

VYATTA, INC. | **Release Notes**

Vyatta Release VC2.2

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Vyatta
Suite 160
One Waters Park Drive
San Mateo, CA 94403
vyatta.com

Contents

- New in This Release
- Behavior Changes
- Upgrade Notes
- Resolved Issues
- Known Issues

New in This Release

- **Per-peer BGP routing policies.** Import and export routing policies can now be applied to individual BGP peers as well as at the BGP protocol level.
- **MD5 authentication for BGP.** An MD5 key can now be specified to authenticate a BGP peer.
- **NAT usability enhancements.** NAT configuration commands have been enhanced to make configuring NAT rules simpler and more intuitive.
 - Rule **type** and rule **translation-type** have been collapsed into a single type attribute, which can take a value of **source**, **destination**, or **masquerade**. The **translation-type** attribute has been deprecated.
 - The **network** statement is no longer available for the **inside-address** and **outside-address** configuration options. An IP address, a range of IP addresses, a port number, or a range of port numbers may be specified for these options.
 - Source and destination ports can both have multiple port numbers and port names defined, by creating multiple **port-number** and **port-name** configuration nodes, respectively.

In support of these changes, the “NAT” chapter of the Vyatta OFR Configuration Guide has been redesigned to reflect the command changes and to present a greater number and variety of examples. Configuration files are automatically migrated to the new syntax, as described below in the Upgrade Notes section.

- **Improvements to DHCP server and DHCP relay configuration.** In previous releases, the system’s DHCP server configuration feature did not work correctly for multiple subnets on the same physical interface (multinetting). In addition, the DHCP relay configuration feature did not work correctly for multiple physical interfaces. These features have been made more robust, and now the DHCP server and relay can be used in both of these cases. To support these improvements, the configuration schema for DHCP has changed.

Configuration files are automatically migrated to the new syntax, as described below in the Upgrade Notes section.

In VC2, the configuration schema for DHCP server was as follows:

```

service {
  dhcp-server {
    name text {
      interface: eth0..eth23
      network-mask: 0-32
      start ipv4 {
        stop: ipv4
      }
      exclude: ipv4 {}
      static-mapping: text {
        ip-address: ipv4
        mac-address: macaddr
      }
      dns-server ipv4 {}
      default-router: ipv4
      wins-server ipv4 {}
      lease: 120-4294967296
      domain-name: text
      authoritative: [enable|disable]
    }
  }
}

```

Beginning with VC2.2, the configuration schema for DHCP server is as follows:

```

service {
  dhcp-server {
    shared-network-name text {
      subnet ipv4net {
        start ipv4 {
          stop: ipv4
        }
        exclude: ipv4 {}
        static-mapping: text {
          ip-address: ipv4
          mac-address: macaddr
        }
      }
      client-prefix-length: 0-32
      dns-server ipv4 {}
      default-router: ipv4
    }
  }
}

```

```

        wins-server ipv4 {}
        lease: 120-4294967296
        domain-name: text
        authoritative: [enable|disable]
    }
}

```

In VC2, the configuration schema for DHCP relay was as follows:

```

service {
  dhcp {
    relay {
      interface [all|eth0..eth23] {
        server: ipv4 {}
        relay-options {
          port: 1-65535
          max-size: 64-1400
          hop-count: 1-255
          relay-agents-packets: [discard|forward]
        }
      }
    }
  }
}

```

Beginning with VC2.2, the configuration schema for DHCP relay is as follows:

```

service {
  dhcp-relay {
    interface [all|eth0..eth23] {}
    server: ipv4 {}
    relay-options {
      port: 1-65535
      max-size: 64-1400
      hop-count: 1-255
      relay-agents-packets: [discard|forward]
    }
  }
}

```

- **New options for “show version.”** The “show version” command has been enhanced to provide additional information. The new options are as follows:
 - **all.** Shows all packages that have either been added, deleted, downgraded, or upgraded since the last baseline release upgrade.
 - **added.** Lists packages that have been added when compared to the last baseline release upgrade.

- **deleted.** Lists packages that have been deleted when compared to the last baseline release upgrade.
- **downgraded.** Lists packages that have been rolled back to a previous version when compared to the last baseline release upgrade.
- **upgraded.** Lists packages that have been upgraded when compared to the last baseline release upgrade.
- **Bug fixes.** Over 100 issues have been resolved with VC2.2. A summary list of these is provided in the “Resolved Issues” section, which begins on page 5.

