Sun Ethernet Fabric Operating System

ONET Administration Guide

Part No.: E26379-03
August 2013

Copyright © 2010, 2013, Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related software documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information on content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.

Copyright © 2010, 2013, Oracle et/ou ses affiliés. Tous droits réservés.

Ce logiciel et la documentation qui l'accompagne sont protégés par les lois sur la propriété intellectuelle. Ils sont concédés sous licence et soumis à des restrictions d'utilisation et de divulgation. Sauf disposition de votre contrat de licence ou de la loi, vous ne pouvez pas copier, reproduire, traduire, diffuser, modifier, breveter, transmettre, distribuer, exposer, exécuter, publier ou afficher le logiciel, même partiellement, sous quelque forme et par quelque procédé que ce soit. Par ailleurs, il est interdit de procéder à toute ingénierie inverse du logiciel, de le désassembler ou de le décompiler, excepté à des fins d'interopérabilité avec des logiciels tiers ou tel que prescrit par la loi.

Les informations fournies dans ce document sont susceptibles de modification sans préavis. Par ailleurs, Oracle Corporation ne garantit pas qu'elles soient exemptes d'erreurs et vous invite, le cas échéant, à lui en faire part par écrit.

Si ce logiciel, ou la documentation qui l'accompagne, est concédé sous licence au Gouvernement des Etats-Unis, ou à toute entité qui délivre la licence de ce logiciel ou l'utilise pour le compte du Gouvernement des Etats-Unis, la notice suivante s'applique :

U.S. GOVERNMENT END USERS. Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

Ce logiciel ou matériel a été développé pour un usage général dans le cadre d'applications de gestion des informations. Ce logiciel ou matériel n'est pas conçu ni n'est destiné à être utilisé dans des applications à risque, notamment dans des applications pouvant causer des dommages corporels. Si vous utilisez ce logiciel ou matériel dans le cadre d'applications dangereuses, il est de votre responsabilité de prendre toutes les mesures de secours, de sauvegarde, de redondance et autres mesures nécessaires à son utilisation dans des conditions optimales de sécurité. Oracle Corporation et ses affiliés déclinent toute responsabilité quant aux dommages causés par l'utilisation de ce logiciel ou matériel pour ce type d'applications.

Oracle et Java sont des marques déposées d'Oracle Corporation et/ou de ses affiliés.Tout autre nom mentionné peut correspondre à des marques appartenant à d'autres propriétaires qu'Oracle.

Intel et Intel Xeon sont des marques ou des marques déposées d'Intel Corporation. Toutes les marques SPARC sont utilisées sous licence et sont des marques ou des marques déposées de SPARC International, Inc. AMD, Opteron, le logo AMD et le logo AMD Opteron sont des marques ou des marques déposées d'Advanced Micro Devices. UNIX est une marque déposée d'The Open Group.

Ce logiciel ou matériel et la documentation qui l'accompagne peuvent fournir des informations ou des liens donnant accès à des contenus, des produits et des services émanant de tiers. Oracle Corporation et ses affiliés déclinent toute responsabilité ou garantie expresse quant aux contenus, produits ou services émanant de tiers. En aucun cas, Oracle Corporation et ses affiliés ne sauraient être tenus pour responsables des pertes subies, des coûts occasionnés ou des dommages causés par l'accès à des contenus, produits ou services tiers, ou à leur utilisation.

