methods	1.1.1	http://registry.npmjs.org/methods/-/methods-1.1.1.tgz	MIT License
mii-diag	2.09	http://freecode.com/projects/mii-diag	GNU General Public License, version 2
mkyaffs	None	http://www.yaffs.net/	GNU General Public License, version 2
mod_ssl	2.8.3.1-1.3.41	http://www.modssl.org/	The BSD License
mongo-c-driver	1.1.0	http://github.com/mongodb/mongo-c-driver	Apache License, Version 2.0
mongo-python-driver	2.7.1	http://github.com/mongodb/mongo-python-driver	Apache License, Version 2.0
mongodb	3.0.5	http://www.mongodb.org/	GNU Lesser General Public License, version 3.0
mongoose	4.0.7	http://registry.npmjs.org/mongoose/-/mongoose-4.0.7.tgz	MIT License
mpath	0.2.1	http://registry.npmjs.org/mpath/-/mpath-0.2.1.tgz	MIT License
mpromise	0.5.5	http://registry.npmjs.org/mpromise/-/mpromise-0.5.5.tgz	MIT License
mquery	1.6.2	http://registry.npmjs.org/mquery/-/mquery-1.6.2.tgz	MIT License
ms	0.7.1	http://registry.npmjs.org/ms/-/ms-0.7.1.tgz	MIT License
mtdev	2009-05-05	http://www.linux-mtd.infradead.org/	GNU General Public License, version 2
mtdev-utils	1.4.4	http://www.linux-mtd.infradead.org/	GNU General Public License, version 2
mtdev-utils	2009-05-05	http://www.linux-mtd.infradead.org/	GNU General Public License, version 2
muri	1.1.0	http://registry.npmjs.org/muri/-/muri-1.1.0.tgz	MIT License
nano	1.2.4	http://www.nano-editor.org/	GNU General Public License, version 2
net-snmp	5.3.0.1	http://net-snmp.sourceforge.net/	The BSD License
no-vnc	None	http://kanaka.github.io/noVNC/	Mozilla Public License, version 2

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node-mongodb-native	1.4.35	http://github.com/mongodb/node-mongodb-native	Apache License, Version 2.0
node.js	0.12.7	http://nodejs.org/	MIT License
ntp	4.2.6p4	http://www.ntp.org/index.html	The BSD License
numactl	2.0.10	https://github.com/numactl/numactl/	GNU General Public License, version 2
Open Scales	2.2	http://openscales.org/	GNU Lesser General Public License, version 3.0
OpenStreetMap		http://www.openstreetmap.org/	Creative Commons Attribution-ShareAlike License, version 3.0
on-headers	1.0.0	http://registry.npmjs.org/on-headers/-/on-headers-1.0.0.tgz	MIT License
openldap	2.4.40	http://www.openldap.org/foundation/	The Open LDAP Public License
openlldp	0.0.3alpha	http://openlldp.sourceforge.net/	GNU General Public License, version 2
openssh	6.6p1	http://www.openssh.com/	The BSD License
openssl	0.9.8zg	http://www.openssl.org/	OpenSSL License
openssl	1.0.0i	http://www.openssl.org/	OpenSSL License
openssl	1.0.1g	http://www.openssl.org/	OpenSSL License
openssl-fips	1.2.3	http://www.openssl.org/	OpenSSL License
openwrt	trunk-r15025	http://www.openwrt.org/	GNU General Public License, version 2
opkg	trunk-r4564	http://code.google.com/p/opkg/	GNU General Public License, version 2
oprofile	0.9.2	http://oprofile.sourceforge.net/news/	GNU Lesser General Public License 2.1
ProGuard	4.8	http://proguard.sourceforge.net/	GNU General Public License, version 2
PyPDF2	1.23	http://mstamy2.github.com/PyPDF2	The BSD License
parseurl	1.3.0	http://registry.npmjs.org/parseurl/-/parseurl-1.3.0.tgz	MIT License
path-to-regexp	1.2.0	http://registry.npmjs.org/path-to-regexp/-/path-to-regexp-1.2.0.tgz	MIT License
pciutils	3.1.8	http://mj.ucw.cz/sw/pciutils/	GNU General Public License, version 2

