Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight

User's Guide

Version 2.1

Lenovo.

Note: Before using this information and the product it supports, read the general information in the *Safety information and Environmental Notices* and *User Guide* documents on the Lenovo *Documentation* CD, and the *Warranty Information* document that comes with the product.

Contents

Preface

Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight User Guide describes how to install, configure, and use Lenovo Networking CNOS Content Pack.

Who Should Use This Guide

This guide is intended for network installers and system administrators engaged in configuring and maintaining a network. The administrator should be familiar with Ethernet concepts, IP addressing, Spanning Tree Protocol, and SNMP configuration parameters.

What You'll Find in This Guide

This guide helps you plan, implement, and administer Lenovo Networking CNOS Content Pack. Where possible, each section provides feature overviews, usage examples, and configuration instructions.

Typographic Conventions

The following table describes the typographic styles used in this book.

Table 1. *Typographic Conventions*

Typeface or Symbol	Meaning	Example
ABC123	This type is used for names of commands, files, and directories used within the text. It also depicts on-screen computer output and prompts.	View the readme.txt file. Switch#
ABC123	This bold type appears in command Example. It shows text that must be typed in exactly as shown.	Switch# **sys**
<ABC123>	This italicized type appears in command Example as a parameter placeholder. Replace the indicated text with the appropriate real name or value when using the command. Do not type the brackets. This also shows book titles, special terms, or words to be emphasized.	To establish a Telnet session, enter: Switch# **telnet** *<IP address>* Read your *User's Guide* thoroughly.
{}	Command items shown inside brackets are mandatory and cannot be excluded. Do not type the brackets.	Switch# **ls {-a}**
[]	Command items shown inside brackets are optional and can be used or excluded as the situation demands. Do not type the brackets.	Switch# **ls [-a]**
|	The vertical bar (**|**) is used in command Example to separate choices where multiple options exist. Select only one of the listed options. Do not type the vertical bar.	Switch# **set {left|right}**
AaBbCc123	This block type depicts menus, buttons, and other controls that appear in Web browsers and other graphical interfaces.	Click the **Save** button.

Overview

Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight enables administrators to take advantage of VMware vRealize Log Insight with their Lenovo Networking deployments. This applies to VMware administrators, system administrators and network administrators. This capability delivers automated log management that helps to provide operational efficiency in dynamic, hybrid cloud environments.

Value brought to VMware vRealize Log Insight deployments with Lenovo networking switches and Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight include:

- Increased reliability:
  - Enabling VMware vRealize Log Insight to monitor a physical network which features Lenovo switches running CNOS allows you to get awareness of issues that need looking into or need to be addressed before failures actually occur.
  - Ability to set up high availability through alerting multiple parties.
- Simplicity:
  - Ability to leverage standard or customized dashboards to have greater insight into the network status and health. Now VMware administrators can monitor networking from the same tool they manage VMs. The syslogs feature an extensive collection of supported protocols.
  - Reduced complexity by enabling VMware vRealize Log Insight to interface with only a single interface point to monitor all networking devices in a Flex System Interconnect Fabric deployment.
- Investment Protection

  Increased network flexibility, cost optimization, and switch options by enabling Log Insight to monitor all Lenovo RackSwitches running CNOS.

- Reduced initial provisioning time by providing Log Insight with 18 pre-built Dashboards for system administrators to utilize. Additionally, Log Insight can easily refine these Dashboards as desired.

- Reduced time to deploy with simple switch setup to support forwarding syslog messages to the Log Insight server. Increased reliability is provided with the switches ability to support Log Insight HA server configurations.

Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight for VMware vRealize Log Insight is custom-designed for Lenovo Networking switches, providing switch information and configuration. It also provides monitoring and analysis of syslogs issued by the switch.

Supported Devices

The following Lenovo Networking switches and configurations are supported by Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight with the indicated Network Operating System.

Table 1. *Supported switches and configurations*

Lenovo CNOS Version	Supported Switches
Lenovo CNOS 10.8 or later	Lenovo RackSwitch: G8272, G8296, G8332
	Lenovo ThinkSystem: NE1032, NE1032T, NE1072T, NE2572, NE10032, NE0152T

To deploy the Lenovo Networking CNOS Content Pack requires VMware vRealize Log Insight version 4.6 or 4.7.

Lenovo Networking CNOS Content Pack Configuration

This section describes the configuration requirements for switches to work with VMware vRealize Log Insight, and how to download and operate Lenovo Networking CNOS Content Pack.

CNOS Switch Configuration Requirements for Log Insight

To receive CNOS syslogs in Log Insight, Lenovo Networking switches must be provisioned with the IP address of the Log Insight server, which is set when the server's Virtual Machine (VM) image is initially deployed onto the vSphere host.

The switch is provisioned using CLI commands. Please refer to the most recent Application Guide at the following site for more information on CNOS syslogs:

http://systemx.lenovofiles.com/help/index.jsp?topic=%2Fcom.lenovo.systemx.common.nav.doc%2Foverview_rack_switches.html

The CLI commands required for syslog configuration are consistent across all Lenovo Networking switches running CNOS.

To set the IP address to where the syslogs are sent, use the following command:

```
Switch(config)# logging server <virtual IP address>
```

where *virtual IP address* is the IP address of the Log Insight Server.

