



AlteonOS **RELEASE NOTES**

Version 34.0.2.0
September 28, 2023

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CONTENT

Radware announces the release of AlteonOS version 34.0.2.0. These release notes describe new and changed features introduced in this version on top of version 34.0.1.0.

RELEASE SUMMARY

Release Date: September 28, 2023


Objective: Minor software release that introduces and/or enhances a number of capabilities and solves a number of issues.

SUPPORTED PLATFORMS AND MODULES

This version is supported by the following platforms:

- 4208, 4208S
- 5208, 5208S
- 5424S, 5424SL, 5820S, 5820SL
- 6024, 6024S, 6024SL, 6024 FIPS II
- 6300
- 6420p, 6420, 6420S, 6420SL
- 7612S, 7612SL
- 7220S, 7220SL
- 7100S, 7100SL, 7100DS
- 7700S, 7700SL, 7700DS
- 8420, 8420S, 8420SL
- 8820, 8820S, 8820SL
- 9800, 9800S, 9800SL
- Alteon VA running on VMware ESXi 6.0, 6.5, 6.7, 7.0, KVM, Hyper-V, and OpenXen
- Alteon VA on AWS
- Alteon VA on Azure
- Alteon VA on Nutanix
- Alteon VA on Oracle Cloud
- Alteon VA on Google Cloud

For more information on platform specifications, refer to the *Alteon Installation and Maintenance Guide*.



Alteon 34.0.2.0 is supported by APSolute Vision version 4.30 and later, and Cyber Controller 10.0 and later.

Integrated AppWall version: 7.6.21.0

OpenSSL version:

- FIPS II model: 1.0.2u
- S/SL models, standard models, and VA: 1.1.1u

UPGRADE PATH

You can upgrade to this AlteonOS from AlteonOS versions 28.x, 29.x, 30.x, 31.x, 32.x, 33.x and 34.x.

General upgrade instructions are found in the *Alteon Installation and Maintenance Guide*.

Before Upgrade – Important!

Before performing an upgrade, back up your current configuration.

1. To ensure a successful upgrade, run the [Upgrade Advisor Tool](#) with your current configuration and the target version. Then, perform the required actions as instructed in the report output. The Upgrade Advisory Tool includes all the limitation and upgrade considerations specifically relevant to the source configuration, version, device details and target version. Make sure to update the Upgrade Advisory Tool DB before performing the analysis. The Upgrade Advisor Tool is available on the Customer Portal.
- 2.
3. Read the [Upgrade Limitations](#) in these Release Notes for new upgrade limitations related to this version.

The following table describes the specific upgrade path from each version to 34.0.2.0:

Current Version	Upgrade Path	Notes
28.x	> 29.0.9.0 > 30.5.3.0 > this version	As an alternative, you can upgrade directly to 34.0.0.0 using the recovery process. Note: You must save the configuration before starting this process.
29.0.x (x=<8)	> 29.0.9.0 > 30.5.3.0 > this version	
29.0.x (x > 8)	> 30.5.3.0 > this version	
29.5.x (x=<7)	> 29.5.8.0 > 30.5.3.0 > this version	
29.5.x (x>7)	> 30.5.3.0 > this version	
30.x =< 30.5.2.0	> 30.5.3.0 > this version	
30.x > 30.5.2.0	Direct upgrade to this version	
31.x	Direct upgrade to this version	
32.x	Direct upgrade to this version	
33.x	Direct upgrade to this version	
34.x	Direct upgrade to this version	

Additional Considerations

Hypervisors (ADC-VX) running a certain version only support vADCs that run the same version or later.

Important!

- For Alteon 5208, 5424, 5820, 6024, 7612, 7220, and 9800, vADCs running this version require ADC-VX running at a minimum version 33.0.0.0.
- For Alteon 8420, vADCs running this version require ADC-VX running at a minimum version 33.0.1.0.
- For Alteon 6420, vADCs running this version require ADC-VX running at a minimum version 33.0.4.50.

Downgrade

1. Configuration rollback (downgrade) is not supported. The configuration should be saved before upgrading to a newer version. If you perform version rollback, Radware recommends the following procedure:
- 2.
- 3.
4. Set the configuration block for the next boot to **factory** (the management port setting can be kept).
5. Change the image for the next boot to the image to which you want to roll back.
Perform reboot.
After reboot, Alteon will run with the previous version with the factory default configuration.
Upload the configuration that was saved before the version upgrade

WHAT'S NEW IN 34.0.2.0

This section describes the new features and components introduced in this version on top of Alteon version 34.0.1.0.

6300 Platform Enhancements

Alteon D-6300 is available with two configurations:

- D-6300F – Fixed configuration with a 4x25G NIC card and the SSL acceleration card. It is available with 40G L4 throughput license.
- D-6300M – Modular platform with four slots:
 - Slot 1: 2x25G or 4x10G NIC card
 - Slot 2: 2x25G or 4x10G NIC card
 - Slot 3: Optional QAT
 - Slot 4: Optional 8x1G NIC card

The D-6300M is available with L4 throughput licenses of 60G and 90G.

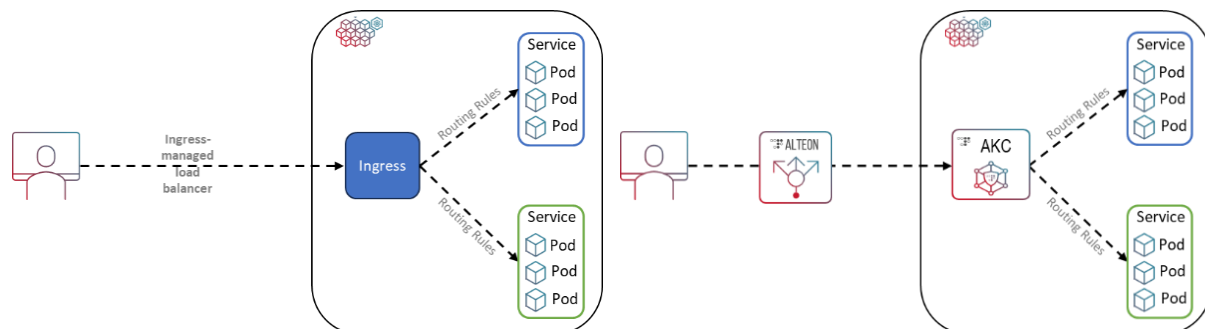
With this release, the D-6300 platform supports ADC-VX mode with up to eight (8) vADCs.


Alteon Kubernetes Connector Enhancements (version 1.4.0)

Ingress Resource Support

The Ingress resource in Kubernetes allows external access to services within a cluster by exposing HTTP and HTTPS routes. The routing of traffic is governed by rules defined in the Ingress resource. An Ingress controller is responsible for fulfilling the Ingress, usually with a load balancer.

When AKC is deployed in your Kubernetes clusters, it now allows provisioning Alteon as an external load balancer fulfilling the Ingress – providing Layer 7 load balancing and SSL/TLS termination.





To make an Ingress secure, you must provide a Secret that has a TLS private key and certificate. The Ingress resource can only use one TLS port, 443, and it assumes that the TLS connection ends at the Ingress point (Alteon in this case), and the traffic to the Service and its Pods is not encrypted.

