

Deployment Guide: Radware Alteon Cloud Control Integration for Cisco ACI

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Introduction

Radware Alteon® Cloud Control for ACI is an application that provides integration between Cisco® Application Policy Infrastructure Controller (Cisco APIC) and Radware Alteon Cloud Control, enabling users to easily monitor both network infrastructure and application performance from Cisco APIC in a single pane of glass. Alteon ADC, Alteon Cloud Control, and Alteon Global Elastic Licensing (GEL) are sold by Cisco as part of the Cisco Secure ADC portfolio of solutions.

Transitioning to the cloud makes managing and controlling networks and applications difficult, and in an application-driven world, ensuring application SLAs is critical for ensuring the digital experience.

Alteon Cloud Control provides a centralized service management and control component that leverages Alteon application delivery technology and extends it to private and public cloud environments for a true multicloud solution.

Alteon Cloud Control provides a single ADC technology across all platforms (hardware, virtual, and cloud), a unified management and control interface and one Alteon Global Elastic License (GEL), which covers all Secure ADC environments. With multicloud support (Alteon Multi Cloud) providing application delivery and security services across multiple environments, Alteon Cloud Control simplifies administration through centralized policies that are propagated to all environments to ensure operational consistency.

Radware Alteon Cloud Control for ACI

The Alteon Cloud Control for ACI application enables monitoring and troubleshooting of ADC functionality using Cisco APIC and provides the administrator with visibility of the entire application environment (L2-L7) within the same interface.

The Alteon Cloud Control for ACI application displays an application dashboard that allows administrators to:

1. View the health of all applications.
 - a. Application health includes: application performance (end-to-end response time), server availability, and Cisco Secure ADC / Alteon¹ instance health. For more information, see the [Cisco Secure ADC Alteon Data Sheet](#) and [Cisco Secure ADC Alteon Technical Specifications](#).
 - b. Each application can be expanded to view status down to an individual server.
2. View the service graph for each application, its state, and associated devices.
 - a. Changes in the service graph state are automatically reflected in the dashboard.
3. Track key application performance metrics such as end-to-end response time, throughput, CPS, RPS, and concurrent connections, from the last 15 minutes up to three months.
4. Troubleshoot applications through deep-level application analytics based on transaction information. This information speeds up root-cause analysis, provides user insights, and enables anomaly detection.

¹ Alteon ADC is a next-generation application delivery controller that guarantees application SLAs and provides advanced, end-to-end local and global load balancing capabilities for all web, cloud, and mobile-based applications. Alteon and other Radware-powered solutions are sold by Cisco as part of the Cisco Secure Application Delivery Controller (ADC) portfolio.

Prerequisites

Software dependencies

- Cisco Application Policy Infrastructure Controller v4.2(3I) or above
- Radware Alteon Cloud Controller v1.4.0

Infrastructure

It is assumed that the Alteon Cloud Control for ACI application is being deployed in an established environment where Cisco ACI®, Alteon instances, and Alteon Cloud Controller have been provisioned and are ready. The full setup of all prerequisites is outside the scope of this document and will vary based on need. If your network is live, make sure that you understand the potential impact of any command or action. Before deploying the application for Alteon Cloud Control for ACI, the following is needed:

- ACI fabric must already be configured.
 - Physical and/or virtual servers must already exist and be served within the fabric.
 - Cisco ACI must already be leveraging Virtual Machine Manager (VMM) to maintain the environment.
 - A tenant and all associated VRFs, bridge domains, endpoint groups, contracts, and service graphs for the managed applications must exist.
- Alteon instances must already be deployed and serving the applications within the environment.
- VM templates must already exist for deploying new instances of Alteon ADC within the environment.
- Alteon ADCs must be associated with the managed applications with ACI within the associated service graphs.
- Alteon Cloud Controller must be configured to manage the Alteon elements within the environment; this includes within both ACI service and external elements. Alteon Cloud Control administrative credentials are required to set up and use the Cisco AppCenter application.

