

升級nV衛星

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簡介

本文檔介紹在升級連線了衛星的思科聚合服務路由器9000系列(ASR9K)時，如何在最短停機時間內升級網路虛擬化(nV)衛星。需要特別考慮以減少主機或衛星裝置升級可能造成的任何故障。

自動升級

5.3.2、6.0.0及更新版本支援自動升級功能。在早期版本中，有三種影象傳輸方案：

- **映像不兼容** — 這是從主機到衛星的自動強制升級。
- **Image not latest** — 此日誌顯示有關版本不匹配的資訊，但使用者需要傳輸/啟用。
- **Image latest** — 這允許使用者選擇強制升級/降級。

利用自動升級功能，您可以自動執行第二個選項，這將使此選項像第一個選項一樣工作，並在衛星重新連線時推送最新映像。衛星自動升級功能的最佳類比是現場可程式設計裝置(FPD)自動升級。

用於啟用自動升級功能的命令是**upgrade on-connect**，該命令在 *nv satellite [satellite ID] config* 子模式下配置：

```
nv
satellite 100
type asr901
upgrade on-connect
!
```

註：本文檔的其餘部分主要介紹衛星裝置的手動升級。

單宿主

在單宿主場景中，一個衛星僅連線到一個ASR9K，這意味著衛星上會出現兩個過載。第一次衛星重新載入來自在Cisco IOS® XR升級期間重新載入的主機，第二次重新載入來自已升級的衛星Cisco IOS軟體。

對於此型別的升級，請完成**Satellite Upgrade**部分中的步驟。

雙宿主

如果升級連線到兩個ASR9K主機的衛星，可以克服單宿主衛星帶來的一些挑戰，但需要特別考慮以最小化任何流量中斷。

假設兩個ASR9K主機首先更新，衛星最後更新，或者甚至以後更新，則執行以下步驟以最小化任何中斷：

1. 檢查每個衛星將哪個主機視為活動主機。
2. 驗證指向主機2的衛星控制平面。
3. 將衛星切換到主機2。
4. 驗證控制平面和資料平面。
5. 升級主機1的XR軟體。
6. 驗證主機1的升級。
7. 驗證指向主機1的衛星控制平面。
8. 將所有衛星切換到主機1。
9. 立即在主機1上驗證衛星的控制平面和資料平面。
10. 升級主機2的XR軟體。
11. 驗證到主機2的控制平面
12. 根據需要切換衛星。
13. 從任一主機升級衛星。
14. 驗證衛星升級。

15. 驗證衛星的控制平面和資料平面。
以下是這些步驟的詳細資訊，省略了重複步驟。

連線檢查

驗證衛星狀態

此範例具有三個衛星環(100、101、102)，其中衛星100和102主動連線到主機1(9001-G)，衛星101主動連線到主機2(9001-H)。

```
RP/0/RSP0/CPU0:ASR9001-G#show nv satellite status
Fri Aug 15 21:32:03.274 UTC
Satellite 100
```

```
-----
Status: Connected (Stable)
Redundancy: Active (Group: 1)
Type: asr901
MAC address: 4c00.8287.1de4
IPv4 address: 10.0.100.1 (auto)
Serial Number: CAT1722U21S
Remote version: Compatible (not latest version)
  ROMMON: 2.1 (Latest)
  FPGA: N/A
  IOS: 1402.20 (Available: 1406.12)
Configured satellite fabric links:
  GigabitEthernet0/0/0/0
-----
  Status: Satellite Ready
  Remote ports: GigabitEthernet0/0/0-9
```

Satellite 101

```
-----
Status: Connected (Stable)
Redundancy: Standby (Group: 1)
Type: asr901
MAC address: 4c00.8287.2e24
IPv4 address: 10.0.101.1 (auto)
Serial Number: CAT1723U02B
Remote version: Compatible (not latest version)
  ROMMON: 2.1 (Latest)
  FPGA: N/A
  IOS: 1402.20 (Available: 1406.12)
Configured satellite fabric links:
  GigabitEthernet0/0/0/0
-----
  Status: Satellite Ready
  Remote ports: GigabitEthernet0/0/0-9
```

Satellite 102

```
-----
Status: Connected (Stable)
Redundancy: Active (Group: 1)
Type: asr901
MAC address: 4c00.8287.2ec4
IPv4 address: 10.0.102.1 (auto)
Serial Number: CAT1723U015
Remote version: Compatible (not latest version)
```

```
ROMMON: 2.1 (Latest)
FPGA: N/A
IOS: 1402.20 (Available: 1406.12)
Configured satellite fabric links:
GigabitEthernet0/0/0/0
-----
Status: Satellite Ready
Remote ports: GigabitEthernet0/0/0-9
```

檢查配置

如果這些檢查顯示所有衛星都為**connected**，則配置應該正確。如果任一ASR9Ks上的任何衛星都不處於**connected**狀態，則可能需要進行其他故障排除。

此配置是本文檔中使用的配置。

```
interface GigabitEthernet0/0/0/0
nv
satellite-fabric-link network
  redundancy
    iccp-group 1
  !
  satellite 100
    remote-ports GigabitEthernet 0/0/0-9
  !
  satellite 101
    remote-ports GigabitEthernet 0/0/0-9
  !
  satellite 102
    remote-ports GigabitEthernet 0/0/0-9
  !
!
!
!
!

nv
satellite 100
type asr901
redundancy
  host-priority 0
!
serial-number CAT1722U21S
!
satellite 101
type asr901
redundancy
  host-priority 200
!
serial-number CAT1723U02B
!
satellite 102
type asr901
redundancy
  host-priority 0
!
serial-number CAT1723U015
!
!
```

驗證衛星狀態 (簡短)

```
RP/0/RSP0/CPU0:ASR9001-H#show nv satellite status brief
```

```
Fri Aug 15 13:39:56.271 UTC
```

Sat-ID	Type	IP Address	MAC address	Status
100	asr901	10.0.100.1	4c00.8287.1de4	Connected (Stby)
101	asr901	10.0.101.1	4c00.8287.2e24	Connected (Act)
102	asr901	10.0.102.1	4c00.8287.2ec4	Connected (Stby)