When fulfilling Ingress, Alteon provides load balancing at the Pod level. Alteon sends traffic directly to the Pods, bypassing the internal load balancing mechanism of the Kubernetes cluster. This is achieved using BGP and requires that the Calico Container Network Interface (CNI) plug-in is used with the K8s cluster.

Static IP for AKC Service

By default, AKC allocates a VIP for a newly deployed Kubernetes service from IPAM. Now it is possible for the operator that deploys the Kubernetes service to manually allocate a specific IP address by using the following annotation: `akc.radware.com/static-ip: <virtual-ip>`

NFR ID: 230609-000038

Alteon High Availability

You can now configure both primary and backup Alteons in the AKC Configurator, to ensure that the Alteons continue to be updated with all changes occurring in the Kubernetes clusters even when the primary Alteon fails.

LDAP User Authentication

Alteon now provides user authentication and authorization using a Lightweight Directory Access Protocol (LDAP) server.

Alteon lets you map between an LDAP object and an Alteon User Role to allow RBAC per user. Radware recommends enabling administrator backdoor (`/cfg/sys/access/user/admbd`) and security backdoor (`/cfg/sys/ldap/secbd`) to allow Alteon access using the default admin user when the LDAP server is not accessible.

NFR ID: 221012-000007

CDP (CRL Distribution Point) High Availability

Until this version, when multiple CDPs (URIs) are defined within the same CDP group, each one is checked ("AND" function) and the certificate is validated only if it is not listed in any of the CDPs. In such a case, if any CDP becomes unavailable, the certificate is not validated.

Starting with this version, Alteon lets you list two CDPs (URIs) as two separate endpoints within one CDP group. In such a case, they work as high-availability support ("OR" function), where if one CDP is unavailable, the certificate is validated by the second CDP.

Ansible Enhancements

Red Hat Certification

The Alteon Ansible collection is now certified by Red Hat and appears in the Red Hat Ecosystem Catalog under Certified Ansible Collections as [radware_alteon_collection](#).

NFR ID: 220707-000144, 230213-000142

New Ansible Modules

The following Ansible modules were added:

- `alteon_config_sideband_policy`: supports Sideband Policy configuration
- `alteon_config_secure_path_policy`: supports SecurePath Policy configuration
- `alteon_config_security_global`: supports enabling/disabling SecurePath at device level

In addition, new fields were added to `alteon_config_virtual_service` to support configuring Sideband and SecurePath policies per virtual service.

AWS HA Enhancements

To enable transferring the public IP address from the primary Alteon device to the backup device in case of failover, Alteon must have access to the AWS account running the Alteon VA virtual machines.

Until now, for Alteon to have access to the AWS account, the user was required to configure on the Alteon instances the AWS Access Key and Secret Key.

A new, more secure option is now available to provide Alteon with the necessary access by creating an IAM role/policy that enables communication between Alteon VA and AWS and applying the role to both primary and secondary Alteon instances. **NFR ID:** 230608-000005

Cluster Manager Enhancements

During the creation of a new cluster, a more detailed BGP configuration is available, including enabling BFD. This requires Cyber Controller version 10.3.0.

NFR ID: 230706-000040

New GEL LLS Notifications

Starting with version 10.3.0.0, Cyber Controller can now send alerts in case one of the following issues occur in its GEL Local License Server (LLS):

- The LLS is not able to communicate with Flexera for more than the defined time.
Default: 12 hours
- The LLS database has grown more than the defined size.
Default: 1 GB

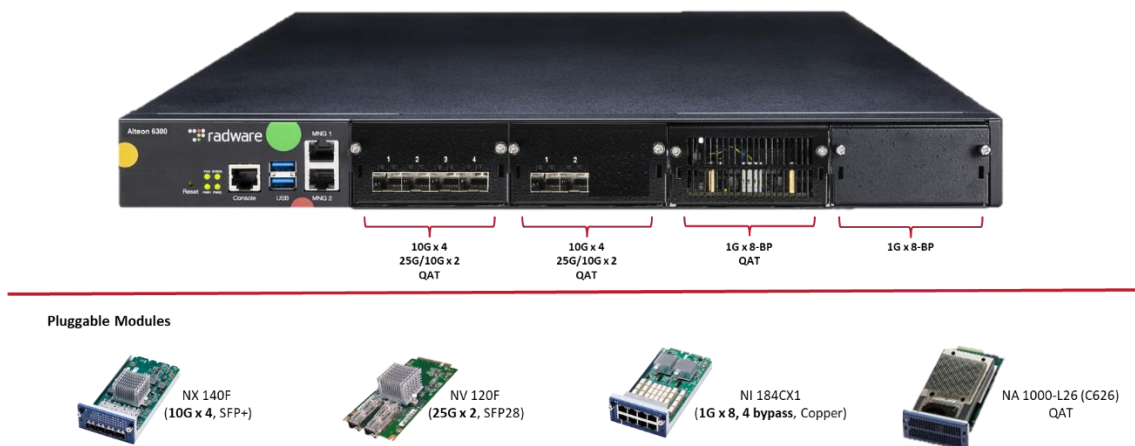
HTTP IP Header Configuration on Filter

In a SecurePath deployment on filters, starting with this version you can define the HTTP IP header for where the original client IP address is specified.

WHAT'S NEW IN 34.0.1.0

This section describes the new features and components introduced in this version on top of Alteon version 34.0.0.0.

New Alteon 6300 Platform



The Alteon 6300 platform is Radware's latest addition to the Alteon appliance family, a mid-range ADC with modular NIC and QAT cards. This cutting-edge platform represents a significant milestone as it introduces modularity to the existing Alteon lineup. Designed to meet the evolving needs of modern applications, the Alteon 6300 offers unmatched flexibility and scalability. With its modular architecture, it offers the following benefits:

- **Deployment** – Customers have the freedom to select and pay exclusively for the interface ports they require.
- **Flexibility** – Customers have the flexibility to interchange installed interface modules within and among different 6300 platforms.
- **Scalability** – Customers have the option to incorporate additional interface modules to accommodate their expansion needs.
- **Cost effective** – No need to pay for unused interface ports.

Known limitations:

- Only the SA option is released. ADC-VX mode is scheduled to be part of the next release

- There is no support for Jumbo frames
- There is no support for BGP FRR

Alteon VA Subscription Model

Radware announces the introduction of its Alteon Virtual Appliance (VA) through an annual subscription.

The new time based VA replaces the perpetual license. The perpetual VA license is removed from Radware price list.

This time-based VA offers customers with the following benefits:

- **Lower initial investment** – Lower entry barrier for users who may not have the resources for a substantial one-time payment.
- **Predictable budgeting** – Users know exactly how much they will be spending on a recurring basis, making it easier to manage cash flow and expenses.
- **Risk mitigation** – Subscriptions provide an opportunity to try out a product or service without committing to a long-term investment.
- **Cost flexibility** – Provides flexibility in managing costs, as users can adjust their subscription level or cancel if needed, rather than making a large upfront investment

Alteon Cluster Management for VMware Environment

The new Alteon Cluster Management capability, available in Radware Cyber Controller starting with version 10.0.2.0, allows for provisioning, management, and maintenance of Alteon auto-scaling clusters in the VMware environment.

An Alteon auto-scaling cluster is a group of Alteon VA instances that can dynamically adjust the number of active nodes based on the traffic load and performance requirements. It improves the availability and reliability of the ADC service by automatically distributing the requests among multiple nodes and avoiding single points of failure.