Please
Recycle

Contents

Using This Documentation 1

Product Notes 1

Related Documentation 2

Acronyms and Abbreviations 2

CLI Command Modes 3

Feedback 3

Support and Accessibility 3

ONET Configuration 5

ONET Example Topology 5

Default Settings 6

ONET and Oracle ILOM 7

- Start ONET From Oracle ILOM 7
- Start the ONET CLI 8

Stopping SEFOS Before Starting ONET 8

- Stop SEFOS 8
- Start ONET 9
- Stop ONET 9

Configuring an ONET 11

- Configure an ONET 11

Common Configuration Errors 13

ONET CLI Commands 15

`help` Command 15

Syntax 15

`show onet` Command 16

Syntax 16

`show onets` Command 17

Syntax 17

`show interfaces description` Command 18

Syntax 18

`show vlan` Command 21

Syntax 21

`show lldp` Command 23

Syntax 23

`show mac-address-table` Command 23

Syntax 23

`speed port` Command 24

Syntax 24

`exit` Command 25

Syntax 25

`write startup-config` Command 25

Syntax 25

`no onet` Command 26

Syntax 26

`onet` Command 26

Syntax 26

`set onet` Command 26

Syntax 27

Using This Documentation

Oracle's ONET feature groups uplink and downlink ports on its switch. ONET provides internal and external isolated network connectivity for blade servers by bridging downlink ports with uplink ports connected to an external switched network. By restricting traffic within the uplink/downlink port combination, ONET ensures that traffic is not propagated to other ports that should not have access to this data. By linking the uplink port to the downlink port, ONET effectively turns that connection into a bridge for the blade server connected to the downlink port. This document describes the use of ONET on a switch.

- "Product Notes" on page 1
- "Related Documentation" on page 2
- "Acronyms and Abbreviations" on page 2
- "CLI Command Modes" on page 3
- "Feedback" on page 3
- "Support and Accessibility" on page 3

Product Notes

For late-breaking information and known issues about the following products, refer to the product notes at:

Oracle Switch ES1-24:

`http://www.oracle.com/goto/ES1-24/docs`

Sun Network 10GbE Switch 72p:

`http://www.oracle.com/goto/SN-10GbE-72p/docs`

Sun Blade 6000 Ethernet Switched NEM 24p 10GbE:

`http://www.oracle.com/goto/SB6K-24p-10GbE/docs`

Related Documentation

Documentation	Links
All Oracle products	http://oracle.com/documentation
Oracle Switch ES1-24	http://www.oracle.com/goto/ES1-24/docs
Sun Network 10GbE Switch 72p	http://www.oracle.com/goto/SN-10GbE-72p/docs
Sun Blade 6000 Ethernet Switched NEM 24p 10GbE	http://www.oracle.com/goto/SB6K-24p-10GbE/docs
Sun Blade 6000 modular system	http://www.oracle.com/pls/topic/lookup?ctx=sb6000
Oracle Integrated Lights Out Manager (Oracle ILOM) 3.0	http://www.oracle.com/pls/topic/lookup?ctx=ilom30

For detailed information about the commands and options described in this document, refer to the *Sun Ethernet Fabric Operating System CLI Base Reference Manual*.

Acronyms and Abbreviations

Acronym or Abbreviation	Explanation
CLI	Command-line interface
GARP	Generic Attribute Registration Protocol
GMRP	GARP Multicast Registration Protocol
GVRP	GARP VLAN Registration Protocol
IP	Internet Protocol
LAN	Local area network
MAC	Media access control
RSTP	Rapid Spanning Tree Protocol
STP	Spanning Tree Protocol

Acronym or Abbreviation	Explanation
VLAN	Virtual local area network
WAN	Wide area network

CLI Command Modes

The following table lists the configuration mode used in this document with the access and exit methods.

Command Mode	Access Method	Prompt	Exit Method
Privileged EXEC	This is the default mode and only way to access the ONET CLI commands.	`ONET#`	Use the `exit` command to return to the Oracle ILOM prompt.

