

# 对间歇性或无响应的N7K控制平面/硬件故障进行故障排除

## 目录

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### [简介](#)

#### [对间歇性或无响应的N7K控制平面进行故障排除](#)

##### [1.间歇性问题是否在某个周期出现？](#)

##### [2.如何解决此问题？](#)

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## 简介

本文档介绍当Nexus 7k中的硬件模块无响应或间歇性时，如何对其进行故障排除。

## 对间歇性或无响应的N7K控制平面进行故障排除

### 1.间歇性问题是否在某个周期出现？

步骤1:对各种SNMP V3用户和/或SNMP V2社区字符串执行snmpwalk ( 即，遍历主机名mib )。

在连续循环中执行此操作。

- 如果Snmpwalk持续响应而没有问题，这很可能不是您的问题。
- 如果Snmpwalk持续响应30秒，然后突然停顿了一下，再持续30秒钟，然后重复这一循环，这就是一个严重指示


步骤2. ssh至有问题的具有步骤1中主机名的间歇性无响应的snmpwalk。

- 在snmpwalk不使用主机名作出响应的相同时间内，在ssh窗口中发出show running-configuration。
- 如果显示运行配置已暂停 — 这是一个严重指示

由于步骤1和步骤2在60秒周期内同时受到影响，这似乎是N7K控制平面内的硬件故障，因为N7K始终运行硬件诊断运行状况检查。当您看到响应时间为30秒，非响应时间为30秒，然后循环重复时，这是硬件诊断运行状况检查扫描所有硬件的明确指示。30秒的响应时间是扫描正常硬件，而30秒的不响应时间是发生故障的硬件。

第三步：如果步骤2.清楚地描述了硬件故障，请执行以下步骤：

- 显示所有活动VDC中的模块以查看任何失败的诊断测试
- 最重要的是，并且仅在管理VDC-1 ( 即VDC-1 ) 中，显示日志记录日志文件并查找EOBC错误 ( 即，EOBC错误仅在管理VDC-1中记录 )

 注:EOBC是N7K用于在SUP/交换矩阵模块/线卡之间进行通信的内部控制平面进程。如果此EOBC流程受到任何影响,管理VDC-1日志文件中描述的关联模块最有可能是先前测试中看到的间歇响应的罪魁祸首,因为SUP丢失了与管理VDC-1日志文件中描述的关联模块的100%一致通信,并且正在尝试与其恢复/通信,从而导致与其他控制平面进程的间歇响应。

示例:

```
lab-sw01-admin-vdc-1# show logging logfile | inc EOBC
2022 Feb 22 19:46:15 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:15 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:16 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:16 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:21 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:21 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:22 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:23 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:23 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:24 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:24 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:26 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
2022 Feb 22 19:46:26 lab-sw01-admin-vdc-1 %MODULE-4-MOD_WARNING: Module 8 (Serial number: JAA00000000)
```

此日志输出清楚地显示模块8在备用SUP上发生EOBC心跳故障,并且处于不正常状态,需要立即采取措施。

## 2.如何解决此问题?


步骤1:执行show module并捕获数据以供参考:

```
lab-sw01-admin-vdc-1# show module
Mod Ports Module-Type Model Status
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 N77-SUP2E active *
6 0 Supervisor Module-2 N77-SUP2E ha-standby
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
```

```
Mod Sw Hw
-----
```

```
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
5 8.4(4) 1.3
6 8.4(4) 1.3
7 8.4(4) 1.2
8 8.4(4) 1.2
```

---

 注意：所有模块均在线（即ok），模块5为主用（即active\*）SUP，模块6为高可用性备用（即ha-standby）SUP。尽管管理VDC日志文件中存在有关模块8的EOBC警告，但此输出将模块8描述为“正常”。

---

第二步：执行交换机重新加载或管理引擎切换（即管理VDC内均执行）：


```
lab-sw01-admin-vdc-1# reload
```

```
- system (ie supervisor) switchover -
```

