软件升级 陈少华 2017-03-08 发表

Fat AP初期投入少见效快,但AP本身储存了大量的网络和安全的配置,包括加密的钥匙,认证报文终结等,每台AP都要单独进行配置,费时、费力、费成本;Fit AP满足规模发展,其采用无线控制器 (AC)和Fit AP的架构,将密集型的无线网络和安全处理功能转移到集中的无线控制器中实现,AP只 作为无线数据的收发设备,大大简化了AP的管理和配置功能,甚至可以做到"零"配置;

Fat AP&Fit AP组网模式对照:

当无线网络由Fat AP转换为Fit AP模式后,由无线控制器实现对Fit AP的管理和控制,无线AP实现无 线信号的加密解密;这种组网方式具有组网灵活,业务开展能力强等特点,Fit AP组网方案和传统的F at AP解决方案对比如下:

	Fat AP方案	Fit AP方案
技术模式	传统方式	新生方式, 增强管理
安全性	传统加密、认证方式, 普通安全性	增加射频环境监控,基于用户位置安全策略 ,高安全性
网络管理	对每AP下发配置文件	Wireless Switch上配置好文件,AP本身零配置
用户管理	类似有线,根据AP接入的有线端口 区分权限	无线专门虚拟专用组方式,根据用户名区分 权限
WLAN组网规模	L2漫游,适合小规模组网,成本较 低	L2、L3漫游,拓扑无关性,适合大规模组网 ,成本较高
增值业务能力	实现简单数据接入	可扩展语音等丰富业务

Comware发展到V5版本已经是一个非常完善的单进程多任务的网络操作系统,在非常广泛的网络设备上得到了使用。要更进一步发展,就是要实现完全的模块化,以解决单进程无法解决的问题;同时提高系统的开放性。Comware V7采用多进程的实现方式,实现了完全的模块化。通过模块化使得系统在可靠性、虚拟化、多核多CPU应用、分布式计算、动态加载升级等方面都有了很大的改进。

随着近年用户开始规模的建设WLAN网络,部分用户在建网初期采用Fat AP,可以实现业务的快速部署,但随着网络规模的扩大,原有WLAN网管渐渐无法满足大量AP的维护、管理、升级需要。迫切需要转换到Fit AP架构。而用户购买我司AC设备新适配版本即为V7模式.AP的FAT V5到FIT V7的升级就变得必要而富有时效性。以下升级介绍H3C_AP V5到FIT V7的平滑升级过程,即无需中间过渡版本,完成平滑切换升级。

1. 新增无线控制器Comware V7适配AP型号

无线控制器旁挂BAS, AP和AC间通过二层或三层互通, 是无线和有线通信的桥梁, 无线和有线报文的 交互都需要无线控制器的中转.

2. 新增管理VLAN DHCP Server

为Fit AP提供管理VLAN IP地址,采用原Fat AP管理VLAN IP地址即可,无需重新规划,由BAS或AC分配

3. 远程更改AP工作形态

远程登录到Fat AP,收集记录AP序列号和MAC地址 ,为日后AP管理、维护建立文档,并将AP序列号添加到AC中:

a. 记录AP序列号和MAC地址

例:

[WA4320i-ACN-hidecmd]dis device manuinfo

DEVICE_NAME:WA4620i-ACN

DEVICE_SERIAL_NUMBER:210235A1BSC145001796

MAC_ADDRESS:80F6-2E4D-4540

MANUFACTURING_DATE:2015-05-20

VENDOR_NAME:H3C

b. V7_AC dhcp 开启地址下发:

[V7_AC]dhcp enable

c. 转换Fat AP工作形态为Fit AP

<WA4320i-ACN>ap-mode fit

Change working mode will reboot system, do you want to continue? [Y/N]:y

Change working mode to FIT now? [Y/N]:y.....

Change State : Unicast Discovery to Sulking

System is starting...

Press Ctrl+D to access BASIC-BOOTWARE MENU

Booting Normal Extend BootWare The Extend BootWare is self-decompressing.....Done!

H3C WA4320i-

ACN BootWare, Version 1.09

Copyright (c) 200	04-2015 Hangzhou H3C Technologies Co., Ltd.
Compiled Date	: Mar 23 2015
CPU Type	: ATHEROS AR9550
CPU L1 Cache	: 32KB
CPU Clock Spee	ed : 720MHz
Memory Type	: SDRAM
Memory Size	: 256MB
Memory Speed	: 560MHz
BootWare Size	: 512KB
Flash Size	: 32MB
CPLD Version	: 002
PCB Version	: Ver.C

BootWare Validating...

Press Ctrl+B to enter extended boot menu...

Starting to get the main application file--flash:/wa4300_fit.bin! The main application file does not exist--flash:/wa4300_fit.bin! Starting to get the backup application file--flash:/backup.bin! The backup application file does not exist--flash:/backup.bin! Starting to get the secure application file--flash:/secure.bin! The secure application file does not exist--flash:/secure.bin! Booting App fails!