Feedback

Provide feedback on this documentation at:

http://www.oracle.com/goto/docfeedback

Support and Accessibility

Oracle customers have access to electronic support through My Oracle Support. For information visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

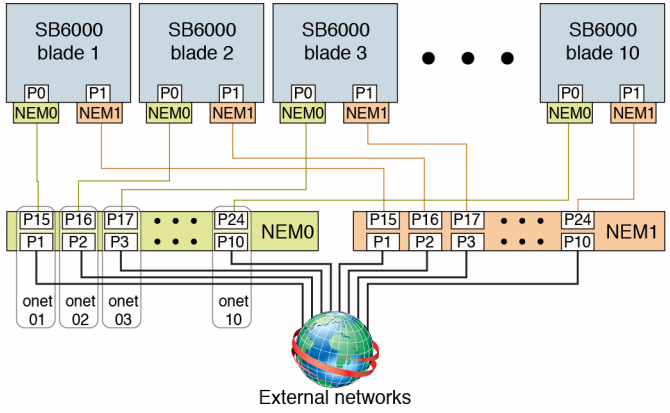
ONET Configuration

These sections describe the ONET configuration and default settings.

- "ONET Example Topology" on page 5
- "Default Settings" on page 6

ONET Example Topology

The ONET configuration is predefined and cannot be changed during switch operation. The downlink ports connected to the blade servers are configured to be connected to individual uplink ports. The following figure illustrates the ONET port assignments.



The ONETs are named `onet01` to `onet10`, where `onet01` is configured with port `1` as the uplink port and port `15` as the downlink port connected to the blade server. `Onet02` is a pairing of port `2` as the uplink port, port `16` as the downlink port, and so on, until `onet10` pairs port `10` with port `24`.

Default Settings

Feature	Default Setting
VLAN module status	Enable
Default VLAN ID (configured in the switch)	1
MAC address table aging time	300 seconds
Acceptable frame types	All (accepts untagged frames or priority-tagged frames or tagged frames received on the port)
STP	Disabled
GMRP	Disabled
GVRP	Disabled

ONET and Oracle ILOM

You must start ONET from Oracle ILOM. You can also access ONET CLI commands through Oracle ILOM.

- "Start ONET From Oracle ILOM" on page 7
- "Start the ONET CLI" on page 8
- "Stopping SEFOS Before Starting ONET" on page 8

▼ Start ONET From Oracle ILOM

- **Log in to Oracle ILOM and start ONET from the Oracle ILOM prompt.**

```
Oracle(R) Integrated Lights Out Manager (Fabric Component Edition)
Version 3.0.5.2
Copyright (c) 2011, Oracle and/or its affiliates. All rights
reserved.
Warning: password is set to factory default.

-> start /NEM/onet
Are you sure you want to start /NEM/onet (y/n)? y

start: Please wait while onet comes up, this can take anywhere from
30 seconds to 2 minutes depending on the configuration
.....................
start: ONET Enabled successfully.
```

▼ Start the ONET CLI

- **Access the ONET CLI.**

```
-> start /NEM/onet_cli/
Are you sure you want to start /NEM/onet_cli (y/n)? y

start: Connecting to Fabric Switch CLI
SUNSP-UN0064 ONET#
```

Stopping SEFOS Before Starting ONET

ONET works in tandem with SEFOS so that the one-to-one uplink to downlink port combination is achieved. SEFOS uses a different set of configuration files when used with ONET. ONET cannot run in conjunction with stand-alone SEFOS, and SEFOS must be stopped before ONET can be started. When ONET is started while SEFOS is running, Oracle ILOM displays the following message:

```
-> start /NEM/onet
Are you sure you want to start /NEM/onet (y/n)? y

start: ONET start failed because SEFOS is running
```


- "Stop SEFOS" on page 8
- "Start ONET" on page 9
- "Stop ONET" on page 9

▼ Stop SEFOS

- **Stop SEFOS before starting ONET.**

```
-> stop /NEM/sefos
stop: Unsaved SEFOS configuration will be lost
Are you sure you want to stop /NEM/sefos (y/n)? y

stop: SEFOS stopped successfully.
```

▼ Start ONET

- **Type.**

```
-> start /NEM/onet
Are you sure you want to start /NEM/onet (y/n)? y

start: Please wait while onet comes up, this can take anywhere from
30 seconds to 2 minutes depending on the configuration
.........................
start: ONET Enabled successfully.
```

If you reset the switch while ONET is running, ONET will be running once it is restarted.

