

Overview

Aruba ClearPass Policy Manager Platform

The most advanced Secure NAC platform available

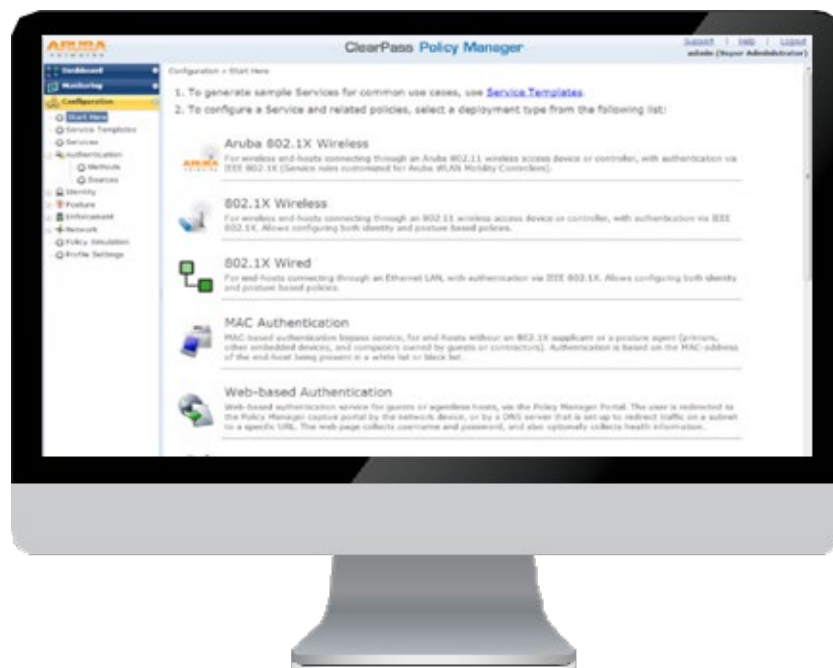
The Aruba ClearPass Policy Manager, part of the Aruba 360 Secure Fabric, provides role- and device-based secure network access control for IoT, BYOD, corporate devices, as well as employees, contractors and guests across any multivendor wired, wireless and VPN infrastructure.

With a built-in context-based policy engine, RADIUS, TACACS+, non-RADIUS enforcement using OnConnect, device profiling, posture assessment, onboarding, and guest access options, ClearPass is unrivaled as a foundation for network security for organizations of any size.

For comprehensive integrated security coverage and response using firewalls, UEM and other existing solutions, ClearPass supports the Aruba 360 Security Exchange Program. This allows for automated threat detection and response workflows that integrate with third- party security vendors and IT systems previously requiring manual IT intervention.

In addition, ClearPass supports secure self-service capabilities, making it easier for end users trying to access the network. Users can securely configure their own devices for enterprise use or Internet access based on admin policy controls.

The result is detailed visibility of all wired and wireless devices connecting to the enterprise, increased control through simplified and automated authentication or authorization of devices, and faster, better incident analysis and response through the integration and orchestration with third-party security solutions. This is achieved with a comprehensive and scalable policy management platform that goes beyond traditional AAA solutions to deliver extensive enforcement capabilities for IT-owned and BYOD security requirements.



Aruba ClearPass Policy Manager Platform

Overview

Key Features

- Role-based, unified network access enforcement across multi-vendor wireless, wired and VPN networks.
 - Intuitive policy configuration templates and visibility troubleshooting tools.
 - Supports multiple authentication/authorization sources (AD, LDAP, SQL).
 - Self-service device onboarding with built-in certificate authority (CA) for BYOD.
 - Guest access with extensive customization, branding and sponsor-based approvals.
 - Integration with key UEM solutions for in-depth device assessments.
 - Comprehensive integration with the Aruba 360 Security Exchange Program.
 - Single sign-on (SSO) support works with Ping, Okta and other identity management tools to improve user experience to SAML 2.0-based applications.
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Standard Features

The ClearPass Difference

ClearPass is the only policy platform that centrally enforces all aspects of enterprise-grade access security for any industry.

Granular policy enforcement is based on a user's role, device type and role, authentication method, UEM attributes, device health, traffic patterns, location, and time-of-day.

