目录

简介

本文描述Cisco uBR10000系列通用宽带路由器的启动顺序从性能路由引擎(PRE)的对无线电频率(RF)、LAN，WAN和Timing， Communications， and Control Plus (TCC+)卡。

先决条件

要求

本文档的读者应掌握以下这些主题的相关知识：

- 基本Cisco路由器体系结构
- Cisco IOS软件命令行界面

使用的组件

本文档中的信息基于以下软件和硬件版本：

- Cisco ucBr10012 通用宽带路由器
- uBR10000系列的Cisco IOS软件(UBR10K-P6-M)

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。

规则

有关文档规则的详细信息，请参阅 Cisco 技术提示规则。

PRE启动顺序

PRE的启动顺序有这些不同步骤：

1. 装载引导助手。这不支持任何线卡;在PRE的仅快速以太网(FE)接口是可用的。
2. 装载主要镜像。线卡的这些类型中的每一种轮询固件的PRE ：电缆线路卡TCC+多士炉千兆以太网光载波12 (OC-12)通电操作(POS)

此输出表示实际实际启动顺序和其日志消息：

RF线卡启动顺序

RF线卡的启动顺序有这些不同步骤：

1. ROM监控器(ROMMON)在线卡的负载引导助手。
2. 引导助手发送软件版本编号和卡类型。
3. PRE下载对应于卡类型的镜像。
4. Cisco IOS软件镜像被解压并且被执行。
5. 钡接口设置，以便数据能通过到PRE。

```
brubeck# debug ipc eventsSpecial Events debugging is on*Aug  1 05:12:10.596: IPC: Registration
request for seat 'clc_6_1'!--- The RF line card requests registration with the software version
!--- number and the line card type.*Aug 1 05:12:10.604: IPC: Got an open port request for port
0x10008*Aug 1 05:12:10.604: IPC: Got an open port request for port 0x100091w1d: %IPCOIR-5-
CARD_DETECTED: Card type 2cable-mc28 (0x254) in slot 6/1!--- The card type is detected.1w1d:
%IPCOIR-2-CARD_UP_DOWN: Card in slot 6/1 is up. Notifying 2cable-mc28 driver.!--- Microcode for
the RF line card.SLOT 6/1: 00:00:16: %IPCGRP-6-UCODEVER: Reported microcode version,
990227862.SLOT 6/1: 00:00:16: %IPCGRP-6-INTENBDISAB: Interface disabled<REMOVED>!--- The main
image is downloaded, decompressed, and executed.SLOT 6/1: 00:00:19: %IPCGRP-6-BARENBDISAB:
Barium interface enabled!--- Enable Barium interface.1w1d: %LINK-3-UPDOWN: Interface Cable6/1/1,
changed state to upSLOT 6/1: 00:00:20: %LINK-3-UPDOWN: Interface Cable6/1/1, changed state to
upSLOT 6/1: 00:00:20: %LINK-3-UPDOWN: Interface Barium3/0, changed state to up!--- The Barium
interface is set to up.1w1d: %LINEPROTO-5-UPDOWN: Line protocol on Interface Cable6/1/1,
changed state to up1w1d: %LINEPROTO-5-UPDOWN: Line protocol on Interface Cable6/1/0,
changed state to upSLOT 6/1: 00:00:21: %LINEPROTO-5-UPDOWN: Line protocol on Interface
Barium3/0,                                          changed state to up!--- The Barium line
protocol is up and can now pass data to the PRE.
```

引导助手继续发送软件版本编号和卡类型作为Keepalive。如果微码在PRE升级，则新的微码下载，并且升级自动地发生。

LAN或广域网卡德启动顺序

LAN或广域网卡的启动顺序有这些不同步骤：

1. 使用软件版本编号和卡类型，线卡请求注册。
2. PRE下载对应于卡类型的镜像。
3. Cisco IOS软件镜像被解压并且被执行。

```
brubeck# debug ipc eventsSpecial Events debugging is on*Aug  1 05:08:01.496: IPC: Registration
request for seat                          'C10K Line Card slot 2/0'!--- The LAN or WAN card
requests registration with the software !--- version and the card type.*Aug 1 05:08:01.500: IPC:
Got an open port request for port 0x100081w1d: %IPCOIR-5-CARD_DETECTED: Card type 1oc12pos-1
(0x164) in slot 2/0!--- The card type is detected.1w1d: %IPCOIR-5-CARD_LOADING: Loading card in
slot 2/0!--- TFTP is used to transfer the microcode to the line card.1w1d: %C10K-5-LC_NOTICE:
Slot[2/0] 1oc12pos-1 ImageDownloaded...Booting...!--- The image is decompressed and the code is
executed.
```

TCC+卡德启动顺序

TCC+卡的启动顺序有这些不同步骤：

1. 使用软件版本编号和卡类型， TCC+卡请求注册。
2. PRE下载对应于卡类型的镜像。
3. Cisco IOS软件镜像被解压并且被执行

```
brubeck# debug ipc eventsSpecial Events debugging is on*Aug  1 07:00:40.751: IPC: Registration
request for seat                          'C10K Line Card slot 1/1'!--- The TCC+ card requests
registration.*Aug 1 07:00:40.755: IPC: Got an open port request for port 0x100081w1d: %IPCOIR-5-
CARD_DETECTED: Card type 2cable-tccplus (0x2AF) in slot 1/1!--- The card type is detected.1w1d:
%IPCOIR-5-CARD_LOADING: Loading card in slot 1/1!--- TFTP is used to transfer the microcode to
the TCC+ card.1w1d: %C10K-5-LC_NOTICE: Slot[1/1] utility-card ImageDownloaded...Booting...!---
The image is decompressed and the code is executed.1w1d: %IPCOIR-5-CARD_DETECTED: Card type
2cable-tccplus (0x2AF) in slot 1/11w1d: %IPCOIR-2-CARD_UP_DOWN: Card in slot 1/1 is up.
Notifying 2cable-tccplus driver.1w1d: %UBR10KTCC-2-ACTIVE_TCC: TCCplus card 1/1 is active with
Local oscillator as clock reference!--- The card is active and reports its clock source.
```

相关信息

- 宽带有线支持
- Cisco ucBr10012 通用宽带路由器
- Cisco uBR10000系列通用宽带路由器版本注释
- 技术支持 - Cisco Systems