▼ Stop ONET

- **Stop ONET from Oracle ILOM.**

```
-> stop /NEM/onet
Are you sure you want to stop /NEM/onet (y/n)? y

stop: ONET Disabled successfully.
```

Configuring an ONET

This section provides information on how to create, modify, and delete ONETs.

- "Configure an ONET" on page 11
- "Common Configuration Errors" on page 13

▼ Configure an ONET

This procedure enables you to create an ONET with multiple downlink ports and a single uplink port, with an option to assign them as member ports (tagged) to multiple VLANs. The `modify` command can be used to modify the downlink and uplink ports, name and VLAN assigned to a given ONET.

A given uplink or downlink port cannot be part of more than one ONET. In the default scenario, all 10 downlinks port are part of an ONET. The only way to create a new ONET is to delete an existing ONET.

1. Delete an ONET.

```
ONET# configure
ONET#-configure# no onet onet01
ONET#-configure# no onet onet02
ONET#-configure# end
```

2. Create an ONET.

```
ONET#-configure# onet onet-new uport extreme-ethernet 2 dport
extreme-ethernet 15,16
ONET#-configure# exit
ONET# show onets
Name: onet-new
   Onet VLAN:           4084
   Downlink port(s):    16 15
   VLAN(s):
```

```
   Uplink port:          02
Name: onet10
   Onet VLAN:            4075
   Downlink port(s):     24
   VLAN(s):
   Uplink port:          10
Name: onet09
   Onet VLAN:            4076
   Downlink port(s):     23
   VLAN(s):
   Uplink port:          09
```

3. Modify an ONET.

You can add a list of VLANs to the ONET and modify `onet-new` to have VLAN 2000 and uplink port as `Ex 0/1`.

```
ONET# configure
ONET#-configure# set onet onet01 uport extreme-ethernet 1 dport
extreme-ethernet 15,16 vlan id 2000
ONET#-configure# exit
ONET# show onets
Name: onet-new
   Onet VLAN:            4084
   Downlink port(s):     16 15
   VLAN(s):             2000
   Uplink port:          01
Name: onet10
   Onet VLAN:            4075
   Downlink port(s):     24
   VLAN(s):
   Uplink port:          10
Name: onet09
   Onet VLAN:            4076
   Downlink port(s):     23
   VLAN(s):
   Uplink port:          09
```

4. Delete an ONET.

```
ONET# configure
ONET#-configure# no onet onet-new
ONET#-configure# exit
ONET# show onets

Name: onet10
   Onet VLAN:            4075
   Downlink port(s):     24
```

```
   VLAN(s):
   Uplink port:          10
Name: onet09
   Onet VLAN:            4076
   Downlink port(s):     23
   VLAN(s):
   Uplink port:          09
```

Common Configuration Errors

This section shows examples of common errors made in configuring ONETs.

- **Creating an existing ONET.**

```
ONET# configure
ONET#-configure#onet onet01 uport extreme-ethernet 1 dport
extreme-ethernet 21
ONet onet01 already in use
ONET#-configure# end
```

- **Creating an ONET with downlink/uplink ports in another ONET.**

```
ONET# configure
ONET#-configure#onet onet03 uport extreme-ethernet 2 dport
extreme-ethernet 21
ONet uport 2 already in use
ONET#-configure# onet onet03 uport 5 extreme-ethernet dport
extreme-ethernet 15
ONet dport 15 already in use
ONET#-configure# end
```

- **Modifying an ONET Vlan without specifying uplink and downlink port.**

```
ONET# configure
ONET#-configure#set onet onet10 uport extreme-ethernet 7 vlan id
1000
Need both uport and dport parameters to assign VLAN
ONET#-configure# end
```

ONET CLI Commands

You can use these CLI commands with ONET. With the exception of the `show onet` and `show onets` commands, these commands are equivalents.