如果需要更精簡的輸出，則可以在兩台主機上使用**show nv satellite status brief** 命令。連線狀態表示控制通道處於運行狀態，而**Act**和**Stby**表示每台主機每個衛星的資料平面狀態。

主機優先順序更改

更改主機優先順序

將衛星故障切換到另一ASR9K主機的最簡單方法是更改配置中的**host-priority**。在本範例中，**host-priority**設定為最高值（最低優先順序），因此環中的所有衛星都切換到主機2。

```
RP/0/RSP0/CPU0:ASR9001-G#config t
```

```
Fri Aug 15 21:39:50.909 UTC
```

```
RP/0/RSP0/CPU0:ASR9001-G(config)#nv
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-nV)#satellite 100
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-satellite)#redundancy
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-nV-red)#host-priority 255
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-nV-red)#exit
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-satellite)#exit
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-nV)#satellite 102
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-satellite)#redundancy
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-nV-red)#host-priority 255
```

```
RP/0/RSP0/CPU0:ASR9001-G(config-nV-red)#end
```

```
Uncommitted changes found, commit them before exiting(yes/no/cancel)? [cancel]:y
```

驗證主機優先順序更改

若要驗證此更改，可以使用**show nv satellite status brief** 命令。

```
RP/0/RSP0/CPU0:ASR9001-G#show nv satellite status brief
```

```
Fri Aug 15 21:40:35.876 UTC
```

Sat-ID	Type	IP Address	MAC address	Status
100	asr901	10.0.100.1	4c00.8287.1de4	Connected (Stby)
101	asr901	10.0.101.1	4c00.8287.2e24	Connected (Stby)
102	asr901	10.0.102.1	4c00.8287.2ec4	Connected (Stby)

```
RP/0/RSP0/CPU0:ASR9001-H#show nv sat stat bri
```

```
Fri Aug 15 13:42:15.847 UTC
```

Sat-ID	Type	IP Address	MAC address	Status
100	asr901	10.0.100.1	4c00.8287.1de4	Connected (Act)
101	asr901	10.0.101.1	4c00.8287.2e24	Connected (Act)
102	asr901	10.0.102.1	4c00.8287.2ec4	Connected (Act)

主機升級

1. 確認哪台主機將所有衛星視為活動且哪台主機將所有衛星視為備用後，請按照Cisco Connection Online(CCO)上記錄的正常升級程式或在所有衛星均處於備用狀態的主機上按照任何經過測試的程式方法(MOP)執行正常升級程式。
2. 升級第一個主機並確認所有安裝後檢查後，請遵循**Connectivity Checks**部分驗證到兩台主機衛星連線。驗證連線後，請依照**主機優先順序變更**一節，降低優先順序，將衛星交換到升級後的主機。
3. 將所有衛星作為備用連線到主機2後，升級此主機，並按照CCO升級指南或MOP執行所有安裝驗證步驟，同時按照**Connectivity Checks**執行所有衛星檢查。
4. 最後，繼續衛星升級。

衛星升級

新的衛星 (9000v和901) 影象分別包含在asr9k-9000v-nV-px-<release>和asr9k-901-nV-px-<release>軟體包中。在主機上啟用這些軟體包後，可能會升級衛星。

要在衛星上下載並啟用軟體映像，請在EXEC模式下使用**install nv satellite**命令。

```
install nv satellite { satellite id | all } { transfer | activate }
```

語法說明

衛星id 指定必須在其上傳輸影象的衛星的唯一識別符號。

全部 對目標版本尚未的所有當前活動衛星執行操作。

轉移 將映像從主機下載到衛星裝置。

啟用 對衛星執行安裝操作。

注意：請參閱**提示和技巧**部分，瞭解有關如何升級簡單環等高級拓撲的詳細資訊。

驗證衛星升級

在您發出**install nv satellite**命令並重新載入衛星後，**show nv satellite status**的輸出應顯示ROMMON、現場可程式設計門陣列(FPGA)和Cisco IOS修訂版是最新的。如果其中任何一項未說明**最新**，則需要執行進一步的疑難排解，以確定映像未升級的原因。

注意：在聯絡Cisco技術協助中心(TAC)之前，請檢查**衛星圖像和已知問題**部分。

```
RP/0/RSP0/CPU0:ASR9001-H#show nv satellite status
Fri Aug 15 19:54:26.429 UTC
Satellite 100
-----
Status: Connected (Stable)
Redundancy: Active (Group: 1)
Type: asr901
MAC address: 4c00.8287.1de4
IPv4 address: 10.0.100.1 (auto)
Serial Number: CAT1722U21S
Remote version: Compatible (not latest version)
  ROMMON: 2.1 (Latest)
  FPGA: N/A
  IOS: 1402.20 (Available: 1406.12)
```

```
Configured satellite fabric links:
GigabitEthernet0/0/0/0
-----
Status: Satellite Ready
Remote ports: GigabitEthernet0/0/0-9
```

```
Satellite 101
-----
Status: Connected (Stable)
Redundancy: Active (Group: 1)
Type: asr901
MAC address: 4c00.8287.2e24
IPv4 address: 10.0.101.1 (auto)
Serial Number: CAT1723U02B
Remote version: Compatible (latest version)
  ROMMON: 2.1 (Latest)
  FPGA: N/A
  IOS: 1406.12 (Latest)
Configured satellite fabric links:
GigabitEthernet0/0/0/0
-----
Status: Satellite Ready
Remote ports: GigabitEthernet0/0/0-9
```

附錄

提示和訣竅

升級多顆衛星

如果使用範圍（例如100-110）或逗號（例如100、105、115），則可以為install nv satellite命令選擇多個衛星。

注意：使用transfer選項並行傳輸所有影象，後跟activate關鍵字，以便按順序或並行順序啟用衛星。

升級衛星環

雖然環中的衛星可以快速（通常不到一秒）切換到備份主機，但最佳實踐是儘可能避免這種情況，並使用主機優先順序函式進行使用者呼叫的切換，而不是事件觸發的切換。

考慮到這一點，如果您升級一個環中的衛星（本例中為SAT101），而另一衛星的活動資料路徑通過此衛星(SAT102)，那麼當SAT101重新啟動以使用新影象時，SAT102的活動資料路徑將發生切換，當SAT101重新聯機後，SAT102將發生第二次切換。