The Alteon auto-scaling cluster enhances the scalability and efficiency of the ADC service and allows handling the following type of scenarios:

- **Gradual growth** – An ADC cluster can start with a couple of Alteon devices that meet the initial traffic needs. As the application traffic increases, the scaling cluster handles it by automatically adding more Alteon instances to meet the requirement.
- **Planned or un-planned traffic surge** – When the ADC cluster is suddenly presented with a significant increase in traffic that exceeds the current cluster capacity, additional Alteon instances are temporarily provisioned to handle that increase. Once the traffic load goes back down, the additional instances are automatically decommissioned.

The ADC Cluster Management solution includes the following components:

- VMware cloud infrastructure
- BGP routers with ECMP support to distribute VIP traffic between Alteon instances in the same cluster

- Alteon VA versions 33.0.8.0, 33.5.4.0, 34.0.0.0 and later.

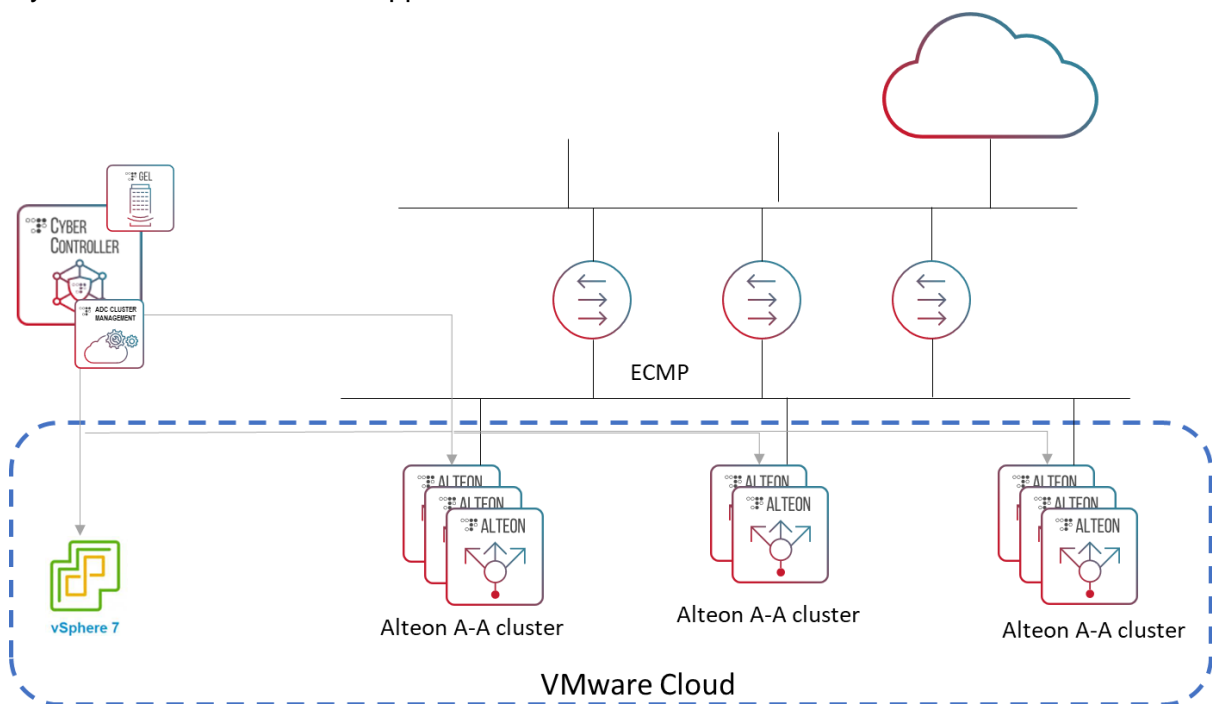
Cyber Controller version 10.0.2.0 and later. Cyber Controller performs the following functions:

- Cluster provisioning** – Provisions on the VMware cloud the Alteon instances required for the cluster
- Cluster scale out/in** – Monitors the resource utilization (CPU and throughput) on the cluster members and, based on the thresholds specified by the user, triggers a scale out or scale in event.
- Deploying and updating ADC Services. All Alteon configurations, ADC service level and device level, must only be performed via Cyber Controller, to ensure that the configuration is identical on all cluster members.
- Provide full visibility for ADC Analytics, both system and application level.

For details on this capability please see Alteon Cluster Management User Guide.

Notes:

- WAF is not currently supported by this capability.
- Cyber Controller HA is not supported.



Alteon Support in Cyber Controller High-Availability

Alteon now supports Cyber Controller in a High-Availability environment.

When Alteon is managed by Cyber Controller version 10.0.2 or later, Cyber Controller updates each registered Alteon device with the IP addresses of both Cyber Controller servers, including their roles (primary or secondary) and statuses (active or inactive). Alteon continuously queries the Cyber Controller servers to identify any change in their statuses.

With that knowledge, Alteon can be configured to send WAF security events, traffic events, and EAAF events to the Active Cyber Controller server, as well as retrieving the ERT Active Attacker Deed from the Active Cyber Controller server.

A new table is available in Alteon displaying the Cyber Controller IP addresses, roles, and statuses:

- From CLI: `/info/sys/cyberc`
- From WBM: *Configuration* perspective > **System** > **Cyber Controller**

NFR ID: 220503-000039

VXLAN Support

In addition to GRE and IP-in-IP, Alteon now supports VXLAN tunnels. The VXLAN support complies with RFC 7348.

Currently Alteon only supports VXLAN tunnels over IPv4.

To configure a VXLAN tunnel:

- From CLI: `/cfg/l3/tunnel /protocol`
- From WBM: *Configuration* perspective > **Network** > **Layer 3** > **Tunnels**

Low and Slow (Slowloris) Attack Protection for TLS

A variant of the Slowloris attack can send “slow SSL.” It sends the handshake data very slowly, one byte at a time, to keep the server waiting for more data, thus overwhelming and slowing down the target.

Alteon can now also protect itself and the application servers from a TLS-based Slowloris attack (protection against “slow HTTP headers” typed of attack was introduced in version 34.0.0.0).

To activate this protection, configure the new **TLS Handshake Timeout** parameter on the *SSL Policy* pane for the virtual services or filters you want to protect. If TLS handshake is not completed within the specified time, the session is closed. The recommended value is 2000 msec (milliseconds).

Statistics on the current number of TLS handshake timeouts per second and total number of timeouts are now available per virtual service, per filter and per device (SSL summary).

BGP ECMP Support on Load Balanced Traffic

Alteon now supports performing ECMP distribution for traffic that it load balances (request traffic to servers and response traffic to clients). In previous versions, Alteon performed ECMP only for routed traffic.

Support for IPv6 Subnet Prefix of 64

Prior to this version, the maximum supported prefix length for an IPv6 subnet was 96. Now prefixes of length 64 are also supported for traffic matching subnets, and a prefix of 65 for IPv6 subnets in a network class. However, this prefix is only supported for traffic matching (such as source and destination in filters, or the source in virtual servers) and not for PIP/NAT.

NFR ID: 220513-000027

sysName LLDP Support

NFR ID: 221024-000120

Alteon now supports LLDP advertisement TLV Type 5 with the system name.

GEL Entitlement Description

Starting with *Cyber Controller 10.2.0*, you can add an editable entitlement description in the *GEL Dashboard* to provide further details that identify the entitlement's purpose.