Behavior Changes

In VC2.2, a number of unsupported options have been removed from the “to” term for BGP policy configuration syntax. Only the “neighbor” option is supported in BGP “to” terms, as follows:

```
to {
    neighbor: ipv4-range
}
```

Upgrade Notes

In VC2.2, the configuration file syntax has been modified for NAT commands (**service nat**), and DHCP server and DHCP relay commands (**service dhcp-server** and **service dhcp-relay**). The Vyatta configuration file is automatically migrated to the new syntax when you upgrade. Likewise, if you roll back a package to a previous version, the configuration file is automatically migrated back to the old version.

There are no manual configuration changes required on your part. However, you should review your configuration after upgrading to ensure that all information is as you expect.

You can upgrade to VC2.2 from VC2 using an ordinary package upgrade, as follows:

1. Configure the repository statement in the system package configuration node to point to the repository holding the VC2.2 release.
2. Exit the Vyatta system shell into the Linux command shell. As the root user at the Linux command prompt, enter the following series of commands:

```
apt-get update
apt-get install vc2-base
full-upgrade
```

After the upgrade has completed, the system automatically prompts you to reboot. Reboot the system.

If you are upgrading from an earlier release, we recommend that you upgrade in two steps to ensure that upgrade performs correctly. First, upgrade to VC2, then upgrade from VC2 to VC2.2.

Resolved Issues

Bug ID	Component	Severity	Description
285	policy	critical	XORP 245: show policy commands do not exist (TC 4.1.1.1.31)
354	BGP	major	XORP 341: default BGP TTL is > 1 (TC 3.2.4.1.17)
409	policy	major	XORP 307: policy prefix-length4 is a range rather than single instance
410	policy	critical	XORP 308: system does not allow insert/move of policy terms
453	policy	major	XORP 357: policy statement accepts non-integer "term" values
791	policy	enhancement	XORP 667: BGP - add import & export policy per peer / group
886	OSPF	critical	XORP 545: OSPF - summary-LSA deleted if area-range with same base subnet deleted
934	policy	enhancement	XORP 579: Policy - enhance "list" element handling
1320	CLI	major	Internal error reported when loading configuration file with deprecated commands
1437	BGP	enhancement	BGP MD5 authentication
1448	NAT	enhancement	Add the ability to specify multiple named ports within a single NAT rule
1481	NAT	enhancement	NAT - cannot configure port forwarding NAT rule
1497	NAT	major	NAT: Add More Flexibility in Protocol Parameter
1530	system	major	slow boot with compact flash: hdc: dma_timer_expiry: dma status == 0x21
1551	policy	major	Receive "102 Command failed delete_policy" when attempting to delete a policy that was bound to a non-existent protocol
1566	DHCP	critical	dhcpd.conf file incorrectly generated when multiple subnets are using the same physical interface
1567	DHCP	critical	DHCP Relay cannot be configured to work with multiple interfaces

1568	DHCP	enhancement	Merge DHCP relay option with service DHCP in CLI
1591	BGP	unavailable	BGP: 'clear bgp' commands should provide user message
1594	DHCP	unavailable	Update "show dhcp statistics" error when DHCP not configured
1630	CLI	enhancement	Add nano (a GPL'ed pico clone) as a text editor to the distribution.
1653	system	enhancement	Add the ability to read and execute scripts/ commands from floppy
1751	system	unavailable	Delete system login user doesn't work properly
1773	NAT	enhancement	NAT: Add range option for inside-address
1785	DHCP	major	Xorpsh reports DHCP leases and Statistics incorrectly
1786	DHCP	unavailable	DHCP cannot be configured on an interface with multiple addresses
1794	system	enhancement	Need quick package comparison with released packages
1797	policy	unavailable	network4-list does not work with action reject
1802	policy	major	XORP 699: Import policy "reject all" statement rejects accept statements on export policy
1808	BGP	unavailable	BGP crash with import & export policy (merged XORP build)
1815	policy	unavailable	policy "neighbor" keyword uses BGP ID not peer IP
1845	policy	major	BGP process dies with import policy containing "from neighbor" statement in combination with any export policy
1847	packaging	major	package component not updating properly
1861	interfaces	blocker	Interfaces responding to arp requests for ports that are down
1867	policy	enhancement	Enable the ability to use match operators in conjunction with the "network4-list" policy object
1868	logging	major	System log file only contains last ten minutes of information
1875	packaging	unavailable	"install package" and "upgrade package" do the same thing
1890	policy	unavailable	Policy/BGP: Committing import policy with "then as-path-expand" crashed the bgp
1896	CLI	unavailable	Suprious error output can happen in various "show" commands