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pdnsd	1.2.5	http://members.home.nl/p.a.rombouts/pdnsd/	GNU General Public License, version 2
picocom	1.6	http://code.google.com/p/picocom/	GNU General Public License, version 2
pillow	2.8.1	http://python-pillow.github.io/	MIT License
ping	1.0	None	The BSD License
pkg-config	0.22	http://pkg-config.freedesktop.org/wiki/	GNU General Public License, version 2
portmap	6.0	http://neil.brown.name/portmap/	The BSD License
posix	2.0.1	http://registry.npmjs.org/posix/-/posix-2.0.1.tgz	MIT License
ppp	2.4.5	http://ppp.samba.org/ppp/	The BSD License
ppp	2.4.3	http://ppp.samba.org/ppp/	The BSD License
preppy	2.3.1	https://bitbucket.org/rptlab/preppy	The BSD License
procname	0.2	http://code.google.com/p/procname/	GNU Lesser General Public License, version 2.0
procps	3.2.8	http://procps.sourceforge.net/	GNU General Public License, version 2
proxy-addr	1.0.8	http://registry.npmjs.org/proxy-addr/-/proxy-addr-1.0.8.tgz	MIT License
psmisc	22.8	http://sourceforge.net/projects/psmisc/	GNU General Public License, version 2
pure-ftpd	1.0.22	http://www.pureftpd.org/project/pure-ftpd	The BSD License
pychecker	0.8.18	http://pychecker.sourceforge.net/	The BSD License
pyparsing	1.5.1	http://sourceforge.net/projects/pyparsing/	The BSD License
pytz	2014.10	http://pythonhosted.org/pytz	MIT License
pyxapi	0.1	http://www.pps.jussieu.fr/%7Eylg/PyXAPI/	GNU General Public License, version 2
pyyaml	3.11	http://pyyaml.org/	MIT License
qdbm	1.8.77	http://qdbm.sourceforge.net/	GNU General Public License, version 2
qs	4.0.0	http://registry.npmjs.org/qs/-/qs-4.0.0.tgz	The BSD License
quagga	0.99.16	http://www.quagga.net	GNU General Public License, version 2
quilt	0.47	http://savannah.nongnu.org/projects/quilt/	GNU General Public License, version 2

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radius	2.2.3	http://freeradius.org/	GNU General Public License, version 2
range-parser	1.0.2	http://registry.npmjs.org/range-parser/-/range-parser-1.0.2.tgz	MIT License
raw-body	2.1.2	http://registry.npmjs.org/raw-body/-/raw-body-2.1.2.tgz	MIT License
redis	3.0.3	http://redis.io/	The BSD License
redis	0.12.1	http://registry.npmjs.org/redis/-/redis-0.12.1.tgz	MIT License
regexp-clone	0.0.1	http://registry.npmjs.org/regexp-clone/-/regexp-clone-0.0.1.tgz	MIT License
report-lab	3.1.44	http://www.reportlab.com	The BSD License
rp-pppoe	3.1.0	http://www.roaringpenguin.com/products/pppoe	GNU General Public License, version 2
rsync	3.0.6	http://rsync.samba.org/	GNU General Public License, version 3
safestr	1.0.3	http://www.zork.org/	The BSD License
samba	3.5.1	http://www.samba.org	GNU General Public License, version 3
sed	4.1.2	http://www.gnu.org/software/sed/	GNU General Public License, version 2
semaphore	1.0.3	http://registry.npmjs.org/semaphore/-/semaphore-1.0.3.tgz	MIT License
send	0.13.0	http://registry.npmjs.org/send/-/send-0.13.0.tgz	MIT License
serve-static	1.10.0	http://registry.npmjs.org/serve-static/-/serve-static-1.10.0.tgz	MIT License
setproctitle	1.1.8	http://code.google.com/p/py-setproctitle	The BSD License
setuptools	11.3.1	https://bitbucket.org/pypa/setuptools	Python License, Version 2 (Python-2.0)
sliced	1.0.1	http://registry.npmjs.org/sliced/-/sliced-1.0.1.tgz	MIT License
smarttools	6.2	http://smartmontools.sourceforge.net	GNU General Public License, version 2
snmpagent	5.0.9	http://sourceforge.net/	The BSD License
socket.io	1.3.6	http://registry.npmjs.org/socket.io/-/socket.io-1.3.6.tgz	MIT License
socket.io-adapter	0.3.1	http://registry.npmjs.org/socket.io-adapter/-/socket.io-adapter-0.3.1.tgz	MIT License

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socket.io-adapter-mongo	0.1.4	http://registry.npmjs.org/socket.io-adapter-mongo/-/socket.io-adapter-mongo-0.1.4.tgz	MIT License
socket.io-client	1.3.6	http://registry.npmjs.org/socket.io-client/-/socket.io-client-1.3.6.tgz	MIT License
socket.io-parser	2.2.4	http://registry.npmjs.org/socket.io-parser/-/socket.io-parser-2.2.4.tgz	MIT License
sqlite3	3070900	http://www.sqlite.org/	None
squashfs	3.0	http://squashfs.sourceforge.net/	GNU General Public License, version 2
squid	2.7.STABLE9	http://www.squid-cache.org/	GNU General Public License, version 2
stack-trace	0.0.9	https://registry.npmjs.org/stack-trace/-/stack-trace-0.0.9.tgz	MIT License
stackless python	2.7.5	http://www.stackless.com/	GNU General Public License, version 2
sticky-session	0.1.0	http://registry.npmjs.org/sticky-session/-/sticky-session-0.1.0.tgz	MIT License
strace	4.5.20	http://sourceforge.net/projects/strace/	The BSD License
stress	1.0.4	http://people.seas.harvard.edu/~apw/stress/	GNU General Public License, version 2
strongswan	4.4.0	http://www.strongswan.org	GNU General Public License, version 2
stunnel	4.31	http://www.stunnel.org/	GNU General Public License, version 2
svg2rlg	0.3	http://code.google.com/p/svg2rlg/	The BSD License
sysstat	9.0.5	http://sebastien.godard.pagesperso-orange.fr/	GNU General Public License, version 2
tar	1.17	http://www.gnu.org/software/tar/	GNU General Public License, version 2
tcpdump	4.0.0	http://www.tcpdump.org/	The BSD License
tinyproxy	1.8.3	https://banu.com/tinyproxy/	GNU General Public License, version 2
type-is	1.6.4	http://registry.npmjs.org/type-is/-/type-is-1.6.4.tgz	MIT License
tz	2014b	http://www.iana.org/time-zones/repository/releases/	GNU General Public License, version 2
u-boot	trunk-2010-03-30	http://www.denx.de/wiki/U-Boot/	GNU General Public License, version 2

