

# Oracle® SD-WAN Edge 7.3 P1

## Release Notes



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## About This Document

Talari APN release notes inform customers of added features, resolved issues, requirements for use, and known issues in the latest Talari APN releases.

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A list of the entire documentation set for the selected product and release appears.

5. To download a file to your location, right-click the PDF link, select Save target as (or similar command based on your browser), and save to a local folder.

## References

The following documents are available:

- *Talari Glossary*
- *Talari Appliance Quick Start Guide*
- *Talari APN 7.3 GA New Features Guide*
- *Talari APN 7.3 GA Configuration File Reference*
- *Talari Aware 4.3 GA Release Notes*



## About This Product

**It is not recommended that customers using Service Chaining upgrade to 7.2 P3 or above.**

### Talari Appliances

APN 7.3 GA P1 supports Talari Appliances functioning as Network Control Nodes (NCNs) or Client Nodes.

The following Talari Appliances are compatible with APN 7.3 GA P1:

- Talari Physical Appliances: E50, T510, T730, T750, T860, E100, T3010, E1000, T5000, T5200
- Talari Virtual Appliances: VT800, CT800

**Note:** The E50, T510, and T730 Appliances only function as Client Nodes.

### Capacity by Appliance Model

The following table details the supported network scale for each Talari Appliance model when running APN 7.3 GA P1.

Model	Max Static Conduits	Max Dynamic Conduits	Max WAN Ingress Paths	Max WAN Egress Paths	Max Flows (TCP Term off)	Max Flows (TCP Term on)	Max Public WAN Links	Max Private WAN Links
E50	8	4	36	36	32,000	500	3	32
T510	8	4	36	36	64,000	500	3	32
T730	16	8	72	72	64,000	4,000	8	32
T750	32	16	216	216	64,000	8,000	8	32
T860	32	16	216	216	64,000	8,000	8	32
E100	32	16	216	216	64,000	8,000	8	32
T3010	128	32	576	576	256,000	16,000	8	32
E1000	200	32	1,000	1,000	256,000	16,000	8	32
T5000	256	32	1,152	1,152	512,000	16,000	8	32
T5200	550	32	5,500	5,500	512,000	16,000	8	32
VT800	32	16	216	216	64,000	8,000	8	32
CT800	16	8	120	120	64,000	4,000	8	32

**Table 1: Network Scale by Talari Appliance Model**

## Supported Combinations

APN 7.3 GA P1 is supported in combination with the following level(s) of Talari Aware:

- Aware 4.3 GA P1

To deploy this level of APN on your network, each Talari Appliance must be running a supported level of Talari OS. If an OS update is required, see the *Talari OS Partition Update Guide* for instructions.

The following versions of Talari OS support APN 7.3 GA P1:

Talari Appliance Model	Talari OS		
	OS 4.6	OS 5.0	OS 5.1
E50	--	--	YES
T510	YES	YES	YES
T730	YES	--	--
T750	YES	--	--
T860	YES	YES	YES
E100	--	YES	YES
T3010	YES	YES	YES
E1000	--	--	YES
T5000	YES	YES	YES
T5200	YES	YES	YES
VT800	YES	YES	YES
CT800	YES	YES	YES

## Supported Web Browsers

The Talari Web Console is supported in latest versions of the following web browsers:

- Microsoft IE9 – IE11
- Mozilla Firefox
- Google Chrome

Supported browsers must have cookies enabled.

Supported browsers must have JavaScript installed and enabled.

## Enhancements/ Features in APN 7.3 GA P1

The following issues have been enhanced or added since APN 7.3 GA:

ID	Issue Description
17478	The “Top Applications” section on the landing dashboard has been renamed “Top Network Protocols” to better reflect the type of information provided.
17401	System Information has been moved from the dropdown in the upper right-hand corner to the side navigation bar.
17352	When configuring BGP neighbors, users may now enable the Next Hop Self option to advertise the Talari’s source address as the next hop. Next Hop Self is enabled by default. Additionally, users may now enable the Use Next Hop option when configuring BGP Import Filters as long as Recursive Route is also enabled. When Use Next Hop is enabled, the next hop will be used to find the Conduit Service for routes imported as Conduit routes. By default Use Next Hop is disabled and the source router is used to find the Conduit Service for routes imported as Conduit routes.
17351	Users can now check the “Allow Return Flow” box when configuring a Static NAT Policy. This will allow inbound connections that match specific outbound connections based on that defined Static NAT policy. Previously, it was necessary to manually configure a separate policy. Additional firewall policies may be required in certain scenarios.
17329	Users may now clone an application from the Talari Defined Applications section. After clicking the Clone icon and then applying the change, the application is cloned to the User Defined Applications section where the user can edit the application as needed.

## Resolved Issues in APN 7.3 GA P1

The following issues have been fixed since APN 7.3 GA:

ID	Issue Description
17553	In some cases, the UI could log to a file that will not wrap around. This has the potential to fill up the disk if the UI is left connected to an appliance for extremely long periods of time.
17548	When making a configuration update to add or remove an ethernet interface, and a rule or class is not also changed, it may cause the port which is changed to work improperly. Making another configuration update after the port is in this state may cause a service impacting memory dump.