1899	NAT	minor	Receive "102 Command failed" When Configuring 'outside-address' on masquerade NAT rule
1907	CLI	unavailable	Missing mandatory configuration node "\$(@.targetname)", if a protocol being deleted without committed, and then set and committed
1909	documentation	minor	CmdRef: OSPF interface parameter "passive" incorrectly described
1911	documentation	minor	CmdRef: OSPF area parameter "default-lsa-disable" is described incorrectly
1915	documentation	unavailable	Incorrect mode in "save configuration" example in Quick Start guide
1921	interfaces	unavailable	Interface number not displayed
1923	policy	unavailable	Policy/BGP: To remove unneeded policy "to" commands for BGP
1925	policy	unavailable	Policy: Commit failed after as-path-list was set in "from" clause of a policy statement
1926	policy	unavailable	Policy/BGP: "community-add" added nothing if the prior community was empty.
1935	policy	unavailable	Policy: The question mark can't be input as a part of an as-path.
1936	policy	unavailable	Policy/BGP: "DependencyError" occurred after a policy-statement was deleted, which was used in the import/export clause that was also then deleted, then committed.
1942	GUI	unavailable	Credits in GUI for Version 2.0 are indicating that the Version is Vyatta OFR v1.1
1944	NAT	major	Multiple PPTP Clients Behind NAT Unable to Connect to PPTP / GRE VPN Server
1947	policy	unavailable	Policy: "set policy policy-statement E0 term 1 from network4 == ?" returned wrong information
1951	VPN	unavailable	Openswan installation fails
1955	documentation	enhancement	OSPF Documentation: enhance description of OSPF Virtual-Links option
1959	system	minor	Cron update error
1960	packaging	blocker	Vyatta packages are not updated during package upgrade
1961	BGP	unavailable	FATAL xorp_bgp: unreachable code reached
1969	BGP	unavailable	Loading configuration file with modified BGP IMPORT policy causes xorp_bgp to crash
1970	BGP	unavailable	Modifying BGP IMPORT policy term causes crash

1971	CLI	enhancement	Frame-Relay "nolmi" option cannot be configured through CLI
1972	interfaces	unavailable	Frame-Relay "nolmi" option to wanpipe does not consistently allow circuit to be activated
1975	policy	major	Policy: Receive "Can't create policy <policy name> : already exists" error when reconfiguring policy after prior commit failure
1985	policy	major	Policy: Receive 102 Command failed "Term already present in position..." when adding policy terms
1989	BGP	unavailable	show bgp peers does not show state transitions correctly.
1991	BGP	major	BGP process dies when adding export policy containing "to neighbor" statement while BGP peers are established
1992	DHCP	unavailable	Output of "show dhcp leases" incorrectly formatted
1993	DHCP	critical	dhcpd.conf file incorrectly generated when an interface is multinetted
1994	DHCP	minor	Show DHCP leases / statistics help strings are reversed
1997	interfaces	minor	"Show interface ethernet ..." command doesn't have correct information for dropped field
1998	documentation	unavailable	[NAT] dynamic mapping possible with destination NAT
2000	policy	unavailable	Terms fail to update action after term is first created
2001	GUI	unavailable	Unable to login to web based GUI interface after upgrade from 2.0 to 2.1.1
2003	policy	unavailable	Export policy applied to BGP fails to advertise routes on matching accept
2005	packaging	minor	Package Upgrade: Error messages during package upgrade to be documented
2022	documentation	major	v2.1.1 Docs/Policy: network4-list and network6-list show incorrect syntax
2024	policy	enhancement	Enhancement Request: Display numeric policy terms in numerical order rRegardless of order of entry
2028	NAT	minor	New NAT CLI: Error message can be modified
2032	NAT	minor	NAT: Incorrect error message information from iptables

