



多量のAPの一括バージョンアップの一つの方法

バージョンアップ手順(WA6320の例ですが、WA6638も同様)

※WX3820H, WX1840Hで行う方法をAPで代用したケースとなります

前準備1:Anchor-acにするAPを目的のバージョンにします

前準備2:1台のAPをAnchor-acに設定します

Ancho-acに必要な設定は接続するAPにIPアドレスを提供する

DHCPサーバー機能のみ(Anchor-acの同時サポートAP数はWA6320は32台、WA6638は50台まで)

前準備3:十分なポート数のPoEスイッチを用意する

前準備4:当然、APを同時にPoEに接続するためのLANケーブル

実施手順1:APを箱から出してAPとPoEスイッチを接続する

すると、ブート後にAnchor-acとCAPWAPで接続され、

Anchor-acからAnchor-acにあるWA6300.ipeというファイルがAPIにダウンロードされ、完了するとリブートを始める

実施手順2:念のため、リブートが完了したAPからdisplay version

コマンドで目的のバージョンになったか確認する

実施手順3:Anchor-acにしたAPの設定をデフォルトにしてからFITモードに戻す

注意事項:32台のバージョンアップが完了したらAnchor-acをリブートして

DHCPをリセットすると割り当てがスムーズに行く

前準備1:装置へ新しいバージョンのソフトウェアを送り込む

```
<H3C>system-view
```

System View: return to User View with Ctrl+Z.

```
[H3C]interface vlan 1
```

```
[H3C-Vlan-interface1]ip address 192.168.0.50 24
```

```
[H3C-Vlan-interface1]quit
```

```
<H3C>ftp 192.168.0.10
```

Press CTRL+C to abort.

Connected to 192.168.0.10 (192.168.0.10).

220 3Com 3CDaemon FTP Server Version 2.0

User (192.168.0.10:(none)): anonymous

331 User name ok, need password

Password:

230 User logged in

Remote system type is UNIX.

Using binary mode to transfer files.

```
ftp> get WA6300-CMW710-R2451.ipe
```

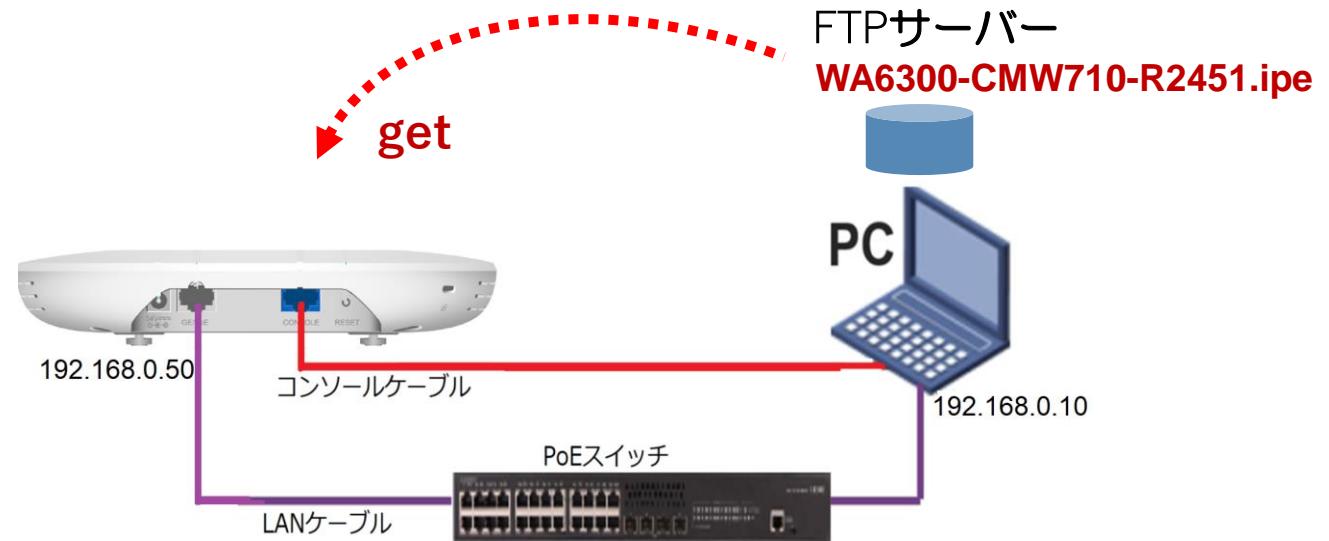
227 Entering passive mode (192,168,1,3,202,200)