You can select an outgoing facility with the following command:

```
Switch(config)# logging server <virtual IP address> facility <outgoing facility>
```

where the *outgoing facility* can be one of the following:

- `local0`
- `local3`
- `local6`
- `local1`
- `local4`
- `local7`
- `local2`
- `local5`
- `user`

To ensure the configuration is done on the switch, use the following command to display logging server information:

```
Switch(config)# show logging server
```

To view the list of feature-specific syslogs, use the following command:

```
Switch(config)# show logging mnemonics [<facility>]
```

There is very little difference when integrating Lenovo Networking switches with Log Insight servers in a high availability configuration or in a standard availability configuration. In a high availability configuration, each switch must be provisioned to send its syslogs to all Log Insight servers present in the configuration. Lenovo Networking switches can be configured to send their syslogs to multiple Log Insight servers.

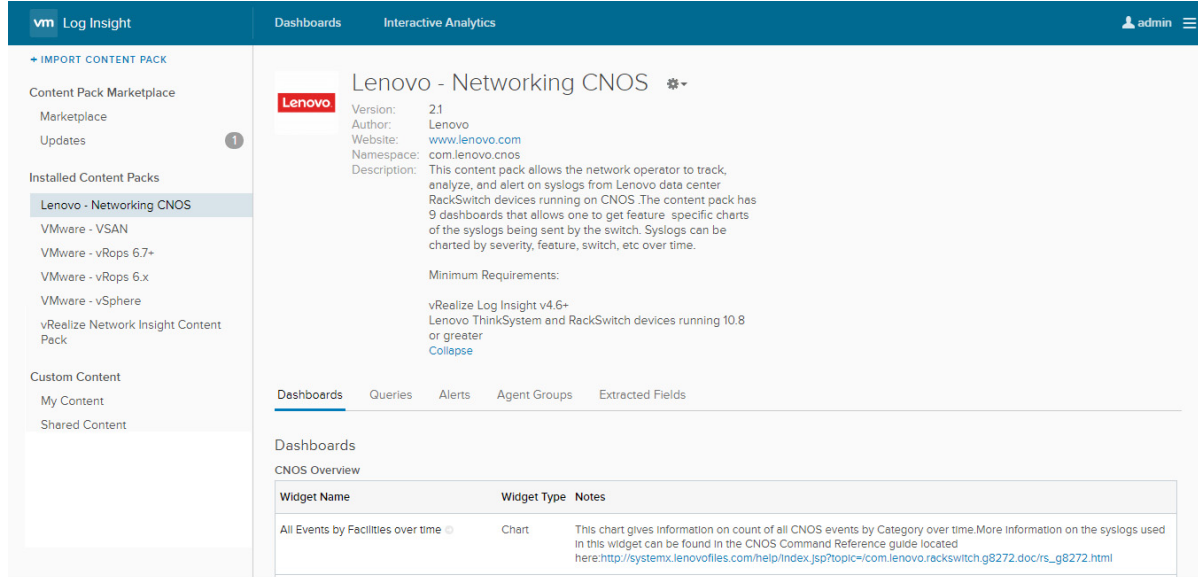# Downloading Lenovo Networking CNOS Content Pack

Download Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight from the VMware Cloud Management Marketplace on the VMware Solution Exchange using the following procedure:

- Go to the VMware vRealize Log Insight site on the VMware Cloud Management Marketplace:

  https://marketplace.vmware.com/vsx/solutions/lenovo-networking-content-pack-for-vmware-vrealize-log-insight

- Once on this site, right click on the blue button in the upper right hand side titled "Log in to Try".

- After logging in with your account information, you are presented with the option to download a zipped file to your workstation. Place this file anywhere convenient on your workstation.

- At a minimum, the zipped file includes the content pack (Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight), the User Guide, and the Software License.

- Once unzipped, import the `.vlcp` file into the target instance of Log Insight. Reference VMware vRealize Log Insight documentation for this procedure.

When you import Lenovo Networking CNOS Content Pack into Log Insight, you are agreeing to the terms and conditions of the Lenovo End User License Agreement (EULA).

Lenovo Networking CNOS Content Pack Dashboards

In Log Insight, Lenovo Networking CNOS Content Pack appears under **Installed Content Packs** as Lenovo - Networking CNOS.

Lenovo Networking CNOS Content Pack for VMware vRealize Log Insight includes the following dashboards:

Table 1. *Lenovo Networking Content Pack dashboards*

Dashboard	Description
CNOS Overview	Display of all syslogs coming from Lenovo CNOS switches and syslogs that cause alerts that are pre-defined in the Content Pack.
CNOS System	Display of system related CNOS syslogs.
CNOS Security	Display of security related CNOS syslogs.
CNOS Interface	Display of interface related CNOS syslogs.
CNOS L2 Protocols	Display of Layer 2 protocol related CNOS syslogs except those covered under Interface and other categories.
CNOS L3 Protocols	Display Layer 3 protocol related CNOS syslogs except those covered under Interface and other categories.
CNOS Virtualization	Displays CNOS syslogs related to the features of NSXGW.
CNOS Logging/ Debugging Services	Displays CNOS syslogs related to logging services.
CNOS Platform Services	Displays CNOS syslogs related to platform services.

CNOS Overview Dashboard

The CNOS Overview Dashboard and the widgets it features displays all CNOS syslogs coming from Lenovo switches and syslogs that cause alerts that are pre-defined in the Content Pack