NOTE: preferred method as this is a non-impacting procedure to the box with regards to active data

```
lab-sw01-admin-vdc-1# system switchover
```

---

 注意：在任何一种情况下，执行重新加载或系统切换之前，请确保您位于两个管理引擎控制台上，以便您可以亲眼看到所有管理引擎输出。

---

第三步：如果模块8是可疑的罪魁祸首，您可能会看到控制台模块8在系统（即Supervisor）切换时出错：

```
lab-sw01-admin-vdc-1(standby) login: 2022 Feb 23 02:09:45 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %KERN-2-
2022 Feb 23 02:09:45 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %SYSMGR-2-HASWITCHOVER_PRE_START: This superv
2022 Feb 23 02:09:45 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %SYSMGR-2-HASWITCHOVER_START: Supervisor 6 is
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %SYSMGR-2-SWITCHOVER_OVER: Switchover complet
2022 Feb 23 02:09:47 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT: Disabling ejector base
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
2022 Feb 23 02:09:46 lab-sw01-vdc-2 %$ VDC-2 %$ %ELTM-2-ELTM_INTF_TO_LTL: Failed to get LTL for int
```

第四步：执行多个show模块并观察模块8是否重新联机/何时重新联机：

```
<#root>
```

```
Module 5 dropped out and is powered-up:
```

```
Module 8 dropped out and is powered-up:
```

```
lab-sw01-admin-vdc-1# show module
Mod Ports Module-Type Model Status
```

```
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 powered-up
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module powered-up
```

```
Mod Power-Status Reason
```

```
-----
8 powered-up Unknown. Issue show system reset mod ...
```

```
Mod Sw Hw
```

```
-----
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
6 8.4(4) 1.3
7 8.4(4) 1.2
```

```
lab-sw01-admin-vdc-1# 2022 Feb 23 02:11:11 lab-sw01-vdc-2 %$ VDC-2 %$ %PLATFORM-2-MOD_DETECT: Module 8
2022 Feb 23 02:11:11 lab-sw01-vdc-2 %$ VDC-2 %$ %PLATFORM-2-MOD_PWRUP: Module 8 powered up (Serial numb
2022 Feb 23 02:11:11 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %PLATFORM-2-MOD_DETECT: Module 8 detected (Serial
2022 Feb 23 02:11:11 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %PLATFORM-2-MOD_PWRUP: Module 8 powered up (Serial
```

```
Module 8 is pwr-cycled
```

```
:
```

```
lab-sw01-admin-vdc-1# show module
Mod Ports Module-Type Model Status
```

```
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 powered-up
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module pwr-cycld
```

```
Mod Power-Status Reason
```

```
-----
8 pwr-cycld Unknown. Issue show system reset mod ...
```

```
Mod Sw Hw
```

```
-----
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
6 8.4(4) 1.3
7 8.4(4) 1.2
```

```
lab-sw01-admin-vdc-1# show module
Mod Ports Module-Type Model Status
```

```
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 powered-up
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 powered-up
```

Mod Sw Hw

```
-----
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
6 8.4(4) 1.3
7 8.4(4) 1.2
8 8.4(4) 1.2
```

Module 8 is checked by epld auto-upgrade and is good to go:

```
lab-sw01-admin-vdc-1# 2022 Feb 23 02:13:06 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %USER-2-SYSTEM_MSG: <<%EPLD
```

```
lab-sw01-admin-vdc-1# show module
```

```
Mod Ports Module-Type Model Status
```

```
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 powered-up
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 powered-up
```

Mod Sw Hw

```
-----
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
6 8.4(4) 1.3
7 8.4(4) 1.2
8 8.4(4) 1.2
```

Module 8 moves to testing by the hardware diagnostics:

```
lab-sw01-admin-vdc-1# show module
```

```
Mod Ports Module-Type Model Status
```

```
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 powered-up
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
```

