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HPE ArubaOS 8.0.1 Terminology and Licensing Guide

SE Guide for Terminology, Licensing Definitions, Requirements, and sample BOMs

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ArubaOS 8.0.1 – Terminology Explained

- **MM** = Mobility Master – the x86 based master appliance to control Mobility Controllers (MCs) in 8.0.0 and later. MM is the next generation of Master controller providing significantly more functionality and flexibility. Can be Primary MM and Standby MM for redundancy
- **VMM or MM-VA** = Virtual Mobility Master– runs on VMWare or KVM
- **HMM or MM-HW**= Hardware Mobility Master– a dedicated hardware Mobility Master appliance
- **VMC** or **MC-VA**= Virtual Mobility Controller – a virtual mobility controller that can terminate APs
- **MC** = Mobility Controller – can be a part of a Mobility Master, s standalone controller, a 'master', or 'local' (aka any controller, generic term)
- **Standalone** – a mode of an MC that operates by itself (no master, no local, not part of an MM)
- **MCM** = Mobility Controller Master – referenced in the migration tool to migrate to a non-MM Mobility Controller Master
- **Master Controller** = is a non-Mobility Master managed controller, serving the role of a master or master-backup
- **Local Controller** = is a non-Mobility Master managed controller, serving as a local under as master controller
- **MZ** = MultiZone – describes the architecture of a MultiZone controller deployment
    - **PZ** = Primary Zone – describes the zone/controller in an MZ topology that manages the APs and configures the MZ settings
    - **DZ** = Data Zone = describes the zone/controller in an MZ topology where only MZ tunnels are terminated (DZ does not manage the AP)

Deprecated terms that may show up in older documentation

- *SC = Services Controller – the old name for a Mobility Master*
- *CCUI = Controller Configuration UI – the old name for the SC GUI*

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ArubaOS 8.0.1 – Terminology Explained (continued)

As a result of these terms NOT all being mutually exclusive, there are conditions where multiple abbreviations can pertain to the same device. For example:

- Example 1: A VMC, which is a MC, can be under an 8.x MM, or be a Master, Local, or Standalone under a 6.x/8.x

- Example 2: A 7005, which is a MC, can be under an 8.x MM, or be a Master, Local, or Standalone under a 6.x/8.x

- Example 3. A 7205, which is a MC, can be under an 8.x MM, or be a Master, Local, or Standalone under a 6.x/8.x

- Example 4: A 7240, which is a MC but not part of a MM, can be a Master or Local MC in 6.x/8.x

- Example 5: A 7010, which is a MC, can be the DZ of a MZ deployment in 8.0.1 (MM or non-MM)

- Example 6: Multiple MCs and VMCs all can be MCs that are part of a VMM or HMM in 8.0.1

These are just a few example, but it should be clear that the descriptors are not mutually exclusive terms

The AOS 8.0.1 Mobility Master Virtual Appliance SKUs

Provides Mobility Master Capacity to manage all APs and MCs that are under the MM (the Standby VMM doesn't need to be purchased)

J-Number	Aruba SKU Description	Description
JY895AAE	Aruba MM-VA-500 Mob Mstr 500 Dev E-LTU	Mobility Master for up to 500APs and MCs total
JY896AAE	Aruba MM-VA-1K Mob Mstr 1000 Dev E-LTU	Mobility Master for up to 1,000 APs and MCs total
JY897AAE	Aruba MM-VA-5K Mob Mstr 5000 Dev E-LTU	Mobility Master for up to 5,000 APs and MCs total
JY898AAE	Aruba MM-VA-10K Mob Mstr 10000 Dev E-LTU	Mobility Master for up to 10,000 APs and MCs total

Virtual MM Notes:
- With MM-VA, you purchase one MM-VA-XXXX, and that capacity is applied across both the Primary VMM and the Standby VMM. In effect, the Standby VMM is included in the cost since the standing up of a Standby VMM has no cost and they both share capacity (MM licensing pool).
- The VMMs can be resized within VMWare (add CPU, RAM, Disk, etc) and two or more MM-VAs can be 'stacked' on a VMM (ie, MM-VA-1000 plus MM-VA-500 will give you an equivalent MM-VA-1500

Hardware MM Notes
- When the Hardware MM (MM-HW-1K/5K/10K) comes out, it will ship with a fixed capacity (1,000, 5,000, and 10,000) and the hardware configuration is fixed within the appliance
- To expand a MM-HW installation, a new hardware appliance must be purchased. The CPU, RAM, Disk, etc is scaled for the quantity of devices supported. It does not have the head room to support additional devices.
- To support Primary and Standby HMM requires the purchase of two HMMs. You cannot share capacity across the two, the hardware is a fixed size and does not support additional devices. (ie, a MM-HW-1K Primary and a MM-HW-1K Standby will still only support 1K devices).