Deployment scalability supports tens of thousands of devices and authentications which surpasses the capabilities offered by legacy AAA solutions. Options exist for small to large organizations, from centralized to distributed environments.

Advanced Policy Management

Enforcement and Visibility for Wired and Wireless

With ClearPass, organizations can deploy wired or wireless using standards-based 802.1X enforcement for secure authentication. ClearPass also supports MAC address authentication for IoT and headless devices that may lack support for 802.1X. For wired environments where RADIUS based authentication cannot be deployed, OnConnect, offers an alternative using SNMP based enforcement.

ClearPass Device Insight provides next generation profiling capabilities to ClearPass Policy Manager through a cloud based machine learning algorithm that also leverage deep packet inspection support.

Authentication methods can be used to concurrently support a variety of use-cases. It also includes support for multi- factor authentication based on log-in times, posture checks, and other context such as new user, new device, and more.

Attributes from multiple identity stores such as Microsoft Active Directory, LDAP-compliant directory, ODBC-compliant SQL database, token servers and internal databases across domains can be used within a single policy for fine- grained control.

Contextual data from these profiled devices allows for IT to define what devices can access either the wired, VPN, or wireless network. Device profile changes are dynamically used to modify authorization privileges. For example, if a Windows laptop appears as a printer, ClearPass policies can automatically deny access.

Secure Device Configuration of Personal Devices

ClearPass Onboard provides automated provisioning of any Windows, macOS, iOS, Android, Chromebook, and Ubuntu devices via a user driven self-guided portal. Network details, security settings and unique device identity certificates are automatically configured on authorized devices. Cloud identity services like Microsoft Azure Active Directory, Google G Suite and Okta can also be leveraged as identity providers with Onboard for secure certificate enrollment.

Device Health Checks

ClearPass OnGuard delivers endpoint posture assessments over wireless, wired and VPN connections. OnGuard's health-check capabilities ensure endpoints meet security and compliance policies before they connect to the network. OnGuard offers a variety of flexible deployment options including agentless, dissolvable agents and agent-based configuration.

Customizable Visitor Management

ClearPass Guest simplifies visitor workflow processes to enable employees, receptionists, and other non-IT staff to create temporary guest accounts for secure wireless and wired access. Highly customizable, mobile friendly portals provide easy-to-use login processes that include self- registration, sponsor approval, and bulk credential creation support any visitor needs - enterprise, retail, education, large public venue. Credentials can be delivered by SMS, email, printed badges, or input directly through cloud identity providers such as Facebook or Twitter.

Built in support for commercial oriented guest Wi-Fi hotspots with credit card billing and 3rd party advertising driven workflows make it simple to integrate into a wide variety of environments.



Standard Features

Aruba 360 Security Exchange Program

Integrate with Security and Workflow Systems

Support for the Aruba 360 Security Exchange Program is an integrated component of ClearPass. Using features like REST- based APIs, RADIUS Accounting Proxy, and Syslog ingestion help facilitate workflows with UEM, SIEM, firewalls, help-desk systems and more. Context is shared between each component for end-to-end policy enforcement and visibility.

The ClearPass Ingress Event Engine provides 3rd party systems the means to share information in real-time using Syslog. This enables ClearPass to respond to changing threats for users and devices after they have authenticated to the network. By utilizing an open dictionary approach, anyone can write a parsing ruleset without the need for costly add-ons or locked in 3rd party ecosystems.

Advanced Reporting and Alerting

ClearPass Insight provides advanced reporting capabilities via customizable reports. Information about authentication trends, profiled devices, guest data, on-boarded devices, and endpoint health can also be viewed in an easy to use dashboard. Insight also has support for granular alerts and a watchlist to monitor specific authentication failures.

Aruba Central NetConductor

For networks managed by Aruba Central, Central NetConductor offers cloud-native security services that enable global policy management and network configuration with simple business-logic interface and workflows. Central NetConductor uses a distributed EVPN/VXLAN network overlay to facilitate inline policy enforcement across large, globally dispersed networks.

Networks that use Central NetConductor for policy orchestration can choose either Cloud Auth or ClearPass for authentication and role assignment. To learn more, read the [Solution Overview](#).