- "help Command" on page 15
- "show onet Command" on page 16
- "show onets Command" on page 17
- "show interfaces description Command" on page 18
- "show vlan Command" on page 21
- "show lldp Command" on page 23
- "show mac-address-table Command" on page 23
- "speed port Command" on page 24
- "exit Command" on page 25
- "write startup-config Command" on page 25
- "no onet Command" on page 26
- "onet Command" on page 26
- "set onet Command" on page 26

`help` Command

This command provides a description of the available CLI commands.

Syntax

`help` *command*

```
ONET# help help
help: Displays help for a particular command
```

`show onet` Command

This command shows the detail of an individual ONET. This command includes the uplink and downlink ports assigned to the specified ONET and the internal ONET VLAN information. The tunneled VLAN information is empty initially, but is displayed when ONET manipulation commands are supported.

Syntax

`show onet` *onet-id* `[counters]`

```
ONET# show onet onet01
Name: onet01
   Onet VLAN:            4075
   Downlink port(s):     15
   VLAN(s):
   Uplink port:          01
ONET# show onets onet01 counters
Name: onet10
   Onet VLAN:            4075
   Downlink port(s):     15
   VLAN(s):
   Uplink port:          01
Port      InOctet      InUcast    InDiscard   InErrs     InHCOctet
----      -------      -------    ---------   ------     ---------
Ex0/1     0           0           0           0          0

Port      OutOctet     OutUcast   OutDiscard  OutErrs    OutHCOctet
----      --------     --------   ----------  -------    ----------
Ex0/1     0            0           0           0           0


Port      InOctet      InUcast    InDiscard   InErrs     InHCOctet
----      -------      -------    ---------   ------     ---------
Ex0/15    0           0           0           0          0

Port      OutOctet     OutUcast   OutDiscard  OutErrs    OutHCOctet
----      --------     --------   ----------  -------    ----------
Ex0/15    0            0           0           0           0
```

`show onets` Command

This command displays the information for all available ONETs. The output shown in this example is for the example topology shown in "ONET Example Topology" on page 5".

Syntax

```
show onets
```

```
ONET# show onets
Name: onet10
   Onet VLAN:           4084
   Downlink port(s):    24
   VLAN(s):
   Uplink port:         10
Name: onet09
   Onet VLAN:           4083
   Downlink port(s):    23
   VLAN(s):
   Uplink port:         09
Name: onet08
   Onet VLAN:           4082
   Downlink port(s):    22
   VLAN(s):
   Uplink port:         08
Name: onet07
   Onet VLAN:           4081
   Downlink port(s):    21
   VLAN(s):
   Uplink port:         07
Name: onet06
   Onet VLAN:           4080
   Downlink port(s):    20
   VLAN(s):
   Uplink port:         06
Name: onet05
   Onet VLAN:           4079
   Downlink port(s):    19
   VLAN(s):
   Uplink port:         05
Name: onet04
   Onet VLAN:           4078
```

```
    Downlink port(s):    18
    VLAN(s):
    Uplink port:         04
Name: onet03
    Onet VLAN:           4077
    Downlink port(s):    17
    VLAN(s):
    Uplink port:         03
Name: onet02
    Onet VLAN:           4076
    Downlink port(s):    16
    VLAN(s):
    Uplink port:         02
Name: onet01
    Onet VLAN:           4075
    Downlink port(s):    15
    VLAN(s):
    Uplink port:         01
```

show interfaces description Command

This command displays the status and configuration information for the ports within the switch.

