

排除故障IOS Hypervisor和CGR的1000系统镜像恢复

目录

[简介](#)

[先决条件](#)

[要求](#)

[使用的组件](#)

[恢复Hypervisor和系统镜像的步骤](#)

[下载Hypervisor镜像和系统镜像](#)

[IOS的CGR启动顺序](#)

[恢复步骤](#)

简介

本文描述hypervisor和系统镜像的恢复步骤在Cisco 1000串联网格路由器(CGR 1000)该运行IOS软件。如果hypervisor或系统镜像损坏的，此步骤可帮助您带来CGR 1000路由器回到联机。IOS配置在NVRAM存储。即使使用另一个Cisco Secure数字(SD)卡，配置不会删除，除非running-config指定在另一个位置存储。

先决条件

- 在本地计算机安装的简单文件传输协议(TFTP)服务器
- 设置TFTP server有hypervisor和系统镜像

要求

Cisco 建议您了解以下主题：

- 控制台电缆
- CAT5
- Hypervisor镜像、系统镜像和套件镜像

使用的组件

本文档中的信息限制对在CGR 1120和CGR1240的仅IOS版本运行。

本文档中的信息都是基于特定实验室环境中的设备编写的。本文档中使用的所有设备最初均采用原始（默认）配置。如果您使用的是真实网络，请确保您已经了解所有命令的潜在影响。

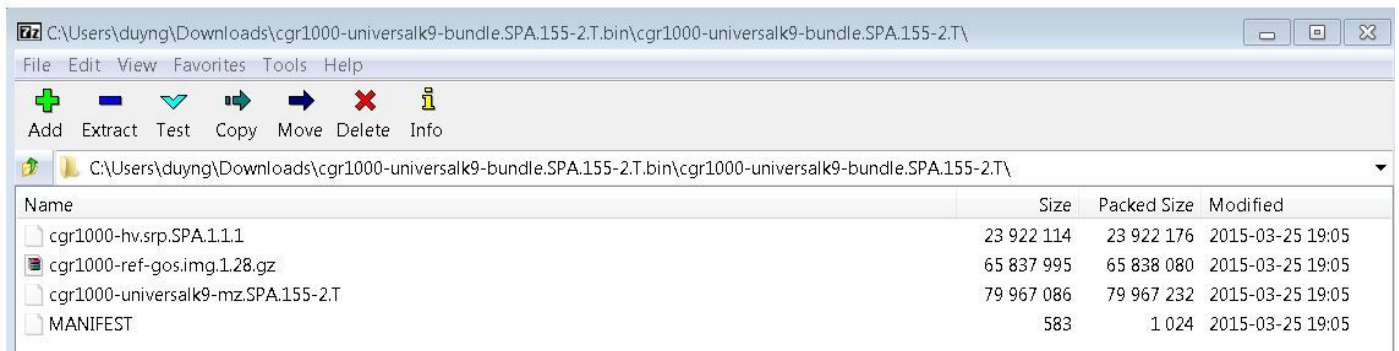
恢复Hypervisor和系统镜像的步骤

下载Hypervisor镜像和系统镜像

1. 在思科下载任何镜像cgr1000-universalk9-bundle.xxx.xxx.xxx.bin。
2. 请使用7z打开bin文件。



3. 双击文件浏览内容。



4. 下载hypervisor镜像(cgr1000-hv.srp.SPA.1.1.1)和系统镜像(cgr1000-universalk9-mz.SPA.155-2.T)。

移动在TFTP server上的这三个文件。

- cgr1000-hv.srp.SPA.1.1.1 (hypervisor镜像)
- cgr1000-universalk9-mz.SPA.155-2.T (系统镜像)
- cgr1000-bundle-universalk9-bundle.SPA.155-2.T.bin (套件镜像)

IOS的CGR启动顺序

启动顺序命令是：

启动> BIOS > Hypervisor镜像IOS的>System镜像>正常操作

如果没有hypervisor镜像，用户看到此：

```
IOFPGA @ 0xd0000000 version=0x23020900, datecode=0xd091e17 CPLD version 0x13
```

```
Reset reason (0.0): Unknown
```

```
BIOS Version: Build # 14 - Wed 04/30/2014
```

```
CGR Loader Stage 1 Version: 1.9.16
```

```
Autoboot string bootstrap:cgr1000-hv.srp.SPA.1.1.0
```

```
Booting image: bootstrap:cgr1000-hv.srp.SPA.1.1.0....
```