ID	Issue Description
17544	On appliances using Service Chaining with a guest VM, the bridged interfaces between the Talari and the guest VM may be removed when the Talari appliance reboots.
17499	When overriding an application to a service, the session may show the wrong service in use on the <b>Statistics &gt; QoS &gt; Applications</b> screen.
17493	The NCN may log a large number of port-learning messages if a remote WAN link with IP learning enabled has multiple paths to the NCN using different source ports.
17489	If more than 3 remote WAN links are DHCP clients with different UDP ports, some paths may become stuck in the DEAD state. The learned IP addresses are not used correctly in the path table at the NCN or Geo-Diverse NCN, resulting in the paths being down.
17466	If the Change Management file transfer process is interrupted because the file transfer process dies, the file transfers will not work when the file transfer process is restarted.
17460	For particularly large networks, Change Management may lock up during the update process.
17457	When the <b>Applications &gt; Service Type Data</b> screen is refreshed, the page contents are not updated.
17448	On the <b>Monitor &gt; Flows</b> screen, flows cannot be filtered by application name or DSCP tag.
17436	The Service Type Data section on the <b>Application &gt; Dashboard</b> may not display the correct application count and bandwidth data.
17427	Under certain conditions (for example, switching an appliance from Secondary NCN mode to Client mode), the Local Change Management UI may not show the option to upload and activate an appliance package.
17421	The Talari appliance may send class data to Aware which causes all classes on the Aware <b>Monitor &gt; Reports &gt; Classes</b> screen to be incorrectly assigned the type of "control_class".
17419	<p>On a T5200, pushing a configuration update with changes to Rules or Classes may cause buffer loss. If buffer loss builds up significantly, it will affect performance on the appliance. Examine the APN_misc.log file for buffer loss messages.</p> <p>If performance becomes seriously degraded, restarting the Talari service will clear the condition.</p>

ID	Issue Description
17416	A change to the probing interval for an application will not be applied properly to applications with active probes.
17415	When Dynamic Conduits are torn down due to lack of use, they are incorrectly shown as dead in the Site Conduits and Conduit Health portions of the landing dashboard.
17404	When multiple last resort standby WAN links are configured, the last standby WAN link may not come up as expected.
17379	In some cases, a non-service impacting memory dump could occur when the forwarding service is starting up. This memory dump is not service impacting as it is a result of inadvertently starting a second copy of the forwarding service.
17336	In some cases, conduit traffic could experience lost packets when a flow is just beginning.
17335	When an application has no match criteria using domain name, the probing interval drop down list is not disabled.
17334	Appliances using Service Chaining may go down after upgrading to R7.2 P3 or later, if the VM is both installed and running at the time of the upgrade. This can be prevented by shutting down the VM before upgrading. If the appliance goes down, restarting the appliance should resolve the issue.
17328	When application traffic is configured to steer to the Intranet service at a destination site which has multiple routing domains and wan-to-wan forwarding enabled, the traffic may not be steered as desired if the routing domain name is not explicitly selected from the dropdown for the Intranet service at the destination site under <b>Connections &gt; [Site] &gt; Intranet Services &gt; [Service Name] &gt; Basic Settings</b> .
17325	When a Zscaler IPsec tunnel is configured, flows using application-based routing will show an incorrect service name on the <b>Monitor &gt; Flows</b> screen. Flows are correctly routed through Zscaler.
17321	When renaming or deleting a Site, Site Group, Source Network, Application, or Category from an application policy definition, it may not be renamed or deleted correctly.
17313	If multiple users have been created on the NCN, comments will not show up as expected in the Configuration Editor's Save/Save As and Export dialog boxes.
17288	On the <b>Statistics &gt; QoS &gt; Applications</b> screen, sorting on the numerical columns (Packets Received, Kbps Received, Packets Sent, Kbps Sent, and Sessions) does not work as expected.

<b>ID</b>	<b>Issue Description</b>
17285	When viewing Applications in the Advanced View of the Configuration Editor, it appears that the user can check to enable or disable applications directly from the list view without selecting the Edit icon first.
17256	If a string containing invalid symbols is pasted into the comment field when exporting or saving a configuration, it may cause the comment to be lost or corrupt the configuration file. The invalid symbols are \ " ' & < > and carriage return.
17224	On the T3010, T5000, and T5200 platforms, it is possible for an ethernet port to fail to initialize, leading to the Talari service being disabled. The error handling has been improved to detect this situation and automatically issue a reboot, which will resolve the issue.
17004	When adding Dynamic NAT to an untrusted WAN link, the Talari service may need to be restarted for the NAT policy to take effect. This includes the automatically generated Dynamic NAT Policy created when adding a new Internet service.
15671	When Rebind Flow on Change is enabled on a rule that also has TCP Termination or WAN Optimization enabled, TCP Termination may lock up for matching flows. As a result, Rebind Flow on Change can no longer be enabled on a rule unless TCP Termination and WAN Optimization are disabled.