125 Using existing data connection

226 Closing data connection; File transfer successful.

125825024 bytes received in 235.368 seconds (522.06 Kbytes/s)

```
ftp> quit
```



前準備1(続き):新しいソフトウェアを解凍してロードする

```
<H3C>boot-loader file flash:/WA6300-CMW710-R2451.ipe main
```

Verifying the file flash:/WA6300-CMW710-R2451.ipe on the device....Done.

H3C WA6320-JP images in IPE:

wa6300-boot.bin

wa6300-system.bin

wa6300-freeradius.bin

This command will set the main startup software images. Please do not reboot the device during the upgrade. Continue? [Y/N]:y

Add images to the device.

File flash:/wa6300-system.bin already exists on the device.

File flash:/wa6300-boot.bin already exists on the device.

Overwrite the existing files? [Y/N]:y

Decompressing file wa6300-freeradius.bin to flash:/wa6300-freeradius.bin...Done.

Decompressing file wa6300-system.bin to flash:/wa6300-system.bin.....Done.

Decompressing file wa6300-boot.bin to flash:/wa6300-boot.bin....Done.

Verifying the file flash:/wa6300-boot.bin on the device...Done.

Verifying the file flash:/wa6300-system.bin on the device.....Done.

Verifying the file flash:/wa6300-freeradius.bin on the device...Done.

The images that have passed all examinations will be used as the main startup software images at the next reboot on the device.

Decompression completed.

You are recommended to delete the .ipe file after you set startup software images for all slots.

Do you want to delete flash:/WA6300-CMW710-R2451.ipe now? [Y/N]:y

前準備1(続き):リブートする

<H3C>reboot

Start to check configuration with next startup configuration file, please wait.....DONE!

Current configuration may be lost after the reboot, save current configuration? [Y/N]:n

This command will reboot the device. Continue? [Y/N]:y

Now rebooting, please wait...

%Nov 12 00:05:38:273 2021 H3C DEV/5/SYSTEM_REBOOT: System is rebooting now.

System is starting...

Press Ctrl+D to access BASIC-BOOTWARE MENU...

Booting Normal Extended BootWare

The Extended BootWare is self-decompressing....Done.

```
*****
*          *
*      H3C WA6320-JP BootWare, Version 7.17      *
*          *
*****
```

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前準備1(続き):バージョンアップできたか確認する

<H3C>display version

H3C Comware Software, Version 7.1.064, Release 2451

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H3C WA6320-JP uptime is 0 weeks, 0 days, 0 hours, 1 minute

Last reboot reason : User soft reboot

Boot image: flash:/wa6300-boot.bin

Boot image version: 7.1.064, Release 2451

 Compiled Dec 20 2021 16:00:00

System image: flash:/wa6300-system.bin

System image version: 7.1.064, Release 2451

 Compiled Dec 20 2021 16:00:00

with 1 ARM 1000MHz Processor

512M bytes DDR4

128M bytes NandFlash Memory

Hardware Version is Ver.A

Basic Bootrom Version is 7.18

Extend Bootrom Version is 7.18

[Subslot 0]H3C WA6320-JP Hardware Version is Ver.A

[SLOT 1]GE1/0/1 (Hardware)Ver.A, (Driver)1.0

[SLOT 1]RADIO1/0/1 (Hardware)Ver.A, (Driver)1.0

[SLOT 1]RADIO1/0/2 (Hardware)Ver.A, (Driver)1.0

前準備2:1台のAPをanchor-acモードにする

手順: 現在の動作モードの確認 -> 動作モードの変更 -> 変更されたかどうかの確認

<H3C> **display wlan device role**

Current running mode: FIT AP.

system-viewにてap-modeコマンドでAnchor-acモードに変更

<H3C> **system-view**

System View: return to User View with Ctrl+Z.

[H3C] **ap-mode anchor-ac**

注: APモードには以下の3つのモード
が選択できます。

ap-mode { anchor-ac | cloud | fit }

Changing working mode will reboot system. Continue? [Y/N]:**y**

#モード変更のためにAPは自動的にrebootします。

System is starting...