Configuration Information

Ordering Guidance

Please refer to the ClearPass Scaling & Ordering Guide for detailed information on appropriate sizing and required licensing to deploy ClearPass. This can be found on the Aruba support website in the [ClearPass documentation section](#).

BTO Models

Rule #	Description	SKU
Hardware Appliances		
Notes:	Includes 1 PSU and 1 US Power Cord	
1	Aruba ClearPass C3010 DL360 Gen10 HW-Based Appliance	R1V82A
1, 2	Aruba ClearPass C1000 S-1200 R4 HW-Based Appliance	JZ508A
1	Aruba ClearPass C2020 DL360 Gen10 HW-Based Appliance	R1V83A
Virtual Appliances		
	Aruba ClearPass Cx000V VM-Based Appliance E-LTU	JZ399AAE
Configuration Rules		
1	Bring in (Min 1 // Max 1) Localized power cord based on the Aruba Localization Menu	
2	If JW124A is the selected localized power cord, do not add Localized Power Cord	
Notes:	<ul style="list-style-type: none"> The ClearPass C1000 S-1200 R4 HW-Based Appliance include a U.S. power cord(will not be displayed in BOM). ClearPass C2020 DL360 Gen10 and the ClearPass C3010 DL360 Gen10 HW-Based Appliance includes a C13 - C14 WW 250V 10Amp Jumper Cord. The redundant PSUs for all models include a C13 - C14 WW 250V 10Amp Jumper Cord. When configuring Appliance, A country specific power cord will be automatically added to the BOM. OCA Only Model Selection Form - Aruba > Security > ClearPass > Policy Manager 	

Power Supplies

Rule #	Description	SKU
Power Options		
	Std (Min 0 // max 99) User Selection (min 0 // max 99)	
1, 5	Aruba DL360 Gen10 500W Spare PSU	R1T38A
Configuration Rules		
1	Bring in (Min 1 // Max 1) Localized power cord based on the Aruba Localization Menu	
5	This PSU is only supported on the R1V82A and R1V83A	
Notes:	Redundant Power Supply includes a IEC C13 - C14 Jumper Cable	