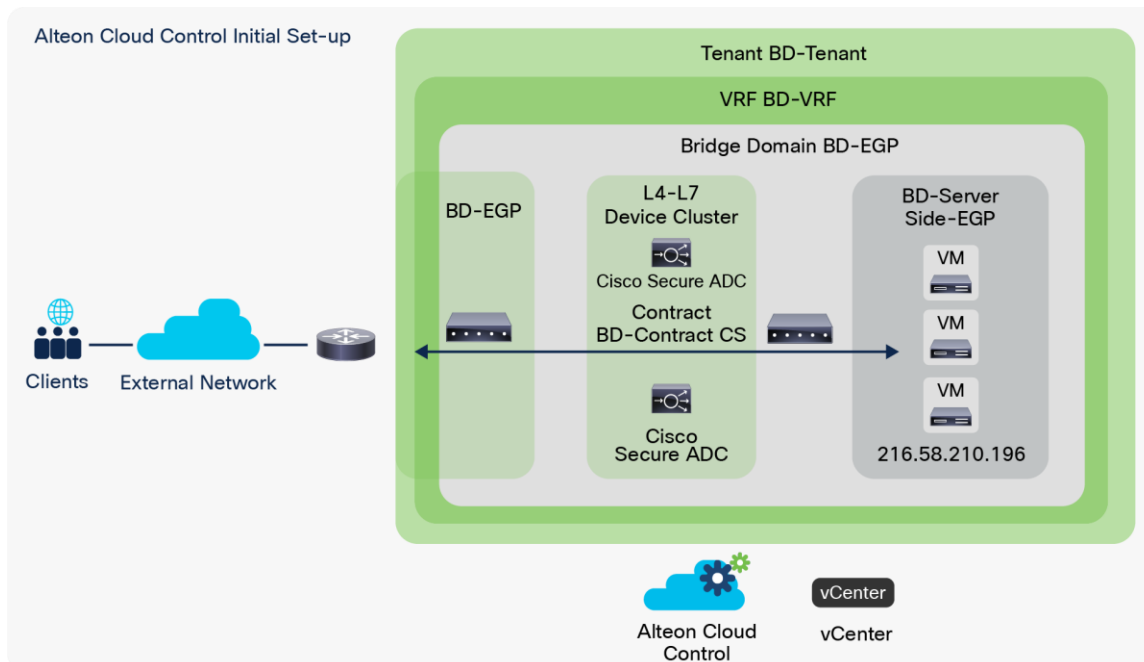


Figure 1.
Alteon Cloud Control Initial Set-up

Deploying the application

Download the Radware Alteon Cloud Control for ACI application from <https://dcappcenter.cisco.com/>.

Within the Cisco APIC interface, select “Apps”:

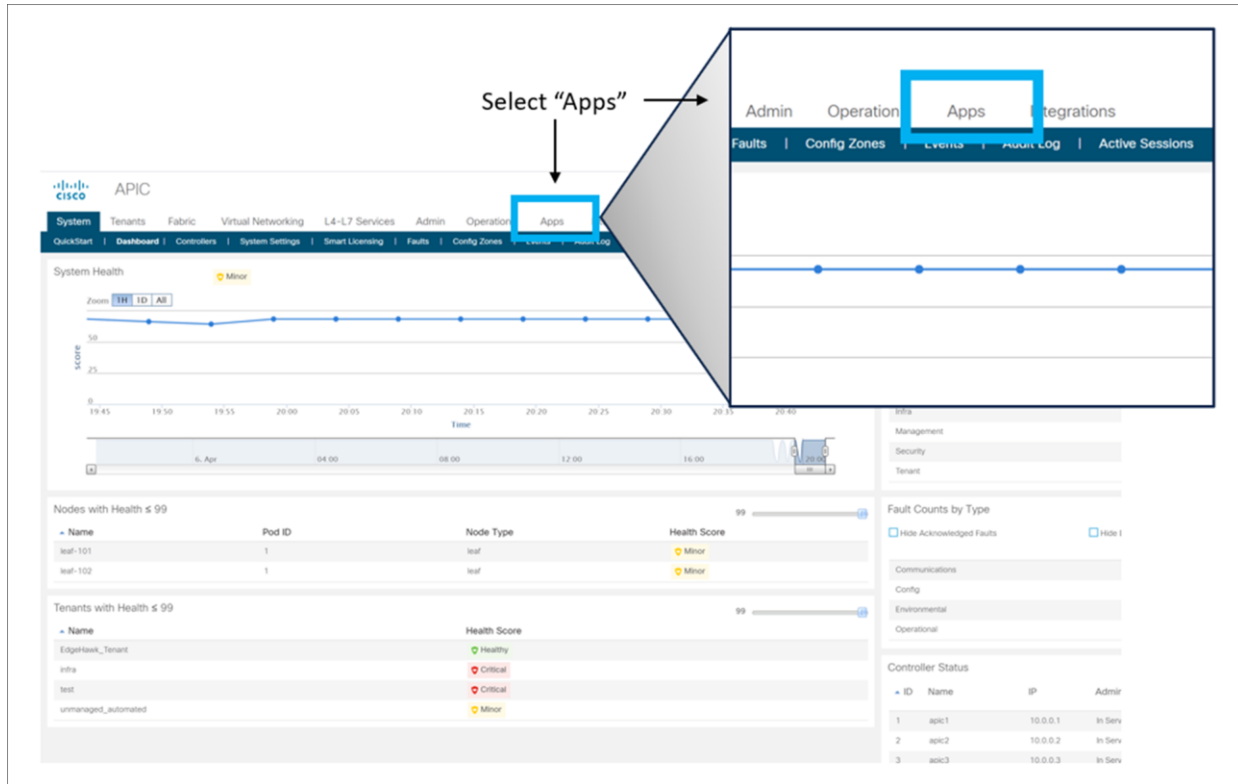
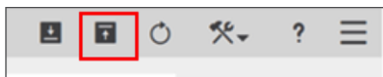


