



Release Notes and Product Information Guide for Open Networking Adapter 1101GT

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Chapter 1: Introduction

Purpose

These Release Notes provide important information about this release of the Open Networking Adapter (ONA). For installation and initial setup information, refer to the ONA Quick Install Guide that came with your ONA.

Documentation

See *Documentation Reference* for a list of documentation for all VOSS products.

For installation and initial setup information of the Open Networking Adapter (ONA), refer to the Quick Install Guide that came with your ONA.

 **Note:**

The ONA works only with the Avaya Virtual Services Platform 4000 Series.

Training

Ongoing product training is available. For more information or to register, you can access the Web site at <http://avaya-learning.com/>.

Viewing Avaya Mentor videos

Avaya Mentor videos provide technical content on how to install, configure, and troubleshoot Avaya products.

About this task

Videos are available on the Avaya Support website, listed under the video document type, and on the Avaya-run channel on YouTube.

Procedure

- To find videos on the Avaya Support website, go to <http://support.avaya.com> and perform one of the following actions:
 - In **Search**, type `Avaya Mentor Videos` to see a list of the available videos.
 - In **Search**, type the product name. On the Search Results page, select **Video** in the **Content Type** column on the left.
- To find the Avaya Mentor videos on YouTube, go to www.youtube.com/AvayaMentor and perform one of the following actions:
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About this task

You can subscribe to different types of general notifications, for example, Product Correction Notices (PCN), which apply to any product or a specific product. You can also subscribe to specific types of documentation for a specific product, for example, Application & Technical Notes for Ethernet Routing Switch 5000 Series.

Procedure

1. In an Internet browser, go to <https://support.avaya.com>.
2. Type your username and password, and then click **Login**.
3. Under **My Information**, select **SSO login Profile**.
4. Click **E-NOTIFICATIONS**.
5. In the GENERAL NOTIFICATIONS area, select the required documentation types, and then click **UPDATE**.

GENERAL NOTIFICATIONS

1/5 Notifications Selected

End of Sale and/or Manufacturer Support Notices	<input type="checkbox"/>
Product Correction Notices (PCN)	<input checked="" type="checkbox"/>
Product Support Notices	<input type="checkbox"/>
Security Advisories	<input type="checkbox"/>
Services Support Notices	<input type="checkbox"/>

UPDATE >>

6. Click **OK**.
7. In the PRODUCT NOTIFICATIONS area, click **Add More Products**.

PRODUCT NOTIFICATIONS

Add More Products

Show Details

1 Notices

8. Scroll through the list, and then select the product name.
9. Select a release version.
10. Select the check box next to the required documentation types.

The screenshot shows a web interface for selecting a product. On the left, a 'PRODUCTS' menu lists various Avaya Ethernet switches, with 'Ethernet Routing Switch 5000 Series' highlighted. On the right, the detailed view for the 'ETHERNET ROUTING SWITCH 5000 SERIES' is shown. It includes a 'Select a Release Version' dropdown menu set to 'All and Future Releases'. Below this, there are several sections with checkboxes: 'Administration and System Programming', 'Application Developer Information', 'Application Notes', 'Application and Technical Notes', 'Declarations of Conformity', and 'Documentation Library'. A red 'SUBMIT >>' button is located at the bottom right of the detailed view.

11. Click **Submit**.

Support

Go to the Avaya Support website at <http://support.avaya.com> for the most up-to-date documentation, product notices, and knowledge articles. You can also search for release notes, downloads, and resolutions to issues. Use the online service request system to create a service request. Chat with live agents to get answers to questions, or request an agent to connect you to a support team if an issue requires additional expertise.

Searching a documentation collection

On the Avaya Support website, you can download the documentation library for a specific product and software release to perform searches across an entire document collection. For example, you can perform a single, simultaneous search across the collection to quickly find all occurrences of a particular feature. Use this procedure to perform an index search of your documentation collection.

Before you begin

- Download the documentation collection zip file to your local computer.
- You must have Adobe Acrobat or Adobe Reader installed on your computer.

Procedure

1. Extract the document collection zip file into a folder.
2. Navigate to the folder that contains the extracted files and open the file named `<product_name_release>.pdx`.

3. In the Search dialog box, select the option **In the index named <product_name_release>.pdx**.
4. Enter a search word or phrase.
5. Select any of the following to narrow your search:
 - Whole Words Only
 - Case-Sensitive
 - Include Bookmarks
 - Include Comments
6. Click **Search**.

The search results show the number of documents and instances found. You can sort the search results by Relevance Ranking, Date Modified, Filename, or Location. The default is Relevance Ranking.

Chapter 2: New in this release

The following sections highlight the new features in this release.

