

The Aruba logo is displayed in a bold, lowercase, orange sans-serif font. It is positioned in the upper right corner of the slide, above the company's affiliation text. The background of the slide is a photograph of two men in a professional setting, with one man in a light blue shirt leaning over another man in a white sweater who is looking at a computer monitor. A diagonal blue gradient overlay is present on the left side of the image.

aruba

a Hewlett Packard
Enterprise company

Aruba License

Alan Hou

Aruba license 类型

- 永久有效 license: 正常下单购买的 AC/Airwave/ClearPass license 一般都是永久有效的。
 - 即使是版本迭代或绑定的设备故障, 都是可以正常 transfer 的, 前提是有正常的维保服务。
 - 看 license 描述后缀有 E-LTU 的都是永久 license

- 如:

MM-VA-500 Mob Master	Aruba MM-VA-500 Mob Mstr SW E-LTU
MM-VA-1K Mob Master	Aruba MM-VA-1K Mob Master SW E-LTU

- 临时 license: 主要用在给用户做 DEMO 或 POC, 有效期一般是一个月或 3 个月。

- 服务年限 license (subscription):
 - 看 license 描述后缀有 E-STU 的都是这种 license,

- 如:

Aruba Central 1 IAP 1yr Sub E-STU	Central Sub
Aruba Central 1 IAP 3yr Sub E-STU	Central Sub

"E-LTU" means "Electronic License to use"

AC license类型

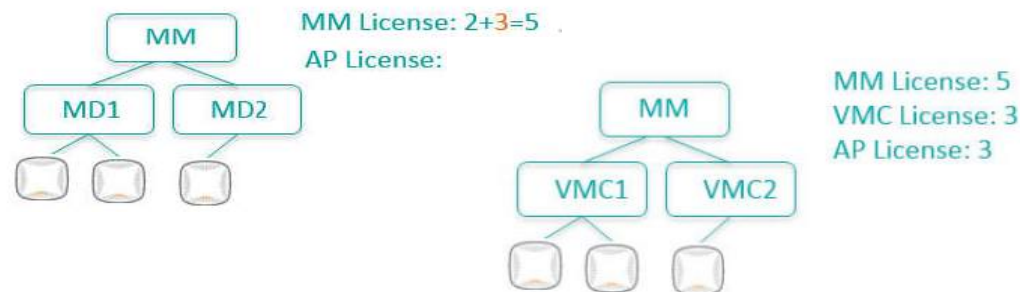
- AP license : lic-ap 基于AP数量
- PEF license: 基于AP数量
- RFP license: 基于AP数量
- MM license: 基于管理的设备数量 (AC/MC/AP)
- HMM license: 购买硬件MM自带的MM license, 不能用于license pool
- MC license: 基于Ap数量 (软件Ac需要, 注意有国家代码区别)
- PEFV: 基于控制器, 启用VIA功能
- Webcc license: 基于Ap数量, 按年购买

AC AOS8.0 license举例

MM-VA-XX

MM: Mobility Master
MC: 虚拟机版AC

表示Mobility 可以管理的设备数量



MM license:

JZ106AAE	新增的50	Aruba MM-VA-50 Mob Mstr 50 Dev E-LTU
JY895AAE	MM-VA-500 Mob Master	Aruba MM-VA-500 Mob Mstr SW E-LTU
JY896AAE	MM-VA-1K Mob Master	Aruba MM-VA-1K Mob Master SW E-LTU
JY897AAE	MM-VA-5K Mob Master	Aruba MM-VA-5K Mob Master SW E-LTU
JY898AAE	MM-VA-10K Mob Master	Aruba MM-VA-10K Mob Master SW E-LTU

VMC license (虚拟机AC):

JY899AAE	MC-VA-50 (RW)	Aruba MC-VA-50 (RW) Cntrl 50 AP E-LTU
JY900AAE	MC-VA-250 (RW)	Aruba MC-VA-250 (RW) Cntrl 250 AP E-LTU
JY901AAE	MC-VA-1K (RW)	Aruba MC-VA-1K (RW) Cntrl 1K AP E-LTU