Figure 2.


Adding the Secure ADC app to Cisco APIC

Select the upload button from the Apps tab:



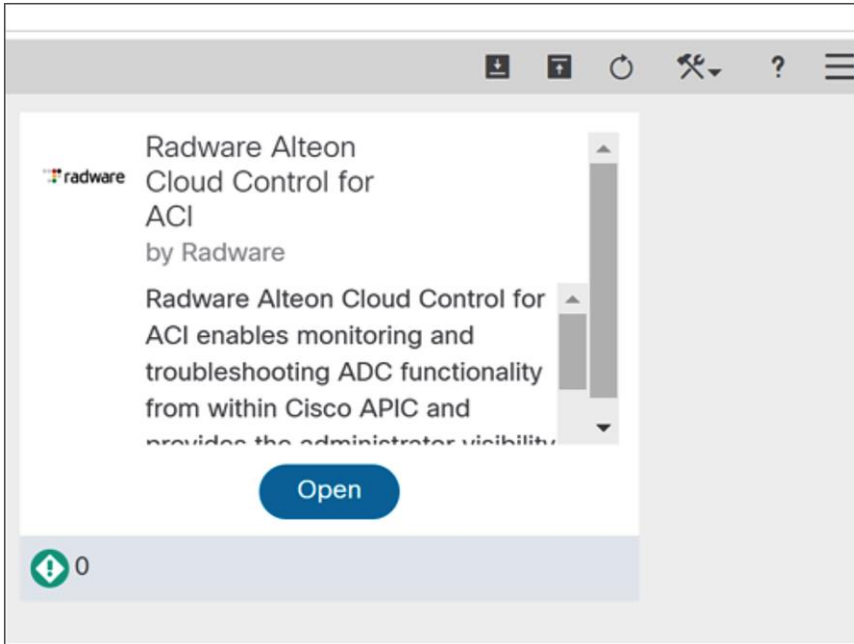
Select Browse and select the ACI application package that was downloaded previously:

Add application to APIC

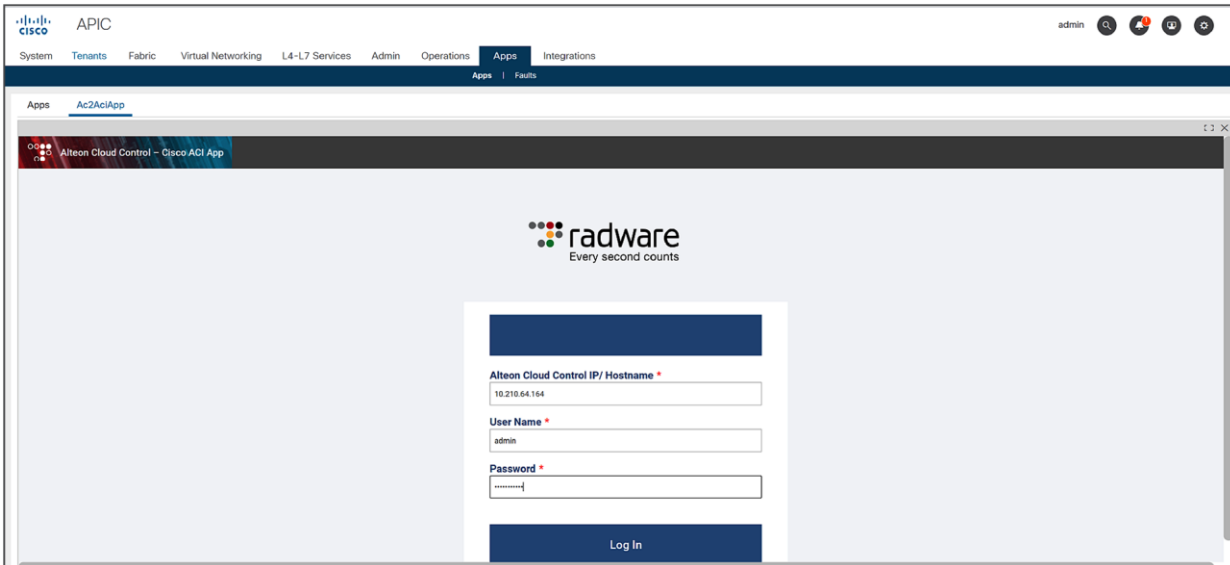
 You will not be able to use APIC UI while upload is in progress.
For large applications it is recommended to use the download remote feature on **Admin->Downloads**.