2033	CLI	unavailable	New NAT CLI: Committing twice with incorrect configuration causes problem when changing existing rule
2038	interfaces	unavailable	WANPIPE: "show interfaces cisco-hdlc" AFT Link status section doesn't work
2039	interfaces	unavailable	WANPIPE: "show interfaces serial wan0 ppp" has error warning message
2040	interfaces	unavailable	Serial Configuration with PPP encap can not be modified after intial configuration
2041	interfaces	unavailable	Serial interface does not work with PPP encapsulation
2047	BGP	unavailable	"delete protocol bgp" crashes bgp process
2054	BGP	minor	BGP multihop parameter
2055	system	critical	Sangoma WAN Module drivers not loaded after upgrade from 2.0 to 2.1.1
2059	policy	unavailable	Policy Issue: Terms in random order (bug 2024) in configuration are not applied in numeric order
2060	DHCP	unavailable	Receive error "dhcp is not configured" When Running 'show dhcp leases' Command
2062	DHCP	critical	DHCP: Intermittently fails to start on some Interfaces – 'No subnet declaration for ethx (x.x.x.x).' Error Messages Generated on Boot
2065	system	unavailable	"init-floppy" does NOT save the config to floppy
2075	DHCP	unavailable	DHCP: Library path for perl library missing for DHCP commands
2077	DHCP	unavailable	DHCP: Deletion of DHCP commands didn't remove the configuration from dhcpd.conf
2082	DHCP	unavailable	DHCP: domain-name-servers parameter in dhcpd.conf file needs to be modified
2084	DHCP	unavailable	DHCP: Configuration with invalid string for naming the dhcp-server should be filtered out
2085	DHCP	unavailable	DHCP Relay – Removing the options configuration completely stopped DHCP relay
2086	DHCP	unavailable	DHCP: "show dhcp leases" doesn't have client-name field populated
2087	DHCP	unavailable	DHCP: Deleting a shared-network configuration didn't remove config's in dhcpd.conf
2088	packaging	unavailable	Packaging: Loading a config file is not successful due to configuration migration failure

2089	BGP	unavailable	BGP: bgp process kept 99% cpu usage after its only session with a neighbor who advertised 200k routes was stopped, while while the 200k routes stayed in not bgp-routing-table but RIB.
2093	policy	unavailable	Policy: help messages for "as-path-expand" and "as-path-prepend" need to be changed
2096	DHCP	unavailable	DHCP Relay – Help needs to be updated for some dhcp relay CLI commands
2098	packaging	enhancement	Feature Request: The "full-upgrade" should request when to reboot the system during an upgrade
2100	DHCP	unavailable	DHCP Relay: dhcrelay doesn't get started correctly in Linux
2108	system	unavailable	Config partition can't be seen from the Linux shell after when utilizing Dell Diagnostics
2117	VPN	enhancement	Allow non-interface addresses to be specified for VPN

Known Issues

Bug ID	Description
1635	SNMP statistics are not reported. SNMP statistics commands return packet counts of zero. Recommended Action: None. This is a display issue, and does not affect SNMP functionality.
1530	Slow boot with compact flash: hdc: dma_timer_expiry: dma status == 0x21. When a Vyatta system is booted from LiveCD or compact Flash, DMA timeout error messages display. Recommended action: None. This message can be safely ignored.
1791	XORP 697: BGP crash – invalid peer AS. If a BGP peering session is changed from a confederation to iBGP and the AS number for the BGP peer is incorrectly specified in the peer configuration, the BGP process may unexpectedly terminate. Recommended Action: To minimize the possibility of this issue occurring, carefully verify the peering session configuration.
1799	Policy statements only allow a single AS prepend. To ensure that AS path manipulation is effective, it is common practice to prepend the AS multiple times. Recommended Action: None. This issue is not service-affecting.
1820	"clear bgp <IP>" does not clear BGP session. The "clear bgp <i>ip-address</i> " command is not clearing the associated BGP session. Recommended action: Use the "clear bgp <i>as-number</i> " command to clear the BGP sessions associated with a specific autonomous system number.