说明:

- (1) VMM License支持在Mm虚拟机上多个license的累加
- (2) 两台VMM做冗余, 只需要买一套Mmlicense即可, license pool

硬件MM

Aruba Mobility Master Hardware Appliance	MM-HW-1K	MM-HW-5K	MM-HW-10K
Number of Devices	1,000	5,000	10,000
Number of Clients	10,000	50,000	100,000
Number of Controllers	100	500	1,000

Aruba Mobility Master Hardware Appliance is based on x86 hardware appliance

注意：

- (1) MM硬件服务器，里面预置了相应数量的MM license
- (2) Mm硬件服务器内置的license不能加入license pool，所以客户如果要求Mm冗余，必须买两台硬件MM，不能一台硬件MM与一台没有license的虚拟机MM组成冗余。

Multizone license需求

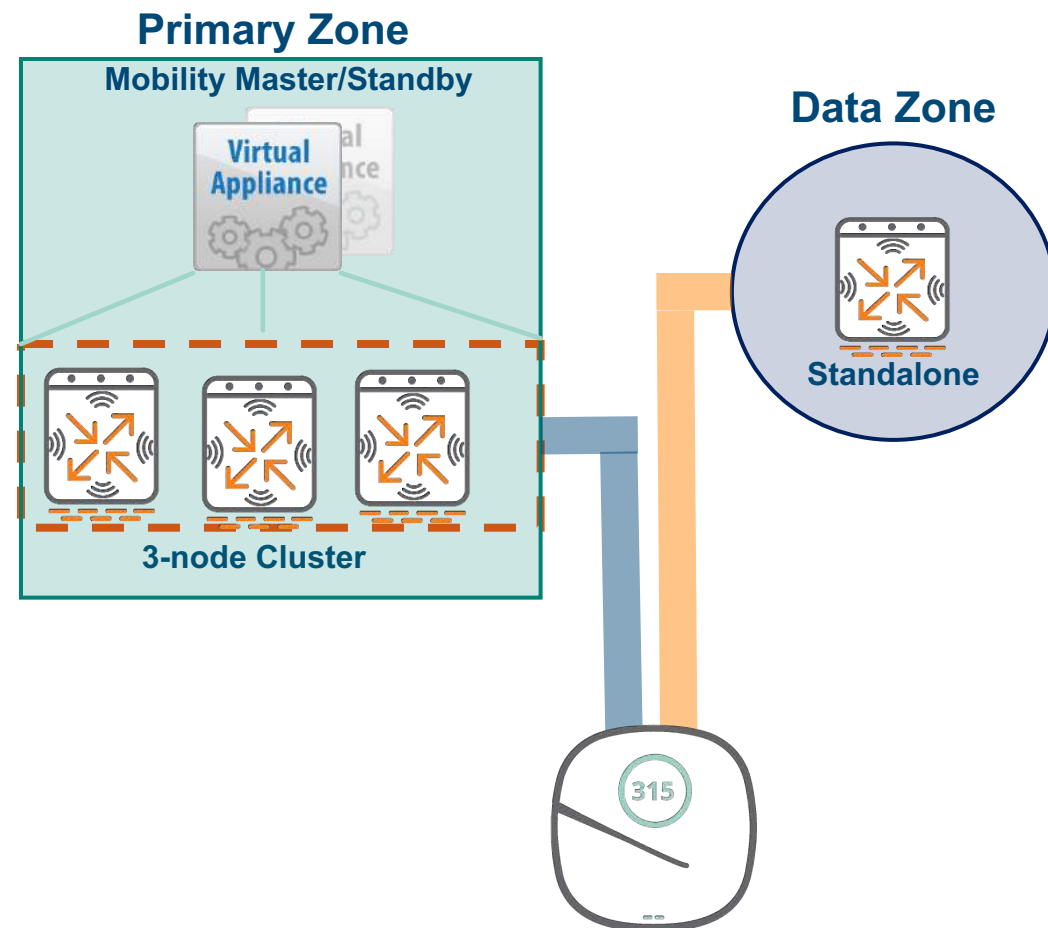
从8.2版本开始:

要启用multizone功能, primary zone必需要有RFP license, (RFP count = AP count).