為了說明此情況，在以下示例中，將此拓撲用於所有活動至9001H和備用至9001G的衛星。

```
9001G --- SAT100 --- SAT101 --- SAT102 --- 9001H
```

示例：升級方式錯誤

問：當SAT101從9001H升級時會發生什麼情況？

答：當衛星101重新載入時，衛星100失去其指向9001H的控制鏈路，並切換到9001G。衛星102失去與9001G的連線，但資料平面沒有切換。一旦衛星101恢復正常並且重新建立9001H和衛星100之間的控制通道，該衛星將再次切換並開始使用9001H作為其主資料平面路徑。

這將驗證每個衛星的資料平面狀態，其中9001G是備用衛星，9001H是活動衛星。

```
RP/0/RSP0/CPU0:ASR9001-G#show nv satellite status brief
Fri Aug 15 21:40:35.876 UTC
Sat-ID  Type      IP Address      MAC address      Status
-----  -
100     asr901    10.0.100.1     4c00.8287.1de4   Connected (Stby)
101     asr901    10.0.101.1     4c00.8287.2e24   Connected (Stby)
102     asr901    10.0.102.1     4c00.8287.2ec4   Connected (Stby)
```

以下是從主機9001H升級的衛星101的範例。

注意：啟動升級的主機不重要。

```
RP/0/RSP0/CPU0:ASR9001-H#install nv satellite 101 activate
Fri Aug 15 18:05:27.899 UTC
The operation will cause an image to be transferred, and then activated on the
requested satellite.
WARNING: This will take the requested satellite out of service.
Do you wish to continue? [confirm(y/n)] y
Install Op 1: activate: 101
1 configured satellite has been specified for activate.
1 satellite has successfully initiated activate.
```

當衛星101重新載入以使用其新影象時，會出現如下所示的輸出結果：

- 1. 衛星100失去到9001H的控制和資料平面連線
- 2. 衛星100將開始使用9001G作為其活動資料路徑
- 3. 衛星102失去與9001G的控制連線

```
RP/0/RSP0/CPU0:ASR9001-G#show nv satellite status brief
Sat Aug 16 02:15:44.148 UTC
Sat-ID  Type      IP Address      MAC address      Status
-----  -
100     asr901    10.0.100.1     4c00.8287.1de4   Connected (Act)
101     asr901    10.0.101.1     0000.0000.0000   Discovery Stalled; Conflict:
no Identification received yet
102     asr901    10.0.102.1     0000.0000.0000   Discovery Stalled; Conflict:
no Identification received yet
```

一旦衛星101回到工作狀態，並且衛星100的控制連線重新建立到9001H，所有衛星再次以9001G為待機狀態並啟用到9001H。這意味著衛星100執行第二切換。

```
RP/0/RSP0/CPU0:Aug 15 18:15:20.280 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
TRANSFER_DONE : Image transfer completed on Satellite 101
RP/0/RSP0/CPU0:Aug 15 18:15:49.775 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 100 one or more links may be down - traffic may
```



```

be impacted
RP/0/RSP0/CPU0:Aug 15 18:15:49.775 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 101 one or more links may be down - traffic may
be impacted
RP/0/RSP0/CPU0:Aug 15 18:15:49.775 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
INSTALL_DONE : Image install completed on Satellite 101
RP/0/RSP0/CPU0:Aug 15 18:15:49.792 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 100 removed
RP/0/RSP0/CPU0:Aug 15 18:15:49.805 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 101 removed
RP/0/RSP0/CPU0:Aug 15 18:18:31.793 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 101 up
RP/0/RSP0/CPU0:Aug 15 18:18:33.809 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR:
Node 101/ inserted
RP/0/RSP0/CPU0:Aug 15 18:18:35.665 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 100 up
LC/0/0/CPU0:Aug 15 18:18:36.021 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Up
LC/0/0/CPU0:Aug 15 18:18:36.022 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Up
LC/0/0/CPU0:Aug 15 18:18:37.786 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 15 18:18:37.786 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Down
RP/0/RSP0/CPU0:Aug 15 18:18:38.980 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:43.988 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:43.990 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:43.993 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:43.996 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:44.203 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
100/ inserted
RP/0/RSP0/CPU0:Aug 15 18:18:50.552 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:55.559 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:55.561 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:55.564 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:55.567 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 15 18:18:55.569 : invmgr[254]: %PLATFORM-INV-6-IF_OIRIN : xFP OIR:
SAT101/0/0 GigabitEthernet port_num: 0 is inserted, state: 1
RP/0/RSP0/CPU0:Aug 15 18:18:55.570 : invmgr[254]: %PLATFORM-INV-6-IF_OIROUT : xFP OIR:
SAT101/0/0 GigabitEthernet port_num: 0 is removed, state: 0
RP/0/RSP0/CPU0:Aug 15 18:18:56.925 : invmgr[254]: %PLATFORM-INV-6-IF_OIRIN : xFP OIR:
SAT100/0/0 GigabitEthernet port_num: 0 is inserted, state: 1
RP/0/RSP0/CPU0:Aug 15 18:18:56.927 : invmgr[254]: %PLATFORM-INV-6-IF_OIROUT : xFP OIR:
SAT100/0/0 GigabitEthernet port_num: 0 is removed, state: 0
RP/0/RSP0/CPU0:Aug 15 18:18:56.931 : invmgr[254]: %PLATFORM-INV-6-IF_OIRIN : xFP OIR:
SAT100/0/0 GigabitEthernet port_num: 4 is inserted, state: 1