Autoboot failed with error=1

rommon-1>

如果没有系统镜像(IOS镜像)，用户将看到此：

```
IOFPGA @ 0xd0000000 version=0x23020900, datecode=0xd091e17 CPLD version 0x13
```

```
Reset reason (0.0): Unknown
```

```
CGR Loader Stage 2 Version: 1.9.16
```

```
Autoboot string flash:/cgr1000-universalk9-mz.SPA.154-3.M1,12;
```

rommon-2>

恢复步骤

1. 设置控制台电缆使用PuTTY。
2. 连接从本地PC NIC的CAT5电缆到CGR ETH 2/2。这是在恢复进程中工作的唯一的接口。
3. 设置本地PC NIC在相同子网作为CGR。

例如;PC的网卡是192.0.2.1子网255.255.255.0。

对于CGR将是192.0.2.2子网255.255.255.0。

4. 在PuTTY会话上，如果CGR找不到hypervisor镜像，您看到rommon-1>。

```
IOFPGA @ 0xd0000000 version=0x23020900, datecode=0xd091e17 CPLD version 0x13
```

```
Reset reason (0.0): Unknown
```

```
BIOS Version: Build # 14 - Wed 04/30/2014
```

```
CGR Loader Stage 1 Version: 1.9.16
```

```
Autoboot string bootstrap:cgr1000-hv.srp.SPA.1.1.0
```

```
Booting image: bootstrap:cgr1000-hv.srp.SPA.1.1.0....
```

```
Autoboot failed with error=1
```

rommon-1>

5. 设置ETH2/2的IP地址与set ip命令的。

```
set ip 192.0.2.2 255.255.255.0
```

```
Correct - ip addr is 192.0.2.2, mask is 255.255.255.0
```

```
Found Intel IOH GBE [2:0.1] at 0xe020, ROM address 0x0000
```

```
Probing...[Intel IOH GBE]
```

```
MAC address bc:16:65:31:58:b2
```

```
External PHY link UP @ 1000/full
```

```
Address: 192.0.2.2
```

```
Netmask: 255.255.255.0
```

```
Server: 0.0.0.0
```

```
Gateway: 0.0.0.0
```

6. 设置网关地址是与set命令千兆瓦的本地PC NIC。

```
set gw 192.0.2.1
```

```
Correct gateway addr 192.0.2.1
```

```
Address: 192.0.2.2
```

Netmask: 255.255.255.0

Server: 0.0.0.0

Gateway: 192.0.2.1

7. 启动从本地TFTP server的hypervisor镜像与boot命令tftp://。

```
Boot tftp://192.0.2.1/cgr1000-hv.srp.SPA.1.1.1
```

```
Booting: /cgr1000-hv.srp.SPA.1.1.1 console=ttyS0,9600n8nn quiet loader_ver="1.9  
16".... [Multiboot-kludge, loadaddr=0x1c100000, text-and-data=0x16d05c2  
Signature verification was successful, bss=0x0, entry=0x1c10005c]
```

```
RIF heap: 1519616 bytes, SKH heap: 2310144 bytes
```

```
RIF: used 7691/16384 bytes of stack
```

