Contents

Introduction

This document describes some quick tips and tricks which may enhance troubleshooting experience with NX-OS.

Quick Hex/Dec conversion

Hex stands for Hexa Decimal , Dec for Decimal

Executing multiple CLI's in one go

CLI stands for Command line Interface

Works for configuration too:

Time it took for a CLI to complete:

Using CLI variables

Also can create your own variables:

[CCO Reference](#)

Customize terminal settings

1) Avoid Terminal Session timeouts:

2) Set width/length of the display terminal:

Comes handy when you don't want output to break to a new line for long width outputs

Delay execution of commands per need

Accessing Routing-Context/VRF's

VRF stands for Virtual Routing and Forwarding

Run CLI's for a specific VRF without adding VRF <> everytime to the command:

Running CLI's for respective VDC when attached to LC: N7k specific

VDC stands for Virtual Device Context

LC stands for Line Card

N7K stands for Nexus 7000

Once attached to LC, the CLI's are run in respect to default VDC, or needs to specify VDC # for related command.

Instead you may run the CLI's in VDC # space just like routing context.

Example:

```
module-4# vdc 6  >>>>>>> switches LC to pull this VDC specific outputs only
module-4# show hardware mac address-table
FE | Valid| PI|  BD  |      MAC      |  Index| Stat| SW  | Modi| Age| Tmr| GM| Sec| TR| NT| RM|
RMA| Cap| Fld|Always| PV | RD| NN| UC|PI_E8| VIF | SWID| SSWID|  LID
  |      |   |      |               |       |  ic |     | fied|Byte| Sel|   | ure| AP| FY|
|    |TURE|    | Learn|    |   |   |   |     |     |     |      |
---+------+---+------+---------------+-------+-----+-----+-----+----+----+---+----+---+---+---+-
---+----+----+------|----|---|---|---|-----|-----|-----|------|-------
 0    1     1   92    0023.ac66.1dc6  0x010c7   1   0x000   0    0     0    1    0   0   0
0    0    0    0    0   0x00  0   0   0    0   0x000 0x000  0x000 0x010c7
 0    1     0   91    0019.3074.9c02  0x00414   0   0x009   0    118   2    0    0   0   0
0    0    0    0    0   0x00  1   0   1    0   0x000 0x000  0x000 0x00414
```

Switching back and forth between Linux Kernel and NX-OS without exiting debug plugin

```
N5600-Lab# load dplugg
Loading plugin version 7.1(1)N1(1)
############################################################
 Warning: debug-plugin is for engineering internal use only!
 For security reason, plugin image has been deleted.
############################################################
Successfully loaded debug-plugin!!!
Linux(debug)# vsh >>>>> Moves back to NX-OS prompt
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
Copyright (c) 2002-2015, Cisco Systems, Inc. All rights reserved.
```

```
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such license is available at
http://www.opensource.org/licenses/gpl-2.0.php and
http://www.opensource.org/licenses/lgpl-2.1.php
N5600-Lab# show clock
20:20:07.468 UTC Mon Apr 04 2016
N5600-Lab# exit >>>>> Moves back to Linux prompt
Linux(debug)#
Linux(debug)# clock
Mon Apr  4 20:20:13 2016   -0.282195 seconds UTC

NOTE: "Debug Plugin" should only be used in presence of Cisco TAC and is not available for
customer use.
Please do not modify any setting unless guided by Cisco TAC.
```

Alternatively NX-OS CLI's could be run directly from debug plugin:

```
N5600-Lab# load dplugg
Loading plugin version 7.1(1)N1(1)
################################################################
 Warning: debug-plugin is for engineering internal use only!
 For security reason, plugin image has been deleted.
################################################################
Successfully loaded debug-plugin!!!
Linux(debug)# vsh >>>>> Moves back to NX-OS prompt
Cisco Nexus Operating System (NX-OS) Software
TAC support: http://www.cisco.com/tac
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http://www.opensource.org/licenses/gpl-2.0.php and
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N5600-Lab# show clock
20:20:07.468 UTC Mon Apr 04 2016
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NOTE: "Debug Plugin" should only be used in presence of Cisco TAC and is not available for
customer use.
Please do not modify any setting unless guided by Cisco TAC.
```

Loading config directly through VSH

VSH stands for virtual shell

```
NEXUS-LABSWICTH# echo "hostname LAB" | vsh
LAB#

Mon Apr  4 20:51:14 2016:type=update:id=10.61.236.97@pts/1:user=admin:cmd=echo "hostname LAB" |
vsh (SUCCESS)
Mon Apr  4 20:51:14 2016:type=start:id=vsh.9326:user=admin:cmd=
Mon Apr  4 20:51:14 2016:type=update:id=vsh.9326:user=admin:cmd=configure terminal ; hostname
LAB (SUCCESS)
```

```
LAB# echo "hostname NEXUS-LABSWITCH" | vsh
NEXUS-LABSWITCH#

Mon Apr  4 20:51:23 2016:type=update:id=10.61.236.97@pts/1:user=admin:cmd=echo "hostname NEXUS-
LABSWITCH" | vsh (SUCCESS)
Mon Apr  4 20:51:23 2016:type=start:id=vsh.9390:user=admin:cmd=
Mon Apr  4 20:51:23 2016:type=update:id=vsh.9390:user=admin:cmd=configure terminal ; hostname
NEXUS-LABSWITCH (SUCCESS)N5600-Lab# show run | i hostname | sed "s/N5600-Lab/N56128/" | vsh
N56128#
N56128# show accounting log | last 3
Mon Apr  4 21:23:23 2016:type=start:id=vsh.6762:user=admin:cmd=
Mon Apr  4 21:23:23 2016:type=update:id=vsh.6762:user=admin:cmd=configure terminal ; hostname
N56128 (SUCCESS)
Mon Apr  4 21:23:23 2016:type=stop:id=vsh.6762:user=admin:cmd=N5600-Lab# echo "hostname N56128"
> bootflash:CLI
N5600-Lab#
N5600-Lab# show file CLI
hostname N56128
N5600-Lab# show file CLI | vsh
N56128#
```

Using Diffs - List the differences between the counters

Diff stands for Difference

```
N5600-Lab# echo "hostname N56128" > bootflash:CLI
N5600-Lab#
N5600-Lab# show file CLI
hostname N56128
N5600-Lab# show file CLI | vsh
N56128#
```

Using Watch CLI - N9k specific since 7.0(3)I2(x)

N9K Stands for Nexus 9000

```
N5600-Lab# echo "hostname N56128" > bootflash:CLI
N5600-Lab#
N5600-Lab# show file CLI
hostname N56128
N5600-Lab# show file CLI | vsh
N56128#
```

Check CPU usage internally

CPU stands for Central Processing Unit

This command provide an output every 5 seconds (can be changed) what process is consuming the CPU. It is the same output as the linux **top** commnad:

```
N5600-Lab# echo "hostname N56128" > bootflash:CLI
N5600-Lab#
N5600-Lab# show file CLI
hostname N56128
N5600-Lab# show file CLI | vsh
N56128#
```

Release internal build version

N7k/N9k

```
N5600-Lab# echo "hostname N56128" > bootflash:CLI
N5600-Lab#
N5600-Lab# show file CLI
hostname N56128
N5600-Lab# show file CLI | vsh
N56128#
```

N5k/6k:

```
N5600-Lab# echo "hostname N56128" > bootflash:CLI
N5600-Lab#
N5600-Lab# show file CLI
hostname N56128
N5600-Lab# show file CLI | vsh
N56128#
```