```

升級衛星後，您應該會看到與之前相同的衛星狀態。

```
RP/0/RSP0/CPU0:ASR9001-H#show nv satellite status brief
```

```
Fri Aug 15 18:20:59.515 UTC
```

```
Sat-ID Type IP Address MAC address Status
```

```
-----
```

```

100    asr901    10.0.100.1    4c00.8287.1de4    Connected (Act)
101    asr901    10.0.101.1    4c00.8287.2e24    Connected (Act)
102    asr901    10.0.102.1    4c00.8287.2ec4    Connected (Act)

```

示例：正確升級方法

與先前的範例拓撲相同，且以需要升級的所有衛星開始，此範例顯示升級環的正確方法。

註：轉移是並行完成的，但某些轉移可能需要比其它轉移更長時間才能完成。建議首先將映像轉移到所有衛星，然後系統地啟動安裝的啟動部分，以便節省時間並防止衛星的不必要過載。

註：此示例顯示一次啟用一個衛星作為參考，但可以同時啟用所有衛星，如本節後面的內容所示。

從兩台主機檢查衛星的狀態，然後將映像傳輸到所有衛星。

```

RP/0/RSP0/CPU0:ASR9001-G#show nv sat stat bri
Fri Aug 22 20:15:59.830 UTC
Sat-ID  Type      IP Address      MAC address      Status
-----  -
100     asr901    10.0.100.1     4c00.8287.1de4   Connected (Stby)
101     asr901    10.0.101.1     4c00.8287.2e24   Connected (Stby)
102     asr901    10.0.102.1     4c00.8287.2ec4   Connected (Stby)

```

```

RP/0/RSP0/CPU0:ASR9001-H#show nv sat stat bri
Fri Aug 22 12:17:20.811 UTC
Sat-ID  Type      IP Address      MAC address      Status
-----  -
100     asr901    10.0.100.1     4c00.8287.1de4   Connected (Act)
101     asr901    10.0.101.1     4c00.8287.2e24   Connected (Act)
102     asr901    10.0.102.1     4c00.8287.2ec4   Connected (Act)

```

```

RP/0/RSP0/CPU0:ASR9001-H#install nv satellite 100-102 transfer
Fri Aug 22 12:17:51.647 UTC
Install Op 1: transfer: 100-102
3 configured satellites have been specified for transfer.
3 satellites have successfully initiated transfer.

```

```

RP/0/RSP0/CPU0:ASR9001-H#RP/0/RSP0/CPU0:Aug 22 12:23:16.238 : icpe_satmgr[1168]:
%PKT_INFRA-ICPE_GCO-6-TRANSFER_DONE : Image transfer completed on Satellite 100
RP/0/RSP0/CPU0:Aug 22 12:27:55.990 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
TRANSFER_DONE : Image transfer completed on Satellite 101
RP/0/RSP0/CPU0:Aug 22 12:28:01.876 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
TRANSFER_DONE : Image transfer completed on Satellite 102

```

之後，由於所有衛星都啟用到9001H，請先啟用衛星100。因此，9001G會失去與環中所有衛星的控制連線。

```

RP/0/RSP0/CPU0:ASR9001-H#install nv satellite 100 activate
Fri Aug 22 12:30:13.088 UTC
WARNING: This will take the requested satellite out of service.
Do you wish to continue? [confirm(y/n)] y
Install Op 2: activate: 100
1 configured satellite has been specified for activate.
1 satellite has successfully initiated activate.
RP/0/RSP0/CPU0:ASR9001-H#

```

```

RP/0/RSP0/CPU0:ASR9001-H#RP/0/RSP0/CPU0:Aug 22 12:30:45.639 : icpe_satmgr[1168]:
%PKT_INFRA-ICPE_GCO-5-SATELLITE_STATUS : Satellite 100 one or more links may
be down - traffic may be impacted
RP/0/RSP0/CPU0:Aug 22 12:30:45.639 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
INSTALL_DONE : Image install completed on Satellite 100
RP/0/RSP0/CPU0:Aug 22 12:30:45.658 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 100 removed
RP/0/RSP0/CPU0:Aug 22 12:33:28.059 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 100 up
RP/0/RSP0/CPU0:Aug 22 12:33:30.446 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR:
Node 100/ inserted
RP/0/RSP0/CPU0:Aug 22 12:33:30.449 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR:
Node 100/ inserted
LC/0/0/CPU0:Aug 22 12:33:30.495 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Up
LC/0/0/CPU0:Aug 22 12:33:30.497 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Up
LC/0/0/CPU0:Aug 22 12:33:43.498 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 12:33:43.498 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 12:33:45.487 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Up
LC/0/0/CPU0:Aug 22 12:33:45.490 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Up
RP/0/RSP0/CPU0:Aug 22 12:33:48.549 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 22 12:33:53.557 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 22 12:33:53.560 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 22 12:33:53.563 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
RP/0/RSP0/CPU0:Aug 22 12:33:53.568 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR: Node
inserted
LC/0/0/CPU0:Aug 22 12:33:57.750 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 12:33:57.750 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Down
RP/0/RSP0/CPU0:Aug 22 12:34:06.111 : invmgr[254]: %PLATFORM-INV-6-IF_OIRIN : xFP OIR:
SAT100/0/0 GigabitEthernet port_num: 0 is inserted, state: 1
RP/0/RSP0/CPU0:Aug 22 12:34:06.113 : invmgr[254]: %PLATFORM-INV-6-IF_OIROUT : xFP OIR:
SAT100/0/0 GigabitEthernet port_num: 0 is removed, state: 0
RP/0/RSP0/CPU0:Aug 22 12:34:06.118 : invmgr[254]: %PLATFORM-INV-6-IF_OIRIN : xFP OIR:
SAT100/0/0 GigabitEthernet port_num: 4 is inserted, state: 1

```

```
RP/0/RSP0/CPU0:ASR9001-H#show nv sat stat bri
```

```
Fri Aug 22 12:34:13.401 UTC
```

Sat-ID	Type	IP Address	MAC address	Status
100	asr901	10.0.100.1	4c00.8287.1de4	Connected (Act)
101	asr901	10.0.101.1	4c00.8287.2e24	Connected (Act; Transferred)
102	asr901	10.0.102.1	4c00.8287.2ec4	Connected (Act; Transferred)

一旦衛星100恢復運作，將其使用中的資料路徑切換到9001G，並繼續升級過程，升級至衛星101和最終的衛星102。

注意：衛星重新載入時，您還可以更改主機優先順序配置，從而完全防止任何切換。

```
RP/0/RSP0/CPU0:ASR9001-G#show run nv satellite 100
```

Fri Aug 22 20:35:59.435 UTC

nv

satellite 100
type asr901
redundancy
host-priority 255

!

serial-number CAT1722U21S

!