Related Options

Licenses

Remarks	Description	SKU
	Policy Manager Licenses	
	Aruba ClearPass New Licensing Entry 100 Concurrent Endpoints E-LTU	R1U35AAE
	Aruba ClearPass New Licensing Entry 500 Concurrent Endpoints E-LTU	R1U36AAE
	Aruba ClearPass New Licensing Entry 1K Concurrent Endpoints E-LTU	R1U37AAE
	Aruba ClearPass New Licensing Entry 2500 Concurrent Endpoints E-LTU	R1U38AAE
	Aruba ClearPass New Licensing Entry 5K Concurrent Endpoints E-LTU	R1U39AAE
	Aruba ClearPass New Licensing Entry 10K Concurrent Endpoints E-LTU	R1U40AAE
	Aruba ClearPass New Licensing Entry 25K Concurrent Endpoints E-LTU	R1U41AAE
	Aruba ClearPass New Licensing Entry 50K Concurrent Endpoints E-LTU	R1U42AAE
	Aruba ClearPass New Licensing Entry 100K Concurrent Endpoints E-LTU	R1U43AAE
	Aruba ClearPass New Licensing Access Upgrade 100 Concurrent Endpoints E-LTU	R1U44AAE
	Aruba ClearPass New Licensing Access Upgrade 500 Concurrent Endpoints E-LTU	R1U45AAE
	Aruba ClearPass New Licensing Access Upgrade 1K Concurrent Endpoints E-LTU	R1U46AAE
	Aruba ClearPass New Licensing Access Upgrade 2500 Concurrent Endpoints E-LTU	R1U47AAE
	Aruba ClearPass New Licensing Access Upgrade 5K Concurrent Endpoints E-LTU	R1U48AAE
	Aruba ClearPass New Licensing Access Upgrade 10K Concurrent Endpoints E-LTU	R1U49AAE
	Aruba ClearPass New Licensing Access Upgrade 25K Concurrent Endpoints E-LTU	R1U50AAE
	Aruba ClearPass New Licensing Access Upgrade 50K Concurrent Endpoints E-LTU	R1U51AAE
	Aruba ClearPass New Licensing Access Upgrade 100K Concurrent Endpoints E-LTU	R1U52AAE
	Aruba ClearPass Access licenses from legacy CP-HW-500 system to new hardware - NO NEW LICENSE	SOV37AAE
	Aruba ClearPass Access licenses from legacy CP-HW-5K system to new hardware - NO NEW LICENSE	SOV38AAE
	Aruba ClearPass Access licenses from legacy CP-HW-25K system to new hardware - NO NEW LICENSE	SOV39AAE
	Aruba ClearPass Access licenses from legacy CP-HW-500 system to new VA - NO NEW LICENSE	SOV40AAE
	Aruba ClearPass Access licenses from legacy CP-HW-5K system to new VA - NO NEW LICENSE	SOV41AAE
	Aruba ClearPass Access licenses from legacy CP-HW-25K system to new VA - NO NEW LICENSE	SOV42AAE
	Access Licenses	
	Aruba ClearPass New Licensing Access 100 Concurrent Endpoints E-LTU	JZ400AAE
	Aruba ClearPass New Licensing Access 500 Concurrent Endpoints E-LTU	JZ401AAE
	Aruba ClearPass New Licensing Access 1K Concurrent Endpoints E-LTU	JZ402AAE
	Aruba ClearPass New Licensing Access 2500 Concurrent Endpoints E-LTU	JZ403AAE
	Aruba ClearPass New Licensing Access 5K Concurrent Endpoints E-LTU	JZ404AAE
	Aruba ClearPass New Licensing Access 10K Concurrent Endpoints E-LTU	JZ405AAE
	Aruba ClearPass New Licensing Access 25K Concurrent Endpoints E-LTU	JZ406AAE
	Aruba ClearPass New Licensing Access 50K Concurrent Endpoints E-LTU	JZ407AAE
	Aruba ClearPass New Licensing Access 100K Concurrent Endpoints E-LTU	JZ408AAE
	Aruba ClearPass New Licensing Access 100 Concurrent Endpoints 1yr E-STU	JZ409AAE
	Aruba ClearPass New Licensing Access 500 Concurrent Endpoints 1yr E-STU	JZ410AAE
	Aruba ClearPass New Licensing Access 1K Concurrent Endpoints 1yr E-STU	JZ411AAE
	Aruba ClearPass New Licensing Access 2500 Concurrent Endpoints 1yr E-STU	JZ412AAE

Related Options

Aruba ClearPass New Licensing Access 5K Concurrent Endpoints 1yr E-STU	JZ413AAE
Aruba ClearPass New Licensing Access 10K Concurrent Endpoints 1yr E-STU	JZ414AAE
Aruba ClearPass New Licensing Access 25K Concurrent Endpoints 1yr E-STU	JZ415AAE
Aruba ClearPass New Licensing Access 50K Concurrent Endpoints 1yr E-STU	JZ416AAE
Aruba ClearPass New Licensing Access 100K Concurrent Endpoints 1yr E-STU	JZ417AAE
Aruba ClearPass New Licensing Access 100 Concurrent Endpoints 3yr E-STU	JZ418AAE
Aruba ClearPass New Licensing Access 500 Concurrent Endpoints 3yr E-STU	JZ419AAE
Aruba ClearPass New Licensing Access 1K Concurrent Endpoints 3yr E-STU	JZ420AAE
Aruba ClearPass New Licensing Access 2500 Concurrent Endpoints 3yr E-STU	JZ421AAE
Aruba ClearPass New Licensing Access 5K Concurrent Endpoints 3yr E-STU	JZ422AAE
Aruba ClearPass New Licensing Access 10K Concurrent Endpoints 3yr E-STU	JZ423AAE
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Aruba ClearPass New Licensing Access 50K Concurrent Endpoints 3yr E-STU	JZ425AAE
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Aruba ClearPass New Licensing Access 500 Concurrent Endpoints 5yr E-STU	JZ428AAE
Aruba ClearPass New Licensing Access 1K Concurrent Endpoints 5yr E-STU	JZ429AAE
Aruba ClearPass New Licensing Access 2500 Concurrent Endpoints 5yr E-STU	JZ430AAE
Aruba ClearPass New Licensing Access 5K Concurrent Endpoints 5yr E-STU	JZ431AAE
Aruba ClearPass New Licensing Access 10K Concurrent Endpoints 5yr E-STU	JZ432AAE
Aruba ClearPass New Licensing Access 25K Concurrent Endpoints 5yr E-STU	JZ433AAE
Aruba ClearPass New Licensing Access 50K Concurrent Endpoints 5yr E-STU	JZ434AAE
Aruba ClearPass New Licensing Access 100K Concurrent Endpoints 5yr E-STU	JZ435AAE

