Syslog Support

Cisco enterprise NFVIS can send syslog messages to syslog servers configured by the user. Syslogs are sent for Network Configuration Protocol (NETCONF) notifications from NFVIS.

Syslog Message Format

Syslog messages have the following format:

```
<Timestamp> hostname %SYS-<Severity>-<Event>: <Message>
```

Sample Syslog messages:

```
2017 Jun 16 11:20:22 nfvis %SYS-6-AAA_TYPE_CREATE: AAA authentication type tacacs created
successfully AAA authentication set to use tacacs server
2017 Jun 16 11:20:23 nfvis %SYS-6-RBAC_USER_CREATE: Created rbac user successfully: admin
2017 Jun 16 15:36:12 nfvis %SYS-6-CREATE_FLAVOR: Profile created: ISRv-small
2017 Jun 16 15:36:12 nfvis %SYS-6-CREATE_FLAVOR: Profile created: ISRv-medium
2017 Jun 16 15:36:13 nfvis %SYS-6-CREATE_IMAGE: Image created: ISRv_IMAGE_Test
2017 Jun 19 10:57:27 nfvis %SYS-6-NETWORK_CREATE: Network testnet created successfully
2017 Jun 21 13:55:57 nfvis %SYS-6-VM_ALIVE: VM is active: ROUTER
```

Configuring Syslog Servers

To configure a remote Syslog server:

```
configure terminal
system settings logging host 172.24.22.186
port 3500
transport tcp
commit
```

Note A maximum of 4 remote syslog servers can be configured. The remote syslog server can be specified using its IP address or DNS name. The default protocol for sending syslogs is UDP with a default port of 514. For TCP, the default port is 601.

To configure syslog severity:

```
configure terminal
system settings logging severity error
```

Note The severity levels are:

- debug

- informational

- alert

- notice

- warning

- error

- critical

- emergency

By default, the logging severity of syslogs is informational which means all syslogs at informational severity and higher will be logged.

To configure syslog facility:

```
configure terminal
system settings logging facility local5
```

Note The logging facility can be changed to a facility from local0 to local7

By default, NFVIS sends syslogs with the facility of local7

Syslog Support APIs and Commands

APIs	Commands
• /api/config/system/settings/logging • /api/operational/system/settings/logging	• system settings logging host • system settings logging severity • system settings logging facility

Syslog Messages

Event	Trigger Condition	Syslog Messages
NETWORK_CREATE	create a new network	nfvis %SYS-6-NETWORK_CREATE: Network my-net created successfully
NETWORK_UPDATE	modify an existing network	nfvis %SYS-6-NETWORK_UPDATE: Network my-net updated successfully
NETWORK_DELETE	delete a network	nfvis %SYS-6-NETWORK_DELETE: Network my-net deleted successfully
BRIDGE_CREATE	create a new bridge	nfvis %SYS-6-BRIDGE_CREATE: Bridge created successfully: my-bridge
BRIDGE_UPDATE	modify an existing bridge	nfvis %SYS-6-BRIDGE_UPDATE: Updated bridge successfully: my-bridge
BRIDGE_DELETE	delete a bridge	nfvis %SYS-6-BRIDGE_DELETE: Bridge deleted successfully: my-bridge
WAN_DHCP_RENEW	dhcp renew from wan interface	nfvis %SYS-6-WAN_DHCP_RENEW: wan-br DHCP IP address is being renewed
BRIDGE_DHCP_RENEW	bridge dhcp renew	nfvis %SYS-6-BRIDGE_DHCP_RENEW: Bridge DHCP IP address is being renewed
MGMT_DHCP_RENEW	dhcp renew from MGMT interface	nfvis %SYS-6-MGMT_DHCP_RENEW: wan-br DHCP IP address is being renewed
INTF_STATUS_CHANGE	interface status change	nfvis %SYS-6-INTF_STATUS_CHANGE: Interface eth0, changed state to up
UPGRADE_REGISTER	upgrade package registration	nfvis %SYS-6-UPGRADE_REGISTER: Upgrade package registration successful: Cisco_NFVIS_Upgrade-3.6.1-698-20170402_042811.nfvispkg
UPGRADE_APPLY	upgrade process	nfvis %SYS-6-UPGRADE_APPLY: Upgrade Process: In Progress
RBAC_USER_CREATE	create a new user	nfvis %SYS-6-RBAC_USER_CREATE: Created user admin as administrators successfully
RBAC_USER_PASSWORD_UPDATE	change user's password	nfvis %SYS-6-RBAC_USER_PASSWORD_UPDATE: Set admin password successfully
RBAC_USER_ROLE_UPDATE	change user's role	nfvis %SYS-6-RBAC_USER_ROLE_UPDATE: Modified user: somebody successfully
RBAC_USER_DELETE	delete a user	nfvis %SYS-6-RBAC_USER_DELETE: Deleted rbac user successfully: somebody