RP/0/RSP0/CPU0:ASR9001-G#**config t**

Fri Aug 22 20:36:03.839 UTC

RP/0/RSP0/CPU0:ASR9001-G(config)#**nv sat 100**

RP/0/RSP0/CPU0:ASR9001-G(config-satellite)#**redundancy**

RP/0/RSP0/CPU0:ASR9001-G(config-nV-red)#**host-priority 50**

RP/0/RSP0/CPU0:ASR9001-G(config-nV-red)#**end**

Uncommitted changes found, commit them before exiting(yes/no/cancel)? [cancel]:y

RP/0/RSP0/CPU0:Aug 22 20:36:18.401 : config[65867]: %MGBL-CONFIG-6-DB_COMMIT :
Configuration committed by user 'lab'. Use 'show configuration commit changes
1000000053' to view the changes.

RP/0/RSP0/CPU0:Aug 22 20:36:18.429 : config[65867]: %MGBL-SYS-5-CONFIG_I :
Configured from console by lab on vty0 (64.102.157.220)

RP/0/RSP0/CPU0:ASR9001-G#LC/0/0/CPU0:Aug 22 20:36:20.291 : ifmgr[208]:
%PKT_INFRA-LINK-3-UPDOWN : Interface GigabitEthernet100/0/0/0, changed state to Up
LC/0/0/CPU0:Aug 22 20:36:20.293 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN :
Line protocol on Interface GigabitEthernet100/0/0/0, changed state to Up

RP/0/RSP0/CPU0:ASR9001-G#**show nv sat stat bri**

Fri Aug 22 20:37:19.041 UTC

Sat-ID	Type	IP Address	MAC address	Status
100	asr901	10.0.100.1	4c00.8287.1de4	Connected (Act)
101	asr901	10.0.101.1	4c00.8287.2e24	Connected (Stby)
102	asr901	10.0.102.1	4c00.8287.2ec4	Connected (Stby)

RP/0/RSP0/CPU0:ASR9001-G#

RP/0/RSP0/CPU0:ASR9001-H#**show nv sat stat bri**

Fri Aug 22 12:40:26.728 UTC

Sat-ID	Type	IP Address	MAC address	Status
100	asr901	10.0.100.1	4c00.8287.1de4	Connected (Stby)
101	asr901	10.0.101.1	4c00.8287.2e24	Connected (Act; Transferred)
102	asr901	10.0.102.1	4c00.8287.2ec4	Connected (Act; Transferred)

RP/0/RSP0/CPU0:ASR9001-H#**install nv satellite 101 activate**

Fri Aug 22 12:40:39.496 UTC

WARNING: This will take the requested satellite out of service.

Do you wish to continue? [confirm(y/n)] y

Install Op 3: activate: 101

1 configured satellite has been specified for activate.

1 satellite has successfully initiated activate.

RP/0/RSP0/CPU0:ASR9001-H#RP/0/RSP0/CPU0:Aug 22 12:41:11.108 : icpe_satmgr[1168]:
%PKT_INFRA-ICPE_GCO-5-SATELLITE_STATUS : Satellite 100 one or more links may be
down - traffic may be impacted

RP/0/RSP0/CPU0:Aug 22 12:41:11.108 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 101 one or more links may be down - traffic may
be impacted

RP/0/RSP0/CPU0:Aug 22 12:41:11.108 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
INSTALL_DONE : Image install completed on Satellite 101

RP/0/RSP0/CPU0:Aug 22 12:41:11.125 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 100 removed

```
RP/0/RSP0/CPU0:Aug 22 12:41:11.134 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 101 removed
LC/0/0/CPU0:Aug 22 12:41:11.150 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 12:41:11.150 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Down
RP/0/RSP0/CPU0:Aug 22 12:44:08.154 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 101 up
RP/0/RSP0/CPU0:Aug 22 12:44:10.598 : invmgr[254]: %PLATFORM-INV-6-OIRIN : OIR:
Node 101/ inserted
RP/0/RSP0/CPU0:Aug 22 12:44:14.031 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 100 up
```

由於衛星101處於啟用狀態，因此重新載入時會發生以下情況：

- SAT 100在9001H的待機狀態下失去與9001G的待機控制平面連線。
- SAT 101丟失資料平面和控制平面給兩台主機
- SAT 102在9001G的待機狀態下失去與9001G的待機控制平面連線。
- SAT100和102上的資料平面沒有影響，也沒有切換。

```
RP/0/RSP0/CPU0:ASR9001-G#RP/0/RSP0/CPU0:Aug 22 20:39:52.241 : icpe_satmgr[1152]:
%PKT_INFRA-ICPE_GCO-5-SATELLITE_STATUS : Satellite 101 one or more links may be
down - traffic may be impacted
RP/0/RSP0/CPU0:Aug 22 20:39:52.241 : icpe_satmgr[1152]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 102 one or more links may be down - traffic may
be impacted
RP/0/RSP0/CPU0:Aug 22 20:39:52.257 : invmgr[253]: %PLATFORM-INV-6-OIROUT :
OIR: Node 101 removed
RP/0/RSP0/CPU0:Aug 22 20:39:52.271 : invmgr[253]: %PLATFORM-INV-6-OIROUT :
OIR: Node 102 removed
RP/0/RSP0/CPU0:Aug 22 20:42:49.285 : icpe_satmgr[1152]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 101 up
RP/0/RSP0/CPU0:ASR9001-G#RP/0/RSP0/CPU0:Aug 22 20:42:51.712 : invmgr[253]:
%PLATFORM-INV-6-OIRIN : OIR: Node 101/ inserted
RP/0/RSP0/CPU0:Aug 22 20:42:55.166 : icpe_satmgr[1152]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 102 up
RP/0/RSP0/CPU0:Aug 22 20:42:55.539 : invmgr[253]: %PLATFORM-INV-6-OIRIN : OIR:
Node 102/ inserted
```