Avaya Surge solution support

Surge IoT Controller Mode (Mode 0) is officially supported in ONA Release 2.0, in addition to Fabric Extend (Mode 1) introduced in Release 1.0.

The ONA has two operational modes:

- Surge IoT Controller Mode (Mode 0, the default mode)
- Fabric Extend Mode (Mode 1)

The Surge IoT Controller Mode (Mode 0) enables the ONA to be controlled with a Surge IoT Controller, which can enable Fabric Attach and other features. In Mode 0, the ONA must communicate with an Surge IoT Controller to operate correctly. For more information about the Surge IoT Controller, see the Avaya Surge solution documentation.

In Mode-0 of the ONA, the following features are added in this release:

- New support for Cisco switches
- New support for Hewlett Packard Enterprise switches
- New support for Juniper Switches
- New support for Avaya FA and non-FA enabled switches: ERS 5600, ERS 5900, ERS 4500, ERS 4800, ERS 4900, ERS 3600
- New support for Zero Touch for ONA on Fabric enabled ERS and VSP switches
- New support for Fabric Attach Message Authentication
- New support for Business Class Surge™ IoT Controller
- New support for HyperSec Gateway

For details of Business Class Surge IoT Controller and HyperSec Gateway, please see the Avaya Surge solution documentation.

Chapter 3: Important notices

This section provides important information for this release.

File names

This section describes the ONA software files.

Software files

The following table provides the details of the ONA software files.

File name	Description	File sizes (bytes)
VEGA1101_GA.v3.0.0.0_oss-notice.txt	Optional: Master Copyright file.	1,187,278
VEGA1101_GA.v3.0.0.0.tgz	System software image for the ONA 1101GT.	48,900,332
VEGA1101_GA.v3.0.0.0.sha512.sig	MD5 Digital Signature	505

Supported operational modes

The ONA has two operational modes:

- Surge IoT Controller Mode (Mode 0, the default mode)
- Fabric Extend Mode (Mode 1)

During reboot, the ONA retains the configured mode.

For information about switching the configured mode, see *Avaya Open Networking Adapter 1101GT Installation Job Aid* (NN48800-300)

 **Note:**

To restore the factory default mode and parameters, depress the reset button for at least 5 seconds.

Operational considerations

The ONA 1101GT packet forwarding performance can vary based on several factors, including which mode the ONA is running and which features are enabled.

- In Surge IoT Controller Mode (Mode 0) the ONA has a 100 MB rate limiter enabled on the device port ingress. The rate limiter cannot be disabled in this release.
- In Fabric Extend Mode (Mode 1) the operational considerations are available in VSP 4000 documentation, see *Configuring Avaya Fabric Connect on VSP Operating System Software, NN47227-510*; see the sections on Fabric Extend considerations and ONA considerations.

Technical specifications

The following tables provide the technical specifications for the ONA 1101GT.

Table 1: Physical specifications

Specifications	ONA 1101GT
Height	1.496 in. (38 mm)
Width	2.716 in. (69 mm)
Depth	3.622 in. (92 mm)

Table 2: Electrical specifications

Specifications	ONA 1101GT
Maximum power consumption	9.6 W
Normal operation power	~7.5 W
Input rating when using PoE power from the VSP4000	PoE 54V @ 200 mA
Thermal rating	32.76 BTU/hr @35° C 25.59 BTU/hr @25° C
MTBF rating	@35° C 1,611,922 hours @25° C 2,240,389 hours

The following table lists the specifications for the 10W 100-240 AC power adapter. This adapter is sold separately and comes with four snap-in plug adapters: Type A (U.S. and Japan), Type B (EU), Type G (UK), and Type I (AUS and China). The part number is EC1105E11-E6.

Table 3: Optional AC power adapter specifications

Specifications	ONA 1101GT
Input	110-240 V AC, 50-60 Hz, 0.4 A Max
Output	5V DC, 2A

Table 4: Environmental specifications

Specifications	ONA 1101GT
Operating Temperature	0° C to 35° C (32° F to 95° F)
Storage Temperature	-40° C to 85°C (-40° F to 185° F)
Operating Humidity	0 to 95 percent noncondensing
Storage Humidity	0 to 95 percent noncondensing
Maximum Operating Altitude	3,048m (10 000 feet) above sea level
Acoustic Noise	None
<p>ONA units must be operated within the specified ambient temperature range of 0-35 C to ensure proper functionality. Special attention must be given to the placement of the ONA and its operating environment. ONA unit must not be placed within 6 inches of any additional heat source. ONA unit must be placed such as to ensure adequate airflow around the unit to allow for proper natural cooling.</p>	

Chapter 4: ONA software upgrade methods

See the following methods to upgrade software on an ONA. Choose the method best suited for your deployment state and ONA operating mode:

- [Upgrading a deployed ONA in Mode 0](#) on page 14 — This method uses the Surge IoT Controller connected to an ONA to perform the upgrade (Mode 0 only).