Figure 1. Lenovo Networking Content Pack CNOS Overview Dashboard
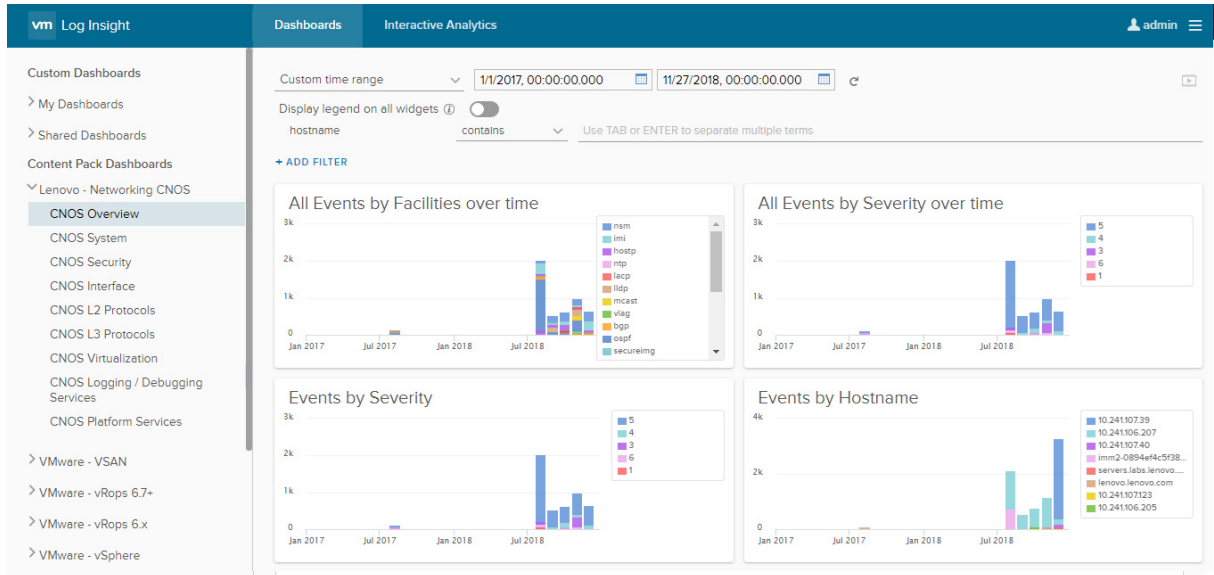
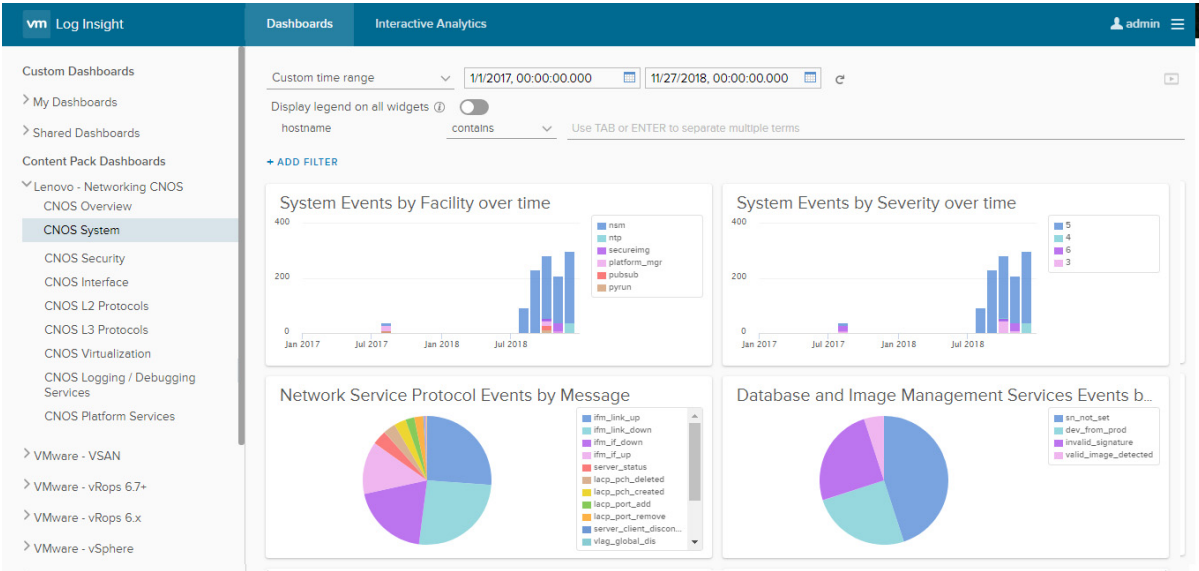The following table describes the widgets featured on the CNOS Overview Dashboard.

Table 2. *CNOS Overview Dashboard widgets*

Widget Name	Description	Category/Component
All Events by Facilities over time	This chart gives information on all events over time by Facility	All
All Events by Severity	This chart gives information on all events by Severity	All
Events by Hostname	This chart gives information on various events by Source.	All
Events by Severity	This chart gives information on count of events by Severity.	All

CNOS System Dashboard

The CNOS System Dashboard and the widgets it features display system related syslogs.

Figure 2. Lenovo Networking Content Pack CNOS System Dashboard

The following table describes the widgets featured on the CNOS System Dashboard.

Table 3. *CNOS System Dashboard widgets*

Widget Name	Description	Category/Component
System Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • Network Management (ONM) • Network Service Module (NSM) • Publisher/Subscriber Inter Process Communication Module (PUBSUB) • Python Runtime Environment (PYRUN) • Open vSwitch Database Management Protocol (OVSDB) • System Manager (SYSMGR) • Platform Manager (PLATFORM_MGR) • Python Scheduler (PYSCHED) • Service Manager (SERVICE_MGR) • SYSMGMT • Secure Image Validation Library (SECUREIMG) • NTP	• Communication/ Scripting • Hardware and Application Services • Network Service Protocols • Database and Image Management