NFR ID: 221024-000041

Integrated AppWall


GraphQL Protocol Support - BETA

We are excited to announce the support for **GraphQL protocol parsing**. GraphQL has gained significant popularity and adoption among clients due to its numerous benefits and advantages over traditional REST APIs.

GraphQL offers a **more efficient and flexible approach** to data fetching, allowing clients to precisely request the data they need in a single request. With its declarative nature, clients can specify the exact structure and shape of the response, reducing over-fetching and minimizing network overhead.

Furthermore, GraphQL enables clients to aggregate data from multiple sources into a unified response, **eliminating the need for multiple round trips to different endpoints**. This reduces latency and improves overall performance, providing a smoother user experience.

By adding GraphQL support to our product, we empower our clients to leverage these advantages and harness the full potential of GraphQL in their applications. With its growing popularity and developer community, GraphQL has become a **preferred choice for modern API development**.



In this release, we not only introduce GraphQL support but also reinforce our commitment to security. **Our enhanced protection for the positive security model ensures that customer GraphQL APIs are guarded against common security vulnerabilities, providing a secure and reliable foundation for applications.**

WHAT'S NEW IN 34.0.0.0

This section describes the new features and components introduced in this version on top of Alteon version 33.5.3.0.

GEL Support in Standalone Mode

Starting with this version, GEL is now available on a Standalone platform.

Now, entitlements can be allocated to VA, vADC, and Standalone platforms.

NFR ID: 221222-000039

Alteon Kubernetes Connector Enhancements

The Alteon Kubernetes Connector (AKC) provides a solution for Alteon integration with Kubernetes/OpenShift orchestration.

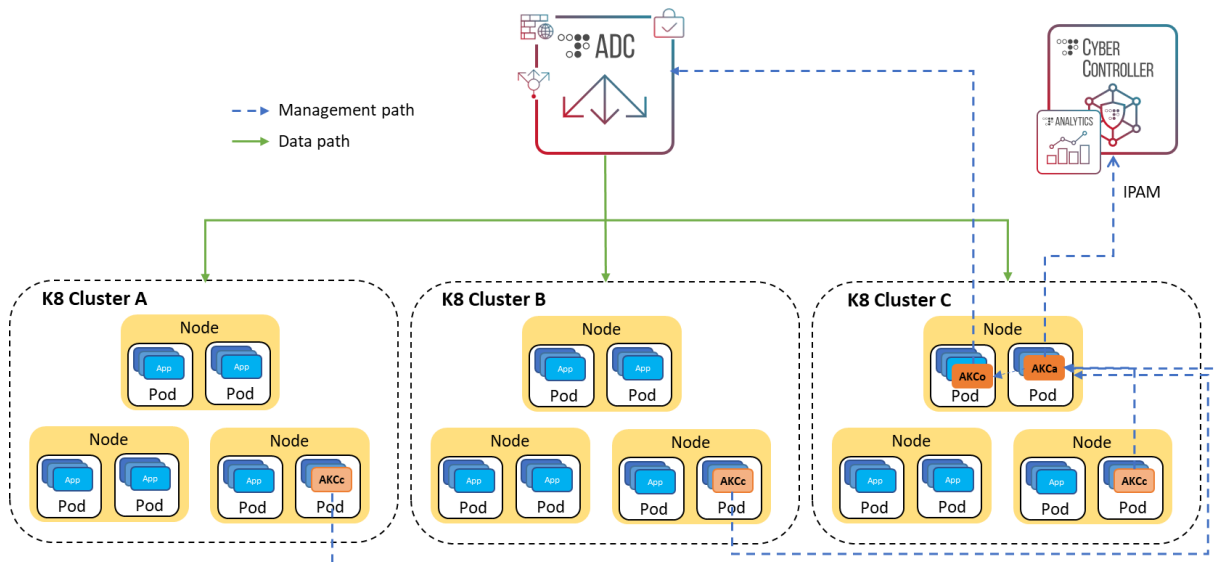
AKC runs inside the Kubernetes clusters, discovers services of type LoadBalancer and translates them to an Alteon ADC configuration. In addition, it monitors the cluster nodes and updates the Alteon configuration when nodes are removed or added to a cluster.

The AKC solution enables Alteon to load balance a service that is deployed in multiple Kubernetes clusters, using a single VIP.

The AKC has three components:

- The AKC Controller that monitors the service objects and nodes in the Kubernetes clusters. Such a component is required in each of the participating Kubernetes clusters.
- The AKC Aggregator that aggregates inputs from all the collectors and communicates the necessary configuration changes to the AKC Configurator. These components should be installed in only one of the clusters.
- The AKC Configurator that translates the changes to Alteon configuration file and pushes it to Alteon.

In addition, the solution uses the vDirect module in Cyber Controller/APSolute Vision, which handles the IPAM service, required to allocate the service IP (VIP) from an IP pool (currently a single pool supported).



In this version, the AKC has added support for the following AlteoN capabilities for the services deployed in Kubernetes:

- **SSL offload.** To enable SSL offload, the following annotations can be used during service deployment to specify the SSL policy and certificate that should be used (these objects must be configured in AlteoN before the service is deployed).
 - `akc.radware.com/sslpol: <ssl policy id>`
 - `akc.radware.com/cert: <certificate id>`
- **The SecurePath connector** that allows providing application security (Cloud WAF, API protection, and BoTM) for the deployed service. The following annotations can be used during service deployment to specify the SecurePath and Sideband policies necessary to activate SecurePath for its traffic (these objects must be configured in AlteoN before the service is deployed).
 - `akc.radware.com/sideband: <sideband policy id>`
 - `akc.radware.com/secpath: <secpath policy id>`

Overload Protection for Integrated WAF

A new mechanism is now available to reduce the load on the WAF process in case of overload by bypassing WAF inspection for some of the transactions.

When the overload protection mechanism is enabled, it looks at the transactions sent within a 10-second sliding window, and when at least 1,000 transactions are received within such a window, the following occurs:

- If the WAF processing time of between 31% and 50% of the transactions within the window is higher than the user-specified threshold, Alteon will start sending to the WAF process only 50% of the transactions.
- If the WAF processing time of between 51% and 75% of the transactions within the window is higher than the user-specified threshold, Alteon will start sending to the WAF process only 10% of the transactions.
- If the WAF processing time of over 76% of the transactions within the window is higher than the user-specified threshold, Alteon will start sending to the WAF process only 1% of the transactions.
- Once 30% or less of the transactions within the window have a WAF processing time higher than the user-specified threshold, Alteon will go back to sending all the transactions to the WAF process.

To enable this mechanism, set the value of the **WAF Overload Threshold** parameter in the relevant virtual service or filter (by default it is disabled, meaning set to 0) as follows:

- From the CLI:
 - For a virtual service: `cfg/slb/virt <id>/service <port>/http/aw overload`
 - For a filter: `cfg/slb/filt <id>/aw overload`
- From the WBM
 - For a virtual service: Use the *New/Edit Virtual Service* pane > *Security* tab
 - For filter: *New/Edit Filter* page, *Security* tab

Note: Filters that have this mechanism enabled must be part of a Filter Set.

Slowloris Attack Protection

Slowloris is an application layer DDoS attack that uses partial HTTP requests to open connections between a single computer and a targeted Web server, and then keeping those connections open for as long as possible, thus overwhelming and slowing down the target.