当然, 如果primary zone需要用户角色及策略控制, 还需要PEF license, 数量也等于Ap数量;

Data Zone:

Datazone不需要任何license也能工作, 不过这时datazone Ac没有防火墙功能, 不能多用户进行策略控制;
如果要在datazone启用防火墙功能, 需要配置1个PEF license即可。



PPTN及PUTN

PPTN(per Port tunnel-node):

- (1) 功能: switch每端口与Ac建立tunnel
- (2) AC license需求: 每台switch占用1个Ap license, 一个MM license, 如果需要防火墙功能, 每台switch占用1个PEFlicense;

PUTN(Per User tunnel-node):

- (1) user根据角色区分是否与Ac建立tunnel, 有的user流量走tunnel, 有的user流量走本地, 没有split模式
- (2) AC license需求: PUTN目前不占用Ac任何license, 如果需要防火墙功能, 只需要配置1个PEFNG license即可;
但据说从8.4版本开始, 会和PPTN一样, 每台交换机占用1个AP&1个PEFlicense;

ClearPass license

- ClearPass 6.7版本的License与之前有重大改变
- 6.6及以前版本的Clearpass硬件系统在2018.6月已经停止销售，软件License也会在2018.12 EOS
- 新旧License可以1:1置换，在后台系统里transfer成新6.7版本的License
- 以下是一个transfer的例子：
 - Existing customers will get a 1:1 license exchange
 - Legacy ClearPass 25K (e.g. CP-VA-25K) = 25,000 Access Licenses
 - Also includes one set of 25 licenses for each feature (Access, Onboard, OnGuard)
 - Legacy ClearPass Guest 500 = 500 Access Licenses
 - Legacy ClearPass Onboard 10K = 10K Onboard Licenses (new key)
 - Legacy ClearPass OnGuard 5K = 5K OnGuard Licenses (new key)
 - Legacy ClearPass Enterprise 100 = New xAccess/yOnboard/zOnGuard Licenses in multiples of 25
 - For example, 25 Access + 50 Onboard + 25 OnGuard = 100
 - Enterprise license conversion is a one-time, one-time way process per license key

ClearPass 6.7 Licensing

Subscription Or Perpetual	<p>OnGuard (Endpoint Health/Posture)</p>	<p>Onboard (BYOD/CA)</p>	<ul style="list-style-type: none"> • Sold as 100, 500, 1K, 2500, 5K, 10K • Perpetual and 1/3/5* year Subscription based offerings
Subscription Or Perpetual	<p>Access (802.1X, MAC-Auth, Guest, TACACS+, OnConnect, Endpoint Profiling & Security Exchange)</p>		<ul style="list-style-type: none"> • Sold as 100, 500, 1K, 2500, 5K, 10K • Perpetual and 1/3/5 year Subscription based offerings
Perpetual	<p>VM Appliance / Hardware Appliances</p>		<ul style="list-style-type: none"> • Sold as Small, Medium, Large Sizes (HW) • Perpetual VM license

* OnGuard is not offered as a 5 year subscription

ClearPass 6.7 Licensing说明

– 6.7版本的虚拟机平台，需要有平台激活license

JZ399AAE	N/A	Aruba ClearPass Cx000V VM Appl E-LTU
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– 每个虚拟机平台需要一个Cx000V，即：如果计划2台虚拟机做冗余，就需要买2个

– 6.7版本的硬件系统C1000/C2000/C3000 里默认包括激活平台的license，不需要再购买

– 其他license分为永久有效Perpetual（即后缀为E-LTU）及服务subscription（后缀为E-STU）两种，一般建

议大家让客户直接买永久有效的

JZ400AAE	N/A	Aruba ClearPass NL AC 100 CE E-LTU
JZ401AAE	N/A	Aruba ClearPass NL AC 500 CE E-LTU
JZ402AAE	N/A	Aruba ClearPass NL AC 1K CE E-LTU