## Known Issues in APN 7.3 GA P1

The following issues are known to exist in 7.3 GA P1:

<b>ID</b>	<b>Issue Description</b>	<b>Workaround</b>	<b>Targeted Fix</b>
17584	It is possible for an OS partition update to fail because the Install Image step fails to format the backup partition. A reboot of the appliance in this state will clear the issue.	See Issue Description	Future
17564	Pushing a configuration change which adds a rule to override conduit traffic to passthrough may cause a service impacting memory dump.	None	TBD
17550	If a dynamic conduit is created between two sites with non- matching MPLS queues (for example, one site has EF and Default queues, while the other only has a Default queue), and a packet is received at a site with a DSCP tag set which doesn't exist at that site, it may cause a service impacting memory dump.	None	Future

ID	Issue Description	Workaround	Targeted Fix
17373	If a user is added with a username that contains the text "talariuser" (ex: "talariuser1" or "newtalariuser"), then an OS partition update will cause the default user "talariuser" to be deleted.	None	Future
17191	When making major configuration changes to Firewall and QoS Rules simultaneously, there is a small possibility of causing a service impacting memory dump on a client device. The workaround is to restart the appliance.	See Issue Description	TBD
17096	When using an application called CMS, which is an ERP system that runs on OS/2 and on the IBM AS400, if WANOp enabled performance may be slower for small files or if multiple tables are accessed at the same time that require multiple authentication. The workaround is to avoid enabling WANOp for this type of application.	See Issue Description	TBD
16800	When using SNMP Route Learning, there is a possibility that after routes are deleted, then may be re-added after clicking the "Propagate Now" button.	None	TBD
16792	Very rarely, when performing a software upgrade on an APN with an E100, the conduit to the E100 may go down due to a potential kernel issue. The workaround is to restart the appliance.	See Issue Description	TBD
16738	In some cases, when a conduit goes down and then comes back up, all the routes may not re-populate as expected.	None	TBD
15794	When performing an OS Update (upload of OS package or installation of the uploaded OS), if the Web Console times out or the user navigates away from the page, the resulting underlying system state causes the OS Version for the Backup partition to be reported as "-1". The workaround is to reboot the appliance and try the OS upload or install operation again.	See Issue Description	TBD



## 3rd Party Issues Affecting APN 7.3 GA P1

The following 3rd party issues are known to affect 7.3 GA P1:

ID	Issue Description	Workaround	Targeted Fix
14734	Opening configuration files containing a very large number of sites into the APN Configuration Editor using Internet Explorer (IE) may take anywhere from 10-30 seconds to load. As a workaround, use Chrome or Firefox.	See Issue Description	None
12610	When using Chrome, the Regenerate HTTPS Certificates page is displayed a second time after the initial count down completes. The workaround is to use another browser.	See Issue Description	None
11268	In certain conditions where an SNMP-polled Cisco device learns multiple EIGRP routes with the same network ID but different lengths (e.g., 10.26.16.0/20 and 10.26.16.0/24), the router will only insert the first route from its routing table into the SNMP table. Cisco IOS devices list the longest match first (/24), whereas Cisco Nexus devices list the shortest match first (/20). As a result, a Talari Appliance polling for routes will only receive one of the routes and which one it receives depends on the device being polled. This could cause connectivity issues.	None	None
8664	On T3010 and T5000 appliances, holding the red "X" button on the front of the unit for less than 10 seconds will not power down the unit. Holding the button for more than 4 seconds but less than 10 will cause a "Power Off" message to be displayed but the unit will not shut down. In order to clear the "Power Off" message and re-display the management IP address, re-apply the existing management interface settings under <b>Manage Appliance - &gt; Ethernet Interface Settings -&gt; Management Interface</b> . Also note that shutting the unit down using the power button does not perform a graceful shutdown.	See Issue Description	None

ID	Issue Description	Workaround	Targeted Fix
8127	When using Chrome, under <b>Manage Appliance -&gt; Users / Authentication</b> , certain fields in the RADIUS section (if RADIUS is enabled) or the TACACS+ section (if TACACS+ is enabled) may be incorrectly filled with login credentials saved by Chrome for the Site. This is an auto-fill issue in Chrome. Workaround is to use another browser or to replace incorrect auto-fill information with correct information before attempting to apply changes to the RADIUS or TACACS+ settings.	See Issue Description	None
7179	When console cable is plugged in to a Talari Appliance and attached out to some external device (e.g. a terminal server), noise on the console cable may interrupt appliance boot sequence. Workaround is to unplug console cable from appliance, to unplug console cable from external device, or to connect to appliance locally and restart interrupted boot sequence from command line. Issue is tied to Linux boot loader and is not within the APN Software product itself. Issue is being documented here for customer awareness.	See Issue Description	None

## Enhancements/Features in Previous Releases

### Enhancements/ Features in APN 7.3 GA

The following issues have been enhanced or added since APN 7.2 GA P3:

ID	Issue Description
17119	Signature Library v1.0 includes more than 100 pre-set application signatures for use in conjunction with Enhanced Application Identification.
16584	Port State Reflection may now be enabled on interface groups which contain more than 2 Ethernet ports.
16537	APN 7.3 GA introduces Enhanced Application Identification, which allows for application-based steering, as well as application health and network usage information.