Press Ctrl+D to access BASIC-BOOTWARE MENU...

Booting Normal Extended BootWare

リブート中メッセージ省略

Image file flash:/wa6600-boot.bin is self-decompressing.....

.....Done.

System image is starting...

Line con0 is available.

Press ENTER to get started.

#起動後Cloudモードになったことを確認します。

<H3C> **display wlan device role**

Current running mode: Anchor AC.

<H3C> **save force**

前準備2(続き):Anchor-acのGUIにログインする方法

PCのブラウザを起動し以下のURLを入力します。

<http://192.168.0.50/>

デフォルトのユーザー名: admin、パスワード: h3capadmin

The image shows two screenshots. On the left is the 'H3C WLAN Management Platform' login page for 'WA6320-JP'. It features a red box around the 'admin' username field and another red box around the 'Login' button. A large red arrow points from this page to the right. On the right is the 'Change Password' dialog box. It contains instructions about password requirements: 'The default password is not secure. A qualified password must meet the following requirements: It must contain a minimum of 10 characters. It must contain a minimum of 2 types, and a minimum of 1 character for each type. It can't contain the username or the reversed letters of the username.' Below these are three password input fields labeled 'Old Password', 'New Password', and 'Confirm Password', all of which are highlighted with a red box. At the bottom are 'Apply' and 'Cancel' buttons.

パスワードは10文字以上で、英数字記号などの2種類を含み、登録されているユーザー、adminなどの文字を含まないこと。

ログインするとDashboardが表示されます

ログインするとDashboardが表示されます

メニュー

ビューオの切換え[System View | Network View]

System View Network View

Access Points Clients Event Logs

1 0 0 0 4 6 6

Anchor-acを他のAPのDHCPサーバーとして設定する

画面中央の真下でSystem Viewを選択

The screenshot shows the H3C WA6320-JP configuration interface. The left sidebar contains a navigation menu with the following items:

- Actions
- Dashboard
- Network Configuration (highlighted with a red box and labeled ②)
- Network Interfaces
- VLAN
- Network Routing
- Network Services (highlighted with a red box and labeled ③)
- IP Services
- DHCP/DNS (highlighted with a red box and labeled ④)
- Multicast
- ARP
- ND
- Management Protocols
- Network Security (with a right arrow)

The main content area shows the current path: System > Network Configuration > Network Services > DHCP/DNS > DHCP. The "DHCP" tab is selected. A sub-section titled "DHCP" is displayed with the following text:
The Dynamic Host Configuration Protocol(DHCP) provides a framework to assign configuration information to network devices.

A blue button labeled "Enable DHCP" is highlighted with a red box and labeled ⑤.

At the top right of the interface, there are two tabs: "System View" (highlighted with a red box and labeled ①) and "Network View". At the bottom right, there are summary statistics for Access Points, Clients, and Event Logs.

Access Points	Clients	Event Logs
1	0	6

Anchor-acを他のAPのDHCPサーバーとして設定する(続き)

The screenshot shows the H3C WA6320-JP web interface. The left sidebar has a tree view with Network Configuration expanded, showing Network Interfaces, VLAN, Network Routing, Network Services (selected), IP Services, DHCP/DNS (selected), Multicast, ARP, ND, Management Protocols, and Network Security. The main content area is titled 'DHCP' and describes the Dynamic Host Configuration Protocol. It has tabs for Assigned Address (selected), DHCP Options, and IP In Use. Below these tabs is an 'Apply' button. At the top right of the content area are buttons for Service, Address pool (highlighted with a red box and circled '1'), Relay agent, and admin. The bottom navigation bar includes System View (selected), Network View, Access Points (1), Clients (0), Event Logs (4), and a status bar showing the IP address 192.168.0.50.