一次升級多個衛星

您可以指定多個衛星，而不是一次啟用一個衛星。

注意：對於環拓撲，不建議這樣做。

```
RP/0/RSP0/CPU0:ASR9001-H#install nv satellite 100-102 activate
Fri Aug 22 13:04:35.604 UTC
The operation will cause an image to be transferred where required, and then
activate new versions on the requested satellites.
WARNING: This will take the requested satellites out of service.
Do you wish to continue? [confirm(y/n)] y
Install Op 5: activate: 100-102
3 configured satellites have been specified for activate.
3 satellites have successfully initiated activate.
```

```
RP/0/RSP0/CPU0:Aug 22 13:05:07.612 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 100 one or more links may be down - traffic may
```

```

be impacted
RP/0/RSP0/CPU0:Aug 22 13:05:07.612 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 101 one or more links may be down - traffic may
be impacted
RP/0/RSP0/CPU0:Aug 22 13:05:07.612 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
INSTALL_DONE : Image install completed on Satellite 100
RP/0/RSP0/CPU0:Aug 22 13:05:07.612 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
INSTALL_DONE : Image install completed on Satellite 101
RP/0/RSP0/CPU0:Aug 22 13:05:07.630 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 100 removed
RP/0/RSP0/CPU0:Aug 22 13:05:07.640 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 101 removed
LC/0/0/CPU0:Aug 22 13:05:07.653 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 13:05:07.653 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet100/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 13:05:07.912 : ifmgr[208]: %PKT_INFRA-LINK-3-UPDOWN : Interface
GigabitEthernet0/0/0/0, changed state to Down
LC/0/0/CPU0:Aug 22 13:05:07.912 : ifmgr[208]: %PKT_INFRA-LINEPROTO-5-UPDOWN : Line
protocol on Interface GigabitEthernet0/0/0/0, changed state to Down
RP/0/RSP0/CPU0:Aug 22 13:05:07.916 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-5-
SATELLITE_STATUS : Satellite 102 one or more links may be down - traffic may
be impacted
RP/0/RSP0/CPU0:Aug 22 13:05:07.916 : icpe_satmgr[1168]: %PKT_INFRA-ICPE_GCO-6-
INSTALL_DONE : Image install completed on Satellite 102
RP/0/RSP0/CPU0:Aug 22 13:05:07.934 : invmgr[254]: %PLATFORM-INV-6-OIROUT : OIR:
Node 102 removed

```

```

RP/0/RSP0/CPU0:ASR9001-H#show nv sat stat bri
Fri Aug 22 13:06:12.255 UTC
Sat-ID   Type      IP Address      MAC address      Status
-----
100      asr901    10.0.100.1     0000.0000.0000  Discovery Stalled; Conflict:
interface is down
101      asr901    10.0.101.1     0000.0000.0000  Discovery Stalled; Conflict:
interface is down
102      asr901    10.0.102.1     0000.0000.0000  Discovery Stalled; Conflict:
interface is down

```

範例：衛星的自動升級

本節提供升級到較新衛星代碼以及自動升級功能觸發器的範例。

```

RP/0/RSP1/CPU0:AE(admin)#install activate disk0:asr9k-asr901-nV-px-5.3.2.12I
Thu Jun 18 20:19:21.299 UTC
Install operation 2 '(admin) install activate disk0:asr9k-asr901-nV-px-5.3.2.12I'
Info:      Install Method: Parallel Process Restart
The install operation will continue asynchronously.
Install operation 2: load phase started at 20:19:43 UTC Thu Jun 18 2015.
Info:      The changes made to software configurations will not be persistent
Info:      across system reloads. Use the command '(admin) install commit' to
Info:      make changes persistent.
Info:      Please verify that the system is consistent following the software
Info:      change using the following commands:
Info:      show system verify
Info:      install verify packages

```

```

RP/0/RSP1/CPU0:Jun 18 20:19:21.373 : instdir[251]:
%INSTALL-INSTMGR-6-INSTALL_OPERATION_STARTED : Install operation 2 '(admin)
install activate mem:asr9k-asr901-nV-px-5.3.2.12I' started by user 'started

```

by user 'lab' via CLI at 20:19:21 UTC Thu Jun 18 2015.
lab'
RP/0/RSP1/CPU0:Jun 18 20:19:58.402 : firmware_manager[235]:
%PLATFORM-UPGRADE_FPD-6-FW_MGR_OPERATION_INFO : AUTO_FPD_UPGRADE_INFO: FW_MGR:
auto fpd-upgrade CLI not configured. Return!
RP/0/RSP1/CPU0:Jun 18 20:20:01.422 : sysmgr[94]: %OS-SYSMGR-7-INSTALL_NOTIFICATION
: notification of software installation received
LC/0/0/CPU0:Jun 18 20:20:02.236 : sysmgr[91]: %OS-SYSMGR-7-INSTALL_NOTIFICATION :
notification of software installation received
LC/0/0/CPU0:Jun 18 20:20:02.250 : sysmgr[91]: %OS-SYSMGR-7-INSTALL_FINISHED :
software installation is finished
RP/0/RSP1/CPU0:Jun 18 20:20:06.432 : sysmgr[94]: %OS-SYSMGR-7-INSTALL_FINISHED :
software installation is finished
RP/0/RSP1/CPU0:Jun 18 20:20:18.772 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-4-SATELLITE_UPGRADE_ON_CONNECT_SET : Satellite 100 has been
configured to auto-update on re-connection and is currently not using a current
version. If the satellite control session is re-established, then the satellite
will update and be temporarily out of service.
RP/0/RSP1/CPU0:Jun 18 20:20:23.075 : instdir[251]:
%INSTALL-INSTMGR-6-INSTALL_OPERATION_COMPLETED_SUCCESSFULLY : Install operation
2 completed successfully

RP/0/RSP1/CPU0:Jun 18 20:22:04.756 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-6-VERSION_NOTCURRENT : Satellite 100 is running a software
version which is not current. Auto-upgrade scheduled.
RP/0/RSP1/CPU0:Jun 18 20:22:04.756 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-4-SATELLITE_UPGRADE_ON_CONNECT_SET : Satellite 100 has been
configured to auto-update on re-connection and is currently not using a current
version. If the satellite control session is re-established, then the satellite
will update and be temporarily out of service.
RP/0/RSP1/CPU0:Jun 18 20:22:04.884 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-5-VERSION_AUTOUPGRADE_STARTED : Auto-upgrade started for
1 satellite.