Alteon can now protect itself and the application servers from a slowloris attack.

To activate the protection, configure the new **HTTP Headers Timeout** parameter for the virtual services or filters you want to protect. If all headers are not received within the specified time, the session is closed. The recommended value is 4000 msec.

Notes:

- The Delayed Bind mode must be Force Proxy when the Slowloris protection is enabled.
- Filters that have this protection enabled must be part of a Filter Set.

Layer 7 Modification on HTTP/2 traffic

Header modification is now supported for HTTP/2 proxy traffic, via HTTP Modification Rules.

Notes:

- Each rule in the rule list must be a header modification rule.
- If the action is Insert, the rule must not contain a condition.
- If the action is Remove or Replace, the following headers cannot be replaced or removed (the values of the header can be changed):
 - Request: ":method", ":scheme", ":authority" and ":path"
 - Response: ":status"
- The header names must not contain uppercase characters.

NFR ID: 221123-000123

Out-of-the-box Certificate Pinned Sites List

Pinning is the process of associating a host with the expected X509 certificate or public key. This means the client (browser or app) knows which certificate to expect for a certain site, including who signed the certificate.

SSL inspection is not possible for a site with a pinned certificate, as the client will identify the signer of the certificate as not being the original signer, thus terminating the connection.

Traffic to these application domains should be configured for bypass in any SSL Inspection solution if the enterprise wants to allow such traffic for its employees.

To simplify this for customers, Radware provides an out-of-the-box list of known sites with pinned certificates. The following out-of-the-box elements have been added:

- Data class `bypass_hosts_list`, which includes the list of known sites with pinned certificates
- Content class `Cert_Pinning_Bypass_Sni` of type SSL with the `bypass_hosts_list` data class attached
- Content class `Cert_Pinning_Bypass_Hostnames` of type HTTP with the `bypass_hosts_list` data class attached

To bypass the pinned sites, you need to configure the bypass filter and select the relevant Content Class (SNI for Transparent Proxy mode or Hostnames for Explicit Proxy mode).

All these out-of-the-box objects are editable:

- If the data class was edited, it can be reverted to the default.
- After version upgrades, the list could be updated. In such cases, if the `bypass_hosts_list` data class was not edited it is automatically updated. If the data class was edited, it is not updated unless **Revert to Default** is performed.

NFR ID: 221011-000139

Sideband and SecurePath Updates in Unified Events

Unified events now include information related to Sideband and SecurePath (based on AppShape++ script `SIDEBAND::add_action` commands `send_response` and `terminate_session`):

- In SecurePath integration, if the request is identified as an attack and is responded to by Cloud WAF (without reaching the destination server), the event's *severity* is marked as "security" with *reason* "SecurePath Response"
- When generic sideband is used, if the request is responded to by the sideband server (without reaching the destination server), the event's *severity* is marked as "Normal" with *outcome* "Sideband Response"
- When the connection is terminated by the sideband, meaning that the client connection is closed by FIN/RST, the event's *severity* is marked as "Exception" with *outcome* "Failure" and *reason* "Connection Closed by Sideband".
- When there is a Sideband time out, meaning that the client connection is closed by FIN/RST, the event's *severity* is marked as "Exception" with *reason* "Sideband Failure".

GEL Dashboard Enhancements

The following GEL Dashboard enhancements are available starting with Cyber Controller version 10.1.1.0 for all supported Alteon versions:

- An instance's last validation time is now visible in the *Instances* table per the selected entitlement. By default, each instance validates its license with the license server every five (5) minutes.
- The validation status of the license allocated to the Alteon server is now available in the *Instances* table per selected entitlement. Values include:
 - Valid — The Alteon server has received revalidation from the LLS.
 - Revalidation Required — The Alteon license is still valid, but the Alteon server did not receive validation from the LLS for more than two (2) hours, half of the borrow period. If the Alteon server receives revalidation before the end of the four-hour borrow period, the status changes back to Valid.
- Sorting was added to the instance table per selected entitlement. By default, the table is sorted according to the validation status. The table can be sorted by each one of the columns in the table.

Control and Export of Management Port Packet Capture from WBM

You can now control and export the Management port packet capture from WBM.

NFR ID: 221102-000004

WHAT'S CHANGED IN 34.0.2.0

vRO Plugin Update

The vRO plugin was updated to support vRealize version 8.6.

OpenSSL Upgrade

The OpenSSL version was updated for both the data and management path, to version 1.1.1u.

Note: Not relevant for FIPS II models.

Quick Application Wizard Enhancement

The following enhancements were done for the Quick Application Wizard:

- Added: Edit server port translation, HTTP2, WebSocket.
- Changed: Persistency is set to disabled by default; Client NAT is set to disabled by default.
- Removed: Application type 'IP', FastView checkbox,

After upgrade, the above changes will not affect applications that were created by the wizard in previous versions, but additional edits of these applications using the updated wizard will be applied to the applications.

GSLB Network Number Increase

The maximum number of GSLB networks was increased from 2048 to 4096 for VA, Standalone, and vADCs with 11 CUs or greater. For vADCs with less than 11 Cus, the maximum number of GSLB networks was increased from 1024 to 2048.

NFR ID: 230111-000065

Password Policy Enhancements

The following enhancements were added to the password policy:

- The password policy can now be enforced on the default admin user.
- You can set the password to contain the username or not to contain it.
- You can define the minimum number of times that you cannot use consecutive repetitions of the same number or letter. For example, if this value is set to 4, a password containing "aaaa" or "5555" is not allowed, while a password containing "aaa" is allowed.
- You can define the minimum number of sequential inputs of consecutive letters or numbers (right-to-left or left-to-right) of the QWERTY keyboard that you cannot use. For example, if this value is set to 5, a password containing "qwerty" is not allowed while a password containing "qwer" is allowed.

Note: This rule does not include special characters.

NFR ID: 230224-000026

"wget" Package Update

The WGET library was upgraded to version 1.21.4.

NFR ID: 220808-000107

SecurePath Policies Number Increase

The maximum number of SecurePath policies was increased from 50 to 100 for all platforms and form factors.

NFR ID: 230302-000167

Integrated AppWall

GraphQL Protection

- Support for Extension, Directive and Variable list.
- Support for requests located in the query parameters.
- Security inspection with Database filter, Vulnerabilities filter and Redirect Validation Host protection.

Custom Pattern

The customer pattern has been improved to support multiple conditions. We can now define different patterns located in different zones of the requests.

It provides a more accurate option to define Custom Pattern and reduce false positives.

Limit Number of Headers to Parse

In the Tunnel Properties, we can limit the maximum number of headers to be parsed.

Base64 Decoding

The Base64 heuristic detection can decode payload with suffix.

Redirect Validation Host Protection

In the Defense Properties, the configuration of the Redirect Validation Host protection is exposed. The signatures used for LFI, RFI, SSRF and their delimiters can be edited.

WHAT'S CHANGED IN 34.0.1.0

Network HSM (Thales/Gemalto) Enhancements

The Network HSM client was updated to version 10.5.1 (previously it was 7.4).

In addition, a periodic health check is performed on the HSM appliance and if it is down, all SSL/HTTPS virtual services are also down.

BWM Shaping

The BWM shaping capability is no longer supported and has been hidden from the CLI and WBM. If the capability is configured already on a device before upgrading to this version, it will continue to work as configured after upgrade.