## Enhancements/ Features in APN 7.2 GA P3

The following issues have been enhanced or added since APN 7.2 GA P2:

ID	Issue Description
16547	APN 7.2 P3 introduces Configuration Versioning and Comparison, which allows users to more easily audit configuration changes.
16497	Talari appliances are now capable of forwarding packets with IP datagrams of up to 2000 bytes.

## Enhancements/ Features in APN 7.2 GA P1

The following issues have been enhanced or added since APN 7.2 GA:

ID	Issue Description
16613	Change Management activity is now logged to the APN_change_management.log and APN_change_management_summary.log files.
16548	APN 7.2 P1 introduces enhanced maximum throughput for the E100. The E100 now supports up to 500 Mbps. Please note that enabling features such as WANOp and Service Chaining will result in lower maximum throughput.  Service Chaining will require the use of one port (1, 2, 3 or 4). It is recommended that all of the other ports are configured for non-service chaining use to maximize throughput.
15597	The Talari service will no longer be disabled when a duplicate IP is detected. Instead, an event will be generated for the duplicate IP, and a warning will be displayed on the home page.

## Enhancements/ Features in APN 7.2 GA

The following issues have been enhanced or added since APN 7.1 GA P2:

ID	Issue Description
16174	The site template feature in the configuration editor can now be used with all model types.
16117	To support service providers who perform NAT/PAT when forwarding Talari frames to the Internet, we have enhanced our path identification process to support checking the source IP and source port when performing a path lookup.  This solves an issue for provider WANs where multiple Talari client sites are NAT'd to the same public IP address.

<b>ID</b>	<b>Issue Description</b>
16055	APN 7.2 GA introduces a new and improved user interface, including a new landing dashboard and new navigation
15975	APN 7.2 introduces support for configuring up to four DHCP Relay Server IP Addresses per Virtual Interface.
15960	APN 7.2 provides a new at-a-glance dashboard for WAN Optimization with more detailed reports and more data about the protocols being optimized.
15890	APN 7.2 introduces integration with the Palo Alto GlobalProtect Cloud service via IPsec tunnel. The APN Configuration Editor has a Palo Alto GPCS IPsec Tunnel option with pre-defined values to simplify configuration for the user.
15578	A note has been added in the Configuration Editor at all locations where a Rule may be configured to clarify that Drop Limit and Disable Limit values in milliseconds are not valid for Bulk Classes.
9672	APN 7.2 introduces the ability to set duplicate VIPs at multiple different sites when the VIP is Private and the associated Interface Group is defined as Untrusted.

## Enhancements/ Features in APN 7.1 GA P2

<b>ID</b>	<b>Issue Description</b>
16124	The E1000 now supports up to 200 Conduits and 1000 Paths.

## Enhancements/ Features in APN 7.1 GA P1

The following issues have been enhanced or added since APN 7.1 GA:

<b>ID</b>	<b>Issue Description</b>
16111	APN 7.1 GA P1 introduces support for the Talari E50 Appliance.

## Enhancements/ Features in APN 7.1 GA

The following issues have been enhanced or added since APN 7.0 GA P2:

<b>ID</b>	<b>Issue Description</b>
15704	License files for Virtual Talari Appliances may be uploaded on the Manage Appliance > License Information screen.
15694	APN 7.1 increases the maximum WAN link bandwidth for interface groups including the AUX port to 500Mbps on the T3010, T5000, and T5200.

ID	Issue Description
15572	APN 7.1 introduces support for two expansion card options on the E1000.
15505	The CT800 now supports three license rates: 20Mbps, 100Mbps, and 200Mbps.
15448	APN 7.1 introduces support for OS 5.1 on the T510, T860, E100, T3010, E1000, T5000, T5200, VT800, and CT800 platforms.
15423	APN 7.1 introduces WANOp functionality for Virtual Talari Appliances.
15379	In this release, the Monitor > WAN Optimization screen has been updated to include historical graphs providing views of various WANOp Statistics over time.
15378	APN 7.1 converts the APN Home Page into an interactive dashboard, providing quick and easy access to actionable network issues.

## Resolved Issues in Previous Releases

### Resolved Issues in APN 7.3 GA

The following issues have been fixed since APN 7.2 GA P3:

ID	Issue Description
17315	When DNS proxy is enabled, if many DNS requests are received in short period of time for same domain name and with the same query ID, it may cause service impacting memory dump.
16922	In rare cases, the forwarding service may not be able to initialize network namespaces due to a Linux kernel bug. When this happens, the appliance will be automatically rebooted so that the system can work around the bug. This has only been observed in older Talari OS versions running on older Talari appliances.
15648	WANOp on TCP sessions using SMBv1, SMBv2, or SMBv3 may show slower performance than non-WAN Optimized sessions for files, especially those that are either encrypted or smaller than 100MB. The workaround is to avoid enabling WANOp for TCP sessions using SMB/CIFS protocol. Ports used are 445, 137, 138, and 139.