Anchor-acを他のAPのDHCPサーバーとして設定する(続き)

The screenshot shows the H3C WA6320-JP web interface. The left sidebar is titled "Actions" and contains the following menu items: Dashboard, Network Configuration (selected), Network Interfaces, VLAN, Network Routing, Network Services (selected), IP Services, DHCP/DNS (selected), Multicast, ARP, ND, Management Protocols, and Network Security. The main content area is titled "DHCP" and includes a sub-section "DHCP". It displays a message: "The Dynamic Host Configuration Protocol(DHCP) provides a framework to assign configuration information to network devices." Below this are tabs for "Assigned Address" (selected), "DHCP Options", and "IP In Use". A blue button labeled "Add Address Pool" is visible. A modal window titled "New DHCP Server Address Pool" is open. Inside the modal, there is a field labeled "Address pool name *" containing the value "For AP Management" (circled in red as step 1). At the bottom of the modal are two buttons: "Apply" (circled in red as step 2) and "Cancel".

Anchor-acを他のAPのDHCPサーバーとして設定する(続き)

The screenshot shows the H3C WA6320-JP web interface under the Network Configuration > Network Services > DHCP/DNS > DHCP section. The left sidebar lists various network services, with 'DHCP/DNS' currently selected. The main area displays the DHCP configuration for AP management, showing an IPv4 address range of 192.168.0.0 / 255.255.255.0 and a subnet mask of 192.168.0.51 - 192.168.0.100. A large red box surrounds the '192.168.0.0 / 255.255.255.0' entry. To the right, two lines of text show the equivalent values: '192.168.0.0 / 255.255.255.0' and '192.168.0.51 - 192.168.0.100'. A large red arrow points from the highlighted input field to these values. Red numbers 1 and 2 are overlaid on the interface: 1 is on the 'Apply' button at the bottom left, and 2 is on the 'System View' tab at the bottom center.

192.168.0.0 / 255.255.255.0
192.168.0.51 - 192.168.0.100

① 192.168.0.0 / 255.255.255.0 (Network address/mask)
② Apply

System View Network View

Anchor-acのDHCPサーバーから払い出されているIPの確認

WA6320-JP

Actions Dashboard Network Configuration Network Interfaces VLAN Network Routing Network Services DHCP/DNS Multicast ARP ND Management Protocols Network Security

Roadmap Service Address pool Relay agent admin

DHCP

The Dynamic Host Configuration Protocol(DHCP) provides a framework to assign configuration information to network devices.

for ap admin Delete Add Address Pool

Assigned Address DHCP Options IP In Use ①

②

IP Address	Hardware Address/Client ID	Expiration	Actions
192.168.0.51	0100-ddb6-b187-a0	11/13/2021 04:11:46	
192.168.0.52	0100-ddb6-b18f-40	11/13/2021 04:13:14	
192.168.0.53	0100-ddb6-b17c-a0	11/13/2021 04:16:40	
192.168.0.54	0100-ddb6-b192-60	11/13/2021 04:40:40	

Total 4 entries, 4 matched, 0 selected. Page 1 / 1.

System View Network View Access Points Clients Event Logs 4 0 0 0 0 4 15 40

192.168.0.50/wnm/frame/index.php?sessionid=200001da873bd50ef995a3a9cde5993bbf85#M_VLAN

ネットワークにFIT APが接続されると自動的に設定を作成するモード
画面中央の真下でNetwork Viewを選択

The screenshot shows the H3C WA6320-JP web interface. At the top, there are two tabs: "System View" and "Network View". The "Network View" tab is highlighted with a blue border. Below the tabs, the title "H3C WA6320-JP" is displayed, followed by the model number "WA6320-JP". On the right side of the header, there is a "Save" button.

The main content area has a breadcrumb navigation path: All Networks > Wireless Configuration > AP Management > AP Global Settings. To the left of the main content, a vertical sidebar lists various management categories:

- Actions
- Dashboard
- Quick Start
- Monitoring
- ② Wireless Configuration
- Wireless Networks
- ③ AP Management
- Wireless QoS
- Wireless Security
- Radio Management
- Applications
- Network Security
- System
- Tools

In the main content area, the "AP Global Settings" tab is selected, indicated by a red box and the number 4. The "Basic Settings" section contains the following configuration items:

- Region code: JAPAN(JP)
- Region code lock: OFF (checkbox)
- Software upgrade: ON (checkbox)
- Auto AP: ※wlan auto-ap enable設定 (checkbox)
- Auto AP conversion: ※wlan auto-persistent enable設定 (checkbox)

Red boxes and numbers are overlaid on the interface to guide the user through the steps:

- ① Network View (highlighted tab)
- ② Wireless Configuration
- ③ AP Management
- ④ AP Global Settings (highlighted tab)
- ⑤ Auto AP (checkbox) and Auto AP conversion (checkbox) settings, with arrows indicating they should be set to ON.