1881	<p>“update package” does not work in CLI. Recommended action: To update to the current release, log into the Linux shell as the root user and execute the following series of commands:</p> <pre>apt-get update apt-get -y install vyatta-base full-upgrade</pre> <p>Note that the system will be automatically rebooted at the end of the upgrade.</p>
1900	<p>BGP crashes peer after manual flap from a Juniper or Vyatta neighbor. After a “clear bgp neighbor” is performed from a Juniper eBGP neighbor or a “disable true” is set on a Vyatta eBGP router, the remote Vyatta peer crashes and frequently a Vyatta iBGP neighbor to the crashed peer also fails. Recommended action: Performing a soft reset on the BGP neighbor on connected to the Vyatta peer could avoid the BGP process crash on the Vyatta router.</p>
1953	<p>Policy/BGP: The default action for matched routes is “accept.” It should should be “reject” for BGP export/redistribution. Recommended action: Be aware that if there is no “action” term in the policy, matched routes are accepted by default. If you intend matched routes to be rejected, ensure that you explicitly include a “then action: reject” statement.</p>
2004	<p>Enhancement request: The Vyatta system should prevent user from assigning redistribution policy on a per-peer basis. The system should fail to commit policies set on a BGP peer exported to non-BGP protocols.</p>
2006	<p>Enhancement request: If the protocol is not specified in the “from” term of a policy statement, then the “from” protocol should be set to whatever protocol is using the policy. For example, if the policy has been applied as a BGP export/redistribution policy, the “from” protocol should be set to BGP. This is expected behavior. Recommended action: Be aware that the “from” protocol is not implicitly set, and ensure that you always explicitly specify the “from” protocol for every term of an export/redistribution policy.</p>
2007	<p>Export policy will not filter redistribution policy on same protocol. If BGP has a redistribution policy on Peer A, and an export filter on Peer B, then routes that redistributed into Peer A will not be filtered by the export policy applied to Peer B. For example, if a static route 1.1.1.1/32 is redistributed into the BGP RIB, and Peer B has a export filter to reject 1.1.1.1/32, the route will still be advertised to Peer B. Recommended action: Export policies intended to redistribute routes into protocols other than BGP should be configured globally, not configured for a specific peer. If you want to specifically define the BGP peers/neighbors to which the redistributed routes should be advertised, configure the route globally but use the “to neighbor x.x.x.x” statement in the policy.</p>
2076	<p>DHCP: Configuration may not be fully validated until commit. It is possible to configure DHCP options in a manner that is not fully supported by the underlying DHCP service. Recommended action: None. Under these conditions, errors may not be flagged as a configuration error, but are reported as a misconfiguration by the DHCP service when the configuration is committed.</p>
2080	<p>DHCP: Some option parameters are not added to dhcpd.conf file. Excluded subnets specified using the “service dhcp-server <i>ip-addr</i> shared-network-name <i>name</i> subnet <i>ip-addr/prefix</i> exclude” statement are not</p>

	<p>correctly excluded: the statement is ignored.</p> <p>Recommended action: Exclude addresses by specifying multiple ranges that split the address range, leaving out the excluded addresses. For example, if the lease range is 192.168.2.100 to 192.168.2.200, and IP address 192.168.2.130 is to be excluded from the range, specify the following two lease ranges: 192.168.2.100 to 192.168.2.129, and 192.168.2.131 to 192.168.2.200.</p>
2095	<p>Policy/BGP: BGP crashed after its export policy was changed and committed. If the "from network4 x.x.x.x" statement is changed in a term in a policy being used by or deleted from the BGP protocol, the BGP process may crash when the policy change is committed.</p> <p>Recommended action: Avoid changing network4 statements in policies being used by BGP.</p>
2108	<p>Config partition can't be seen from the Linux shell after when utilizing Dell Diagnostics.</p> <p>After the Dell Diagnostics utility partition has been created and the appropriate configuration and root partitions have been created from the Linux shell and are visible, the configuration partition does not appear when the Vyatta operation system is installed to the hard drive.</p> <p>Recommended action: None. This issue is not service-affecting.</p>
2109	<p>BGP: Deleting/committing "multihop" may not enforce desired multihop behavior.</p> <p>When a BGP peering session is disabled and then re-enabled, the multihop peer distance used is 64 rather than the default peer distance of 1.</p> <p>Recommended action: None. This issue is not service-affecting.</p>