Table 3. *CNOS System Dashboard widgets (continued)*

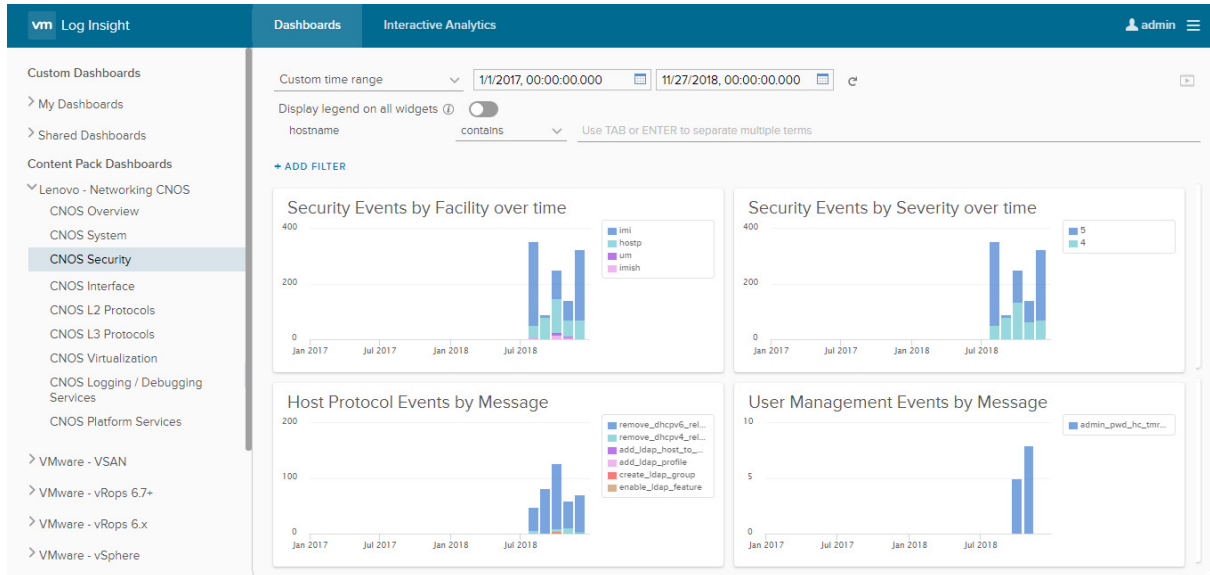| Widget Name	Description	Category/Component
System Events by Severity over time	This widget provides a stacked bar chart of syslog counts from the following facilities by severity over time: • Communication / Scripting • Hardware and Application Services • Network Service Protocols • Database and Image Management	• Network Management (ONM) • Network Service Module (NSM) • Publisher/Subscriber Inter Process Communication Module (PUBSUB) • Python Runtime Environment (PYRUN) • Open vSwitch Database Management Protocol (OVSDB) • System Manager (SYSMGR) • Platform Manager (PLATFORM_MGR) • Python Scheduler (PYSCHED) • Service Manager (SERVICE_MGR) • SYSMGMT • Secure Image Validation Library (SECUREIMG) • NTP
Network Service Protocol Events by Message	This widget provides a pie chart showing the syslog counts from the Network Service Protocol facility which includes: • Network Management • Network Service Module • NTP	• NTP • Network Management (ONM) • Network Service Module (NSM)
Database and Image Management Services Events by Message	This widget provides a pie chart showing the syslog from the Database and Image Management Services facility which includes: • Secure Image Validation Library • Open vSwitch Database Management Protocol	• Secure Image Validation Library (SECUREIMG) • Open vSwitch Database Management Protocol (OVSDB)

Table 3. *CNOS System Dashboard widgets (continued)*

Widget Name	Description	Category/Component
Communication/ Scripting Events by Message	This widget provides a pie chart showing the syslog from Communication / Scripting facility which includes: • Publisher/Subscriber Inter Process Communication Module • Python Runtime Environment • Python Scheduler	• Publisher/Subscriber Inter Process Communication Module (PUBSUB) • Python Runtime Environment (PYRUN) • Python Scheduler (PYSCHED)
Hardware and Application Services Events by Message	This widget provides a pie chart showing the syslog from the Hardware and Application Services facility which includes: • Platform Manager • System Management Host Protocol • Service Manager	• Platform Manager (PLATFORM_MGR) • SYSMGMT • System Manager (SYSMGR) • Service Manager (SERVICE_MGR)

CNOS Security Dashboard

The CNOS Security Dashboard and the widgets it features displays security related syslogs, such as user login or failures.

Figure 3. Lenovo Networking Content Pack CNOS Security Dashboard

The following table describes the widgets featured on the CNOS Security Dashboard.