JZ409AAE	N/A	Aruba ClearPass NL AC 100 CE 1yr E-STU
JZ410AAE	N/A	Aruba ClearPass NL AC 500 CE 1yr E-STU
JZ411AAE	N/A	Aruba ClearPass NL AC 1K CE 1yr E-STU

– Access/onboard/onguard license可以在系统里倒入多个，例如客户说每天并发认证最大为2K，那就可以买2个1K的access license。

– License可以在两台冗余的系统里做license pool，即只需要买一套。

Airwave license

(1) Airwave 管理1个设备的license, 按管理设备数量购买: (通常只需要买这个license即可)

JW546AAE	LIC-AW	Aruba AirWave 1 Device Lic E-LTU
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(2) Airwave 冗余设备管理1个设备的license, 有以下可选:

JW558AAE	AW-25-FR	Aruba AirWave FailOvr 25 Dev Lic E-LTU
JW559AAE	AW-50-FR	Aruba AirWave FailOvr 50 Dev Lic E-LTU
JW560AAE	AW-100-FR	Aruba AirWave FailOvr 100 Dev Lic E-LTU
JW561AAE	AW-200-FR	Aruba AirWave FailOvr 200 Dev Lic E-LTU
JW562AAE	AW-500-FR	Aruba AirWave FailOvr 500 Dev Lic E-LTU
JW563AAE	AW-1000-FR	Aruba AirWave FailOvr 1000 Dev Lic E-LTU
JW564AAE	AW-2500-FR	Aruba AirWave FailOvr 2500 Dev Lic E-LTU

(3) Airwave 冗余设备超出50个license时, 数量增加1个的license: AW-EXF1-50; 冗余设备超过2500FR时, 数量增加1个的license为: AW-EXF1-2500;

JW565AAE	AW-EXF1-50	Aruba AW FailOvr 50 Dev Exp Lic E-LTU
JW566AAE	AW-EXF1-2500	Aruba AW FailOvr 2500 Dev Exp Lic E-LTU

(4) Airwave 硬件服务器 (注意: 只是硬件服务器, 不含license)

JX918A	AW-HWDL360-PRO	Aruba AirWave DL360 Pro HW Appliance
JX919A	AW-HWDL360-ENT	Aruba AirWave DL360 Ent HW Appliance

(5) Glass license: 由于一台Aw最多管理4000AP, 当用户的设备数量超过4000AP, 需要有两台或多台AW, 可以用Glass统一管理; **目前License免费;**

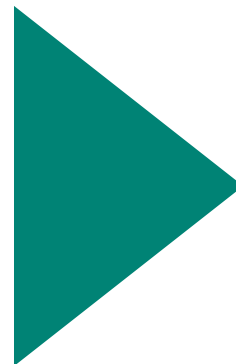
JZ075A	Aruba AW-HW-GLASS AirWave Hardware Appliance for Centralized Monitoring
JZ076AAE	Aruba AW-VA-GLASS AirWave Virtual Appliance for Centralized Monitoring E-LTU

Central license

包括2种License，全是服务年限的License

(1) 设备管理license

Device Management	Description
JY925AAE	Aruba Central DM 1 Token 1y Sub E-STU
JY926AAE	Aruba Central DM 1 Token 3y Sub E-STU
JY927AAE	Aruba Central DM 1 Token 5y Sub E-STU



DEVICE MANAGEMENT
License Per Managed Device
Transferrable between devices



INSTANT
ACCESS POINTS



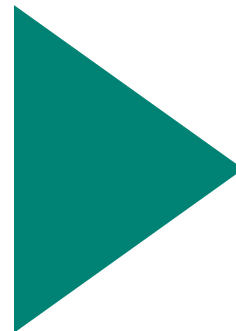
ARUBA-OS
SWITCHES



BRANCH
CONTROLLERS

(2) 增值服务license

Services	Description
JY928AAE	Aruba Central Svc 1 Token 1y Sub E-STU
JY929AAE	Aruba Central Svc 1 Token 3y Sub E-STU
JY930AAE	Aruba Central Svc 1 Token 5y Sub E-STU



