1. NEW: ISC DHCP for DHCPv6 has been replaced with Kea. DHCPv4 remains (and shall remain for the foreseeable future) on ISC DHCP due to the amount of custom configurations implemented by customers. The change to Kea for DHCPv6 brings with it enhanced performance as well as more reliable record keeping. It also supports active/standby failover mode which allows us to have the primary active and the secondary as a standby in DHCPv6. In the case that the primary becomes unavailable, the secondary already is aware of all of the leases and begins servicing clients. This is different than before when we had the subnets split between the two devices and no failover. Under that scenario, if a prefix delegation subnet was more than 50% full and one of the DHCPatriot devices failed, there would not be enough addresses left to service the clients with the remaining portion of the subnet. Please note that it is not possible for Kea to be aware of the IP addresses and Delegated prefix that were assigned by ISC DHCP. As such, when version 7.1.0 is installed on the DHCPatriot system, there could be some address conflicts. We will want to lower the lease time for a while prior to installing 7.1.0 to make the effects short lived.
2. NEW: Throughout the interface, a wider variety of formats of DUID are now accepted. This is similar to the MAC address formats that are accepted. All of these are valid DUIDs formats: 0:1:2:3:ff:aa:cc:DD; 00010203ffaaccDD; 0-1-2-3-ff-aa-cc-DD; 0001.0203.ffaa.ccDD All of the former will be reformatted to 00:01:02:03:ff:aa:cc:dd
3. NEW: A new setting has appeared in 'System Configuration -> General Setup' called 'DHCP Decode Binary Option 82 Data'. This setting, when enabled, will cause the DHCPatriot to treat incoming option 82 data (Circuit-ID / Remote-ID) in DHCPv4 as binary encoded (base 16, 8 bit) hex. It will add a ":" separator between each octet. This is the most common form of binary encoding of option 82 data. If this is not enabled, the values are treated as plain text (as is the case with Calix option 82 data, for example)
4. NEW: The NTP servers that can be set for the DHCPatriot itself to utilize for time services (not the servers that are given to customers) now support both hostnames and IPv6 addresses. Primary and Secondary NTP Server (optional) under 'System Configuration -> General Setup' will now accept an FQDN such as 'pool.ntp.org' or an IPv6 address in addition to IPv4 addresses.
5. NEW: Auth DHCP Actions -> Built-in Authentication: User Maintenance now supports Static IPv6 and Static Delegated Prefix. An address or prefix may be assigned to a customer here and it will be assigned to the customer upon authentication if using Built-In authentication instead of an external RADIUS server.
6. BUG: Fixed a problem where if optional NTP servers were specified for either DHCPv4 auth or standard in the shared network config, they were remembered and output for other shared networks as well. This feature now functions correctly and NTP servers may be specified specifically for certain shared networks.
7. BUG: Repaired a problem where it was possible to not enter a match string when choosing match type of circuit id or remote id in Standard DHCP Actions -> Static IP Assignment. This caused the DHCP server not to run due to the blank string. The GUI now correctly detects that no string has been entered.
8. BUG: Validation was being done on neither the mac nor the DUID in DHCPv6 (IPv6) -> Sticky Assignments. This is no longer the case and invalid data will not be allowed.
9. BUG: Previously it was possible to add invalid DUID or macs via DHCPv6 (IPv6) -> Suspend Auth Device as now validation was being done. This is now no longer the case.

10. BUG: It is no longer possible to enter invalid DUIDs in DHCPv6 (IPv6) -> Authorize Device
11. BUG: Previously in DHCPv6 (IPv6) -> Known Client, both invalid MAC addresses and DUIDs could be entered. This is no longer possible.