Table 4. *CNOS Security Dashboard widgets*

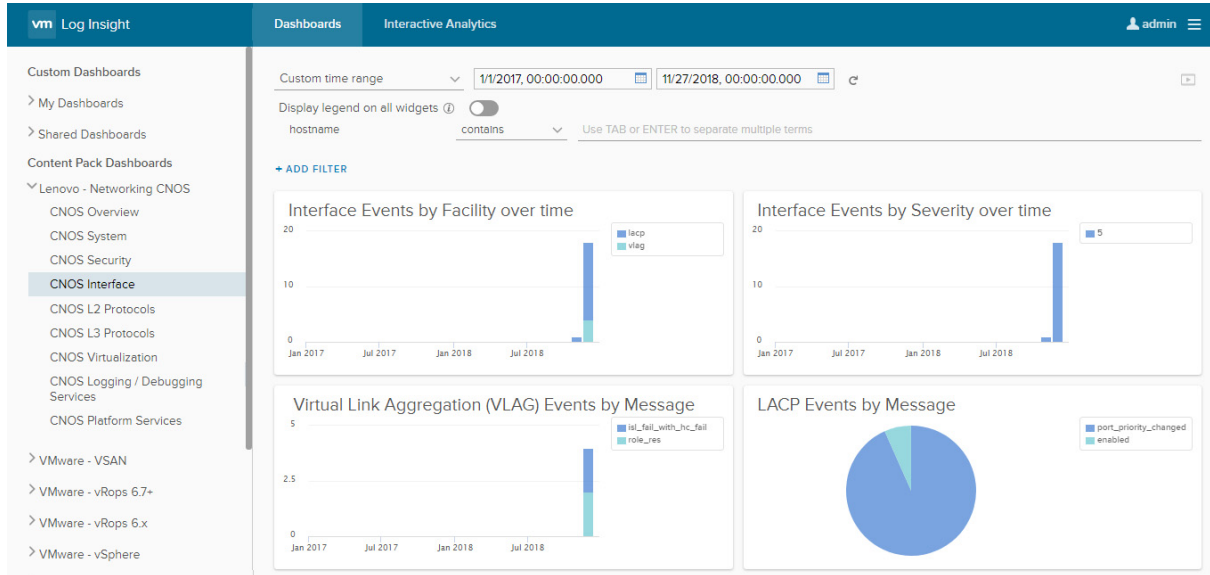| Widget Name	Description	Category/Component
Logging / Debugging Service Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • Virtual Terminal Logging • Logging Control Daemon • Logging Management Interface Library	• LOG • Logging Control Daemon (NLOG) • Virtual Terminal Logging Control Daemon (VLOG)
Logging / Debugging Service Events by Severity over time	This widget provides a stacked bar chart of syslog counts from the following facilities by severity over time: • Virtual Terminal Logging • Logging Control Daemon • Logging Management Interface Library	• LOG • Logging Control Daemon (NLOG) • Virtual Terminal Logging Control Daemon (VLOG)

Table 4. *CNOS Security Dashboard widgets (continued)*

Widget Name	Description	Category/Component
Virtual Terminal Logging Control Daemon Events by Message	This widget provides a pie chart showing the syslog from the Virtual Terminal Logging Control Daemon facility.	Virtual Terminal Logging Control Daemon (VLOG)
Logging Control Daemon Events by Message	This widget provides a pie chart showing the syslog from the Logging Control Daemon facility.	Logging Control Daemon (NLOG)
Logging Management Interface Library Events by Message	This widget provides a pie chart showing the syslog from the Logging Management Interface Library facility.	LOG

CNOS Interface Dashboard

The CNOS Interface Dashboard and the widgets it features displays switch configuration change related syslogs.

Figure 4. Lenovo Networking Content Pack CNOS Interface Dashboard

The following table describes the widgets featured on the CNOS Interface Dashboard.

Table 5. *CNOS Interface Dashboard widgets*

Widget Name	Description	Category/Component
Interface Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • VLAG • LACP	• LACP • VLAG
Interface Events by Severity over time	This widget provides a stacked bar chart of syslog counts from the following facilities by severity over time: • VLAG • LACP	• LACP • VLAG
Virtual Link Aggregation (VLAG) Events by Message	This widget provides a pie chart showing the syslog from the VLAG facility.	VLAG
LACP Events by Message	This widget provides a pie chart showing the from the LACP facility.	LACP

CNOS L2 Protocols Dashboard

The CNOS L2 Protocols Dashboard displays Layer 2 protocol-related syslogs except those covered under Interface and other categories.

Figure 5. Lenovo Networking Content Pack CNOS L2 Protocols Dashboard
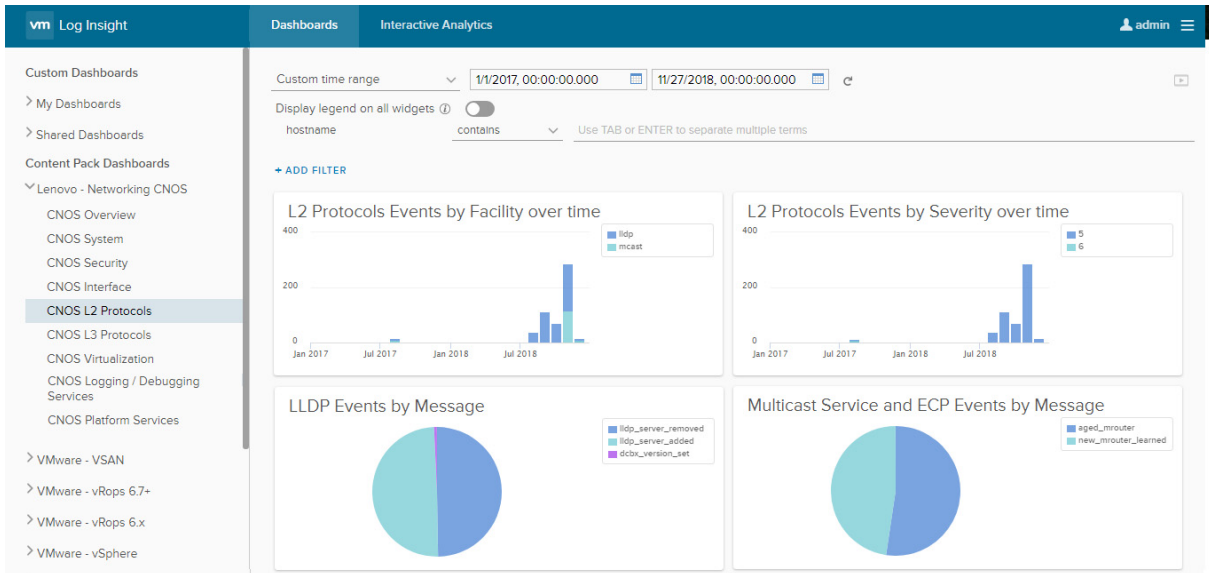
The following table describes the widgets featured on the CNOS L2 Protocols Dashboard.