Syntax

```
show interfaces description
```

```
ONET# show interfaces

Ex0/1 up, line protocol is down (not connect)
Bridge Port Type: Customer Bridge Port

Hardware Address is 00:14:4f:6c:63:4f
MTU  9216 bytes, Full duplex, 10 Gbps,  No-Negotiation
HOL Block Prevention enabled.
Input flow-control is off,output flow-control is off

Link Up/Down Trap is enabled
```

```
Reception Counters
   Octets                    : 0
   Unicast Packets           : 0
   Discarded Packets         : 0
   Error Packets             : 0
   Unknown Protocol          : 0

Transmission Counters
   Octets                    : 0
   Unicast Packets           : 0
   Discarded Packets         : 0
   Error Packets             : 0

Ex0/2 up, line protocol is down (not connect)
Bridge Port Type: Customer Bridge Port

Hardware Address is 00:14:4f:6c:63:50
MTU  9216 bytes, Full duplex, 10 Gbps,  No-Negotiation
HOL Block Prevention enabled.
Input flow-control is off,output flow-control is off

Link Up/Down Trap is enabled

Reception Counters
   Octets                    : 0
   Unicast Packets           : 0
   Discarded Packets         : 0
   Error Packets             : 0
   Unknown Protocol          : 0

Transmission Counters
   Octets                    : 0
   Unicast Packets           : 0
   Discarded Packets         : 0
   Error Packets             : 0
?.....
Ex0/24 up, line protocol is down (not connect)
Bridge Port Type: Customer Bridge Port

Hardware Address is 00:14:4f:6c:63:66
MTU  9216 bytes, Full duplex, 10 Gbps,  No-Negotiation
HOL Block Prevention enabled.
Input flow-control is off,output flow-control is off

Link Up/Down Trap is enabled

Reception Counters
   Octets                    : 0
```

```
   Unicast Packets           : 0
   Discarded Packets         : 0
   Error Packets             : 0
   Unknown Protocol          : 0

Transmission Counters
   Octets                    : 0
   Unicast Packets           : 0
   Discarded Packets         : 0
   Error Packets             : 0

vlan1 up, line protocol is down (not connect)

ONET# show interfaces description

Interface    Status   Protocol  Description
---------    ------   --------  -----------
Ex0/1        up       down
Ex0/2        up       down
Ex0/3        up       down
Ex0/4        up       down
Ex0/5        up       down
Ex0/6        up       down
Ex0/7        up       down
Ex0/8        up       down
Ex0/9        up       down
Ex0/10       up       down
Ex0/11       down     down
Ex0/12       down     down
Ex0/13       down     down
Ex0/14       down     down
Ex0/15       down     down
Ex0/16       down     down
Ex0/17       down     down
Ex0/18       down     down
Ex0/19       down     down
Ex0/20       down     down
Ex0/21       down     down
Ex0/22       down     down
Ex0/23       down     down
Ex0/24       down     down
vlan1        down     down
```

`show vlan` Command

This command displays the VLAN membership of the ports within the switch. This command should display the ONET VLANs and the uplink-downlink port members of each VLAN.

In this example, ports `11-14` are unused at this time and are assigned to the default VLAN.

Syntax

`show vlan`

```
ONET# show vlan

Vlan database
-------------
Vlan ID             : 4075
Member Ports        : Ex0/1, Ex0/15
Untagged Ports      : Ex0/1, Ex0/15
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4076
Member Ports        : Ex0/2, Ex0/16
Untagged Ports      : Ex0/2, Ex0/16
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4077
Member Ports        : Ex0/3, Ex0/17
Untagged Ports      : Ex0/3, Ex0/17
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4078
Member Ports        : Ex0/4, Ex0/18
Untagged Ports      : Ex0/4, Ex0/18
Forbidden Ports     : None
Name                :
```

```
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4079
Member Ports        : Ex0/5, Ex0/19
Untagged Ports      : Ex0/5, Ex0/19
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4080
Member Ports        : Ex0/6, Ex0/20
Untagged Ports      : Ex0/6, Ex0/20
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4081
Member Ports        : Ex0/7, Ex0/21
Untagged Ports      : Ex0/7, Ex0/21
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4082
Member Ports        : Ex0/8, Ex0/22
Untagged Ports      : Ex0/8, Ex0/22
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4083
Member Ports        : Ex0/9, Ex0/23
Untagged Ports      : Ex0/9, Ex0/23
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 1
Member Ports        : Ex0/11, Ex0/12, Ex0/13, Ex0/14
Untagged Ports      : Ex0/11, Ex0/12, Ex0/13, Ex0/14
Forbidden Ports     : None
Name                :
Status              : Permanent
-------------------------------------------------
Vlan ID             : 4084
Member Ports        : Ex0/10, Ex0/24
Untagged Ports      : Ex0/10, Ex0/24
Forbidden Ports     : None
```

```
Name                  :
Status                : Permanent
------------------------------------------------------
```

show lldp Command

This command displays the configuration information for LLDP.