File Name:

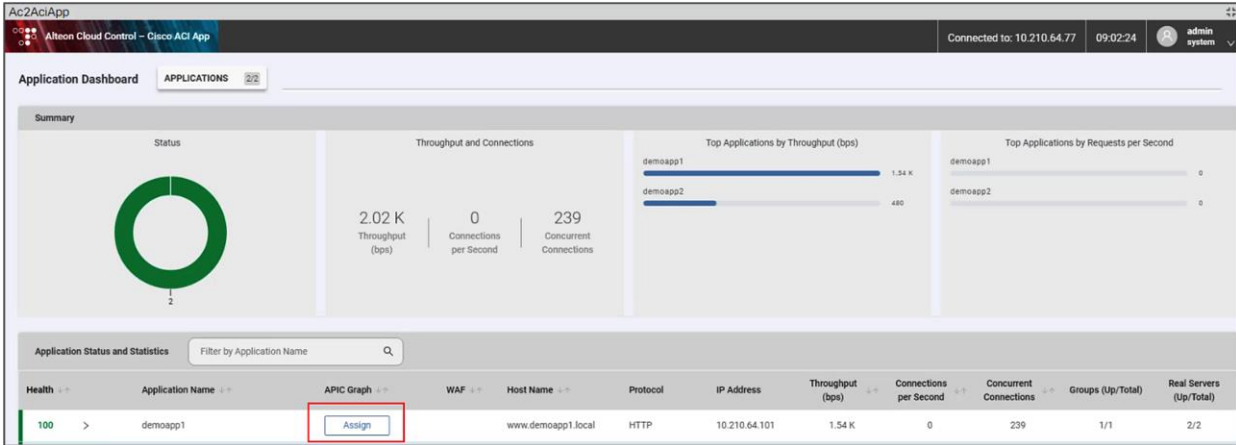
Once the upload is complete, the application should be present within the Apps tab. Click “Open” to launch:



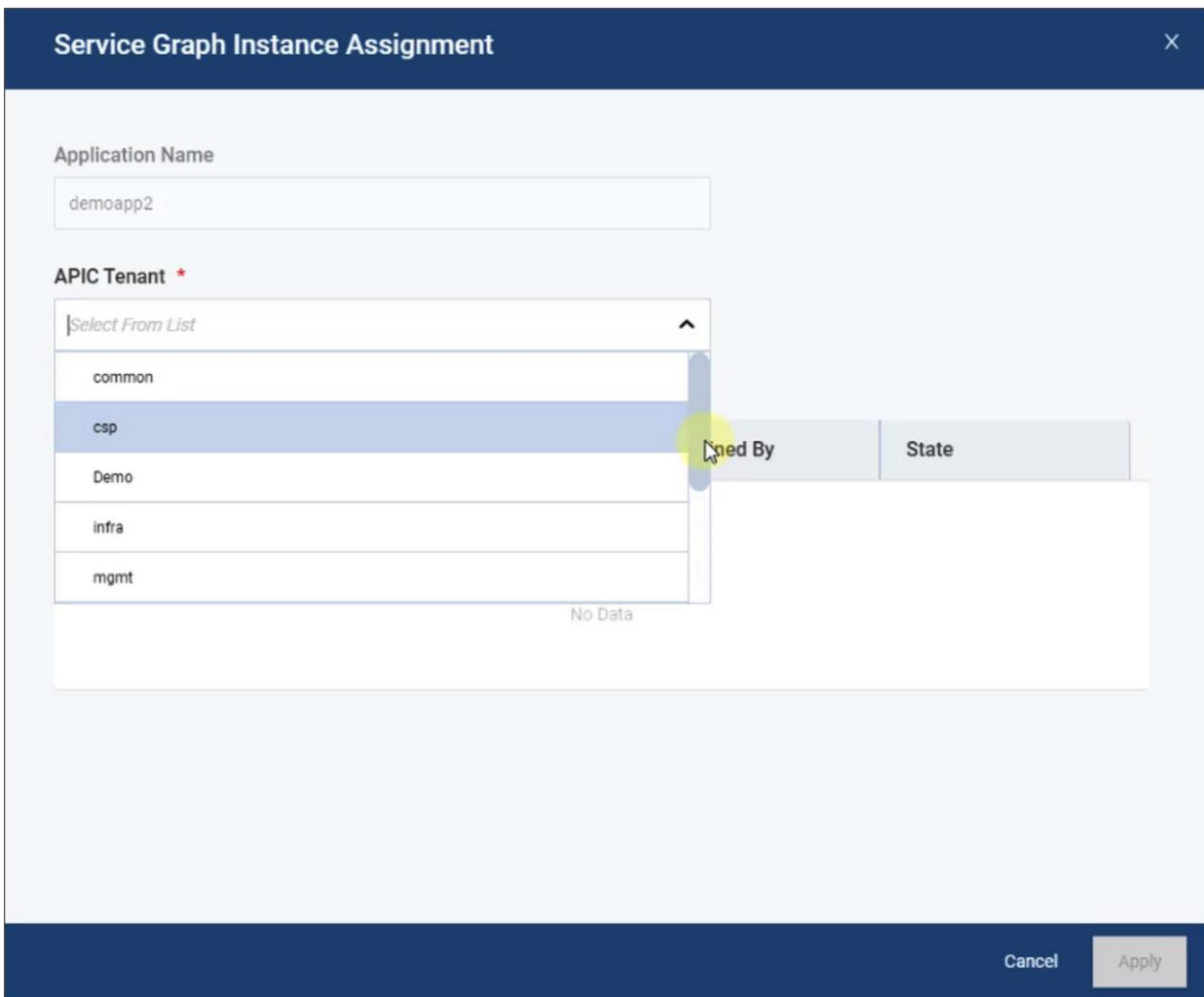
You should be presented with the following screen. Enter the IP address or host name and administrative credentials for the Alteon Cloud Control instance managing the environment:



Within the Alteon Cloud Control interface, click “Assign” under the APIC Graph associated for each of the applications listed:



Associate the appropriate tenant and service graphs within ACI to ensure correlation within Alteon Cloud Controller and click “Apply”:



Service Graph Instance Assignment ✕

Application Name

APIC Tenant *

Select Service Graph Instance *

	Service Graph	Contract	Contained By	State
<input type="radio"/>	DemoSG	app1-contract	Tenant Demo	applied
<input checked="" type="radio"/>	DemoSG	app2-contract	Tenant Demo	applied


Cancel Apply

Ateon Cloud Control - Cisco ACI App Connected to: 10.210.64.77 09:02:53 admin system

Application Dashboard APPLICATIONS 2/2

Summary

Status



2

Throughput and Connections

2.14 K Throughput (bps) | 0 Connections per Second | 235 Concurrent Connections

Top Applications by Throughput (bps)

demoapp1	1.66 K
demoapp2	480

Top Applications by Requests per Second


demoapp1	0
demoapp2	0


Application Status and Statistics Filter by Application Name


Health	Application Name	APIC Graph	Action
100	demoapp1		Assign
100	demoapp2		Applied

Service Graph Instance ✕

Status: ● Applied Contract: app2-contract Graph: DemoSG Contained By: Tenant Demo