8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 testing

Mod Sw Hw

```
-----  
1 8.4(4) 1.5  
2 8.4(4) 1.5  
3 8.4(4) 1.9  
4 8.4(4) 1.9  
6 8.4(4) 1.3  
7 8.4(4) 1.2  
8 8.4(4) 1.2
```

Module 8 moves to initializing after passing hardware diagnostics:

Tab-sw01-admin-vdc-1# show module

Mod Ports Module-Type Model Status

```
-----  
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok  
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok  
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok  
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok  
5 0 Supervisor Module-2 powered-up  
6 0 Supervisor Module-2 N77-SUP2E active *  
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok  
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 initializing
```

Mod Sw Hw

```
-----  
1 8.4(4) 1.5  
2 8.4(4) 1.5  
3 8.4(4) 1.9  
4 8.4(4) 1.9  
6 8.4(4) 1.3  
7 8.4(4) 1.2  
8 8.4(4) 1.2
```

Module 8 comes online:

Tab-sw01-admin-vdc-1# show module

Mod Ports Module-Type Model Status

```
-----  
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok  
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok  
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok  
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok  
5 0 Supervisor Module-2 powered-up  
6 0 Supervisor Module-2 N77-SUP2E active *  
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok  
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
```

Mod Sw Hw

```
-----  
1 8.4(4) 1.5  
2 8.4(4) 1.5  
3 8.4(4) 1.9  
4 8.4(4) 1.9  
6 8.4(4) 1.3  
7 8.4(4) 1.2  
8 8.4(4) 1.2
```

Module 5 SUP going active:

```
lab-sw01-admin-vdc-1# show module
Mod Ports Module-Type Model Status
```

```
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 N77-SUP2E inserted
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
```

```
Mod Sw Hw
```

```
-----
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
5 8.4(4) 1.3
6 8.4(4) 1.3
7 8.4(4) 1.2
8 8.4(4) 1.2
```

Module 5 SUP becomes ha-standby:

```
2022 Feb 23 02:16:38 lab-sw01-admin-vdc-1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT: Enabling ejector based shut
```

```
lab-sw01-admin-vdc-1# show module
Mod Ports Module-Type Model Status
```


```
-----
1 12 100 Gbps Ethernet Module N77-F312CK-26 ok
2 12 100 Gbps Ethernet Module N77-F312CK-26 ok
3 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
4 48 1/10 Gbps Ethernet Module N77-F348XP-23 ok
5 0 Supervisor Module-2 N77-SUP2E ha-standby
6 0 Supervisor Module-2 N77-SUP2E active *
7 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
8 24 10/40 Gbps Ethernet Module N77-F324FQ-25 ok
```

```
Mod Sw Hw
```

```
-----
1 8.4(4) 1.5
2 8.4(4) 1.5
3 8.4(4) 1.9
4 8.4(4) 1.9
5 8.4(4) 1.3
6 8.4(4) 1.3
7 8.4(4) 1.2
8 8.4(4) 1.2
```

```
2022 Feb 23 02:15:44 lab-sw01-admin-vdc-1 %MODULE-5-MOD_OK: Module 8 is online (Serial number: JAA00000)
2022 Feb 23 02:15:43 lab-sw01-admin-vdc-1 %SYSMGR-SLOT8-5-MODULE_ONLINE: System Manager has received no
2022 Feb 23 02:15:44 lab-sw01-admin-vdc-1 %PLATFORM-5-MOD_STATUS: Module 8 current-status is MOD_STATUS
2022 Feb 23 02:16:38 lab-sw01-admin-vdc-1 %MODULE-5-STANDBY_SUP_OK: Supervisor 5 is standby
```

---

 注意：所有模块均在线（即正常），模块6为主用（即主用\*）SUP，模块5为高可用性备用（即高可用性备用）。

---

第五步：所有模块均在线后，重复步骤1.并验证所有连接都已标准化。



## 关于此翻译

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