Syntax

```
show lldp
```

```
ONET# show lldp

LLDP is disabled
Transmit Interval         : 30
Holdtime Multiplier       : 4
Reinitialization Delay    : 2
Tx Delay                  : 2
Notification Interval     : 5
Chassis Id SubType        : Mac Address
Chassis Id                : 00:14:4f:6c:63:4f
```

show mac-address-table Command

This command displays the MAC address table learned and published by the switch.

Syntax

```
show mac-address-table
```

```
ONET# show mac-address-table
```

```
Vlan    Mac Address          Type      Ports
----    -----------          ----      -----
Total Mac Addresses displayed: 0
```

speed port Command

This command sets the link speed for the SFP ports 1 and 2 only. Error messages are displayed when invalid values for the ports or the speeds are used. The link speed is retained even if the switch is reset.

Syntax

speed port *interface-type interface* { 1000 | 10000 }

```
ONET# speed port extreme-ethernet 0/3 1000

Port speed can only be changed for ports 1 and 2!
Unknown argument value

ONET# speed port extreme-ethernet 0/2 10001

Port speed can only be set to either 1000 or 10000!
Unknown argument value
```

The default link speed for the SFP ports is 10Gbps. The following output appears for port 1 before the port speed is changed:

```
ONET# show interfaces

Ex0/1 up, line protocol is down (not connect)
Bridge Port Type: Customer Bridge Port

Hardware Address is 00:21:28:c4:53:01
MTU 9216 bytes, Full duplex, 10 Gbps, No-Negotiation
HOL Block Prevention enabled.
Input flow-control is off,output flow-control is off
.....
ONET# speed port extreme-ethernet 0/1 1000
```

The following output appears after the speed is changed:

```
ONET# show interfaces

Ex0/1 up, line protocol is down (not connect)
Bridge Port Type: Customer Bridge Port

Hardware Address is 00:21:28:c4:53:01
MTU 9216 bytes, Full duplex, 1 Gbps, No-Negotiation
HOL Block Prevention enabled.
Input flow-control is off,output flow-control is off
```

`exit` Command

Use this command to exit ONET.

Syntax

```
exit
```

```
ONET# exit

Connection closed by foreign host.
```

`write startup-config` Command

This command saves the existing configuration and restores it after rebooting.

Syntax

```
write startup-config
```

```
ONET# write startup-config
ONET#
```

`no onet` Command

This command deletes an existing ONET.

Syntax

`no onet` *onet-id*

```
ONET# configure
ONET#-configure# no onet onet01
ONET#-configure# end
```

`onet` Command

This command creates a new ONET. This command enables you to specify the *onet-id* (name), uplink and downlink ports, and the VLAN.

Syntax

`onet` *onet-id* `uport` *interface-type 1,2-3,4..14* `dport` *interface-type 15,16-17,18...24* `[vlan id` *1-4094*`]`

```
ONET# configure
ONET#-configure# onet onet-new uport extreme-ethernet 2 dport
extreme-ethernet 15,16
ONET#-configure# end
```

`set onet` Command

This command modifies an existing ONET. This command enables you to modify the uplink and downlink ports, ONET name, and the VLAN.

Syntax

`set onet` *name* `[uport` *interface-type 1,2-3,4..14*`] [dport` *interface-type 15,16-17,18...24*`] [name` *new-name*`] [vlan id` *1,2,3-4*`]`

```
ONET# configure
ONET#-configure# set onet onet01 uport extreme-ethernet 1 dport
extreme-ethernet 15,16 vlan id 2000
ONET#-configure# end
```