UDP Virtual Service Down Response

In previous versions, when UDP requests were sent to a UDP virtual service that was down, Alteon did not respond. When those requests were sent for health check purposes, the lack of answer did not produce an error that the service was down, as UDP clients expect ICMP errors as a response when a UDP service is down.

In this version, Alteon responds with an ICMP error to requests to UDP virtual services that are down. To preserve backward compatibility the **srvdown** flag is used to enable the new behavior under UDP services (**Connection Handling on Service Down** in WBM).

Updated Option to Enable/Disable Weak Algorithms in SSH

The command that enables the SSH weak MAC algorithm is now updated to also enable the weak KEX algorithm and the weak Server host key algorithm.

The CLI command was renamed from `/cfg/sys/access/sshd/weakmac` to `/cfg/sys/access/sshd/weakalg`

By default, the value is enabled (to support backward compatibility).

Disabling weak algorithms excludes the following weak SSH algorithms:

- KEX “algorithms diffie-hellman-group-exchange-sha1”, “diffie-hellman-group14-sha1”,
- server host key algorithm “ssh-rsa” and MAC algorithm “hmac-sha1”.

Alteon Embedded Dashboard Removal

Starting with this version, the Alteon embedded dashboard is no longer available from WBM. For enhanced analytics, which include historical data and reporting, Radware recommends using the ADC analytics capability available via APSolute Vision or Cyber Controller.

Advanced Virtual Wire Health Check Enhancements

The advanced virtual wire health check now works in conjunction with port trunks (Static and LACP).

Change in AppWall SNMP Trap OID

The SNMP trap OID for the integrated AppWall server status was wrong and is now fixed:

- appwallUpTrap (AppWall server is up) OID is now .1.3.6.1.4.1.1872.2.5.7.0.166
- appwallDownTrap (AppWall server is down) OID is now .1.3.6.1.4.1.1872.2.5.7.0.167

Integrated AppWall

Multiple Improvements

- **Automatic Disable for Auto Discovery and Auto Policy:** A timer was added to disable Auto Discovery and Auto Policy after 30 days.
- More security coverage in the **Directory Listing** host protection.
- Support for **Tor Exit Nodes** in the GEO updates subscription (Anonymous Proxy renamed).
- **SSRF Security Event** name change.
- Increase **default configuration value for Fast Upload**.
- **Redirect Validation default configuration change**.
- **Default Security filters in a new Virtual Directory:** Database filter, Vulnerabilities filter and HTTPMethod are proposed by default.
- **Base64 support:** Option for “Heuristic Detection” and “Force scan of original value” has been removed from AppWall management Console (available in the Configuration file and REST Management APIs).

WHAT’S CHANGED IN 34.0.0.0

UDP Stateless and TCP Services on the Same VIP

You can now configure both a TCP service and an UDP stateless service on the same VIP and port.

NFR ID: 220520-000151

Integrated WAF SUS and GEO DB Update Via Proxy

Auto-updates for WAF SUS and GEO DB can now be performed through a Proxy server.

Use `/cfg/sys/mgmt/awproxy` to set the interface to route the traffic to the proxy server.

The management interface is defined by default.

NFR ID: 220601-000032

Combined Image Upload Option Removed from WBM

The Alteon combined image is utilized to install both ADC-VX and vADC instances for Alteon platforms in a single step. However, the option to upload a combined image has been removed from the WBM in this version and is only supported via the CLI. If you want to upload an image via WBM, you must upload the ADC-VX and vADC images separately.

Service and Real PPS Collection Interval

Starting with this version, the service and real PPS collection is enabled by default and collects the information every 20 minutes in .csv format. In addition, the interval can be now adjusted using the `/cfg/slb/adv/pps/interval` command.

OpenSSL Upgrade

The OpenSSL version was updated, for both the data and management path, to version 1.1.1t.

Note: Not relevant for FIPS II models.

Integrated AppWall

API Security

In this version multiple enhancements are provided for API Security protection:

- **Support for Preflight request (CORS mechanism):** Usually the preflight requests are automatically sent by browsers. This consists of sending automatic requests with the HTTP method `OPTION` and the header "Access-Control-Request-Method". If the method `OPTION` is not defined in the OpenAPI file description, the requests are blocked by the API protection. Support of preflight request will now accept these client requests coming from the browser.
 - **Case insensitivity during the API Catalog endpoints inspection.** By default, the inspection is case sensitive. It can be deactivated to be case insensitive.
 - **Circular reference:** OpenAPI files that include circular references are now supported.
 - The **Forensics Security Events** present more detailed descriptions related to the nested parameters, for example into a JSON body.
 - When a Security violation occurs, AppWall propose a more accurate and **advanced refinements option** that will improve the False Positive management.
 - The **AppWall Techdata** has been updated to include the OpenAPI files that have been previously uploaded.

Custom Pattern per Application Path

Custom Patterns help to define a personal signature. Custom Patterns can now be defined per Application Path, not only globally.

Server-Side Request Forgery

The Unvalidated Redirect protection is improved in term of performance and security coverage.

Multiple IPs Included in XFF HTTP Header

In version 7.6.18.0, AppWall allowed globally configuring how to read XFF HTTP headers when they contain multiple IPs. From this version, this can be configured per AppWall Tunnel (referred to as SECWA in the Alteon WAF).

Global Security Event Suppression

AppWall provides mechanisms to protect from a Security Events flood:

- Automatic Event suppression configured manually per Security Event.
- Automatic Event suppression configured dynamically per Security Event.

In this version, AppWall provides an additional mechanism:

- Automatic Event suppression configured dynamically per multiple Security Events.

Database Security Filter

Database Filter inspection can be excluded for Query/Body Parameter names. The configuration is available globally or per Application Path.

Multiple Enhancements on AppWall REST API for DevOps

Multiple new AppWall REST APIs have been delivered.

For details, please consult the on-line product documentation.

MAINTENANCE FIXES

The following sections list the fixed bugs included in this release.

Fixed in 34.0.2.0

General Bug Fixes

Item	Description	Bug ID
1.	There was an issue with a DPDK instance in Azure.	AL-49525 AL-50573
2.	A VIP was unreachable after migration from an Alteon 6K platform to a 7K platform.	AL-50582
3.	A vADC MP reached 100% CPU utilization.	AL-54939
4.	Problems occurred with an SSL certificate with a Subject Alternative Name with more than 1024 characters.	AL-139069
5.	Using APSolute Vision, there was a back-end SSL handshake failure exception.	AL-139140 AL-139178