RP/0/RSP1/CPU0:Jun 18 20:27:22.438 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-6-TRANSFER_DONE : Image transfer completed on Satellite 100
LC/0/0/CPU0:Jun 18 20:27:48.995 : ifmgr[211]: %PKT_INFRA-LINK-3-UPDOWN :
Interface GigabitEthernet0/0/0/10, changed state to Down
LC/0/0/CPU0:Jun 18 20:27:48.995 : ifmgr[211]: %PKT_INFRA-LINEPROTO-5-UPDOWN :
Line protocol on Interface GigabitEthernet0/0/0/10, changed state to Down
RP/0/RSP1/CPU0:Jun 18 20:27:48.996 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-6-INSTALL_DONE : Image install completed on Satellite 100
LC/0/0/CPU0:Jun 18 20:27:50.476 : vic_0[367]: %PLATFORM-VIC-4-SIGNAL :
Interface GigabitEthernet0/0/0/10, Detected Signal failure
LC/0/0/CPU0:Jun 18 20:29:16.741 : ifmgr[211]: %PKT_INFRA-LINK-3-UPDOWN :
Interface GigabitEthernet0/0/0/10, changed state to Up
LC/0/0/CPU0:Jun 18 20:29:57.670 : ifmgr[211]: %PKT_INFRA-LINK-3-UPDOWN :
Interface GigabitEthernet0/0/0/10, changed state to Down
LC/0/0/CPU0:Jun 18 20:29:58.213 : vic_0[367]: %PLATFORM-VIC-4-RX_LOS :
Interface GigabitEthernet0/0/0/10, Detected Rx Loss of Signal
LC/0/0/CPU0:Jun 18 20:29:58.224 : ifmgr[211]: %PKT_INFRA-LINK-3-UPDOWN :
Interface GigabitEthernet0/0/0/10, changed state to Up
LC/0/0/CPU0:Jun 18 20:30:25.019 : ifmgr[211]: %PKT_INFRA-LINEPROTO-5-UPDOWN :
Line protocol on Interface GigabitEthernet0/0/0/10, changed state to Up
RP/0/RSP1/CPU0:Jun 18 20:30:28.969 : icpe_satmgr[1154]:
%PKT_INFRA-ICPE_GCO-5-SATELLITE_STATUS : Satellite 100 up

衛星影象

以下是衛星的預期版本控制清單。

900伏

XR版本	首次客戶發貨 (FCS)或軟體維護升級 (SMU)	映像型別	映像版本	備註
4.2.1	FCS	Cisco IOS/核心	202.0(151-3.SVA)	202-209.9
		ROMMON	125	
		FPGA	1.13	
4.2.3	FCS	Cisco IOS/核心	210(151-3.SVB)	210-219.9
		ROMMON	125	
		FPGA	1.13	
	CSCuc59715	Cisco IOS/核心	211	
		ROMMON	125	
		FPGA	1.13	
	CSCty86900	Cisco IOS/核心	212	
		ROMMON	125	
		FPGA	1.13	
	CSCul09549	Cisco IOS/核心	213	
		ROMMON	125	
		FPGA	1.13	
4.3.0	FCS	Cisco IOS/核心	252(151-3.SVC)	250-259.9
		ROMMON	125	
		FPGA	1.13	
4.3.1	FCS	Cisco IOS/核心	276(151-3.SVD)	
		ROMMON	125	
		FPGA	1.13	
	CSCuj97259	Cisco IOS/核心	277	
		ROMMON	125	
		FPGA	1.13	
	CSCui7	Cisco	278	

	7863	IOS/核心 ROMMO N	125	
		FPGA	1.13	
	CSCuj9 7259	Cisco IOS/核心 ROMMO N	279 125	
4.3.2		FPGA	1.13	
		Cisco IOS/核心 ROMMO N	285(151-3.SVF) 125	
		FPGA	1.13	
4.3.4		Cisco IOS/核心	287(151 -3.SVFa)	它可能會 說285個 可用，這 是錯誤的 。
		ROMMO N	125	
		FPGA	1.13	
5.1.0		Cisco IOS/核心 ROMMO N	292(151-3.SVE) 125	
		FPGA	1.13	
5.1.1		Cisco IOS/核心	322.6(151-3.SVG)	
		ROMMO N	126	要使用高 級功能 ，衛星必 須運行此 版本。
		FPGA	1.13	
5.1.2		Cisco IOS/核心 ROMMO N	327(151-3.SVG2) 127	
		FPGA	1.13	
5.1.3		Cisco IOS/核心 ROMMO N	338.1(15 1-3.SVI) 127	
		FPGA	1.13	
5.2.0		Cisco IOS/核心 ROMMO N	353(151-3.SVH) 127	
		FPGA	1.13	
5.2.1		Cisco IOS/核心 ROMMO	353(151-3.SVH) 127	

	N	
	FPGA	1.13
5.2.2	Cisco IOS/核心	378(151-3.SVH2)
	ROMMO	127
	N	
	FPGA	1.13
5.3.0	Cisco IOS/核心	530.101(151-3.SVI)
	ROMMO	127.0
	N	
	FPGA	1.13
5.3.1	Cisco IOS/核心	531.101
	ROMMO	127.0
	N	
	FPGA	1.13
5.3.2	Cisco IOS/核心	532.101
	ROMMO	127.0
	N	
	FPGA	1.13