8. 如下所示:屏幕,一旦CGR装载hypervisor镜像并且无法启动系统镜像。

```
LynxSecure TRUNK (i386; No Service Packs installed)
```

```
Copyright 2005-2014 LynuxWorks, Inc
```

```
All rights reserved.
```

```
LynxSecure (i386) build ENGINEERING created on 03/14/2014 13:21:02
```

```
URL: svn://txx.lynx.com/svn/lynxsecure-svn/engr/psubramaniam/cisco/ohci/lynxsk
```

```
Revision(s): 5194M
```

```
Built by: psubramaniam@paricos62.localdomain
```

```
Initializing the Internal Timekeeping...
```

```
Initializing the System State Manager...
```

```
Initializing LynxSecure global data areas.
```

```
Number of CPU(s) : 2
```

```
Initializing the CPU Support Package.
```

```
Initializing LynxSecure page table...
```

```
Initializing the Board Support Package.
```

```
Starting up the other CPUs...
```

```
CPUs online: #0 #1
```

```
Initializing Scheduler...
```

```
Initializing the VCPU module...
```

```
Initializing Device Configuration Virtualization...
```

```
Initializing Subject Resources...
```

```
Initializing Interrupt Routing...
```

```
Initializing Hypercalls...
```

```
Heap memory used by LynxSecure: 2240444 (0x222fbc) bytes
```

```
Launching Subjects
```

```
IOFPGA @ 0xd0000000 version=0x23020900, datecode=0xd091e17 CPLD version 0x13
```

```
Reset reason (0.0): Unknown
```

```
CGR Loader Stage 2 Version: 1.9.16
```

```
rommon-2>
```

9. 设置ETH2/2的IP地址与set ip命令的。

```
set ip 192.0.2.2 255.255.255.0
```

```
Correct - ip addr is 192.0.2.2, mask is 255.255.255.0
```

```
Found Intel IOH GBE [2:0.1] at 0xe020, ROM address 0x0000
```

```
Probing...[Intel IOH GBE]
```

```
MAC address bc:16:65:31:58:b2
```

```
External PHY link UP @ 1000/full
```

```
Address: 192.0.2.2
```

```
Netmask: 255.255.255.0
```

```
Server: 0.0.0.0
```

```
Gateway: 0.0.0.0
```

10. 设置网关地址是与set命令千兆瓦的本地PC NIC。

```
set gw 192.0.2.1
Correct gateway addr 192.0.2.1
Address: 192.0.2.2
Netmask: 255.255.255.0
Server: 0.0.0.0
Gateway: 192.0.2.1
```

11. 启动从TFTP server的系统镜像与boot命令tftp://。

```
Boot tftp://192.0.2.1/cgr1000-universalk9-mz.SPA.155-2.T
```

```
Booting: /cgr1000-universalk9-mz.SPA.155-2.T console=ttyS0,9600n8nn quiet loade
r_ver="1.9.16".... [Multiboot-elf, <0x110000:0xc599aec:0x6667dc>, shtab=0xcd1
1500
```

```
Signature verification was successful, entry=0x110240]
```

```
Smart Init is enabled
```

```
smart init is sizing iomem
```

```
TYPE MEMORY_REQ
```

```
Onboard devices &
```

```
buffer pools 0x02E44000
```

```
-----
```

```
TOTAL: 0x02E44000
```

```
Rounded IOMEM up to: 47MB.
```

```
Using 10 percent iomem. [47MB/448MB]
```

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cisco Systems, Inc.

170 West Tasman Drive

San Jose, California 95134-1706

Cisco IOS Software, cgr1000 Software (cgr1000-UNIVERSALK9-M), Version 15.5(2)T, RELEASE SOFTWARE (fc1)

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A summary of U.S. laws governing Cisco cryptographic products may be found at: <http://www.cisco.com/wvl/export/crypto/tool/stqrg.html>

!!
!!
!!
!!
!!

[OK - 163484669 bytes]

163484669 bytes copied in 570.760 secs (286433 bytes/sec)

15. 安装hypervisor镜像、系统镜像和访客OS使用bundle命令安装flash: <bundle image>。

```
CGR1240-AST04#bundle install flash:/cgr1000-universalk9-bundle.SPA.155-2.T.bin
Installing bundle image: /cgr1000-universalk9-bundle.SPA.155-
2.T.bin.....
.....
.....
.....
.....
```

```
updating Hypervisor image...
Sending file modes: C0444 23922114 cgr1000-hv.srp.SPA.1.1.1
```

SRP md5 verification passed!

```
updating IOS image...
Sending file modes: C0664 79967086 cgr1000-universalk9-mz.SPA.155-2.T
```

IOS md5 verification passed!
Done!

```
CGR1240-AST04#
*Mar 27 18:35:09.805: %SYS-5-CONFIG_I: Configured from console by bundle install command
*Mar 27 18:35:09.805: %CGR1K_INSTALL-6-SUCCESS_BUNDLE_INSTALL: Successfully installed bundle
image.
```