Item	Description	Bug ID
6.	There was cyclic reboot of vADC1 on version 33.0.7.50 when data ports were up.	AL-139201
7.	A virtual service froze after an apply operation .	AL-139209
8.	vADC4 rebooted cyclically after Alteon ADC-VX upgraded to version 33.0.7.50.	AL-139214 AL-139217
9.	An IPv6 remote real health check failed via a DSSP health check.	AL-139255
10.	WBM was not available after the mmgmt certificate was updated .	AL-139282
11.	A failed real server mistakenly displayed the current sessions counts.	AL-139379
12.	There was an issue with a non-configured peer.	AL-139422
13.	The IPv6 Network filter for an unspecified address (::/128) overlapped with an IPv4 network filter.	AL-139451
14.	There was an issue session capacity and session mirroring .	AL-139481
15.	When syncing from backup to master, virtual services were deleted on the master, affecting the service.	AL-139502 AL-139508
16.	The device rebooted.	AL-139518
17.	A standby Alteon advertised BGP routes when any BGP related configuration changes were made, and the “advertise BGP on HA backup peer” option was disabled.	AL-139548
18.	On an Alteon D-6024S platform, the RX and TX PPS statistics value seemed stuck in the pefmon file.	AL-139591
19.	vADC-2 was restarting on both ADC-VX instances in a High Availability environment.	AL-139631
20.	Sessions through transparent SSLi failed when sending traffic to a VRRP MAC.	AL-139642
21.	The Alteon embedded dashboard was visible even through is no longer should be available.	AL-139651
22.	Alteon TRP MIB file (CHEETAH-TRAP-MIB.mib) was missing a definition for session table threshold traps.	AL-139666
23.	An IP address deleted in Smart NAT was not released.	AL-139872
24.	Traffic graphs on the dashboard were not updated during a performance test.	AL-139914
25.	There was an issue with vADC High Availability if a high number of CUs are assigned.	AL-139973

Item	Description	Bug ID
26.	For IP ACLs enabled at the Alteon level, when applying changes to AppWall, the sync process from the device where the AppWall change was applied adds/removes IP addresses not configured manually on the destination device for the sync process.	AL-140055
27.	The /oper/slb/group/shut (connection shutdown) did not work correctly.	AL-140185
28.	Issue using AppShape++ to add a PIP if the client IP address was in the same subnet as the server.	AL-140231
29.	After upgrading from version 33.5.4.0 to version 33.5.5.1, the NAT health check configuration was missing.	AL-140264
30.	Application Service Engine Out-of-sync issue	AL-140273
31.	When connecting to a Alteon 5424 platform with a specific server name, after disabling then enabling a port, the device did not come up again.	AL-140283
32.	In Integrated AppWall, could not set traffic routing for the DefensePro Signaling Server.	AL-140287
33.	After running automation with an API call that failed, accessing the WBM on Alteon VA produced a 50X error.	AL-140415
34.	FRR BGPv6 session not established over the default gateway	AL-140551
35.	Inconsistent restart information between ADC-VX and vADC in TechData.	AL-140566
36.	The RST packets originated after an inactivity timeout from the proxy were sent with wrong source MAC instead of the proxymac.	AL-140575

AppWall Bug Fixes

Item	Description	Bug ID
1.	Latency on masked responses.	AW-49841
2.	Standalone AppWall VA crashed (version 7.6.20.0)	AW-49833
3.	AppWall Security event showed wrong destination port.	AW-49938
4.	AppWall crashed when it is inline.	AW-49871

Fixed in 34.0.1.0

General Bug Fixes

Item	Description	Bug ID
1.	On an ADC VA, an SP1 freeze for slb_pbt_age_entries occasionally caused the device to reboot.	AL-49410
2.	There were DNS errors in the Alteon MP logs.dns due to DNS resolution not being case-insensitive.	AL-49475 AL-49476 AL-49477
3.	The Websec module fluctuated between down and up.	AL-49482
4.	The APP response was not calculated correctly when there were matches to the content class	AL-49486
5.	DNS Vulnerability CVE-2004-0789 was fixed.	AL-49498
6.	The FQDN real indexes changed during get config.	AL-49506
7.	After upgrading to version 33.0.x, the Apply time increased from 12 to 18 seconds.	AL-49510
8.	When the capture -M command was run on very large secrets files, the disk became full. Now the secrets file size is limited during capture -M execution.	AL-49521
9.	Alteon SSH failed a security audit.	AL-51831
10.	The CDP group table became empty when deleting one entry case.	AL-51872
11.	The static NAT for GRE traffic in point-to-point was incorrect.	AL-51876
12.	The VLAN 2090 error was assigned to more than 32 PIPs.	AL-51885
13.	The /oper/slb/sessdel command did not work for ESP sessions.	AL-51889
14.	There was a corruption in the NAT rule configuration.	AL-51898
15.	The LinkProof Smart NAT ID disappeared.	AL-51908

Item	Description	Bug ID
16.	Updated the REST API Guide to explain how to retrieve the high availability state via REST API when in VRRP mode.	AL-51914
17.	On a KVM VA, health checks to AppWall and nodejs failed in single IP mode.	AL-52635
18.	The appwallUp appwallDown traps were sent with the wrong OIDs.	AL-52638
19.	In the Ansible SSL policy configuration, added the option "none" to fe_intermediate_ca_chain_type.	AL-52647
20.	The /info/sys/log command issues an error when the ramdisk is full. This was due to an issue with the FRR log rotation logic.	AL-53589
21.	Implemented a new CLI command "/c/slb/virt x/service 53 dns/undirect ena dis" to bypass BWM processing in the response path for the DNS UDP stateless service.	AL-53598
22.	Hid the internal address from the BE session table.	AL-53607
23.	On a vADC, enabling LACP caused the device to reboot.	AL-53612
24.	Back-end SSL with client authentication using static RSA caused a "bad" MAC address..	AL-54021 AL-54022 AL-54024
25.	Alteon failed to support the OID for Temperature sensor 3 and Temperature sensor 4.	AL-54702
26.	Using WBM, when dbind was set to enabled, when changing SSL-related configurations (as such the SSL policy), the dbind setting was changed to forceproxy.	AL-54715
27.	On a vADC, the perf_rec_2.tmp.old file utilized all of the disk space.	AL-54722
28.	In an SLB with pbind environment, when a service was configured with AppShape++ and alwayson, upon receiving the traffic the device rebooted.	AL-54728
29.	There was a discrepancy in the output hard disk between the CLI and WBM.	AL-54738
30.	In an ADC-VX environment, when VLAN sharing was enabled on a 5424 platform, traffic destined to the vADC was dropped.	AL-54744
31.	With virt sync disabled and a virtual service configured with a content rule, during configuration sync, devices being synced lost the content rule association with the virtual service.	AL-54751
32.	A vADC rebooted because of a software safe restart.	AL-54760

Item	Description	Bug ID
33.	In WBM, the password strength (pwscrip) menu was not included.	AL-54764
34.	On an Alteon VA, even though the disk space was increased, logs were issued regarding the storage capacity.	AL-54775
35.	The SSL inspection advanced virtual wire check was down when the IDS ports belonged to trunks.	AL-54915 AL-54917
36.	When a syslog message sent from Alteon did not use LF as delimiters, the vDirect traffic event was not triggered .	AL-54922
37.	The health check run-time instance was shared unexpectedly when several cntrules with different groups were defined under the same virtual service.	AL-54929 AL-54931
38.	Logs were added in relevant places that failed during key/certificate modification.	AL-55158 AL-55165
39.	Alteon sent incorrect parameters to the customer-hosted CAPTCHA/Block page.	AL-55167 AL-55173
40.	Did not receive the complete URL in the data received post.	AL-130949
41.	When sending an FQDN update, the SSL-related configuration that was sent was still in progress and caused a configuration issue.	AL-138539
42.	Unexpected reboot	AL-138556
43.	Both Alteon devices panic at the same time, multiple times	AL-138694
44.	Alteon sent a duplicate response for each ICMPv6 request sent to the device's interface IP address.	AL-138757