12. BUG: DHCPv6 (IPv6) -> Search Sessions now checks the validity of the DUID or MAC address submitted for search.
13. BUG: Valid MAC Addresses and DUIDs are now required by DHCPv6 (IPv6) -> View Authenticated Users for searching.
14. BUG: DHCPv6 (IPv6) -> Search DHCP Logs now requires valid DUIDs for searching.
15. BUG: Fixed a problem where CSRF protection could be triggered if multiple versions of "Limit Displayed Entries" appeared on the screen such as could happen if clicking a username in Auth DHCP Reports -> View Authenticated Users. What would happen is once this username popup occurred and then the original "Limit Displayed Entries" form was used back in the View Authenticated Users area, the token was no longer valid causing CSRF protection to log you out. This is now fixed.
16. BUG: Repaired a problem where sometimes a session could show up in the count of IPs in use, and in the list of IPs in use when clicking the subnet under Auth DHCP Reports -> View Address Usage but fail to show up when doing a search in Auth DHCP Reports -> Search Sessions. This applied to the "standard" versions of these reports as well.
17. BUG: There was a problem where "Total Prefix" or "Total Dynamic" lines wouldn't print under certain circumstances in DHCPv6 (IPv6) -> View Address Usage. This has been corrected and these lines now print as they should.
18. Box 31 Extra DHCPv6 Configs has been removed from System Configuration -> General Setup as the Extra DHCPv6 configs are, currently, not relevant for the new Kea implementation.
19. The Prefix delegation assignment via RADIUS that was added in version 7.0.0 will now log and be reported in the Captive Portal and DHCPv6 (IPv6) -> Authorize Device. In version 7.0.0 we just quickly added the support and planned to circle back in 7.1.0 to add proper reporting. This previously planned reporting is now added.
20. Options for lease lengths less than 3 minutes have been removed. Any lease length settings that were less than 3 minutes have been set to 3 minutes. Testing shows that many clients will not accept a lease length less than 3 minutes. Further, sometimes those shorter lengths were used on highly populated subnets causing load issues.
21. Post->Redirect->Get method has been implemented throughout the web-based GUI on read-only type reports and lists such that it is now possible to use the refresh button without receiving warnings about re-submitting the previous form and subsequently getting logged out due to CSRF protection. Previously, this only applied to configuration changes etc.. such that it prevented double submissions.
22. The formerly only OUI lookup report that was shown when clicking a mac address throughout the interface, now shows more. It is now called "Device Profiler". In addition to the OUI data, it also shows the username associated with the device, option 60, and option 82 data (if any of that exists). It also shows any DHCPv6 details such as DUID, option 18 and option 37 (if any exist).
23. The "Device Profiler" can now be accessed by clicking on DUIDs as well throughout the interface.

24. API: SearchSessions/RemoteSearch now supports searching by option 82 parameters (CircuitID and RemoteID) like so:
    https://patriot.alpha.network1.net/cli/?function=SearchSessions&username=apiuser&password=apipass&action=search&user=&mac=&ip=&online=1&start=$stop=&82=&CircuitID=VLAN12&RemoteID=
    https://patriot.alpha.network1.net/cli/?function=SearchSessions&username=apiuser&password=apipass&action=search&user=&mac=&ip=&online=1&start=$stop=&82=&CircuitID=&RemoteID=01:02:03:04:05:06
    Searching by either of those option 82 parameters causes 82 to become "true" meaning that option 82 data will be included in the results as if you had sent "true" for that parameter.
25. API: BASearchCustomers now supports showing assigned Static IPv6 and Static Delegated Prefix in Built-In authentication. New parameters called StaticIPv6 and DelegatedPrefix contain the assigned values.
26. API: BAAddCustomer now supports two additional parameters of StaticIPv6 and DelegatedPrefix to allow assigning of Static IPv6 and Static Delegated Prefix, respectively, in Built-In Authentication.
27. API: BAEditCustomer now supports two additional parameters of StaticIPv6 and DelegatedPrefix to allow editing assignments of Static IPv6 and Static Delegated Prefix, respectively, in Built-In Authentication.