Table 6. *CNOS L2 Protocols Dashboard widgets*

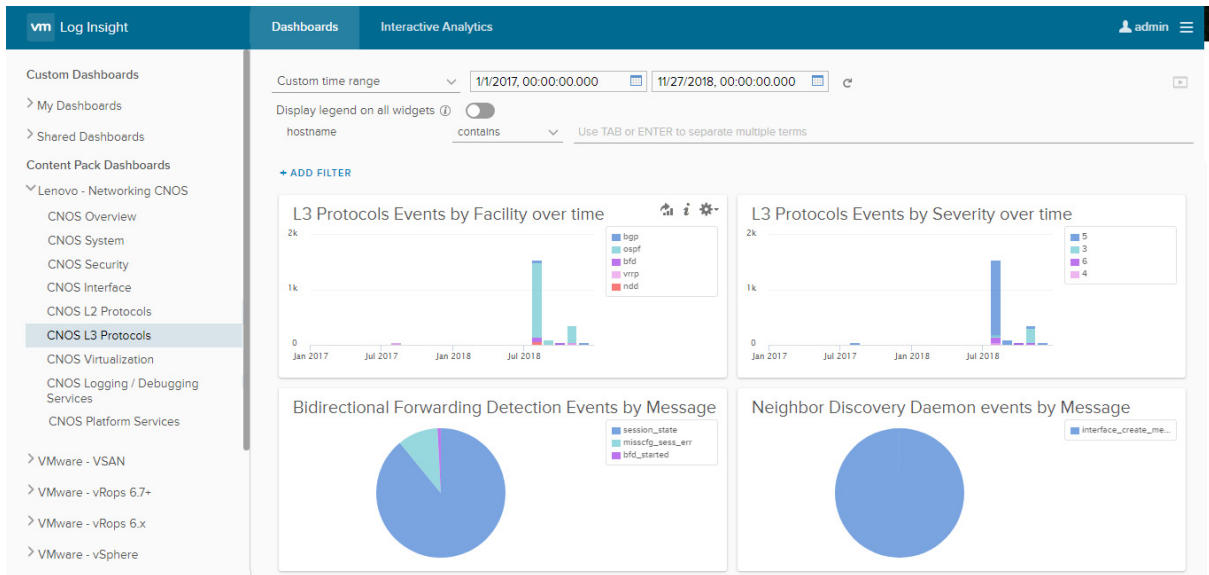| Widget Name	Description	Category/Component
L2 Protocols Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • Multicast Service • Layer 2 Multicast Information Base • LLDP • VLAN • ECP	• Layer 2 Multicast Routing Information Base (L2MRIB) • Multicast Services Library (MCAST) • VLAN • LLDP • ECP
L2 Protocols Events by Severity over time	This widget provides a stacked bar chart of syslog counts from the following facilities by severity over time: • Multicast Service • Layer 2 Multicast Information Base • LLDP • VLAN	• Layer 2 Multicast Routing Information Base (L2MRIB) • Multicast Services Library (MCAST) • VLAN • LLDP • ECP

Table 6. *CNOS L2 Protocols Dashboard widgets (continued)*

Widget Name	Description	Category/Component
Layer 2 Multicast Routing Information Base Events by Message	This widget provides a pie chart showing the syslog from the Layer 2 Multicast Routing Information Base facility.	Layer 2 Multicast Routing Information Base (L2MRIB)
Multicast Service and ECP Events by Message	This widget provides a pie chart showing the syslog from the Multicast Service and ECP facilities which includes: • Multicast • ECP	• MCAST • ECP
LLDP Events by Message	This widget provides a pie chart showing the syslog from the LLDP facility.	LLDP
VLAN Events by Message	This widget provides a pie chart showing the syslog counts by message type from the VLAN facility.	VLAN

CNOS L3 Protocols Dashboard

The CNOS L3 Protocols Dashboard and the widgets it features display Layer 3 protocol-related syslogs.

Figure 6. Lenovo Networking Content Pack CNOS L3 Protocols Dashboard

The following table describes the widgets featured on the CNOS L3 Protocols Dashboard.
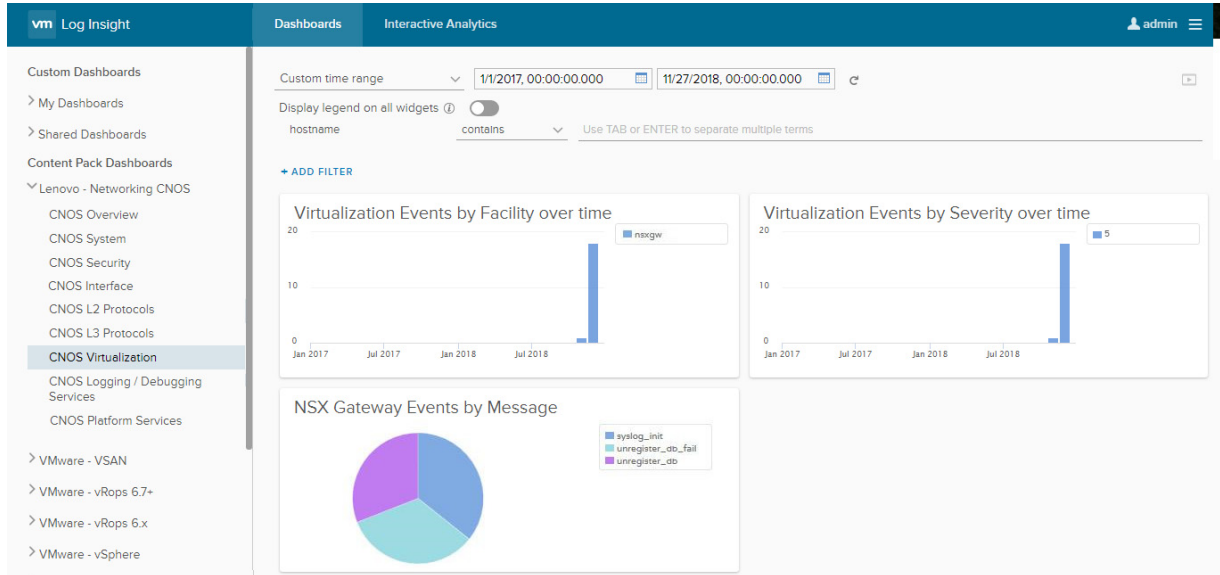
Table 7. *CNOS L3 Protocols Dashboard widgets*