AppWall Bug Fixes

Item	Description	Bug ID
1.	Attack recorded in Passive state.	DE81421
2.	The Websec module down/up statistic was fluctuating.	DE81882
3.	Customer request was blocked with transactionID 0 and no event being generated.	DE82183
4.	Query about discrepancy between documentation and error message on Parameters Filter refinement.	DE82374
5.	Traffic was not sent to the back-end when integrated WAF had the "Subsystem stopped" Init event, reported on "Subsystems – Escalation".	DE82382

Item	Description	Bug ID
6.	Filtering forensics view by URI returns nothing and cause web page freeze.	DE82455
7.	Customer unable to visualize the GeoMap dashboard in AppWall 7.6.17.1.	DE82787
8.	Server Request failed with status code 500.	DE82865
9.	API Discovery caused overwrite of HTTP Properties.	DE83555
10.	The DefensePro connection failed when the user clicked the Check button, even though AppWall was able to reach the DefensePro device.	AW-11611
11.	The DefensePro connection failed when the user added a DefensePro device.	AW-11615
12.	In rare cases, when a security apply is performed, AppWall can get stuck for 35 seconds.	AL-49522

Fixed in 34.0.0.0

General Bug Fixes

Item	Description	Bug ID
1.	On a 6024 SL platform, as unable to give the response to a TCP-SYN message.	DE76488
2.	RSTP was not working properly	DE78382
3.	Could not configure filtpbkp in hot-standby mode. Modified the CLI validation to resolve the issue.	DE78555
4.	Interface 256 could not be selected for switch HA advertisements.	DE78894
5.	Using WBM, an update to the cipher list was greater than 256 characters and was not accepted.	DE78975 DE78982
6.	The Unit label for a rule level timeout was different between WBM and the CLI.	DE79014
7.	On DPDK virtual platforms, traffic passing thorough BWM shaping contracts caused invalid buffer access and caused the vADC to reboot.	DE79049
8.	There was high SP memory utilization during a low traffic period.	DE79060
9.	Getting the vADC partition size failed and caused the vADC to hang on restart.	DE79122

Item	Description	Bug ID
10.	After running /stats/slb/pip, the SNMP OID was missing from the output.	DE79222
11.	VPN connectivity failed because of the IKE and the ESP sessions being bound to different servers.	DE79231
12.	Could not enter the hyphen (-) character in the New Host to Replace field on the Application Delivery > Virtual Services >Virtual Services of Selected Virtual Server > HTTP Content Modifications >HTTP Rules >URL Match & URL Action pane.	DE79234
13.	The Root Bridge was not properly declared in MSTP.	DE79245
14.	Using WBM, the hard disk capacity displayed incorrectly because secondary disk size was not counted.	DE79254
15.	SNMP walk failed because the OID did not increase.	DE79433
16.	A vADC did not handle traffic when it became the master.	DE79515
17.	An AppShape++ script trying to insert a script greater than 50k characters into the cmdLogMP-1-1 file caused the device to reboot.	DE79544
18.	If PIP processing or session mirroring is enabled if the Alteon device is identified as the backup device with server processing disabled, the frame received from the server needs to be forwarded.	DE79607
19.	System analytics were sent with null data.	DE79612 DE79619
20.	There was an issue with FQDN and multiport applications because there was no server name for the FQDN ephemeral real server in the XML sent to AppXcel.	DE79729
21.	When setting the time zone by name and not changing the default NTP time zone, a warning is issued after the Apply.	DE79793 DE79800
22.	When clisaging both is enabled with tunnels, the device rebooted.	DE79831
23.	The application services engine was not synchronized with the current configuration and the change was not saved.	DE79844
24.	In an SLB and PIP environment, there was a discrepancy in the PIP statistics between /st/slb/pip and /st/slb/aux.	DE80128
25.	SANs fields greater than 1024 bytes were accepted while generating a CSR.	DE80145
26.	The traceroute response packet was sent by Alteon with the wrong interface.	DE80192

Item	Description	Bug ID
27.	After upgrading from version 30.5.3.0 to 32.4.6.0, VLANs displayed as Down.	DE80314
28.	After downloading and uploading a configuration via REST API, SlbNewCfgFQDNSTable was empty.	DE80348
29.	An SSLi issue caused the device to reboot.	DE80415 DE80420
30.	An incorrect GSLB DNS query refused a response for non-existing domains.	DE80453
31.	Unexpected BFD behavior.	DE80466
32.	Logging the times command caused the device to reboot.	DE80605
33.	There was an AppShape++ namespace conflict when using rule lds that end with digits.	DE80629
34.	SNMP trap 193 is returned for a disk space issue when it was not included in its MIB.	DE80689
35.	The Secured Web Applications (secwa) pane did not display on a standalone device.	DE80695
36.	On an ADC-VX, the MP caused a reboot.	DE80820
37.	From the CLI, could not connect to real server via Telnet.	DE81212
38.	Using WBM, could not change the protocol TCP/UDP for port 389.	DE81263
39.	The real server health checks treatment was delayed when an unavailable rlogging server was configured.	DE81271
40.	The label in the output regarding MP memory for the <code>/i/sys/capacity</code> command was not clear. Changed the label from "mp memory" to "total device memory".	DE81369
41.	The last digit of the year was missing in the output for some OIDs because <code>arrayLength-1</code> was assigned with a Null character.	DE81378
42.	A RADIUS UDP health check was sent for RADIUS AA instead of the expected TCP health check when a non-standard destination port was defined.	DE81519
43.	When there is a shared resource (file) that is being accessed by two different operations (for example, <code>putcfg</code> and <code>snmp</code>), there was a bug in the state machine that is responsible for the synchronization, causing the device to reboot.	DE81560
44.	There were DNS errors in the Alteon MP logs.dns due to DNS resolution not being case-insensitive.	DE81599

Item	Description	Bug ID
45.	Back-end SSL with client authentication using static RSA caused a bad MAC address.	DE81675

AppWall Bug Fixes

Item	Description	Bug ID
1.	Cannot change the tunnel operational mode to Passive.	DE78282
2.	Sensitive Parameters are not getting masked in Security Details but are getting masked in Raw Request Data.	DE78706
3.	AppWall GUI gets stuck and affects the Alteon GUI as well in versions 32.4.13 and 33.5.3 and 33.0.6.5.	DE79700
4.	Error in the GUI when accessing Vulnerabilities.	DE79955
5.	File Upload security filter is detecting false-positive.	DE80620
6.	AppWall is trimming requests payload based on Content-Length header value.	DE81172
7.	AppWall does not send complete hostname in the security syslog message.	DE81249

KNOWN LIMITATIONS

The list of known limitations, available to customers only, is available at the following link:
https://support.radware.com/app/answers/answer_view/a_id/1036876

RELATED DOCUMENTATION

The following documentation is related to this version:

- *Alteon Installation and Maintenance Guide*
- *Alteon VA Installation and Maintenance Guide*
- *Alteon Getting Started Guide*
- *Alteon Web Based Management Application Guide*
- *Alteon Command Line Interface Application Guide*
- *Alteon Command Reference*
- *Alteon REST API User Guide*
- *Alteon AppShape++ SDK Guide*
- *AppWall for Alteon NG User Guide*

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- *LinkProof for Alteon NG User Guide*
 - *LinkProof NG User Guide*

For the latest Alteon product documentation, as well as previous and retired versions, refer to:
<https://portals.radware.com/Customer/Home/Downloads/Application-Delivery-Load-Balancing/?Product=Alteon>

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