OnBoard Licenses

Aruba ClearPass New Licensing Onboard 100 Users E-LTU	JZ436AAE
Aruba ClearPass New Licensing Onboard 500 Users E-LTU	JZ437AAE
Aruba ClearPass New Licensing Onboard 1K Users E-LTU	JZ438AAE
Aruba ClearPass New Licensing Onboard 2500 Users E-LTU	JZ439AAE
Aruba ClearPass New Licensing Onboard 5K Users E-LTU	JZ440AAE
Aruba ClearPass New Licensing Onboard 25K Users E-LTU	JZ442AAE
Aruba ClearPass New Licensing Onboard 50K Users E-LTU	JZ443AAE
Aruba ClearPass New Licensing Onboard 100K Users E-LTU	JZ444AAE
Aruba ClearPass New Licensing Onboard 10K Users E-LTU	JZ441AAE
Aruba ClearPass New Licensing Onboard 100 Users 1yr E-STU	JZ445AAE
Aruba ClearPass New Licensing Onboard 500 Users 1yr E-STU	JZ446AAE
Aruba ClearPass New Licensing Onboard 1K Users 1yr E-STU	JZ447AAE
Aruba ClearPass New Licensing Onboard 2500 Users 1yr E-STU	JZ448AAE
Aruba ClearPass New Licensing Onboard 5K Users 1yr E-STU	JZ449AAE
Aruba ClearPass New Licensing Onboard 10K Users 1yr E-STU	JZ450AAE
Aruba ClearPass New Licensing Onboard 25K Users 1yr E-STU	JZ451AAE
Aruba ClearPass New Licensing Onboard 50K Users 1yr E-STU	JZ452AAE
Aruba ClearPass New Licensing Onboard 100K Users 1yr E-STU	JZ453AAE



Related Options

Aruba ClearPass New Licensing Onboard 100 Users 3yr E-STU	JZ454AAE
Aruba ClearPass New Licensing Onboard 500 Users 3yr E-STU	JZ455AAE
Aruba ClearPass New Licensing Onboard 1K Users 3yr E-STU	JZ456AAE
Aruba ClearPass New Licensing Onboard 2500 Users 3yr E-STU	JZ457AAE
Aruba ClearPass New Licensing Onboard 5K Users 3yr E-STU	JZ458AAE
Aruba ClearPass New Licensing Onboard 10K Users 3yr E-STU	JZ459AAE
Aruba ClearPass New Licensing Onboard 25K Users 3yr E-STU	JZ460AAE
Aruba ClearPass New Licensing Onboard 50K Users 3yr E-STU	JZ461AAE
Aruba ClearPass New Licensing Onboard 100K Users 3yr E-STU	JZ462AAE
Aruba ClearPass New Licensing Onboard 100 Users 5yr E-STU	JZ463AAE
Aruba ClearPass New Licensing Onboard 500 Users 5yr E-STU	JZ464AAE
Aruba ClearPass New Licensing Onboard 1K Users 5yr E-STU	JZ465AAE
Aruba ClearPass New Licensing Onboard 2500 Users 5yr E-STU	JZ466AAE
Aruba ClearPass New Licensing Onboard 5K Users 5yr E-STU	JZ467AAE
Aruba ClearPass New Licensing Onboard 10K Users 5yr E-STU	JZ468AAE
Aruba ClearPass New Licensing Onboard 25K Users 5yr E-STU	JZ469AAE
Aruba ClearPass New Licensing Onboard 50K Users 5yr E-STU	JZ470AAE
Aruba ClearPass New Licensing Onboard 100K Users 5yr E-STU	JZ471AAE