Trying to get the IP address from the DHCP server..... DHCP server& # 39;s IP address is 192.168.1.1 Client& #39;s assigned address is 192.168.1.3 DNS domain name got from DHCP server is DNS server& #39;s IP address is 0.0.0.0 Default Gateway& # 39;s IP address is 192.168.1.1 This client& #39;s subnet mask is 255.255.255.0 The length of option 43 is: 0 Change State : Idle to Broadcast Discovery Change State : Broadcast Discovery to Join Change State : Join to JoinAck Download..... Change State : JoinCfm to Image [State : ImageLoad] Image download successful [State : Idle] Reset request, rebooting the AP Rebooting

Svetom is starting

System is starting
Press Ctrl+D to access BASIC-BOOTWARE MENU
Booting Normal Extend BootWare
The Extend BootWare is self-decompressing
Done!

H3C WA4320i-ACN BootWare, Version 1.09

Copyright (c) 2004-2015 Hangzhou H3C Technologies Co., Ltd.Compiled Date: Mar 23 2015CPU Type: ATHEROS AR9550CPU L1 Cache: 32KBCPU Clock Speed: 720MHzMemory Type: SDRAMMemory Size: 256MBMemory Speed: 560MHzBootWare Size: 512KBFlash Size: 32MBCPLD Version: 002PCB Version: Ver.C

BootWare Validating...

Press Ctrl+B to enter extended boot menu...

Starting to get the main application file--flash:/wa4300_fit.bin!.....

Extend BootWare Version is not equal,updating? [Y/N] Updating Extend BootWare.....Done! BootWare updated,System is rebooting now. System is starting... Press Ctrl+D to access BASIC-BOOTWARE MENU Booting Normal Extend BootWare The Extend BootWare is self-decompressing.....Done! The system have been updated to ComwareV7. Saving the boot-loader file , please wait.

Image file wa4300-boot.bin is self-decompressing...

Saving file flash:/wa4300-boot.binDone.

Image file wa4300-system.bin is self-decompressing...

Saving file flash:/wa4300-system.bin

.....Done.

System have been updated to ComwareV7!

H3C WA4320i-ACN BootWare, Version 7.03

Copyright (c) 2004-2015 Hangzhou H3C Technologies Co., Ltd.

Compiled Date: Jul 7 2015CPU Type: ATHEROS AR9550CPU L1 Cache: 32KBCPU Clock Speed: 720MHzMemory Type: SDRAMMemory Size: 256MBMemory Speed: 560MHzBootWare Size: 512KBFlash Size: 32MBCPLD Version: 002PCB Version: Ver.C

BootWare Validating...

Press Ctrl+B to access EXTENDED-BOOTWARE MENU... Loading the main boot and system image files... Loading file flash:/wa4300-system.bin.....Done. Loading file flash:/wa4300-boot.bin.....Done.

System image is starting... Press Ctrl+I to enter inter-initiate mode... 0 s Startup configuration file does not exist. Line con0 is available.

Press ENTER to get started. <H3C>dis version H3C Comware Software, Version 7.1.064, alpha 2104sp13

d. V7 AC配置AP 注册上线

wlan ap ap2 model WA4320i-ACN serial-id 210235A1GQC14A000407 radio 1 radio enable service-template 1 radio 2 gigabitethernet 1 gigabitethernet 2

.....

e. 查看DHCP下发 [V7_AC]dis dhcp server ip IP address Client identifier/ Lease expiration Type Hardware address 192.168.1.2 0158-20b1-7290-18 Jan 14 16:18:21 2016 Auto(C) f. 查看AP注册状态 <V7_AC>dis wlan ap all Total number of APs: 2 Total number of connected APs: 1

AP information State : I = Idle, J = Join, JA = JoinAck, IL = ImageLoad C = Config, DC = DataCheck, R = Run, M = Master, B = Backup

 AP name
 AP ID
 State
 Model
 Serial ID

 ap1
 1
 I
 WA4320i-X-R
 10235A1PQC158000179

 ap2
 2
 R/M
 WA4320i-ACN
 210235A1GQC14A000407

4. 远程更改接入交换机连接AP端口类型

在Fat AP网络中,由于AP需要对管理数据和用户数据作转发,所以其上行交换机接口类型须为trunk接口。

而Fit AP和无线控制器之间通过CAPWAP隧道传递用户数据,数据集中式转发,AP和无线控制器之间只需存在管理VLAN,所以在Fat AP网络整改时,须远程更改AP上行交换机端口类型为access接口。

在H3C_FAT V5到FIT V7切换平滑升级方案中,无需更换硬件设备,通过命令行或Web网管中一个点击 就可以把v5 Fat AP转换为v7 Fit AP模式,然后在网络中增加AC,就可以实现对AP设备的统一管理和 业务部署,保护用户资源。