Event	Trigger Condition	Syslog Messages
RBAC_USERS_INACTIVATED	disable the user	nfvis %SYS-6-RBAC_USERS_INACTIVATED: Following users have been marked as INACTIVE, [user1, user2]. Please take necessary action.
RBAC_USER_ACTIVATED	activate the user	nfvis %SYS-6-RBAC_USER_ACTIVATED: Modified user user1 successfully.
RBAC_PWD_EXPIRED	password expired	nfvis %SYS-6-RBAC_PWD_EXPIRED: User user1's password is older than 60 days. Please reset password.
RBAC_LOGIN_FAILURE	invalid user login	nfvis %SYS-3-RBAC_LOGIN_FAILURE: Login with invalid username from maapi failed
SECURITY_SERVER_CREATE	create server config	nfvis %SYS-6-SECURITY_SERVER_CREATE: TACACS+ server config created successfully.
SECURITY_SERVER_UPDATE	update server config	nfvis %SYS-6-SECURITY_SERVER_UPDATE: TACACS+ server configuration updated successfully.
SECURITY_SERVER_DELETE	delete server config	nfvis %SYS-6-SECURITY_SERVER_DELETE: TACACS+ server deleted successfully.
AAA_TYPE_CREATE	create AAA authentication type	nfvis %SYS-6-AAA_TYPE_CREATE: AAA authentication type TACACS created successfully.
AAA_TYPE_UPDATE	update AAA authentication type	nfvis %SYS-6-AAA_TYPE_UPDATE: AAA authentication type TACACS+ updated successfully. AAA authentication updated to use TACACS+ server
RECREATE_CERTIFICATE	recreate self-sign certificate	nfvis %SYS-6-RECREATE_CERTIFICATE: Self Signed Certificate re-created. Application connection may become temporarily unavailable.
CERT_CSR_CREATE	create a CSR file	nfvis %SYS-6-CERT_CSR_CREATE: signing-request created /data/intdatastore/download/nfvis.csr
CERT_SWITCH_CERT	switch to use different certificate	nfvis %SYS-6-CERT_SWITCH_CERT: switch certificate from ca-signed to self-signed.
CERT_CA_CERT_INSTALL	install CA signed certificate	nfvis %SYS-6-CERT_CA_CERT_INSTALL: ca-signed certificate file:// installed
REBOOT	system reboot	nfvis %SYS-6-REBOOT: System will be rebooted
SHUTDOWN	system shutdown	nfvis %SYS-6-SHUTDOWN: System will be shutdown
LOGGING_FAILURE	logging failure	nfvis %SYS-6-LOGGING_FAILURE: Unable to write to log file nfvis_config.log. Log message: log_config.CONFIG_LOGGER: File not found.
DISK_SPACE_ALMOST_FULL	disk space almost full	nfvis %SYS-6-DISK_SPACE_ALMOST_FULL: 'lv_data' currently occupies 95% of available disk space, which is more than or equal to the threshold of 90%.