OnGuard Licenses

Aruba ClearPass New Licensing OnGuard 100 Endpoints E-LTU	JZ472AAE
Aruba ClearPass New Licensing OnGuard 500 Endpoints E-LTU	JZ473AAE
Aruba ClearPass New Licensing OnGuard 1K Endpoints E-LTU	JZ474AAE
Aruba ClearPass New Licensing OnGuard 2500 Endpoints E-LTU	JZ475AAE
Aruba ClearPass New Licensing OnGuard 5K Endpoints E-LTU	JZ476AAE
Aruba ClearPass New Licensing OnGuard 10K Endpoints E-LTU	JZ477AAE
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Aruba ClearPass New Licensing OnGuard 100K Endpoints E-LTU	JZ480AAE
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Aruba ClearPass New Licensing OnGuard 500 Endpoints 1yr E-STU	JZ482AAE
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Aruba ClearPass New Licensing OnGuard 1K Endpoints 3yr E-STU	JZ492AAE
Aruba ClearPass New Licensing OnGuard 2500 Endpoints 3yr E-STU	JZ493AAE
Aruba ClearPass New Licensing OnGuard 5K Endpoints 3yr E-STU	JZ494AAE
Aruba ClearPass New Licensing OnGuard 10K Endpoints 3yr E-STU	JZ495AAE

Related Options

Aruba ClearPass New Licensing OnGuard 25K Endpoints 3yr E-STU	JZ496AAE
Aruba ClearPass New Licensing OnGuard 50K Endpoints 3yr E-STU	JZ497AAE
Aruba ClearPass New Licensing OnGuard 100K Endpoints 3yr E-STU	JZ498AAE
Policy Manager VM to VM Migration SKUs	
Aruba ClearPass Access Licenses from Legacy CP-VA-500 System - No New License E-LTU	R9R49AAE
Aruba ClearPass Access Licenses from Legacy CP-VA-5K System - No New License E-LTU	R9R50AAE
Aruba ClearPass Access Licenses from Legacy CP-VA-52K System - No New License E-LTU	R9R51AAE



Technical Specifications

Appliances

ClearPass is available as hardware or as a virtual appliance. Virtual appliances are supported on VMware vSphere Hypervisor (ESXi), Microsoft Hyper-V, CentOS KVM, Amazon EC2 & Microsoft Azure.

- VMware ESXi up to 7.0
- Microsoft Hyper-V 2016/2019 R2/2019
- KVM on CentOS 7.7, Ubuntu 18.04, and Ubuntu 20.04
- Amazon AWS (EC2)
- Microsoft Azure

Platform

- Deployment templates for any network type, identity store and endpoint
- 802.1X, MAC authentication and captive portal support
- ClearPass OnConnect for SNMP-based enforcement on wired switches
- Advanced reporting, analytics and troubleshooting tools
- Interactive policy simulation and monitor mode utilities
- Multiple device registration portals - Guest, Aruba AirGroup, BYOD, and un-managed devices
- Admin/operator access security via CAC and TLS certificates

Framework and protocol support

- RADIUS, RADIUS Dynamic Authorization, TACACS+, web authentication, SAML v2.0
- RadSec (TLS encoded RADIUS)
- 802.1X-2010, 802.1X-2020
- TEAP (Tunneled EAP)
- EAP-FAST (EAP-MSCHAPv2, EAP-GTC, EAP-TLS)
- PEAP (EAP-MSCHAPv2, EAP-GTC, EAP-TLS, EAP-PEAPPublic, EAP-PWD)
- TTLS (EAP-MSCHAPv2, EAP-GTC, EAP-TLS, EAP-MD5, PAP, CHAP)
- EAP-TLS
- PAP, CHAP, MSCHAPv1, MSCHAPv2, EAP-MD5
- OAuth2
- WPA3
- Windows machine authentication
- SMB v2/v3
- Online Certificate Status Protocol (OCSP)
- SNMP generic MIB, SNMP private MIB
- Common Event Format (CEF), Log Event Extended Format (LEEF), and RFC5424