At the bottom of the interface, there are summary statistics: Access Points (1), Clients (0), Event Logs (4), and other metrics like 0, 0, 6.

最後に今まで設定したコンフィグを保存(save)

画面の右上で Save > yes

The screenshot shows the H3C WA6320-JP web interface. The left sidebar has a blue header "AP Management" under "Wireless Configuration". The main content area shows the "AP Global Settings" tab selected. A "Confirm" dialog box is overlaid on the page, asking "Are you sure you want to save the current configuration?". The "Yes" button is highlighted with a red box and circled with a red number 2. The "Save" button in the top right corner of the main interface is also highlighted with a red box and circled with a red number 1.

Actions

All Networks > Wireless Configuration > AP Management > AP Global Settings

Region code: JAPAN(JP)

Region code lock

Software upgrade

Auto AP

Auto AP conversion: ON

Save

Confirm

Are you sure you want to save the current configuration?

② Yes

① Save

Access Points: 1 Clients: 0 Event Logs: 6

ログアウトして終了

H3C WA6320-JP

Actions

All Networks > Dashboard

Roadmap

① **Dashboard**

② admin

③ Logout

System Logs

- Emergency: 0
- Critical: 4
- Warning: 4
- Information: 1

APs

System usage

Wireless services

Clients

Serial ID: 219801A2YF821BE000L2

Hardware: Ver.A

Boot ROM: 7.18

Software: 7.1.064, Release 2451

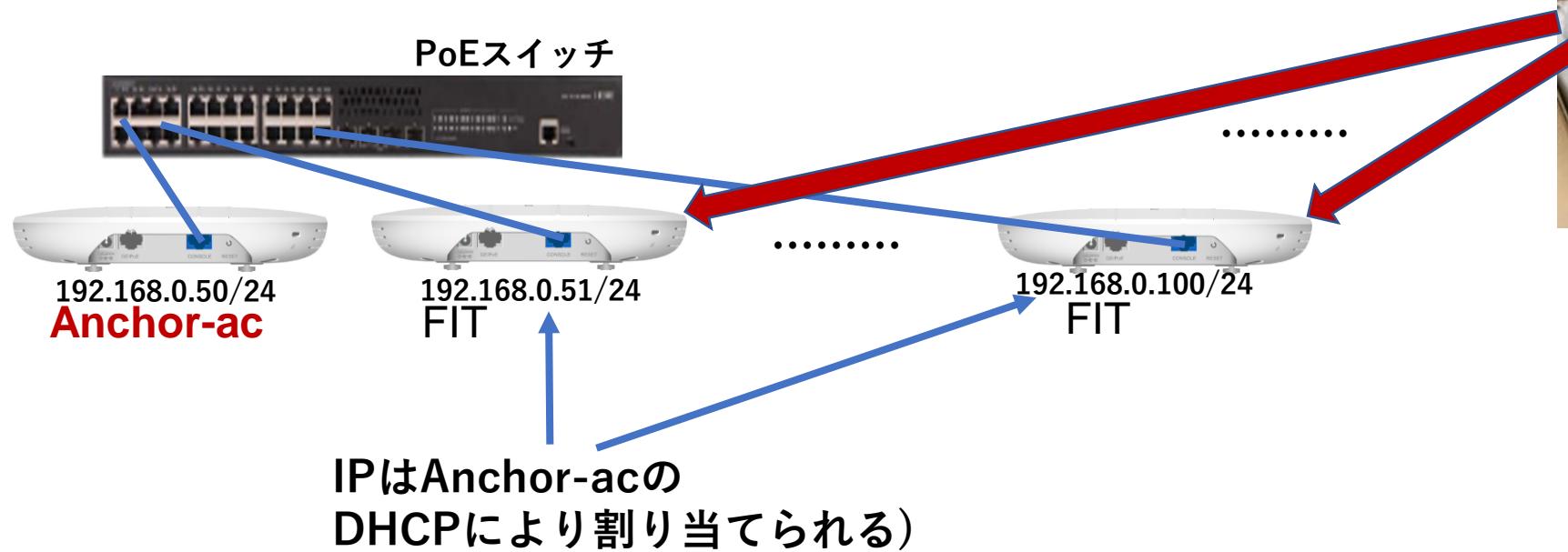
Access Points: 1 | Clients: 0 | Event Logs: 3