Event	Trigger Condition	Syslog Messages
ROTATED_LOGS_DELETE	delete rotated logfiles when accumulated rotated log files reach 2GB	nfvis %SYS-6-ROTATED_LOGS_DELETE: Deleted rotated logs from archive older than 30 days
TIME_UPDATE	Change system time manually	nfvis %SYS-6-TIME_UPDATE: Manual time updated successfully Manual time is now set to 2018-04-26 11:43:00
TIMEZONE_UPDATE	Change system timezone	nfvis %SYS-6-TIMEZONE_UPDATE: Timezone updated successfully. Timezone is now set to US/Eastern
FILE_COPY_STATUS	copy status of file	nfvis %SYS-6-FILE_COPY_STATUS: hostaction.py Copied Successfully.
CREATE_IMAGE	create image	nfvis %SYS-6-CREATE_IMAGE: Image creation successful: TinyLinux.tar.gz
DELETE_IMAGE	delete image	nfvis %SYS-6-DELETE_IMAGE: Image deletion successful: TinyLinux.tar.gz
CREATE_FLAVOR	create flavor	nfvis %SYS-6-CREATE_FLAVOR: Profile creation successful: small
DELETE_FLAVOR	delete flavor	nfvis %SYS-6-DELETE_FLAVOR: Profile deletion successful: small
VM_DEPLOYED	vm deployment	nfvis %SYS-6-VM_DEPLOYED: VM deployment successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_ALIVE	vm alive	nfvis %SYS-6-VM_ALIVE: VM active successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
SERVICE_ALIVE	service alive	nfvis %SYS-6-SERVICE_ALIVE: Service group deployment completed successfully!
VM_UNDEPLOYED	vm undeployed	nfvis %SYS-6-VM_UNDEPLOYED: VM undeployment successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c SERVICE_UNDEPLOYED service undeployed nfvis %SYS-6-SERVICE_UNDEPLOYED: Service group undeployment completed successfully
VM_UPDATED (update flavor)	vm updated	nfvis %SYS-6-VM_UPDATED: VM update successful: VM is resized with flavor [ISRv-medium].
VM_UPDATED (vnic add / delete / update)	vm updated	nfvis %SYS-6-VM_UPDATED: VM update successful: Added 1 interface: [managed, net=my-net-1, nicid=3] Updated 2 interface: [managed, net=lan-net, nicid=1],[managed, net=wan-net, nicid=2]

Event	Trigger Condition	Syslog Messages
SERVICE_UPDATED	service updated	nfvis %SYS-6-SERVICE_UPDATED: Service group update completed successfully
VM_STOPPED	vm stopped	nfvis %SYS-6-VM_STOPPED: VM stop successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_STARTED	vm started	nfvis %SYS-6-VM_STARTED: VM start successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_REBOOTED	vm rebooted	nfvis %SYS-6-VM_REBOOTED: VM reboot successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_RECOVERY_INIT	vm recovery initiation	nfvis %SYS-6-VM_RECOVERY_INIT: VM recovery initiation successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_RECOVERY_REBOOT	vm recovery reboot	nfvis %SYS-6-VM_RECOVERY_REBOOT: VM recovery reboot successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_RECOVERY_COMPLETE	vm recovery complete	nfvis %SYS-6-VM_RECOVERY_COMPLETE: VM recovery successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_MONITOR_UNSET	vm monitoring unset	nfvis %SYS-6-VM_MONITOR_UNSET: Unsetting VM monitoring successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
VM_MONITOR_SET	vm monitoring set	nfvis %SYS-6-VM_MONITOR_SET: Setting VM monitoring successful: SystemAdminTena_ROUTER_0_df6733c1-0768-4ae6-8dce-b223ecdb036c
ROTATED_LOGS_DELETE (When logs older than 30 days are present)	delete rotated logs	nfvis %SYS-6-ROTATED_LOGS_DELETE: Deleted rotated logs from archive older than 30 days
ROTATED_LOGS_DELETE (When Log file size exceed 2GB, older logs are deleted)	delete rotated logs	nfvis %SYS-6-ROTATED_LOGS_DELETE: Rotated logs had exceeded 2G, older logs have been deleted to make space
CIMC_PASSWORD_UPDATE	cimc password update operation	nfvis %SYS-6-CIMC_PASSWORD_UPDATE: CIMC password change is successful
BIOS_PASSWORD_UPDATE	bios password update operation	nfvis %SYS-6-BIOS_PASSWORD_UPDATE: BIOS password change is successful
SECURE_OVERLAY_CREATING	create secure overlay	nfvis %SYS-6-SECURE_OVERLAY_CREATING: Secure Overlay mgmthub initial creation. Active local bridge: wan-br