### Resolved Issues in APN 7.2 GA P3

The following issues have been fixed since APN 7.2 GA P2:

ID	Issue Description
17157	On T3010 appliances that do not have WAN Optimization enabled, processing large amounts of TCP terminated traffic may cause a service impacting memory dump.

ID	Issue Description
17114	Under <b>Statistics &gt; QoS &gt; Applications</b> , the number of sessions may not be decremented properly when a connection ends.
17108	A kernel watchdog has been enabled for VT800 platforms so that if user space processes hang, the VM can automatically reboot itself.
17105	Under heavy load with a large number of IP datagrams that have been fragmented into smaller frames, it is possible to lose buffers, resulting in frame drops and poor performance. This could cause conduit and path instability.  The workaround is to restart the appliance.
17104	When IPsec tunnels are used within conduits, large packets can cause buffers to not be counted properly and could lead to exhaustion of packet buffers. This results in an impact to WAN ingress packet performance.
17054	For WAN links with Autodetect Public IP enabled, if the WAN link is moved from one access interface to another it may cause the paths to other client sites to go dead.
17002	During the startup process on a VT800, a potential race condition could trigger a 'Bad file descriptor' error and prevent the Talari service from starting properly.
16994	After renaming a configured Intranet Service, the updated service is not applied to any Static NAT Rules which are configured to use that Intranet Service. The workaround is to edit the Static NAT rule and select the renamed Intranet Service from the dropdown.
16992	When SNMP Route Learning is enabled and an Include Rule is configured to match the route cost, the route may not be removed when the route cost changes.
16983	If TCP Termination or WAN Optimization is enabled at a site which also has an Internet Service with Dynamic NAT Policies enabled, a local route becoming unreachable may cause a service impacting memory dump.
16975	Configuring multiple equivalent routes across different routing domains was not allowed and triggered an audit check when matching routes were detected.
16951	When an Internet Service is configured on an untrusted interface, ICMP responses to pings initiated using the Ping Interface option in the Talari UI will be blocked by the firewall.
16856	On an E1000 experiencing high utilization, creating a diagnostic may cause all conduits at the site to temporarily go DEAD.

ID	Issue Description
16803	In an effort to queue traffic appropriately in certain scenarios (for example, when an APN is configured with a high bandwidth WAN link and a low bandwidth WAN link which are sometimes unstable), the default calculation for minimum bandwidth previously used for paths on a WAN link has been increased. This allows for a WAN link or path to recover much quicker as Talari heartbeat frames are not dropped or delayed. As a result, an Audit Warning could be issued during the configuration process if a WAN link does not have enough bandwidth available for all paths defined, alerting the user to change the shares provisioned per site/path to allow more bandwidth for a path.
16630	In situations where a WAN link with a lot of bandwidth fails and the remaining WAN links have little bandwidth, excessive congestion on the remaining WAN links can occur.
16158	If the user defines an UDP-based application and then uses the application definition in a rule which has WANOp enabled, an Audit Warning will be issued during the configuration process. The warning states that the traffic defined in the application definition is UDP and cannot be WAN Optimized, as WANOp only is only performed on TCP based applications.
15708	In rare situations, a race condition involving dynamic NAT may result in a service impacting memory dump. This rare condition only occurs when using the Talari firewall with dynamic NAT configured.

## Resolved Issues in APN 7.2 GA P2

The following issues have been fixed since APN 7.2 GA P1 H1:

ID	Issue Description
16940	On the WAN Optimization Dashboard, CIFS flows are incorrectly labelled as SSH flows.
16933	When a configuration update adds a new Ethernet Interface on an appliance, the appliance is not able to transmit packets from the newly configured port until the Talari service is restarted.
16930	When upgrading to APN 7.1 P2 or above from prior release, a valid configuration with more than 72 manually added paths at a site may fail to load or compile in the Configuration Editor or Change Management, resulting in EC310 and EC312 errors for the extra paths.
16914	When performing a configuration update, if WANOp is enabled or disabled at the same time as an Ethernet port is added on a T5200, T3010, or E1000, it may cause a service impacting memory dump.



ID	Issue Description
16883	The count of Good and Dead Conduits on the landing dashboard may not be correct on HA appliances.
16863	If a Port Forwarding Rule is added to a symmetric Dynamic NAT Policy on an Internet Service and the Internet Service is in load balancing mode, viewing <b>Statistics &gt; Firewall &gt; NAT Policies</b> on the Talari web console may cause a service impacting memory dump.
16854	When multiple Intranet services are configured at a single site on different WAN links, if a packet with a DSCP tag arrives from an Intranet service which is not included in the route table it may cause a service impacting memory dump.
16825	On a T3010, low priority threads may be starved out if the CPU they are assigned to gets too busy. This may cause a service impacting memory dump.