Widget Name	Description	Category/Component
L3 Protocols Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • OSPF • BGP • VRRP • Neighbor Discovery Daemon (NDD) • Bidirectional Forwarding Detection (BFD) • Routing Information Base (RIB)	• Bidirectional Forwarding Detection (BFD) • BGP • Neighbor Discovery Daemon (NDD) • OSPF • VRRP • Routing Information Base (RIB)
L3 Protocols Events by Severity over time	This widget provides a stacked bar chart of syslog counts from the following facilities by severity over time: • OSPF • BGP • VRRP • Neighbor Discovery Daemon (NDD) • Bidirectional Forwarding Detection (BFD) • Routing Information Base (RIB)	• Bidirectional Forwarding Detection (BFD) • BGP • Neighbor Discovery Daemon (NDD) • OSPF • VRRP • Routing Information Base (RIB)
Bidirectional Forwarding Detection Events by Message	This widget provides a pie chart showing the syslog from the Bidirectional Forwarding Detection facility.	Bidirectional Forwarding Detection (BFD)
Neighbor Discovery Daemon events by Message	This widget provides a pie chart showing the syslog from the Neighbor Discovery Daemon facility.	Neighbor Discovery Daemon (NDD)
OSPF and BGP Events by Message	This widget provides a pie chart showing the syslog counts by message type from the OSPF and BGP facilities.	• OSPF • BGP
Routing Information Base and VRRP Events by Message	This widget provides a pie chart showing the syslog counts by message type from the Routing Information Base and VRRP facilities.	• Routing Information Base (RIB) • VRRP

CNOS Virtualization Dashboard

The CNOS Virtualization Dashboard and the widgets it features display syslogs related to the features of the NSXGW.

Figure 7. Lenovo Networking Content Pack CNOS Virtualization Dashboard

The following table describes the widgets featured on the CNOS Virtualization Dashboard.

Table 8. *CNOS Virtualization Dashboard widgets*

Widget Name	Description	Category/Component
Virtualization Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facility included in this widget is NSX Gateway.	NSXGW
Virtualization Events by Severity over time	This widget provides a stacked bar chart of syslog from the NSX Gateway facility by severity over time.	NSXGW
NSX Gateway Events by Message	This widget provides a pie chart showing the syslog from the NSX Gateway facility.	NSXGW

CNOS Logging / Debugging Services Dashboard

The CNOS Logging / Debugging Services Dashboard and the widget it features display syslogs related to the NSX Gateway feature.

Figure 8. Lenovo Networking Content Pack CNOS Logging / Debugging Services Dashboard
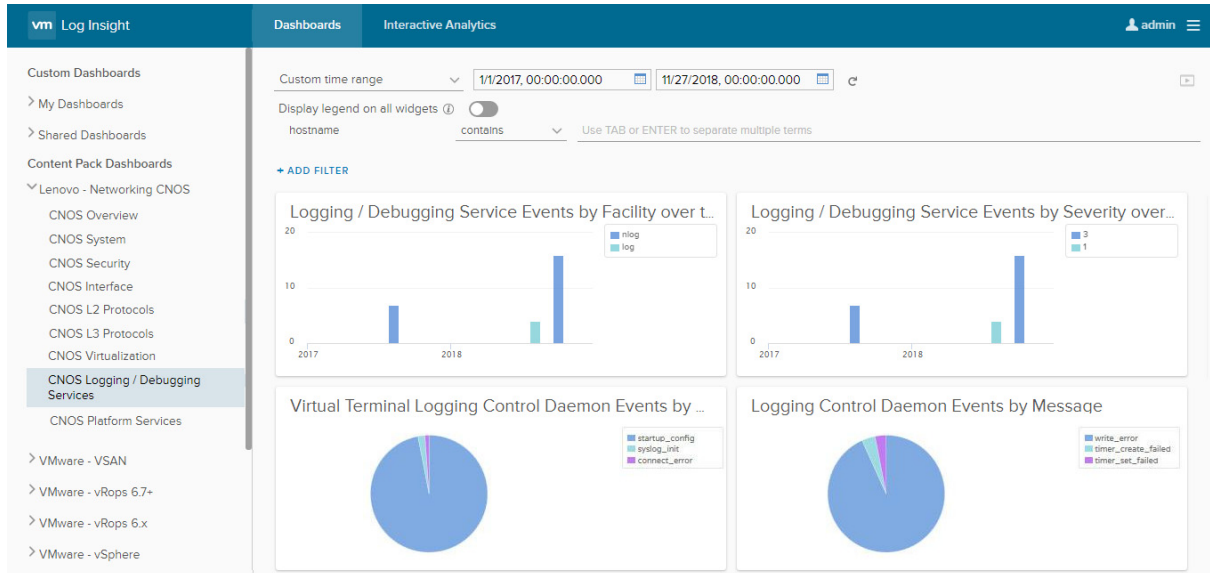
The following table describes the widgets featured on the Logging / Debugging Services Dashboard.