System View Network View

実施手順1:バージョンアップするAPをネットワークへ接続

工場出荷状態のAPを、接続できるだけ(最大32台)ネットワークへ接続する

注意事項: 32台のバージョンアップが完了したらAnchor-acをリブートして
DHCPをリセットするとIPの割り当てがスムーズに行く



多量での確認はできていないが、1台では 5分程度 かかった。

多量の場合、この処理が1台1台順に行われるのではなく同時並行的に行われるの、1台当たりの処理時間が台数分かかるわけではない

実施結果:1台目のみダウンロードのリトライが発生する

注意:WX3820H, WX1840Hはダウンロード用にflash:/にWA6300.ipeファイルを保存する必要があるが、Anchor-acは最初にboot.binとsystem.binからWA6300.ipeを作成するため、1台目では準備されていないためエラーとなり、作成後リトライして成功します。2台目以降はこのファイルを利用してスムーズにアップロードされます。

```
*****
* Anchor-acでの最初の1台のバージョンアップは *
* 1回目のみ失敗します *
*****
```

```
%Feb 09 09:01:25:346 2021 H3C CWS/6/CWS_IMG_DOWNLOAD_START: AP 00dd-b6b1-8f40 started to download the image file wa6300.ipe.
%Feb 09 09:01:24:355 2021 H3C CWS/6/CWS_IMG_DOWNLOAD_FAILED: Failed to download image file wa6300.ipe for AP 00dd-b6b1-8f40.
```

```
*****
* 最初の1台のバージョンアップは2回目のリトライには成功します *
*****
```

```
%Feb 09 09:03:22:336 2021 H3C CWS/6/CWS_IMG_DOWNLOAD_START: AP 00dd-b6b1-8f40 started to download the image file wa6300.ipe.
%Feb 09 09:04:21:498 2021 H3C CWS/6/CWS_IMG_DOWNLOAD_COMPLETE: Downloading the image file wa6300.ipe for AP 00dd-b6b1-8f40 through the CAPWAP tunnel is complete.
%Feb 09 09:06:12:810 2021 H3C APMGR/6/APMGR_AP_ONLINE: AP 00dd-b6b1-8f40 came online. State changed to Run.
%Feb 09 09:06:12:810 2021 H3C CWS/6/CWS_AP_UP: Master CAPWAP tunnel to AP 00dd-b6b1-8f40 went up.
```

```
*****
* 2台目以降のバージョンアップはすべて成功します *
*****
```

```
%Feb 09 09:06:54:037 2021 H3C CWS/6/CWS_IMG_DOWNLOAD_START: AP 00dd-b6b1-87a0 started to download the image file wa6300.ipe.
%Feb 09 09:07:54:663 2021 H3C CWS/6/CWS_IMG_DOWNLOAD_COMPLETE: Downloading the image file wa6300.ipe for AP 00dd-b6b1-87a0 through the CAPWAP tunnel is complete.
%Feb 09 09:08:45:182 2021 H3C APMGR/6/APMGR_AP_ONLINE: AP 00dd-b6b1-87a0 came online. State changed to Run.
%Feb 09 09:08:45:183 2021 H3C CWS/6/CWS_AP_UP: Master CAPWAP tunnel to AP 00dd-b6b1-87a0 went up.
```

確認手段:FITがバージョンアップされたかどうかをGUIで確認する (個別に確認)

The screenshot shows the H3C WA6320-JP management interface. The left sidebar has a red box around 'Wireless Configuration' (1) and another red box around 'AP Management' (2). The main content area shows 'AP Groups' with a table of APs. A red box highlights the 'Actions' column header. A blue arrow points from the 'Actions' column to a red box containing a magnifying glass icon. A red circle labeled '3' is placed over the magnifying glass icon.