 Consumer
 ClientApp2


 Logical Device
 Ateons


 Provider
 ServerApp2

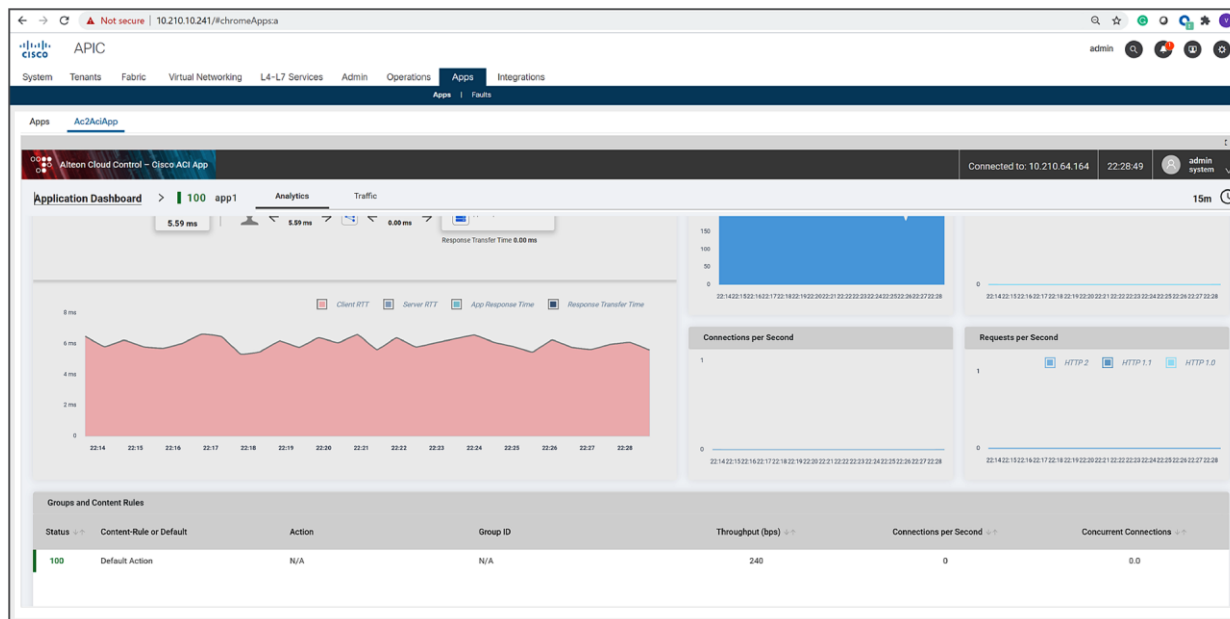
Concrete Devices

Name	vCenter Name	VM Name
app2-adc1	vc7	adc-system-app2-adc1
app2-adc2	vc7	adc-system-app2-adc2

Remove Assignment Close

Throughput (bps)	Connections per Second	Concurrent Connections	Groups (Up/Total)	Real Servers (Up/Total)
1.66 K	0	235	1/1	2/2
480	0	0	1/1	2/2

Once this association is complete, you can select each application within the interface to obtain application analytics, SSL metrics, and traffic logs associated with the managed applications with the added context of ACI contracts, service graphs, and EPGs.



References

- Cisco APIC Basic Configuration Guide, Release 4.2(x):
<https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/4-x/basic-configuration/Cisco-APIC-Basic-Configuration-Guide-42x.html>
- Alteon Cloud Control v1.4.0 User Guide:
[https://portals.radware.com/ProductDocumentation/Alteon Cloud Control User Guide 1 4 0/index.html#page/ACC_UG_1_4_0%2Fcontroller_dashboard.htm%23ww30395782](https://portals.radware.com/ProductDocumentation/Alteon%20Cloud%20Control%20User%20Guide%201%204%200/index.html#page/ACC_UG_1_4_0%2Fcontroller_dashboard.htm%23ww30395782)
- Cisco Application Policy Infrastructure Controller Release 4.2(3I) Release Notes:
<https://www.cisco.com/c/en/us/td/docs/switches/datacenter/aci/apic/sw/4-x/release-notes/Cisco-APIC-Release-Notes-423.html>
- What's New in Alteon Cloud Controller v1.4.0:
[https://portals.radware.com/ProductDocumentation/Alteon Cloud Control Release Notes 1 6 0/index.html#page/ACC_1_6_0_RN/AlteonCloudControl-1_6_0-RN_html.1.22.html#](https://portals.radware.com/ProductDocumentation/Alteon%20Cloud%20Control%20Release%20Notes%201%206%200/index.html#page/ACC_1_6_0_RN/AlteonCloudControl-1_6_0-RN_html.1.22.html#)

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