Table 9. *CNOS Logging / Debugging Services Dashboard widgets*

Widget Name	Description	Category/Component
Logging / Debugging Service Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • Virtual Terminal Logging • Logging Control Daemon • Logging Management Interface Library	• LOG • Logging Control Daemon (NLOG) • Virtual Terminal Logging Control Daemon (VLOG)
Logging / Debugging Service Events by Severity over time	This widget provides a stacked bar chart of syslog counts from the following facilities by severity over time: • Virtual Terminal Logging • Logging Control Daemon • Logging Management Interface Library	• LOG • Logging Control Daemon (NLOG) • Virtual Terminal Logging Control Daemon (VLOG)

Table 9. *CNOS Logging / Debugging Services Dashboard widgets*

Widget Name	Description	Category/Component
Virtual Terminal Logging Control Daemon Events by Message	This widget provides a pie chart showing the syslog from the Virtual Terminal Logging Control Daemon facility.	Virtual Terminal Logging Control Daemon (VLOG)
Logging Control Daemon Events by Message	This widget provides a pie chart showing the syslog from the Logging Control Daemon facility.	Logging Control Daemon (NLOG)
Logging Management Interface Library Events by Message	This widget provides a pie chart showing the syslog from the Logging Management Interface Library facility.	LOG

CNOS Platform Services Dashboard

The CNOS Platform Services Dashboard and the widgets it features displays syslogs related to the features of Hardware Services Layer and Kernal Hardware Services Layer

Figure 9. Lenovo Networking Content Pack CNOS Platform Services Dashboard

The following table describes the widgets featured on the CNOS Platform Services Dashboard.

Table 10. *CNOS Platform Services Dashboard widgets*

Widget Name	Description	Category/Component
Platform Services Events by Facility over time	This widget provides a stacked bar syslog counts by facility over time. The facilities included in this widget are: • Kernel Hardware Services Layer • Hardware Services Layer • HSL Inter-Process-Communication Client library • HSL Inter-Process-Communication Server library	• Hardware Service Layer (HSL) • Kernel Hardware Service Layer (KHSL)
Platform Services Events by Severity over time	This widget provides a stacked bar syslog counts by severity over time. The facilities included in this widget are: • Kernel Hardware Services Layer • Hardware Services Layer • HSL Inter-Process-Communication Client library • HSL Inter-Process-Communication Server library	• Hardware Service Layer (HSL) • Kernel Hardware Service Layer (KHSL)
Hardware Services Layer (HSL) events by Message	This widget provides a pie chart showing the syslog from the HSL facility.	Hardware Service Layer (HSL)
Kernel Hardware Services Layer (HSL) events by Message	This widget provides a pie chart showing the from the KHSL facility.	Kernel Hardware Service Layer (KHSL)

Lenovo Networking Syslog Formats

All Lenovo switches conform to syslog protocol defined in RFC 3164.

CNOS Syslog Message Format

Each CNOS dashboard defines a set of widgets that are defined by CNOS syslog mappings. These mappings are based on the *facility* label in each CNOS syslog message. In the Content Pack, we refer to these as syslog *facilities*.

In CNOS versions 10.4.x and later, the Syslog message format is:

<time> <hostname>(cnos:<vrf-name>) %<facility>-<severity>-<mnemonic>:
[<process>] <message>

where:

Table 11. *Lenovo CNOS syslog message parameters*

Parameter	Definition
time	The time of the message event is displayed in the following format: *<month (3 characters)> <day> <hour (1-24)>*:*<minute>*:*<second>* For example: `Jul 4 11:55:02`
hostname	The host name is displayed when configured otherwise the IP address is used. For example: `Switch22`
facility	The facility label. CNOS supports the following types of facilities: • **Process**: Main application processes • **Sub-application**: Threads or subsets of code relevant enough to be individually identified that reside within a process . This is the typical case when a process implements multiple protocols • **Library**: Code that is commonly used by multiple processes
severity	The log severity string that the switch display is defined in the previously mentioned RFC. They are: 0 EMERGENCY 1 ALERT 2 CRITICAL 3 ERROR 4 WARNING 5 NOTICE 6 INFORMATIONAL 7 DEBUG
mnemonic	Text string containing detailed information about the event being reported.

Table 11. *Lenovo CNOS syslog message parameters*

Parameter	Definition
process	The process in which the error occurred. The process name is only added to the message when the message is logged by a shared library facility.

message	Text is displayed describing the specific event that occurred in that feature/category of the switch. For example:
	`Authentication session terminated with`
	`Success on port 17`

The syslog ID portion of the message consists of *<facility>-<severity>-<mnemonic>*.

For more information on the CNOS syslog message format, see the most recent Application Guide at the following site:

http://systemx.lenovofiles.com/help/index.jsp?topic=%2Fcom.lenovo.systemx.common.nav.doc%2Foverview_rack_switches.html

Product Support

The Lenovo Networking Content Pack is provided "as is" with no warranty.

If you have questions or need support on the Log Insight application, please contact VMware.

For additional information, please refer to the following sources:

- VMware Solution Exchange:

  https://marketplace.vmware.com/vsx/

- VMware vRealize Log Insight:

  http://www.vmware.com/products/vrealize-log-insight

- Lenovo RackSwitch and ThinkSystem syslog information (see Application Guide and Command Reference):

  http://systemx.lenovofiles.com/help/index.jsp?topic=%2Fcom.lenovo.systemx.common.nav.doc%2Foverview_rack_switches.html

- Lenovo Networking Content Pack for VMware:

  https://marketplace.vmware.com/vsx/solutions/lenovo-networking-content-pack-for-vmware-vrealize-log-insight

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