Supported identity stores

- Microsoft Active Directory
 - RADIUS
 - Any LDAP compliant directory
 - MySQL, Microsoft SQL, PostGRES and Oracle 11g ODBC-compliant SQL server
 - Token servers
 - Built-in SQL store, static hosts list
 - Kerberos
 - Microsoft Azure Active Directory
 - Google G Suite
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Technical Specifications

RFC Standards

2246, 2248, 2407, 2408, 2409, 2548, 2759, 2865, 2866, 2869, 2882, 3079, 3579, 3580, 3748, 3779, 4017, 4137, 4301, 4302, 4303, 4308, 4346, 4514, 4518, 4809, 4849, 4851, 4945, 5176, 5216, 5246, 5280, 5281, 5282, 5424, 5755, 5759, 6614, 6818, 6960, 7030, 7170, 7296, 7321, 7468, 7748, 7815, 8031, 8032, 8247, 8446, 8709, 8894, 8908

Internet Drafts

Protected EAP Versions 0 and 1, Microsoft CHAP extensions, dynamic provisioning using EAP-FAST.

Profiling Methods

- Active: Nmap, WMI, SSH, SNMP
 - Passive: MAC OUI, DHCP, TCP, Netflow v5/v10, IPFIX, sFLOW, 'SPAN' Port, HTTP User-Agent, IF-MAP
 - ClearPass Device Insight
 - Integrated & 3rd Party: Onboard, OnGuard, ArubaOS, EMM/MDM, Cisco device sensor
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IPv6 Support

- RADIUS and RadSec
 - TACACS+
 - Clustering (intra-node communication)
 - Web and CLI based management
 - IPv6 addressed authentication & authorization servers
 - IPv6 accounting proxy
 - IPv6 addressed endpoint context servers
 - Syslog, DNS, NTP, IPsec IPv6 targets
 - IPv6 Virtual IP for high availability
 - HTTP Proxy
 - Ingress Event Engine Syslog sources
 - Onboard, OnGuard
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Technical Specifications