SERVICES
License PER SERVICE Per Device
Transferrable between services

GUEST



PRESENCE



+ FUTURE SERVICES



注意：这里只是central的License，AC等硬件设备的维保服务还是要单独购买

Note: AppRF included in Device Management

SD-Branch license

- SD-Branch主要包括7000系列控制器做Branch Gateway，7200系列控制器做headend Gateway
- 基于Central来管理这些设备，需要SD-Branch的license，也是服务1/3/5年的license，分为基础license（Foundation）和高级（Advanced），高级license包括了基础license的功能，所以2选1即可。
- 同一用户要么全是基础license要么全是advanced，不能混合
- 每台设备会占用1个license
- 如果客户分支机构客户端数量不超过75个终端，可以选用7005做branch gateway，选用带“base”的license，要便宜不少，但终端数量不能超过75，否则就要用正常的license。所以这个license尽量少用。

SD-Branch license功能介绍

Tier	70xx Branch GW, 72xx Headend GW
Foundation	<ul style="list-style-type: none">• Gateway and VPNC Management• Role and Application based Policies• LAN Segmentation (Tunneled Node)• Routing: Static and Dynamic, Load Balancing• WAN Services: NAT, DHCP• L7 DPI• Stateful Firewall• Content Filtering• Extensive WAN Visibility• VPN Overlay, Hub spoke• Dynamic Path Selection• HA: Active-Standby, Active-Active• Gateway and VPNC ViA support
Advanced	<ul style="list-style-type: none">• All Foundation Features• Advanced WAN Analytics• End to End Micro-segmentation• Public Cloud Virtual Gateway• SAAS express• Dynamic Mesh• One-touch Cloud security integration

SD-Branch license

Branch license :

JZ118AAE	Aruba 70xx Gateway	Fnd	1yr Sub E-STU
JZ119AAE	Aruba 70xx Gateway	Fnd	3yr Sub E-STU
JZ120AAE	Aruba 70xx Gateway	Fnd	5yr Sub E-STU
JZ124AAE	Aruba 70xx Gateway	Fnd Base	1y Sub E-STU
JZ125AAE	Aruba 70xx Gateway	Fnd Base	3y Sub E-STU
JZ126AAE	Aruba 70xx Gateway	Fnd Base	5y Sub E-STU
JZ121AAE	Aruba 70xx Gateway	Adv	1yr Sub E-STU
JZ122AAE	Aruba 70xx Gateway	Adv	3yr Sub E-STU
JZ123AAE	Aruba 70xx Gateway	Adv	5yr Sub E-STU
JZ127AAE	Aruba 70xx Gateway	Adv Base	1y Sub E-STU
JZ128AAE	Aruba 70xx Gateway	Adv Base	3y Sub E-STU
JZ129AAE	Aruba 70xx Gateway	Adv Base	5y Sub E-STU

Headend license :

JZ195AAE	Aruba 72xx Gateway	Fnd	1yr Sub E-STU
JZ196AAE	Aruba 72xx Gateway	Fnd	3yr Sub E-STU
JZ197AAE	Aruba 72xx Gateway	Fnd	5yr Sub E-STU
JZ198AAE	Aruba 72xx Gateway	Adv	1yr Sub E-STU
JZ199AAE	Aruba 72xx Gateway	Adv	3yr Sub E-STU
JZ200AAE	Aruba 72xx Gateway	Adv	5yr Sub E-STU

1. Select ALL Foundation or Advanced for all Gateways in Deployment.
2. For 7005 Branch Gateways, a Foundation **Base** or Advanced Base license is available. The Base license is limited to 75 active clients.
3. 70xx Foundation Base can be used with 70xx Foundation in the same network. 70xx Advanced Base can be used with 70xx Advanced in the same network.

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Thank You