Interface Alarms

For supported software information, click here.

interface-down alarm

The Versa Operating System™ (VOS™) device represents physical interfaces as VNI interfaces. When these interfaces go down, the interface-down alarm is raised. This alarm is cleared after the recovery of the link.

Description	VOS virtual network interfaces (VNIs) raise interface down alarm when the operational state changes. This is a critical alarm, because VNI interfaces need to be operationally and administratively up for normal working of the interfaces. During upgrade of an image, the interface state will not change.
Cause	• When the VOS device is running on a physical machine (BM server or a Lanner/Advantech device), the physical link state change triggers interface down alarms. • When the VOS device is running on a virtual machine (VM), the interface down alarms gets triggered only if operator disables the interface in the configuration.
Action	• Verify the physical connectivity for the vni port that raised the alarm. • Check the LED status to determine whether the link is Up. • Check the configuration to see if the interface was disabled. • Check the alarm log. If several linkup and linkDown alarms are received in a short time span for a LACP enabled interface, then it could be a faulty physical connection or LACP issue on the adjacent switch. The alarm log contains timestamps of the link events to correlate with adjacent attached devices, such as physical L2 switches or physical routers.

Related Commands

- Run the **show interfaces brief** CLI command to view current status of interfaces.

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```
admin@vCPE101-cli> show interfaces brief
NAME          MAC               OPER   ADMIN   TENANT   VRF                IP
-------------------------------------------------------------------------------------------------
eth-0/0       52:00:b9:81:7f:01   up     up      0        global             10.0.60.10/16
ptvi2         n/a                 up     up      1        Provider-Control-VR    10.0.192.1/32
ptvi3         n/a                 up     up      1        Provider-Control-VR    10.0.192.2/32
ptvt.4        n/a                 up     up      2        Customerl-Control-VR   10.1.64.1/32
ptvi5         n/a                 up     up      2        Customerl-Control-VR   10.1.64.2/32
tvi-0/2       n/a                 up     up      -        -
tvi-0/2.0     n/a                 up     up      1        Provider-Control-VR    10.0.128.101/32
tvi-0/3       n/a                 up     up      -        -
tvi-0/3.0     n/a                 up     up      1        Provider-Control-VR    10.0.192.101/32
tvi-0/4       n/a                 up     up      -        -
tvi-0/4.0     n/a                 up     up      2        Customerl-Control-VR   10.1.0.101/32
tvi-0/5       n/a                 up     up      -
tvi-0/5.0     n/a                 up     up      2        Customerl-Control-VR   10.1.64.101/32
vni-0/0       52:3d:30:8b:5o:01   up     up      -
vni-0/0.0     52:3d:30:8b:5o:01   up     up      1        MPIS-Transport-VR      192.168.4.101/24
vni-0/1       52:0d:0d:77:6a:01   up     up      -
vni-0/1.0     52:0d:od:77:60:01   up     up      1        Internet-Transport-VR  192.168.5.101/24
vni-0/2       52:08:b7:6a:6f:01   down   down    -
```

- Run the **show alarm | match interface** CLI commands to view interface alarm history.

```
admin@vCPE101-cli> show alarms  | match interface
system    interfoceUp            2017-08-24T17:21:22-0  Provider:  Interface vni-0/0 is up
system    interfaceUp            2017-08-24717:35:37-0  Provider:  Interface vni-0/0 is up (n/a)
system    interfaceUp            2017-08-24T17:47:05-0  Provider:  Interface vni-0/0 is up (n/a)
system    interfaceUp            2017-08-25116:17:45-0  Provider:  Interface vni-0/0 is up (n/a)
system    interfaceUp            2017-08-25716:19:34-0  Provider1: Interface vni-0/0 is up (n/a)
system    interfaceUp            2017-08-25116:19:34-0  Provider1: Interface vni-0/1 is up (n/a)
system    interfaceUp            2017-08-25116:19:34-0  Provider1: Interface vni-0/2 is up (n/a)
system    interfaceDown            2017-08-25117:06:13-0  Provider1: Interface vni-0/0 is down (n/a)
system    interfaceDown            2017-08-25117:06:13-0  Customer1: Interface vni-0/0 is down (n/a)
system    interfaceUp            2017-08-25117:06:33-0  Provider1: Interface vni-0/0 is up (n/a)
system    interfaceUp            2017-08-28102:19:31-0  Provider:  Interface vni-0/0 is up (n/a)
```

interface-half-duplex alarm

When the VOS device vni interface is connected to a switch or remote end configured with a duplex mismatch settings, the interface-half-duplex alarm is raised.

Description	If the vni interface has a mismatch of half-duplex, either locally or remoter end, the interface changes to down state and raises the interface-half-duplex alarm.
Cause	Mismatch of interface duplex configuration, either locally or remotely.
Action	Configure both end of the link with the same duplex settings.

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Related Commands

Run the **show interfaces details** CLI command to check the duplex settings.

