

# Resolve ASR 5500 Series "FanFailed" Error Condition



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## Introduction

This document describes the problem and solution related to fan failure errors reported by Simple Network Management Protocol (SNMP) traps, seen on the Cisco Aggregation Services Router (ASR) 5500 platform. This normally happens, though rare, in normal operation of the platform.

## Problem

In some cases the FanFailed alarm is seen on the ASR 5500 platform in regards to fan numbers 1 and 2 as shown here:

```
Tue Apr 01 16:07:07 2014 Internal trap notification 22 (FanFailed)
  fan number 2 fan status Communication Error
Tue Apr 01 16:07:27 2014 Internal trap notification 22 (FanFailed)
  fan number 1 fan status Communication Error
```

The lower rear and lower front fans currently report an Unknown state, and the general temperature of the node cards appears to be OK at the moment.

```
[local]ASR5500# show fan
Tuesday April 01 16:47:04 BST 2014
Lower Rear Fan Tray:
  State:      Unknown
  Speed:      0%
  Temperature: Unknown

Upper Rear Fan Tray:
  State:      Normal
  Speed:      50%
  Temperature: 27C

Lower Front Fan Tray:
  State:      Unknown
  Speed:      0%
  Temperature: Unknown

Upper Front Fan Tray:
  State:      Normal
```

Speed: 50%  
Temperature: 27C

## Solution

This issue is usually resolved when you reseal the fan modules. Complete these steps in order to verify that the status is normal:

1. Slide out the fan module. Wait two to three minutes and then slide it back into the slot.
2. Enter this command in order to verify that the fans are in the normal state:

```
[local]ASR5500# show fans verbose
Thursday May 28 19:16:54 EDT 2015
  Location State Speed Temp Version WD Tach Current
-----
Lower Rear Normal 50% 24C 0.2.5 E -- --
Fan 00 Normal -- -- -- -- 3280 386mA
Fan 01 Normal -- -- -- -- 3280 406mA
Fan 02 Normal -- -- -- -- 3320 416mA
Fan 03 Normal -- -- -- -- 3240 396mA
Fan 04 Normal -- -- -- -- 3280 440mA
Fan 05 Normal -- -- -- -- 3280 430mA
Fan 06 Normal -- -- -- -- 3240 460mA
Fan 07 Normal -- -- -- -- 3280 493mA
Fan 08 Normal -- -- -- -- 3240 470mA

Upper Rear Normal 50% 39C 0.2.5 E -- --
Fan 00 Normal -- -- -- -- 3240 430mA
Fan 01 Normal -- -- -- -- 3240 416mA
Fan 02 Normal -- -- -- -- 3280 416mA
Fan 03 Normal -- -- -- -- 3320 460mA
Fan 04 Normal -- -- -- -- 3280 416mA
Fan 05 Normal -- -- -- -- 3320 416mA
Fan 06 Normal -- -- -- -- 3240 430mA
Fan 07 Normal -- -- -- -- 3280 430mA
Fan 08 Normal -- -- -- -- 3320 430mA

Lower Front Normal 50% 23C 0.2.5 E -- --
Fan 09 Normal -- -- -- -- 2520 146mA
Fan 10 Normal -- -- -- -- 2520 146mA
Fan 11 Normal -- -- -- -- 2400 146mA

Upper Front Normal 50% 35C 0.2.5 E -- --
Fan 09 Normal -- -- -- -- 2400 146mA
Fan 10 Normal -- -- -- -- 2520 146mA
Fan 11 Normal -- -- -- -- 2400 146mA
```

3. Enter this command in order to verify that the fan modules run the correct firmware version:

```
[local]ASR5500# show hardware version fans
Thursday May 28 19:16:54 EDT 2015
Fan Tray Controller Version
Upper Fan Tray: 0.2.5
Lower Fan Tray: 0.2.5
```

4. Enter this command in order to verify that the SNMP trap errors were cleared and that there are no errors after the fan module was reseated:

```
[local]ASR5500# show snmp trap hist ver | grep -i fan
Saturday February 07 08:22:32 UTC 2015
Sat Feb 07 07:56:38 2015 Internal trap notification 1509 (CiscoFruFanStatusChanged)
FRU entity Fan tray fan status changed to Communication Error at Lower Front
Sat Feb 07 07:56:38 2015 Internal trap notification 22 (FanFailed) fan number 1
fan status Communication Error
Sat Feb 07 07:56:38 2015 Internal trap notification 1503 (EntStateOperDisabled)
```

```
Fan Tray(Lower Front) Admin state:"Unknown", Alarm severity:"Major"
Sat Feb 07 07:56:58 2015 Internal trap notification 1509 (CiscoFruFanStatusChanged)
FRU entity Fan tray fan status changed to Normal at Lower Front
Sat Feb 07 08:09:06 2015 Internal trap notification 1509 (CiscoFruFanStatusChanged)
FRU entity Fan tray fan status changed to Communication Error at Lower Front
Sat Feb 07 08:09:06 2015 Internal trap notification 22 (FanFailed) fan number 1
fan status Communication Error
Sat Feb 07 08:09:06 2015 Internal trap notification 1503 (EntStateOperDisabled)
Fan Tray(Lower Front) Admin state:"Unknown", Alarm severity:"Major"
Sat Feb 07 08:10:26 2015 Internal trap notification 1509 (CiscoFruFanStatusChanged)
FRU entity Fan tray fan status changed to Normal at Lower Rear
Sat Feb 07 08:10:26 2015 Internal trap notification 1509 (CiscoFruFanStatusChanged)
FRU entity Fan tray fan status changed to Normal at Lower Front
```

## Related Information

- *ASR5000 SGSN Administration Guide – Cisco Systems*
- *Technical Support & Documentation – Cisco Systems*

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