## Resolved Issues in APN 7.2 GA P1 H1

The following issues have been fixed since APN 7.2 GA P1:

ID	Issue Description
16826	The Conduit Usage section of the main Dashboard does not show the correct data. The workaround is to click the Conduit Usage header to view the details on the Conduit Statistics screen.
16812	Disabling and enabling the Talari service on the E100 or E50 may cause the appliance to reboot.

## Resolved Issues in APN 7.2 GA P1

The following issues have been fixed since APN 7.2 GA:

ID	Issue Description
16782	Performing a configuration update to remove the AUX port and then reverting to the previous configuration may cause a service impacting memory dump.
16780	When multiple WAN links with Internet or Intranet service enabled use the same gateway and DSCP tagging is not used to identify the WAN links, WAN Egress Internet/Intranet traffic may be accounted to the wrong WAN link. Additionally, if the Internet Service is configured for load balancing across these WAN links, the WAN link used for WAN Ingress traffic will rebind based on the WAN link used for WAN Egress traffic.
16720	For rules defined in a Conduit Default Set, if a specific drop depth is not set, it may not be recalculated properly after changing the rate for a WAN link.



ID	Issue Description
16711	The Purge Dynamic Route button on the <b>Statistics &gt; WAN &gt; Routes</b> screen is not working. The work around is to switch to Classic View and purge dynamic routes there.
16706	When both Internet and Intranet services are defined at a site and there is a rule to override Internet service to Conduit service, receiving packets from the Internet service will cause service impacting memory dump.
16701	Flows using IPsec tunnels for Intranet or Internet service may not be freed properly, resulting in a service impacting memory dump.
16699	When using the Configuration Editor when the vertical scrollbar is present, pop-up dialog boxes may pop up above the top of the screen and the user will need to scroll up to make them visible.  The workaround is to scroll up to the dialog box in order to use it.
16694	On large networks (with more than 100 sites), when Aware has been disconnected from the network for an extended period of time and requires "Stats Catchup" to collect data and sync up with the network, it may never successfully catch up to the stats.
16687	Appliances which use IPMI to monitor fans and power supplies may generate false alerts after a software upgrade. This issue does not impact system operations.
16684	In certain scenarios when using WANOP with WAN to WAN forwarding there can be delay in establishing the TCP session between sites. This typically occurs when there is path loss or insufficient bandwidth from the intermediary site to the destination site
16672	Under Monitor > Statistics > Routes, Site ID is improperly displayed for Intranet Route Service. Site ID should be * for Intranet Routes.
16655	A service impacting memory dump may occur during a major configuration update to a newly installed appliance with no user traffic.
16649	When GRE or IPsec encapsulated traffic hits a configured static NAT rule, it may cause a service impacting memory dump.
16645	On an E100, if WANOP is enabled and Port 5 is in use, a burst of traffic on Port 5 may cause a service impacting memory dump.
16632	The Diagnose > Log Files page could allow a user to view system files they should not have access to.

ID	Issue Description
16609	Any flow change (including a rule configuration change, or a flow switching to internet because the conduit has gone down) may result in a service impacting memory dump.
16594	In cases where all sites in the APN reside in a single subnet, unnecessary ARP requests are sent for all VIPs in the APN.
16587	A reboot during the installation of a software package can cause an appliance to have incorrect information about what software version it is running. If this happens on an NCN, this can lead to an outage of the entire APN.
16585	With TCP Termination enabled, if the SYN/ACK is delayed too long while a TCP connection is being established it may cause a service impacting memory dump.
16575	In some circumstances, Change Management can misinterpret the version information of packages. This can lead to invalid packages being distributed through the APN.
16564	DHCP Server or DHCP Relay may stop working when the Talari service starts or restarts. The workaround is to restart the DHCP Server or DHCP Relay from <b>Monitor &gt; DHCP</b> .
16554	After modifying the match criteria for an Application in the Talari Configuration, existing flows using the modified match criteria are not updated.
16486	On the <b>Configuration &gt; APN Configuration Editor</b> screen, if the Import button is pressed too soon before the screen finishes rendering completely, the Import APN Configuration From Change Management drop-down can be empty. The workaround is to refresh the screen and try again.
16442	When Internet Access For All Routing Domains is enabled on a WAN Link, connections from different Routing Domains may get mixed up if they go to same destination IP/port.
11704	In some situations, the IKEv2 SA rekey is using the max lifetime instead of the configured value for IKE lifetime.

## Resolved Issues in APN 7.2 GA

The following issues have been fixed since APN 7.1 GA P2:

ID	Issue Description
16529	When a Dynamic Conduit are enabled between two client sites, if a routing domain exists only at the client sites but not at the intermediate site, a service impacting memory dump will occur after the Dynamic Conduit is created.