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u-boot	trunk-2010-05-10	http://www.denx.de/wiki/U-Boot/	GNU General Public License, version 2
uClibc	0.9.29	http://www.uclibc.org/	GNU General Public License, version 2
uClibc	0.9.30.2	http://www.uclibc.org/	GNU General Public License, version 2
uci	0.7.5	http://www.openwrt.org/	GNU General Public License, version 2
udev	147	https://launchpad.net/udev	GNU General Public License, version 2
udev	r147	http://www.kernel.org/pub/linux/utils/kernel/hotplug/	GNU General Public License, version 2
usbutils	0.73	http://www.linux-usb.org/	GNU General Public License, version 2
util-linux	2.20	http://www.kernel.org/pub/linux/utils/util-linux/	GNU General Public License, version 2
utils-merge	1.0.0	http://registry.npmjs.org/utils-merge/-/utils-merge-1.0.0.tgz	MIT License
valgrind	3.5.0	http://valgrind.org/	GNU General Public License, version 2
validator	3.41.2	http://registry.npmjs.org/validator/-/validator-3.41.2.tgz	MIT License
vary	1.0.1	http://registry.npmjs.org/vary/-/vary-1.0.1.tgz	MIT License
wanpipe	3.5.18	http://wiki.sangoma.com/wanpipe-linux-drivers	GNU General Public License, version 2
websocket	2.4	https://github.com/hori0428/mod_websocket	MIT License
wget	1.14	http://www.gnu.org/software/wget/	GNU General Public License, version 3
winston	1.0.1	http://registry.npmjs.org/winston/-/winston-1.0.1.tgz	MIT License
wireless_tools	r29	http://www.hpl.hp.com/personal/Jean_Tourrilhes/Linux/Tools.html	GNU General Public License, version 2
wpa_supplicant	2.0	http://hostap.epitest.fi/wpa_supplicant/	The BSD License
ws	0.7.2	http://registry.npmjs.org/ws/-/ws-0.7.2.tgz	MIT License
wuftp	1.0.21	http://wu-ftp.d.therockgarden.ca/	WU-FTPD Software License
XenAPI	None	http://docs.vmd.citrix.com/XenServer/4.0.1/api/client-examples/python/index.html	GNU General Public License, version 2

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xen	4.1.5	http://www.xen.org/	GNU General Public License, version 2
xen-crashdump-analyser	20130505	http://xenbits.xen.org/people/andrewcoop/	GNU General Public License, version 2
xen-tools	4.2.1	http://xen-tools.org/software/xen-tools/	GNU General Public License, version 2
xxhashjs	0.1.1	http://registry.npmjs.org/xxhashjs/-/xxhashjs-0.1.1.tgz	MIT License
z3c-rml	2.7.2	http://pypi.python.org/pypi/z3c.rml	Zope Public License (ZPL) Version 2.0
zlib	1.2.8	http://www.zlib.net/	zlib License
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You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

The modified work must itself be a software library.

You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.

You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

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You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a "work that uses the Library" with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a "work that uses the library". The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted,

regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the "work that uses the Library" must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

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Version 2.1, February 1999

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For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

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"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

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You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.

If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful.

(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

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When a "work that uses the Library" uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

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Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable "work that uses the Library", as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)

Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

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Version 3, 29 June 2007

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The reason we have a separate public license for some libraries is that they blur the distinction we usually make between modifying or adding to a program and simply using it. Linking a program with a library, without changing the library, is in some sense simply using the library, and is analogous to running a utility program or application program. However, in a textual and legal sense, the linked executable is a combined work, a derivative of the original library, and the ordinary General Public License treats it as such.

Because of this blurred distinction, using the ordinary General Public License for libraries did not effectively promote software sharing, because most developers did not use the libraries. We concluded that weaker conditions might promote sharing better.

However, unrestricted linking of non-free programs would deprive the users of those programs of all benefit from the free status of the libraries themselves. This Library General Public License is intended to permit developers of non-free programs to use free libraries, while preserving your freedom as a user of such programs to change the free libraries that are incorporated in them. (We have not seen how to achieve this as regards changes in header files, but we have achieved it as regards changes in the actual functions of the Library.) The hope is that this will lead to faster development of free libraries.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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