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The AOS 8.0.1 Virtual Mobility Controller SKUs – for MM or Standalone deployments

Serves as a license installed on an MM to support VMCs, or a platform license installed directly on to a VMC (standalone/master/local)

J-Number	Aruba SKU Description	Description
JY899AAE	Aruba MC-VA-50 (RW) Cntlr Lic 50AP E-LTU	Support for up to 50 VMCs and APs terminated on a VMC for RW
JY900AAE	Aruba MC-VA-250(RW) Cntlr Lic 250AP E-LTU	Support for up to 250 VMCs and APs terminated on a VMC for RW
JY901AAE	Aruba MC-VA-1K (RW) Cntlr Lic 1KAP E-LTU	Support for up to 1000 VMCs and APs terminated on a VMC for RW
JY902AAE	Aruba MC-VA-50 (US) Cntlr Lic 50AP E-LTU	Support for up to 50 VMCs and APs terminated on a VMC for US
JY903AAE	Aruba MC-VA-250(US)Cntlr Lic 250AP E-LTU	Support for up to 250 VMCs and APs terminated on a VMC for US
JY904AAE	Aruba MC-VA-1K (US) Cntlr Lic 1KAP E-LTU	Support for up to 1000 VMCs and APs terminated on a VMC for US
JY905AAE	Aruba MC-VA-50 (IL) Cntlr Lic 50AP E-LTU	Support for up to 50 VMCs and APs terminated on a VMC for Israel
JY906AAE	Aruba MC-VA-250(IL)Cntlr Lic 250AP E-LTU	Support for up to 250 VMCs and APs terminated on a VMC for Israel
JY907AAE	Aruba MC-VA-1K (IL) Cntlr Lic 1KAP E-LTU	Support for up to 1000 VMCs and APs terminated on a VMC for Israel
JY908AAE	Aruba MC-VA-50 (JP) Cntlr Lic 50AP E-LTU	Support for up to 50 VMCs and APs terminated on a VMC for Japan
JY909AAE	Aruba MC-VA-250(JP)Cntlr Lic 250AP E-LTU	Support for up to 250 VMCs and APs terminated on a VMC for Japan
JY910AAE	Aruba MC-VA-1K (JP) Cntlr Lic 1KAP E-LTU	Support for up to 1000 VMCs and APs terminated on a VMC for Japan
JY911AAE	Aruba MC-VA-50 (EG) Cntlr Lic 50AP E-LTU	Support for up to 50 VMCs and APs terminated on a VMC for Egypt
JY912AAE	Aruba MC-VA-250(EG)Cntlr Lic 250AP E-LTU	Support for up to 250 VMCs and APs terminated on a VMC for Egypt
JY913AAE	Aruba MC-VA-1K (EG) Cntlr Lic 1KAP E-LTU	Support for up to 1000 VMCs and APs terminated on a VMC for Egypt

Note: when MC-VA-XXX is installed on the MM, multiple VMCs can be installed and they will share the capacity (license pool of VMC licenses). In a non-MM environment, MC-VA is applied directly on the VMC and there is no pooling (per-platform license).

The AOS 8.0.1 AP License SKUs – AP, PEF, and RFP

Behaves the same as AOS 6.x. Serves as a license installed on an MM to support AP capacity and features, for both MM or MCs (standalone/master/local)

J-Number	Legacy SKU	Aruba SKU Description	Description
JW471AAE	LIC-ENT	Aruba Cntrlr Per AP Ent Lic Bundle E-LTU	Includes one AP, PEF, RFP, and AirWave license
JW472AAE	LIC-AP	Aruba Cntrlr Per AP Capacity Lic E-LTU	Enables 1 AP capacity license
JW473AAE	LIC-PEF	Aruba Cntrlr Per AP PEF Lic E-LTU	Enables 1 PEF capacity license
JW474AAE	LIC-RFP	Aruba Cntrlr Per AP RFProtect Lic E-LTU	Enables 1 RFP capacity license

AP/Features:
- Ordered in the number required
- When added to MM, can be managed via MM license pooling. When applied to Master Controller Mode, can be managed via Centralized Licensing
- When applied to a standalone MC, will allow up to the enabled license capacity