ID	Issue Description
16446	If a user updates a Port Forwarding Rule for a Dynamic NAT Policy while a flow is using an outside port (in use with current flow) there can be a service impacting memory dump. This will happen when the user performs a second configuration change to the Dynamic NAT Port Forwarding Rule.
16445	Making a configuration update which includes interface changes may cause service impacting memory dump.
16393	When Path MTU is configured on a Dynamic Conduit, there may be a small window while the Dynamic Conduit is disconnecting where the Dynamic Conduit can get stuck in a pending state and not be properly removed.
16392	After a configuration update where a Model or Site name of a client is changed, the hyperlink for that site in the home page may be broken.
16373	On the Change Management screen of an NCN running an HA configuration, the Currently Staged column in the table may contain no timestamp for the configuration. This is a display only issue: the software and configuration packages are still correct and may be downloaded from the Download Package 'staged' links in the table.
16371	Exporting SNMPv3 settings from Aware may not work as expected.
16317	With TCP Termination or WANOp enabled, streams transferred by TCP may have an extra byte appended at the end. This can cause problems with some protocols.
16173	When disabling a path, an invalid path may sometimes be shown in the list.
16171	In some configurations of the VT800 running in Azure, the CLI can output warning messages from the sudo command. While these messages are annoying, they are harmless.
16148	When IPsec is configured on a Conduit, WAN Link Usage statistics in the Receive direction are not collected properly when IPsec packets have been fragmented.
16118	On the Monitor -> Statistics -> WAN Link Usages screen, the Usage % column under the Usages and Permitted Rates table is incorrectly calculated, and can be off by a factor of 100.
16028	Adding a VLAN to an existing Interface in Basic View of the Configuration editor creates an additional, blank Virtual IP Address.
15007	Bad path probation is not enforced when Bad Loss Sensitivity is disabled.

## Resolved Issues in APN 7.1 GA P2

The following issues have been fixed since APN 7.1 GA P1 H1:

ID	Issue Description
16236	With TCP Termination or WANOp enabled, streams transferred by TCP may have an extra byte appended at the end. This can cause problems with some protocols.
16232	In some configurations of the VT800 running in Azure, the CLI can output warning messages from the sudo command. While these messages are annoying, they are harmless.
16230	Learning more than 100 routes from the route stack may cause a service-impacting memory dump. Additionally, some traffic interruption may result since routes learned will be removed.
16146	When lots of ARP packets received in a short period of time, it may cause service impacting memory dump.
15949	Activating a major configuration change with Dynamic Conduits configured may cause a service-impacting memory dump.
15871	When editing a Firewall Policy from a Conduit Service Type back to an Any Service Type, if the user selects the Any choice, Audit Error EC801 will appear. The workaround is to set the Service Type to Any, leave the Service Instance blank, and apply that setting. This is the equivalent to setting "Any" in the instance.

## Resolved Issues in APN 7.1 GA P1 H1

The following issues have been fixed since APN 7.1 GA P1:

ID	Issue Description
16112	Expanded support for E1000 4-Port Expansion Card.

## Resolved Issues in APN 7.1 GA P1

The following issues have been fixed since APN 7.1 GA:

ID	Issue Description
16091	With TCP Termination enabled, if a new TCP session is initiated at the same time an associated route is changing services (for example, from Internet to Conduit), it may cause a service-impacting memory dump.
16077	Activating a configuration change which disables TCP Termination while there are active TCP Terminated sessions may cause a service-impacting memory dump.

ID	Issue Description
15916	When an E100 powers on, a port previously configured as Fail-to-Wire may come up as Fail-to-Block. If so, the port will remain in Fail-to-Block mode until the Talari service starts, which may take up to 2 minutes.
15539	When WAN-to-WAN forwarding TCP traffic, with TCP Termination and Internet/Intranet Service enabled at the intermediate site, a Conduit going dead may cause a service-impacting memory dump.

## Resolved Issues in APN 7.1 GA

The following issues have been fixed since APN 7.0 GA P2:

ID	Issue Description
15991	A VT800 on Azure may experience a memory dump during startup if the VM does not receive a timely response from the hypervisor when attempting to bring up an Ethernet interface.
15978	When IPsec is enabled for a Conduit, pushing a configuration update to change a rule or class may cause a service-impacting memory dump.
15955	Removing a virtual interface while a TCP Termination or WANOp flow is active may cause a service-impacting memory dump.
15935	Similar routes with different prefixes may be incorrectly treated as the same route, rather than as different routes.
15907	Appliance Uptime does not display correctly when Talari service is disabled.
15887	When OS 5.0 or later is used, an IPv6 address could get assigned to ethernet ports used for data if the network they are attached to have an IPv6 router doing router advertisements. This could allow packets to access the management IPv6 stack from a data network.
15885	The tooltip on the Monitor > Performance Reports screen for Jitter is labelled with incorrect units. The values should be in milliseconds.
15864	If the WAN Ingress and WAN Egress flows for a TCP session will hit rules with different TCP Termination and/or WANOp settings, the TCP session will not be established.
15846	Dynamic conduit creation may cause some flows to be incorrectly routed to the newly created dynamic conduit.