Appliance Specifications

	C1000 Appliance (JZ508A)	C2000 Appliance (JZ509A)	C2010 Appliance (R1V81A)	C3010 Appliance (R1V82A)
Hardware model	Unicom S-1200 R4	HPE DL20 Gen 9	HPE DL20 Gen10	HPE DL360 Gen10
CPU	(1) Eight Core 2.4GHz Atom C2758	(1) Xeon 3.5Ghz E3-1240v5 with four cores (8 threads)	(1) Xeon 4.0GHz E-2274G with four cores (8 threads)	(1) Xeon 2.3Ghz 5118 with twelve cores (24 threads)
Memory	8 GB	16 GB	16 GB	64GB
Hard drive storage	(1) SATA (7.3K RPM) 1TB hard drive	(2) SATA (7.2K RPM) 1TB hard drives, RAID-1 controller	(2) SATA (7.2K RPM) 1TB hard drives, RAID-1 controller	(6) SAS (10K RPM) 600GB Hot-Plug hard drives, RAID-10 controller
Out of band management	N/A	HPE Integrated Lights-Out (iLO) Standard	HPE Integrated Lights-Out (iLO)	HPE Integrated Lights-Out (iLO) Advanced
Network interfaces	4 x 1GbE	2 x 1GbE	4 x 1GbE	4 x 1GbE
Serial port	Yes (RJ-45)	Yes (virtual serial via iLO)	Yes (DB-9)	Yes (DB-9)
Performance and scale	Please refer to the ClearPass Scaling and Ordering Guide	Please refer to the ClearPass Scaling and Ordering Guide	Please refer to the ClearPass Scaling and Ordering Guide	Please refer to the ClearPass Scaling and Ordering Guide
Form Factor				
Rackmount	Included	1U SFF Easy Install Rail 1U Cable Management Arm	1U SFF Easy Install Rail 1U Cable Management Arm	1U SFF Easy Install Rail 1U Cable Management Arm
Dimensions (WxHxD)	17.2 x 1.7 x 11.3"	17.11 x 1.70 x 15.05"	17.11" x 1.70" x 15.05"	17.1 x 1.7 x 27.8"
Weight (Max Config)	8.5 lbs	Up to 19.18 lbs	Up to 19.18 lbs	Up to 36 lbs
Power				
Power supply	200 watts max	HPE 900W AC 240VDC Power Input FIO Module*	HPE 500W Flex Slot Platinum Hot Plug Power Supply	HPE 500W Flex Slot Platinum Hot Plug Power Supply
Notes: *The HPE 900W Redundant Power Supply supports 100VAC to 240VAC and also supports 240VDC., R1V82A				
Power cord	C13 - NEMA 5-15P US/CA 110V 10Amp Power Cord	C13 - NEMA 5-15P US/CA 110V 10Amp Power Cord	C13 - C14 WW 250V 10Amp Jumper Cord	C13 - C14 WW 250V 10Amp Jumper Cord
Power redundancy	N/A	Optional	Optional	Optional
AC input voltage	100/240 VAC auto-selecting	100/240 VAC auto-selecting	100/240 VAC auto-selecting	100/240 VAC auto-selecting
AC input frequency	50/60 Hz auto-selecting	50/60 Hz auto-selecting	50/60 Hz auto-selecting	50/60 Hz auto-selecting
Environmental				
Operating temperature	5° to 35° C (41° to 95° F)	10° to 35° C (50° to 95° F)	10° to 35° C (50° to 95° F)	10° to 35° C (50° to 95° F)
Operating vibration	0.25 G at 5 Hz to 200 Hz for 15 minutes	Random vibration at 0.000075 G ² /Hz, 10Hz to 300Hz, (0.15 G's nominal)	Random vibration at 0.000075 G ² /Hz, 10Hz to 300Hz, (0.15 G's)	Random vibration at 0.000075 G ² /Hz, 10Hz to 300Hz, (0.15 G's nominal)
Operating shock	1 shock pulse of 20 G for up to 2.5 ms	2 G's	2 G's	2 G's
Operating altitude	-16 m to 3,048 m (-50 ft to 10,000 ft)	3,050 m (10,000 ft)	3,050 m (10,000 ft)	3,050 m (10,000 ft)

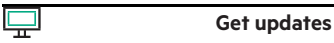
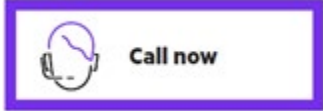
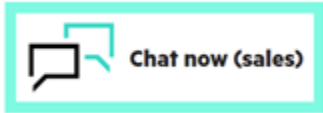
Summary of Changes

Date	Version History	Action	Description of Change
10-Jul-2023	Version 13	Changed	Configuration Information section was updated.
03-Apr-2023	Version 12	Changed	Overview, Standard Features, Configuration Information, and Technical Specifications sections were updated.
04-May-2021	Version 11	Changed	Configuration Information section was updated.
06-Jul-2020	Version 10	Changed	Overview, Standard Features, Configuration Information and Technical Specification sections were updated. New SKU was added.
04-May-2020	Version 9	Changed	Configuration Information section was updated.
12-Mar-2020	Version 8	Changed	Technical Specification section was updated.
18-Nov-2019	Version 7	Changed	Configuration Information, section was updated. Obsolete SKUs were removed.
05-Aug-2019	Version 6	Changed	SKU added R1V82A Configuration Information, Related Options and Technical Specification sections were updated.
04-Mar-2018	Version 5	Changed	SKUs added: R1U35AAE, R1U36AAE, R1U37AAE, R1U38AAE, R1U39AAE, R1U40AAE, R1U41AAE, R1U42AAE, R1U43AAE, R1U44AAE, R1U45AAE, R1U46AAE, R1U47AAE, R1U48AAE, R1U49AAE, R1U50AAE, R1U51AAE, R1U52AAE Overview section updated
18-Dec-2017	Version 4	Changed	Minor edit on Configuration section
04-Dec-2017	Version 3	Changed	SKUs added: JZ508A, JZ509A, JZ510A, JZ399AAE, JX923A All document sections updated
07-Nov-2016	Version 2	Added	SKUs added: JW771A, JW772A
01-Nov-2016	Version 1	New	New QuickSpecs



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