Actions

WA6320-JP

Roadmap

All Networks > Wireless Configuration > AP Management > AP

AP AP Groups AP Global Settings

AP Groups

Search

Name Description AP Group Type Model Serial ID MAC Address Radios Status Actions

1 All AP Groups default-group Manual AP (E... WA6320-JP 219801A2 00-DD-B6-B1- 2,802.11ax(5GHz... Online 3

2 Wireless Networks

3 AP Management

Wireless QoS

Wireless Security >

Radio Management

Applications

Network Security >

System >

Tools >

Total 7 entries, 1 matched, 0 selected. Page 1 / 1.

System View Network View

Access Points Clients Event Logs

1 0 0 0 0 4 4 12

確認手段:FITがバージョンアップされたかどうかをGUIで確認する (個別に確認)

H3C WA6320-JP

All Networks > Wireless Configuration > AP Management > AP > View 00dd-b6b1-6480

Roadmap

Actions	AP type	Maunal AP
	Group name	default-group
Dashboard	Status	Online
Quick Start	Serial ID	219801A2YF821BE000L2
Monitoring	MAC address	00-DD-B6-B1-64-80
Wireless Configuration	AC IP address	N/A
Wireless Networks	AP IP address	192.168.0.50
AP Management	AP port number	60489
Wireless QoS	Region code	JAPAN(JP)
Wireless Security	LED mode	Normal
Radio Management	Map File	N/A
Applications	Radio number	2
Network Security	Online time	0day0hour16minute10second
System	Client number	N/A
Tools	H/W version	Ver.A
	S/W version	R2451
	Boot version	7.18

Return

System View Network View

Access Points Clients Event Logs

1 0 0 0 0 4 4 12

確認手段: FITがバージョンアップされたかどうかをコマンドで一括確認する

<H3C>**display wlan ap all verbose | inc S/W**

実施手順3:Anchor-acにしたAPの設定をデフォルトにしてからFITモードに戻す

```
<H3C>reset saved-configuration
```

The saved configuration file will be erased. Are you sure? [Y/N]:**y**

Configuration file in flash: is being cleared.

Please wait ...

Configuration file is cleared.

```
<H3C>system-view
```

System View: return to User View with Ctrl+Z.

```
[H3C]>ap-mode fit
```

Changing working mode will reboot system. Continue? [Y/N]:**y**

System is starting...

Press Ctrl+D to access BASIC-BOOTWARE MENU...

Booting Normal Extended BootWare

The Extended BootWare is self-decompressing....Done.

```
*****
```

```
* * *
```

H3C WA6320-JP BootWare, Version 7.18

```
* * *
```

```
*****
```

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```
<H3C>display wlan device role
```

Current running mode: FIT AP.

実施手順3:Anchor-acモードで作成されたファイルは削除します

<H3C>dir

Directory of flash:

```
0 drw-      - Nov 12 2021 02:35:34  anchor-ac
1 drw-      - Nov 12 2021 02:35:58  apimage
1 drw-      - Jan 01 1970 00:00:22  cloud
2 rw-       260649 Jan 01 1970 00:00:20  defaultfile.zip
3 drw-      Nov 12 2021 02:49:42  diagfile
4 drw-      - Jan 01 1970 00:00:22  fit
5 drw-      - Nov 12 2021 02:49:42  logfile
6 drw-      - Nov 12 2021 02:50:18  pki
7 drw-      - Nov 12 2021 02:49:42  seclog
8 -rw-     6528000 Feb  2 2022 02:12:17  wa6300-boot.bin
9 -rw-     40499200 Feb  2 2022 02:12:14  wa6300-system.bin
```

112640 KB total (63224 KB free)

<H3C>dir apimage/

Directory of flash:/apimage

```
0 -rw-    47034368 Feb  2 2022 02:12:27  wa6300.ipe
```

112640 KB total (17432 KB free)

<H3C>delete /unreserved apimage/wa6300.zip

<H3C>rmdir apimage

<H3C>reset recycle-bin /force

All files in the recycle bin will be cleared. Continue? [Y/N]:y

その他赤のアンダーラインで示したファイル

※delete /unreservedは削除したファイルをゴミ箱(recycle bin)に残さない

※reset recycle-bin /forceはゴミ箱のファイルを強制的にファイル属性にかか
わらず削除する

H3C

www.h3c.com