```
admin@vCPE101-cli> show interfaces detail
Interface:   eth-0/0
Tenant                          : 0
Vlan-Id                         : n/a
Administrative status           : up
Operational status              : up
Protocols Down                  : n/a
Interface index                 : 0
Interface Role                  : n/a
MAC address                     : 52:00:b9:81:7f:01
IP address                      : n/a
Obtained from DHCP              : False
DHCP Server IP                  : n/a
DHCP Lease Time                 : n/a
DHCP Lease Expiry               : n/a
Name Server 1 Address           : n/a
Name Server 2 Address           : n/a
Routing instance                : global (0)
Host interface                  : eth0
MTU                             : 1500
Duplex/Speed                    : auto/1Gps
        RX packets:2565872 errors:0
        RX bytes:155275393
        TX packets:267344 errors:0
```

- Run the **set interfaces vni-0/0 ether-options link speed** CLI command to configure the interface duplex settings.

```
admin@vCPE -cli (config)% set interfaces vni-0/0 ether-options link speed ?
Description: Link speed for ethernet interfaces
Possible completions:
   [auto]
   1g       -  1gbps interface
   10m      -  10mbps interface
   100m     -  100mbps interface
   auto     -  auto speed
```

vrrp-v3-backup-not-available alarm

Description	VRRP backup went down.
Cause	• VRRP backup in a VRRP group went down.

Related Commands

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- Run the **show vrrp group summary** CLI command to view the status of the masters and backups in the VRRP group.

```
admin@SDWAN-Branch1-cli> show vrrp group summary

             GROUP                        PRIORITY
INTERFACE       ID      TNT STATE      MODE       CONF(CURR)   TYPE     IP Address
vni-0/3.101     1       1   Master     Active     200(200)     Primary  172.18.11.1
                                                                Virtual  172.18.11.100
vni-0/3.102     1       1   Master     Active     200(200)     Primary  172.18.12.1
                                                                Virtual  172.18.12.100

admin@SDWAN-Branch2-cli> show vrrp group summary

             GROUP                        PRIORITY
INTERFACE       ID      TNT STATE      MODE       CONF(CURR)   TYPE     IP Address
vni-0/3.101     1       1   Backup     Active     150(150)     Primary  172.18.11.2
                                                                Virtual  172.18.11.100
vni-0/3.102     1       1   Backup     Active     150(150)     Primary  172.18.12.2
                                                                Virtual  172.18.12.100
```

- Run the **show alarms** CLI command to display the recently generated alarms on the VRRP backup.

```
admin@SDWAN-Branch2-cli> show alarms
Module     Alarm                Time                 Text
========= ====================== ==================== ====================
oam        configChange           2019-10-23T02:20:33+0 provider-org: Configuration changed : username
(admin), context (cli), time&date (Wed Oct 23 02:20:33 2019)
vrrp       vrrpV3BackupNotAvailabl 2019-10-23T02:20:35+0 Tenant1: Backup went down for vrrp group-id 1,
interface vni-0/3.101, index 1068
vrrp       vrrpV3BackupNotAvailabl 2019-10-23T02:20:35+0 Tenant1: Backup went down for vrrp group-id 1,
interface vni-0/3.102, index 1069
system     interfaceDown          2019-10-23T02:20:35+0 Tenant1: Interface vni-0/3.101 is down (n/a)
system     interfaceDown          2019-10-23T02:20:35+0 Tenant1: Interface vni-0/3.102 is down (n/a)
```

- Run the **show alarms statistics detail** CLI command to check for the backup not available alarm.

```
admin@SDWAN-Branch2-cli> show alarms statistics detail | match vrrp-v3-backup-not-available
vrrp-v3-backup-not-available  major/critical  AsS         2       0       0       0       0       2       2
```

- Check for the alarm in the alarms log file:

```
Cadmin@SDWAN-Branch2:versa$ sudo tail -f /var/log/versa/alarms
2019-10-23 02:20:33 SDWAN-Branch2 versa-vmod: [oam] [configChange] [2019-10-23T02:20:33+0000]
provider-org: Configuration changed : username (admin), context (cli), time&date (Wed Oct 23 02:20:33 2019)
2019-10-23 02:20:35 SDWAN-Branch2 versa-vmod: [vrrp] [vrrpV3BackupNotAvailable] [2019-10-23T02:20:35+
0000] Tenant1: Backup went down for vrrp group-id 1, interface vni-0/3.101, index 1068
2019-10-23 02:20:35 SDWAN-Branch2 versa-vmod: [vrrp] [vrrpV3BackupNotAvailable] [2019-10-23T02:20:35+
0000] Tenant1: Backup went down for vrrp group-id 1, interface vni-0/3.102, index 1069
2019-10-23 02:20:35 SDWAN-Branch2 versa-vmod: [system] [interfaceDown] [2019-10-23T02:20:35+0000]
Tenant1: Interface vni-0/3.101 is down (n/a)
2019-10-23 02:20:35 SDWAN-Branch2 versa-vmod: [system] [interfaceDown] [2019-10-23T02:20:35+0000]
Tenant1: Interface vni-0/3.102 is down (n/a)
```


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vrrp-v3-new-master alarm

Description	VRRP group changed to master state.
Cause	• masterNoResponse—When the master is down, VRRP group is transitioned from backup to master state. This is because of a communication failure between the VNFs. If VNF1 is up but the group state shows INIT, then there is issue with interface or system process on VNF1. • If VNF1 is up and shows master state, and VNF2 shows the not incrementing highlighted counters, there is communication failure between VNF1 and VNF2. • Priority—When a VRRP group with higher priority (designated master) comes back online, it takes over the master role from other VNF. • Preempted—When a VRRP group with priority 255 is started or comes back online, it takes over themaster role. This is because the virtual IP is same as its own interface IP address.

Related Commands

- Run the **show vrrp group summary** CLI command find the cause of no response from the master.