*** Note:**

You can use this upgrade method to avoid physically disconnecting the ONA from the Avaya Surge Fabric Attach network when an ONA is deployed in Mode 0.

- [Upgrading a deployed ONA in Mode 1](#) on page 14 — This method uses the VSP 4000 switch connected to an ONA to perform the upgrade (Mode 1 only).

*** Note:**

You can use this upgrade method to avoid physically disconnecting the ONA from the VSP 4000 Fabric Extend network when an ONA is deployed in Mode 1.

- [Upgrading a standalone ONA](#) on page 17 — This method uses a PC and a web browser to access the ONA's Manual Configuration menu to perform the upgrade (any mode).

*** Note:**

You can use this upgrade method before an ONA deployment, such as when you first receive your ONA.

Upgrading a deployed ONA in Mode 0

If the ONA is deployed in an Avaya Surge solution, Avaya recommends using the Surge IoT Controller to upgrade the ONA. See *Maintaining Avaya Surge*, NN48200-500.

You can use the Surge IoT Controller to perform a software upgrade on an ONA device deployed in Fabric Attach Mode 0.

Upgrading a deployed ONA in Mode 1

Use this procedure to upgrade the software on an ONA that has already been deployed.

Perform the steps in this procedure on the VSP 4000 connected to the ONA that you want to upgrade.

! Important:

The following upgrade procedure is applicable for Fabric Extend Mode 1 only.

Procedure

1. Enter Global Configuration mode:

```
enable
configure terminal
```

2. Configure the boot flag to enable the SSH daemon:

```
boot config flags sshd
```

3. Enable SSH globally on the switch:

```
ssh
```

4. Verify that SSH is globally enabled:

```
show ssh global
```

! Important:

You must enable **both** the SSH boot flag daemon and SSH globally.

5. Verify that the SSH daemon and server are enabled:

```
show logging file
```

6. Go to the Avaya Support website, <http://support.avaya.com> and download the ONA software image that you want to use.

7. Verify that the ONA has an IP address, and is up and running. This includes the Network and Device ports:

```
show khi fe-ona detail
```

*** Note:**

Before the ONA can get an IP tunnel source address from the VSP 4000, the following steps must be taken:

- Connect the Device and Network ports on the ONA to the VSP 4000.
- Make sure that the ONA is connected to a DHCP server. If a DHCP server is unavailable, statically configure an IP tunnel source address on the ONA.
- Create a Management VLAN on the ONA that includes the Network port.
- Designate the Device port for the IP tunnel source address in the configuration file.

The syntax for the IP tunnel source address is: `ip-tunnel-source-address <A.B.C.D> port <slot/port> [mtu <750-1950>] [vrf WORD<1-16>]`.

8. Upgrade the ONA:

```
fe-ona image-upgrade <ONAReleaseFile> [Username] [Password]
```

*** Note:**

The Username and Password are required. This is only optional if you did not change the defaults from `rwa/rwa`.

9. Check the status of the upgrade:

```
show khi fe-ona status
```

*** Note:**

When the upgrade finishes, the ONA automatically reboots.