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XR版本	FCS或SMU	映像型別	映像版本	備註
4.3.0	FCS	Cisco IOS/核心	1212.1	
		ROMMON	2.1	
		FPGA	不適用	
4.3.1	FCS	Cisco IOS/核心	1304.23	
		ROMMON	2.1	
		FPGA	不適用	
4.3.2	FCS	Cisco IOS/核心	1308.18	
		ROMMON	2.1	
		FPGA	不適用	
4.3.4	FCS	Cisco IOS/核心	1312.06	
		ROMMON	2.1	
		FPGA	不適用	
5.1.0	FCS	Cisco IOS/核心	1308.18	
		ROMMON	2.1	
		FPGA	不適用	
5.1.1	FCS	Cisco IOS/核心	1401.13	
		ROMMON	2.1	
		FPGA	不適用	
5.1.2	FCS	Cisco IOS/核心	1404.11	
		ROMMON	2.1	
		FPGA	不適用	
5.1.3	FCS	Cisco IOS/核心	1408.01	
		ROMMON	2.1	
		FPGA	不適用	
5.2.0	FCS	Cisco IOS/核心	1406.12	
		ROMMON	2.1	

		FPGA	不適用
5.2.1	FCS	Cisco IOS/核心	1406.12
		ROMMON	2.1
		FPGA	不適用
5.2.2	FCS	Cisco IOS/核心	1409.29
		ROMMON	2.1
		FPGA	不適用
5.3.0	FCS	Cisco IOS/核心	1409.29
		ROMMON	2.1
		FPGA	不適用

已知的問題

映像下載失敗

Saw the following message which indicates something blocking the image transfer

```
SAT9K_IMG_DOWNLOADER-3-TFTP_READ_FAIL: FTP download failure for 4502A1__.FPG with error code:-3
```

建議：檢查管理平面保護(MPP)配置，以確保機箱間鏈路(ICL)埠的TFTP設定為**allowed**。

映像下載錯誤地顯示已完成

在此案例中，介面控制平面延伸器(ICPE)報告安裝完成，但檢查衛星時，它不會執行最新版本。

```
RP/0/RSP0/CPU0:asr9k#install nv satellite 101 transfer progress
Wed Dec 18 16:36:43.381 CST
1 configured satellite has been specified for transfer.
1 satellite has successfully initiated transfer.
| Working...RP/0/RSP0/CPU0:Dec 18 16:37:00.072 CST: icpe_gco[1148]:
%PKT_INFRA-ICPE_
GCO-6-TRANSFER_DONE : Image transfer completed on Satellite 101
Press Ctrl+C at any time to stop displaying the current progress.
Completed.
1 satellite has successfully completed the transfer operation: 101.
```

```
RP/0/RSP0/CPU0:asr9k#install nv satellite 101 activate progress
Wed Dec 18 16:37:26.943 CST
WARNING: This will take the requested satellite out of service.
Do you wish to continue? [confirm(y/n)] y
1 configured satellite has been specified for install.
1 satellite has successfully initiated install.
<snip>
RP/0/RSP0/CPU0:Dec 18 16:37:29.962 CST: icpe_gco[1148]:
%PKT_INFRA-ICPE_GCO-6-INSTALL_DONE :
Image install completed on Satellite 101
RP/0/RSP0/CPU0:Dec 18 16:37:29.968 CST: invmgr[262]:
%PLATFORM-INV-6-OIROUT : OIR: Node 101
removed
Completed.
1 satellite has successfully completed the install operation: 101.
```

```
RP/0/RSP0/CPU0:asr9k#show nv satellite status satellite 101
Wed Dec 18 16:39:09.258 CST
Satellite 101
-----
State: Connected (Stable)
Type: asr9000v
MAC address: 8478.ac05.8a14
IPv4 address: 101.101.101.101
Configured Serial Number: CAT1733U1K2
Received Serial Number: CAT1733U1K2
Remote version: Compatible (not latest version)

  ROMMON: 125.0 (Latest)
  FPGA: 1.13 (Latest)
  IOS: 210.0 (Available: 292.0)
```

需檢查的專案：

- MPP配置（請參見上一節）。
- 如果在安裝CLI中使用**progress**關鍵字，則不要使用5.1.2或5.2.0之前的版本中的**progress**關鍵字。
- 確保TFTP主機未設定（例如，`fttp vrf預設ipv4伺服器主機disk0：`）。
- 如果衛星是ASR901，安裝可能會由於空間限制而失敗。建議從901快閃記憶體中刪除非nV映像，然後執行**squeeze flash:**以釋放空間。

注意： 影像傳輸大約需要五分鐘。

5.1.1 雙家庭問題

從版本5.1.1升級到版本5.1.2或降級可能會導致升級失敗時，存在已知問題，[Cisco錯誤ID CSCuo41004](#)中對此進行了說明。

Symptom:

During an upgrade from 5.1.1 or downgrade to 5.1.1 scenario, both hosts of a dual head satellite configuration become the standby host for the satellite. This stops traffic.

Conditions:

A dual head topology for nV ICPE configuration and one of the hosts being 5.1.1, with the other being a later version.

Workaround:

Ensure that the secondary host is the host that is running 5.1.1. So during an upgrade from 5.1.1, then upgrade the primary host first; during a downgrade to 5.1.1, then downgrade the secondary host first.

The primary host can be identified using the `<cmdBold>show nv satellite protocol redundancy</noCmdBold>` command.

An alternative option (if only a few satellites have been configured) is to explicitly configure host priorities for the 2 hosts.

Further Problem Description:

The dual system will recover when both systems have the same version.

If testing between versions is required, then the user must explicitly configure host priorities.

關於此翻譯

思科已使用電腦和人工技術翻譯本文件，讓全世界的使用者能夠以自己的語言理解支援內容。請注意，即使是最佳機器翻譯，也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準確度概不負責，並建議一律查看原始英文文件（提供連結）。