ID	Issue Description
15833	If WANOp is enabled and a TCP SYN packet with data is received, it may cause a service-impacting memory dump.
15832	For a non-WANOp TCP Terminated flow, a service-impacting memory dump may occur during session cleanup if FIN flag is set and there is still more data to send.
15799	At an HA site with dynamic routing enabled, the dynamic routes for that site may not be sent to other sites correctly if the standby HA appliance and other appliances in the APN do not sync with the site's dynamic route version at the same time.
15730	When changing a site name on an appliance, the status table showing the active and staged software and configuration information may present the wrong information. The workaround for this is to push out the configuration a second time.
15712	If Conduit traffic is fragmented on the WAN, it may cause a packet buffer leak.
15699	E-Mail alert notifications may not work if the SMTP server has a self-signed certificate or a certificate that cannot be verified with a certificate authority.
15688	<p>In rare cases, a file containing cached UI session information can get corrupted, saving more sessions than is valid. This can result in UI errors and possibly a service-impacting memory dump on the appliance.</p> <p>A reboot will clear this state.</p>
15683	If a Virtual Talari Appliance is configured for WANOp, but does not have the required disk space free for the WANOp cache, the appliance does not display the banner alert in the Web Console.
15539	When WAN-to-WAN forwarding TCP traffic, with TCP Termination and Internet/Intranet Service enabled at the intermediate site, a Conduit going dead may cause a service-impacting memory dump.
15517	When a symmetric Dynamic NAT Policy is configured and in use, it may cause a service-impacting memory dump if two connections have the same hash key.
15493	When performing TCP Termination, a flow may not be TCP Terminated if the first SYN packet has any additional TCP flags set. If TCP Termination is not performed on a flow, Talari cannot WAN Optimize the flow.
15482	In an HA pair, when ports are configured to be used as part of an HA Interface but are not connected, an appliance may report the link as up when it is not. The appliance with the false link will take over as active.

ID	Issue Description
15481	When a configuration update is performed while the appliance is writing to the sql database, it may cause a service impacting memory dump.
15462	Power cycling the NCN appliance can result in the Change Management screen saying the NCN is not connected and requires Local Change Management. Typically, this will show no active package on the NCN only. The workaround is to do local change management with the staged package and activate.
15447	When Internet Service is configured, and the Primary and Secondary WAN Links are connected to untrusted interfaces, losing the connection to either the Primary or Secondary gateway may cause a service impacting memory dump.
15439	In large networks with many conduits and customer rules, a configuration can be deemed invalid because the total number of expanded rules exceeds 200,000.
15396	On a CT800 being used as an NCN, after navigating to the Manage Network > View Configuration screen and then clicking on the View File button, the contents of the file may not be shown.
15380	The configuration editor will disallow the IP Address when creating a VIP in the configuration editor using a /31 and a lower bit of 0. This is disallowed for all length subnets because it would be a network address of 0. For 2 site point-to-point IPV4 networks this should be allowed.
15369	If Dynamic Routing or WANOp restarts, the start time for the availability report under Monitor > Availability can be wrong.
15368	When downgrading from a newer OS to an older OS that never ran a version of code newer than R5.1, there can be extra text showing up in the os_partition command in the CLI. These messages can be ignored and will not cause any harm unless the user tries to do an OS Patch operation.
15363	When DNS proxy is enabled at a site, it is possible for WAN egress conduit packets that have had NAT applied to not match the expected Application.
15361	If there is Standby Wan Link used for Internet Load Balancing, and the gateway is same as other regular WAN Links used for Internet Service, the Standby WAN Link may be used for internet traffic even though regular WAN Links are still up.
15356	When non TCP and non UDP packets exceed the conduit MTU, the fragmented packets may not get handled properly and are dropped.



ID	Issue Description
15330	After a route configuration update, dynamic routes may not be in sync in the APN. Additionally, dynamic routes originally learned at a site in one WAN to WAN Forwarding Group may show up at sites that are not in the same WAN to WAN Forwarding Group.
15327	In the Configuration Editor, two 0.0.0.0/0 Internet Routes will appear when Zscaler is configured and no specific protected route has been configured for Zscaler. This does not affect forwarding.
15314	On the Web Console, in Diagnose -> Insert/View Events, the Time column may wrap and split the date and time into 3 separate lines depending on the specific events being presented.
15307	On platforms that don't support WAN Optimization, issuing the show_stats command in tcon still allows the user to attempt to view the WANOp stats even when WANOp is not supported.
15143	In the Configuration Editor, a user can add a static route with a next-hop to a site that has no conduit connection to the site where the route is added, and isn't warned that it won't work.
15039	On the Manage Appliance > Local Change Management screen, the Configuration Filenames section may not show the correct filename information for the Active and Staged configurations after performing a configuration update where the Site name has been changed.
14867	Routes listed in the Config Editor for a site are incorrectly sorted by gateway for each subnet, instead of cost. This is visual only and the actual routing table correctly sorts route by cost for each subnet.
14617	When editing an Interface Group in the Configuration Editor, if the Security setting is changed from Untrusted to Trusted, the Firewall Zone will show as <Default> while editing, but revert back to Untrusted_Internet_Zone after clicking Apply. The workaround is to manually set the Firewall Zone back to <Default> and apply, after applying the Security setting.