```
admin@VNF1-cli> show vrrp group summary

          GROUP                                  PRIORITY
INTERFACE    ID     TNT     STATE      MODE       CONF (CURR)    TYPE      IP ADDRESS
-------------------------------------------------------------------------------------
vni-0/5.100  1      1       Master     Active      200(200)      Primary   192.168.31.1
                                                                Virtual   192.168.31.100
vni-0/5.200  2      1       Master     Active      200(200)      Primary   192.168.32.1
                                                                Virtual   192.168.32.100
```

- Run the **show vrrp group detail** *interface-name* CLI command to find the cause of no response from the master.

```
admin@VNFI-cli> show vrrp group detail vni-0/5.100 1

interface: vni-O/S.100. IfIndex: 13. Primary Address: 192.163.31.1
vrld: 1. Previous state: Backup. Current State: Master
Configured priority: 200. Current priority: 200
Advertisement interval: 1000. Threshold: 3
Track priority hold interval: O. waroup interval: 5
Skew time: 0, Preempt: Enabled. Accept data: Enabled
Org: orgl. Mode: Active
Redundancy slave priority cost: 100
virtual address count: 1
```


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```
192.168.31.100
Track interface: Enabled
   Name: vni-0/6.0. Routing Instance: global
   Index: IS, Status: Up. Priority Cost: 100
Track route: Disabled
votRP Group Stets:
   Became master                  : 1
   Advertisement Received          : 21
   Advertisement Sent             : 39340
   Invalid Checksum               : 0
   Invalid version                : 0
   Invalid Advertise Interval     : 0
   Invalid TTL                    : 0
   Invalid Pkts Received          : 0
   Invalid virtual IP Addr List   : 0
   IP count mismatch              : 0
   Zero Pri PktS Received         : 0
   Zero Pri Pkts Sent             : 0
   Equal Pri Pkts Received        : 0
   Lower Pri Pkts Received        : 0
   Higher Pri Pkts Received       : 0
   Owner Pri Error                : 0
   Invalid State                  : 0
   Inherit mode Pkts Received     : 0
   Track Interface Lookup Error   : 0
   Track Route Lookup Error       : 0
```

Sample Alarm Text

```
192.168.31.1 became MASTER [interface vni-0/5.100, index 1046, group-id 1]
Reason:masterNoResponse
```

vrrp-v3-new-backup alarm

Description	VRRP group changed to backup state.
Cause	• Startup—VRRP group is initialized and transitioned from the INIT state to the backup state. This occurs for one of the following reasons: ◦ VNF is powered on or services are restarted. ◦ Interface on which VRRP group is configured is disabled and then enabled; that is, it is reset. ◦ VRRP protocol (global) config has changed (changing protocols vrrp mac-address-mode). • Priority—Another VNF comes online with higher priority. After receiving a higher priority packet, the group transitions from master to backup. Issue the

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	show vrrp group summary command to display the priority and state of group on other VNF. • Larger IP—Another group with same priority but a larger interface IP address comes online. When two VNFs are configured with same priority, the VNF with larger interface IP address takes the master role. Issue the **show vrrp group summary** command to display the interface IP addresses of the groups.

Sample Alarm Text

> 192.168.32.1 became BACKUP [interface vni-0/5.200, index 1047, group-id 2] Reason: startup

vrrp-v3-proto-error alarm

Description	VRRP group encountered a protocol error while receiving packets.
Cause	• vrIdError—Another VNF has a group configured on the same LAN with a group ID that is not configured in the VNF generating the alarm. Issue the **show vrrp group summary** command to list the groups configured on other VNF. To resolve this configuration error indicated by vrIdError messages, either remove the group on other VNF or create a group with same group ID in the VNF generating the alarm. • versionError— Two VRRP VNFs become the master if both are configured with different VRRP versions (VRRPv2 and VRRPv3). This indicates a configuration error. • ipTtlError— VRRP packet received does not have IP TTL set to 255. • checksumError—Packet received has incorrect VRRP checksum, because a malicious entity trying to peer with the VOS device.

Sample Alarm Text

> VRRP protocol error for interface vni-0/5.200, index 1047. Reason: vrIdError

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Supported Software Information

Releases 20.2 and later support all content described in this article.

Additional Information

Configure VOS Device Alarms

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