The AOS 8.0.1 License SKUs – Via VPN (PEF-V)

PEF-V licenses can be applied to an MC via the MM, or applied to each individual MC that is not part of an MM (standalone/master/local)

J-Number	Legacy SKU	Aruba SKU Description	Description
JW495AAE	LIC-7005-PEFV	Aruba PEF VIA Lic for 7005 Cntrlr E-LTU	PEF-V license for a 7005
JY342AAE	LIC-7008-PEFV	Aruba PEF VIA Lic for 7008 Cntrlr E-LTU	PEF-V license for a 7008
JW496AAE	LIC-7010-PEFV	Aruba PEF VIA Lic for 7010 Cntrlr E-LTU	PEF-V license for a 7010
JW497AAE	LIC-7024-PEFV	Aruba PEF VIA Lic for 7024 Cntrlr E-LTU	PEF-V license for a 7024
JW498AAE	LIC-7030-PEFV	Aruba PEF VIA Lic for 7030 Cntrlr E-LTU	PEF-V license for a 7030
JW499AAE	LIC-7205-PEFV	Aruba PEF VIA Lic for 7205 Cntrlr E-LTU	PEF-V license for a 7205
JW500AAE	LIC-7210-PEFV	Aruba PEF VIA Lic for 7210 Cntrlr E-LTU	PEF-V license for a 7210
JW501AAE	LIC-7220-PEFV	Aruba PEF VIA Lic for 7220 Cntrlr E-LTU	PEF-V license for a 7220 MC
JW502AAE	LIC-7240-PEFV	Aruba PEF VIA Lic for 7240 Cntrlr E-LTU	PEF-V license for a 7240 MC
JY931AAE		Aruba LIC-MC-VA-50-PEFV License E-LTU	PEF-V license for a VMC-50
JY932AAE		Aruba LIC-MC-VA-250-PEFV License E-LTU	PEF-V license for a VMC-250
JY933AAE		Aruba LIC-MC-VA-1K-PEFV License E-LTU	PEF-V license for a VMC-1K

PEF-V:
- Applied either to specific controller through the MM (via 'Controller Licenses') to directly to the MC platform (in non-MM)

The AOS 8.0.1 License SKUs – Web Content Filtering (WebCC)

WebCC is a subscription-based license that is a per-AP capacity license, applied to the MM or the MC license server (in non-MM)

J-Number	Legacy SKU	Aruba SKU Description	Description
JY028AAE	Sub1-WEBCC	Aruba Cntrlr Web Cont Class 1y Sub E-STU	Enables 1 AP WebCC 1-year subscription license
JY029AAE	Sub3-WEBCC	Aruba Cntrlr Web Cont Class 3y Sub E-STU	Enables 1 AP WebCC 3-year subscription license
JY030AAE	Sub5-WEBCC	Aruba Cntrlr Web Cont Class 5y Sub E-STU	Enables 1 AP WebCC 5-year subscription license
JY031AAE	Sub7-WEBCC	Aruba Cntrlr Web Cont Class 7y Sub E-STU	Enables 1 AP WebCC 7-year subscription license
JY032AAE	Sub10-WEBCC	Aruba Cntlr Web Cont Class 10y Sub E-STU	Enables 1 AP WebCC 10-year subscription license

WebCC:
- Ordered in the number required (just like LIC-AP/PEF/RFP)
- Is subscription-based and will expire
- Requires that the MM or the individual MCs (in non-MM) have access to the internet to get updates

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The AOS 8.0.1 License SKUs – Advanced Crypto (ACR)

The Advanced Crypto license (ACR) is applied to the MM license pool or to individual MCs to enable Suite-B cryptographic libraries

J-Number	Legacy SKU	Aruba SKU Description	Description
JW538AAE	LIC-ACR-8	Aruba Adv Crypto 8 Session Lic E-LTU	Enables up to 8 sessions of ACR/SuiteB
JW539AAE	LIC-ACR-32	Aruba Adv Crypto 32 Session Lic E-LTU	Enables up to 32 sessions of ACR/SuiteB
JW540AAE	LIC-ACR-64	Aruba Adv Crypto 64 Session Lic E-LTU	Enables les up to 64 sessions of ACR/SuiteB
JW541AAE	LIC-ACR-128	Aruba Adv Crypto 128 Session Lic E-LTU	Enables up to 128 sessions of ACR/SuiteB
JW542AAE	LIC-ACR-256	Aruba Adv Crypto 256 Session Lic E-LTU	Enables up to 256 sessions of ACR/SuiteB
JW543AAE	LIC-ACR-512	Aruba Adv Crypto 512 Session Lic E-LTU	Enables up to 512 sessions of ACR/SuiteB
JW544AAE	LIC-ACR-1024	Aruba Adv Crypto 1024 Session Lic E-LTU	Enables up to 1024 sessions of ACR/SuiteB