Event	Trigger Condition	Syslog Messages
SECURE_OVERLAY_UP	secure overlay is up	nfvis %SYS-6-SECURE_OVERLAY_UP: Secure Overlay mgmthub up. Active bridge: wan-br Secure Overlay up after network interuption
SECURE_OVERLAY_DELETE	secure overlay is deleted	nfvis %SYS-6-SECURE_OVERLAY_DELETE: Secure Overlay deleted
SECURE_OVERLAY_ERROR	error in secure overlay	nfvis %SYS-3-SECURE_OVERLAY_ERROR: Secure Overlay mgmthub creation in error. Active bridge: wan-br Secure overlay initial creation nfvis %SYS-3-SECURE_OVERLAY_ERROR: Secure Overlay mgmthub creation in error. Active bridge: wan-br Cannot ping remote system ip address 10.0.0.1
WAN_DHCP_SWITCHOVER	WAN bridge toggle	nfvis %SYS-6-WAN_DHCP_SWITCHOVER: Switch over to bridge wan-br for auto DHCP enablement successful
WAN_DHCP_TOGGLE_END	WAN bridge toggle	nfvis %SYS-6-WAN_DHCP_TOGGLE_END: Disabling bridge toggle for auto DHCP enablement.
ROUTE_DISTRIBUTION_DOWN	Route distribution down	nfvis %SYS-6-ROUTE_DISTRIBUTION_DOWN: Neighbor Address: 172.25.221.106
ROUTE_DISTRIBUTION_START	Route distribution start	nfvis %SYS-6-ROUTE_DISTRIBUTION_START: Route Distribution initial creation. Neighbor Address: 172.25.221.106
ROUTE_DISTRIBUTION_ERROR	Route distribution in error state	nfvis %SYS-3-ROUTE_DISTRIBUTION_ERROR: Neighbor Address: 172.25.221.106
ROUTE_DISTRIBUTION_DELETE	Route distribution deleted	nfvis %SYS-6-ROUTE_DISTRIBUTION_DELETE: All Neighbor Addresses deleted
ROUTE_DISTRIBUTION_UP	Route distribution up	nfvis %SYS-3-ROUTE_DISTRIBUTION_UP: Neighbor Address: 172.25.221.106
OVS_DPDK_SUCCESS	Enable DPDK	nfvis %SYS-3-OVS_DPDK_SUCCESS: OVS-DPDK enabled
OVS_DPDK_FAILURE	DPDK failure	nfvis %SYS-3-OVS_DPDK_FAILURE: Unable to allocate CP
BACKUP_INIT	Backup configuration initiation	nfvis %SYS-6-BACKUP_INIT: Starting backup: configuration-xxx
BACKUP_SUCCESS	Backup configuration successful	nfvis %SYS-6-BACKUP_SUCCESS: Backup configuration-xxx completed successfully
BACKUP_FAILURE	Backup configuration failure	nfvis %SYS-3-BACKUP_FAILURE: Backup configuration-xxx failed

Event	Trigger Condition	Syslog Messages
RESTORE_INIT	Restore initiation	nfvis %SYS-6-RESTORE_INIT: Restore started
RESTORE_SUCCESS	Successful restore	nfvis %SYS-6-RESTORE_ SUCCESS: Restore successful
RESTORE_FAILURE	Failure to restore	nfvis %SYS-3-RESTORE_FAILURE: Restore failed - internal error