Example

```
Switch(config)# boot config flags sshd
Switch(config)# show ssh global
Total Active Sessions : 0
  version                : v2only
  port                    : 22
  max-sessions            : 4
  timeout                 : 60
  action rsa-host key     : rsa-hostkeysize 2048
  action dsa-host key     : dsa-hostkeysize 1024
  rsa-auth                : true
  dsa-auth                : true
  pass-auth               : true
  sftp enable             : true
  enable                  : false

Switch(config)# ssh
CP1 [10/27/15 13:40:05.882:UTC] 0x000d861c 00000000 GlobalRouter SSH INFO SSH Server
Enabled

Switch(config)# show ssh global
Total Active Sessions : 0
  version                : v2only
  port                    : 22
  max-sessions            : 4
  timeout                 : 60
  action rsa-host key     : rsa-hostkeysize 2048
  action dsa-host key     : dsa-hostkeysize 1024
  rsa-auth                : true
  dsa-auth                : true
  pass-auth               : true
  sftp enable             : true
  enable                  : true

Switch(config)# show logging file
CP1 [10/27/15 13:40:05.882:UTC] 0x000d861c 00000000 GlobalRouter SSH INFO SSH Server
Enabled
CP1 [10/27/15 13:40:05.882:UTC] 0x0000461f 00000000 GlobalRouter SNMP INFO SSH server
enabled

Switch(config)# show khi fe-ona detail
=====
                        ONA RUNTIME INFORMATION
=====
ONA Port Number : 1/8
ONA Management Address : 11.1.1.100
```



```
Tunnel Source IP Address : 40.1.1.4
ONA LLDP Port Status : Enabled
ONA Device Port Status : UP
ONA Device Status : UP
MTU : 1950
ONA Network Port Number : 1/6
ONA Mac(ARP) Address : 10:cd:ae:69:c6:d0
ONA Source VlanId : 11
ONA Source Vlan IP : 11.1.1.1
ONA Gateway IP: 11.1.1.1
ONA Management IP Mask : 255.255.255.0
ONA Bootmode : 1
ONA Uptime : 2 days, 12:07:11
pbit-to-dscp-map p0=0 p1=0 p2=10 p3=18 p4=26 p5=34 p6=46 p7=46

Switch(config)# fe-ona image-upgrade VEGA1101_GA.3.0.0.0.tgz
CP1 [10/26/15 10:51:07.294:UTC] 0x00378603 00000000 GlobalRouter ONA INFO Periodic ONA
Image upgrade status :DOWNLOAD_IN_PROGRESS

Switch(config)# show khi fe-ona status
=====
ONA STATUS
=====
ONA Device Status : UP
Running Release Name : VEGA1101_beta.3.0.0.0int018
Image Upgrade Status : DOWNLOAD_IN_PROGRESS
Image File Is Being Used For Upgrade: VEGA1101_GA.3.0.0.0.tgz
-----

Switch(config)# show khi fe-ona status
=====
ONA STATUS
=====
ONA Device Status : UP
Running Release Name : VEGA1101_GA.3.0.0.0
Last Image Upgrade Status : UPGRADE SUCCESS
Last Image File Used For Upgrade: VEGA1101_GA.3.0.0.0.tgz
-----
```

Upgrading a standalone ONA using the Manual Configuration menu

Use this procedure to upgrade the ONA when you first receive it. This method uses a PC to access the ONA's Manual Configuration menu.

Procedure

1. From the PC that you are going to use for this upgrade procedure, go to the Avaya Support website, <http://support.avaya.com>, and download the ONA software image that you want to use.
2. Connect a PC to the RJ-45 port on the Device side of the ONA.

*** Note:**

Make sure the PC's network port is enabled with DHCP client.

3. Insert a paper clip into the reset switch. Press and hold the reset button before applying power to the ONA.
4. Connect the cable from the network switch to the Network side of the ONA for PoE power. If PoE power is unavailable, connect an external power adapter.
5. Continue pressing and holding the reset button until the Status LED cycles through a steady red/green/blue. Then release the reset button and the Status LED flashes a steady amber, which indicates that the Manual Configuration menu is running.

*** Note:**

After this step, wait for a few seconds so that the PC gets an IP address for the ONA over DHCP.

6. On the PC, use a browser to connect to the ONA configuration menu with the address `http://192.168.100.1`.

*** Note:**

You cannot go directly to this web page. You must complete steps 1–5 first.

7. Click **Upgrade Software**.
8. Select the software upgrade package that you want to upload.
9. Click **Send** to upload the image to the ONA. This may take up to five minutes.

*** Note:**

Do not refresh or close the webpage during the upgrade.

10. Click **Return to Configuration page**.
11. Click **Reboot into Operational Mode**.
12. Disconnect the PC.

Version of Previous Releases

Software Version:

- 1.0.0.0
- 1.0.1.0
- 2.0.0.0
- 2.0.1.1
- 2.0.1.2

Chapter 5: Known issues and limitations

This chapter details the known issues and limitations found in this release. Where appropriate, use the workarounds provided.

Known issues in this release

This section identifies the known issues in this release.

Issue number	Description	Workaround
VEGA 158	The ONA software continuously monitors the internal operating temperature of the ONA device. If the high temperature threshold value of 73 degrees Centigrade (C) is reached; a high temperature warning is generated. The ONA unit automatically shuts down if its temperature reaches 75 C. The ONA unit automatically restarts when its temperature drops below 69 C.	ONA units must be operated within the specified ambient temperature range of 0-35 C to ensure proper functionality. Special attention must be given to the placement of the ONA and its operating environment. ONA unit must not be placed within 6 inches of any additional heat source. ONA unit should be placed such as to ensure adequate airflow around the unit to allow for proper natural cooling.

Limitations in this release

This section lists known limitations and expected behaviors that may first appear to be issues.

Issue number	Description
wi01234289	HTTP management of the ONA is not supported when it is in Mode 1 deployed with a VSP 4000 Series switch, or Mode 0 deployed with a Surge IoT Controller.

Chapter 6: Resolved issues in this release

This section identifies the resolved issues in this release.

Issue number	Description	Workaround
VEGA-211	ONAs were reporting high temperature warnings at ambient temperature.	Alarm Threshold temperature has been raised from 65C to 73C. Operating efficiencies have been made by disabling unused hardware features to help further reduce power consumption.