ACR:
- ACR enables the SUITE-B crypto ciphers to be used in VPN for VIA connections
- ACR is a session-based license, where a session is IP-to-IP
- For a single Site to Site VPN, 1 session is consumed
- For each PEF-V VIA client, 1 session is consumed
- For 10 Site to Site and 100 VIA clients, 110 sessions would be consumed
- The licensed sessions are independent of AP licenses (many ACR enabled MCs terminate VPN only, no APs)

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Sample BOMs using the License J-Numbers/SKUs

Site A: 450 AP-315s, two VMMs, four 7205 MCs clustered, enabled for AP, PEF, RFP, and WebCC

J-Number	Aruba SKU Description	Description	Qty
JW736A	Aruba 7205 (US) Controller	7205 Hardware Controller for US	4
JY895AAE	Aruba MM-VA-500 Mob Mstr 500 Dev E-LTU	Mobility Master license for up to 500 APs and MCs total	1
JW472AAE	Aruba Cntrlr Per AP Capacity Lic E-LTU	The LIC-AP license that enables 1 AP capacity license	450
JW473AAE	Aruba Cntrlr Per AP PEF Lic E-LTU	The LIC-PEF license that enables 1 PEF capacity license	450
JW474AAE	Aruba Cntrlr Per AP RFProtect Lic E-LTU	The LIC-RFP license that enables 1 RFP capacity license	450
JY028AAE	Aruba Cntrlr Web Cont Class 1y Sub E-STU	The LIC-WebCC subscription that enabled 1 WebCC capacity license	450
JW797A	Aruba AP-315 Dual 2x2/4x4 802.11ac AP	AP-315 Access Point Hardware	450

Note – the above BOMs are just samples and not representative of any required architectures

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Sample BOMs using the License J-Numbers/SKUs

Site B: 4500 AP-315s, two VMMs, four 7240 MCs clustered, enabled for AP, PEF, RFP, and AirWave

J-Number	Aruba SKU Description	Description	Qty
JW784A	Aruba 7240XM (US) Controller	7240XM Hardware Controller for US	4
JY897AAE	Aruba MM-VA-5K Mob Mstr 5000 Dev E-LTU	Mobility Master license for up to 5,000 APs and MCs total	1
JW471AAE	Aruba Cntrlr Per AP Ent Lic Bundle E-LTU	The LIC-ENT which includes one AP, PEF, RFP, and AirWave license	4500
JW546AAE	Aruba AirWave 1 Device Lic E-LTU	LIC-AW x6 to add support for the 7240s and MMs to AirWave	6
JW797A	Aruba AP-315 Dual 2x2/4x4 802.11ac AP	AP-315 Access Point Hardware	4500

Note – the above BOMs are just samples and not representative of any required architectures

Sample BOMs using the License J-Numbers/SKUs

Site C: 1800 AP-315s, two VMMs, four VMC-1K MCs clustered, enabled for AP, PEF, RFP, and AirWave

J-Number	Aruba SKU Description	Description	Qty
JY897AAE	Aruba MM-VA-5K Mob Mstr 5000 Dev E-LTU	Mobility Master license for up to 5,000 APs and MCs total	1
JY904AAE	Aruba MC-VA-1K (US) Cntlr Lic 1KAP E-LTU	Support for up to 1000 VMCs and APs terminated on a VMC for US	2
JW471AAE	Aruba Cntrlr Per AP Ent Lic Bundle E-LTU	The LIC-ENT which includes one AP, PEF, RFP, and AirWave license	1800
JW546AAE	Aruba AirWave 1 Device Lic E-LTU	LIC-AW x6 to add support for the VMC-1Ks and MMs to AirWave	6
JW797A	Aruba AP-315 Dual 2x2/4x4 802.11ac AP	AP-315 Access Point Hardware	1800

Note – the above BOMs are just samples and not representative of any required architectures. Additionally, the VMC sizing is dependent on the need. It can be as few or as many VMCs as needed based on the architecture dictates. VMC scale is determined by resource configuration (CPU, RAM, Disk, etc).

Thank You

For questions, please reach out to your HPE Aruba representative. If there is a critical issue, please contact TAC.