Avaya SDN Fx Healthcare Release Notes

Release 1.0

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Virtualization

Each virtual appliance has its own ordering code. Note that each instance of a virtual appliance must be ordered separately. If the end-user customer or Business Partner wants to install two of the same type of virtual appliances, then two virtual appliances of that type must be ordered.

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Purpose

Release Notes provide information about Avaya SDN Fx Healthcare Release 1.0.

- General information about the SDN Fx Healthcare solution
- Release distribution
- Supported devices
- Known problems and workarounds
- Operational notes
- List of documents
- Support contact information

Intended audience

The primary audience for this document is anyone who is involved with deployment, administration, maintenance and troubleshooting for the SDN Fx Healthcare solution. The audience includes, but is not limited to, implementation engineers, field technicians, business partners, solution providers, and customers. This document does not include optional or customized aspects of a configuration.

About SDN Fx Healthcare Solution

The Avaya SDN Fx Healthcare solution delivers the simplicity needed to help connect, secure, and manage the growing number of medical devices and technologies to reduce breaches, implement new healthcare innovation rapidly, and improve IT staff efficiency. The solution provides the following features:

- Advanced network segmentation to reduce catastrophic breaches.
- Automated and secure onboarding of medical devices.
- Inventory management of hundreds of devices.
- Ability to assign flow priority by device and traffic type.

The Avaya SDN Fx Healthcare solution is an implementation of Avaya SDN Fx architecture. The solution combines Open vSwitch (OVS)-enabled hardware with the SDN Controller and user level workflows to provide isolation and segmentation of medical devices in healthcare facilities. The SDN Controller uses the OpenDaylight Controller (ODL) that manages all service modules within the framework. Using the protocols NETCONF and OpenFlow for network configuration, the system accesses manager and services modules through a programmable northbound or southbound API layer.

Along with the SDN Controller, the Avaya SDN Fx Healthcare solution provides the Avaya SDN Healthcare Application. The Avaya SDN Healthcare Application enables you to configure and manage the network of Open Networking Adapter (ONA) devices, along with the medical devices to which the ONAs connect over the network. The Avaya SDN Healthcare Application provides a web user interface for ONA device configuration, device management, flow configuration, and diagnostics.

Terminology

Term	Description
SDN Controller	An appliance based solution consisting of two rack mountable single unit servers running the software components of the SDN Fx Healthcare Solution
Leader Node	The node which provides acts as the Active node in the Active-Standby high availability setup
Master Node	The node which provides acts as the Standby node in the Active-Standby high availability setup
ONA	Open Networking Adapter 1101GT
SDN Controller UI	The software component in the SDN Fx Healthcare solution that allows configuration of the SDN Controller functions
SDN Fx HealthCare App	The software component in the SDN Fx Healthcare solution that allows licensing of ONAs and provisioning of the flows in the ONA
ADM	Appliance Device Manager
KVM	Kernel-based Virtual Machine. The VM Hypervisor
VM	Virtual Machine

Supported features for this Release

The following features are supported:

- ONA Certificate Authentication
- License Management
- ONA Onboarding
- ONA Upgrade
- Backup and Restore
- Syslog Notification
- Distributed ONA onboarding and certificate authentication
- Ability to add/manage a third party certificate
- ONA upgrade (active node only)
- High Availability and Failover
- RBAC Support on SDN Application
- Mobility - Location based ONA inventory
- Bulk assign Service Profile
- Auto detection of Paired MAC Address during Security Profile creation.
- Improved Topology Visualization
- Syslog collection & Auditing
- Appliance Device Management
- Online Help

SDN Fx Healthcare hardware and software requirements

The solution is shipped with two components:

- Open Networking Adapter (ONA) : A pocket-sized intelligent appliance that pairs with a medical device
- SDN Controller hardware appliances: The servers provide hardware and software resources for the SDN Fx Healthcare solution.

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Important!

The SDN Controller server appliance does not ship with AC power cords. You can use any 100–240V IEC 60320 AC power cord with a C13 connector that meets the regulations for your geographic region and operating environment.

Avaya recommends one of the following AC power cords whose Avaya material code are as follows:

Material Code	Description
AA0020062E6	POWER CORD IEC C13 TO NEMA 5-15P NORTH AMERICA (2.5M 10A/125V) ERS3500 ERS4500 ERS5500 ERS5900_450W VSP7000 VSP8000 SECURE ROUTER POE_INJECTORS
AA0020063E6	POWER CORD IEC C13 TO BS1363 UK (2.5M 10A/250V) ERS3500 ERS4500 ERS5500 VSP7000 SECURE ROUTER POE_INJECTORS
AA0020064E6	POWER CORD IEC C13 TO CEE 7/17 EU (2.5M 10A/250V) ERS3500 ERS4500 ERS5500 VSP7000 SECURE ROUTER POE_INJECTORS
AA0020065E6	POWER CORD IEC C13 TO CEI23-16 ITALY (2.5M 10A/125V) ERS3500 ERS4500 ERS5500 ERS5900_450W VSP7000 VSP8000 SECURE ROUTER POE_INJECTORS
AA0020066E6	POWER CORD IEC C13 TO GB2099 CHINA (2.5M 10A/250V) ERS3500 ERS4500 ERS5500 VSP7000 SECURE ROUTER POE_INJECTORS
AA0020067E6	POWER CORD IEC C13 TO BS546 INDIA (2.5M 10A/250V) ERS3500 ERS4500 ERS5500 VSP7000 SECURE ROUTER POE_INJECTORS
AA0020068E6	POWER CORD IEC C13 TO AS 3112 AUSTRALIA (2.5M 10A/250V) ERS3500 ERS4500 ERS5500 VSP7000 SECURE ROUTER POE_INJECTORS
AA0020069E6	POWER CORD IEC C13 TO JIS 8303 JAPAN CNS-10917 TAIWAN (2.5M 12A/125V) ERS3500 ERS4500 ERS5500 VSP7000 SECURE ROUTER POE_INJECTORS

Other software and hardware requirements

- A DNS/DHCP server is required and must be set up prior to the Application installation
- SDN Healthcare Application version 1.0.0.24.20161331803
- Network Devices
    - VSP4850-GTS running VOSS 5.1.0.0
    - ERS4826 or 4850GTS-PWR+ running BOSS 5.9.2.047
    - ONA 1101GT running VEGA ONAv2.0.0.0int014

Supported browsers

SDN Healthcare Application:

- Chrome - version 40 and above

SDN Controller Application:

- Internet Explorer – version 10, version 11
- Firefox – version 40 and above

Known Limitations & Workarounds

The following are limitations for Avaya SDN Fx Healthcare release 1.0:

Issue ID	Summary	Component/s	Description / Workaround
SDN-1817	SDN Controller Platform Postgres DB failure observed during HA Failover	AFO-UI	**Workaround:** Check if postgres is running on platform vm, using ***service postgresql status***. If the service is not running, check the logs in /var/lib/pgsql/pgstartup.log and /var/lib/pgsql/data/pg_log/postgres.log If the logs resemble: Mar 17 02:44:48 cluster-platform postgres[15503]: [2-1] 2016-03-17 02:44:48 EDT:[15503]LOG: database system was interrupted; last known up at 2016-03-16 09:49:15 EDT Mar 17 02:44:48 cluster-platform postgres[15503]: [3-1] 2016-03-17 02:44:48 EDT:[15503]LOG: invalid magic number 0000 in log file 0, segment 2, offset 7512064 Mar 17 02:44:48 cluster-platform postgres[15503]: [4-1] 2016-03-17 02:44:48 EDT:[15503]LOG: invalid primary checkpoint record Mar 17 02:44:48 cluster-platform postgres[15503]: [5-1] 2016-03-17 02:44:48 EDT:[15503]LOG: invalid secondary checkpoint record Mar 17 02:44:48 cluster-platform postgres[15503]: [6-1] 2016-03-17 02:44:48 EDT:[15503]PANIC: could not locate a valid checkpoint record Mar 17 02:44:48 cluster-platform postgres[15494]: [2-1] 2016-03-17 02:44:48 EDT:[15494]LOG: startup process (PID 15503) was terminated by signal 6: Aborted Mar 17 02:44:48 cluster-platform postgres[15494]: [3-1] 2016-03-17 02:44:48 EDT:[15494]LOG: aborting startup due to startup process failure

			What next: The transaction logs or write ahead logs in postgres sql are corrupted. Run the following command's with **due diligence** to recover the database Login as root to platform vm ***mkdir -p /root/pg_data;cp -r /var/lib/pgsql/data/ /root/pg_data/*** ***sudo -H -u postgres bash -c "/usr/pgsql-9.3/bin/pg_resetxlog /var/lib/pgsql/data/"*** ***service postgresql start*** If the postgresql service doesn't come up, please contact Avaya.
SDN-1496	The number of devices shown in device inventory data and network topology UI may not always be the same.	SDN HealthCare Application	Known Limitation for 1.0. Topology Manager will only show the count of the Connected ONA information.
SDN-1575	ONA containing old CA certificate will not go ACTIVE. If this occurs, the ONA must be reset.	SDN HealthCare Application	**Workaround:** Factory Reset the ONA.
SDN-915	In FTP application, if the user selects PASV mode, FTP will not work	Flow manager	**Workaround:** Use SFTP or FTP Active mode.
SDN-1943	It takes more than 4 minutes to apply 50 flows changes to 10 ONAs	Flow manager	No Workaround.

Known problems and workarounds

Issue ID	Summary	Component/s	Description / Workaround
SDN-1556	Role Based Access Control for the SDN Controller Orchestration menu does not work.	AFO-UI	Any user account created by "admin" account on the AFO, has permissions to modify the HC App password. The account also has permissions to perform operations on the following pages: 1. Administration > SDN Licensing 2. Administration > OSC 3. Orchestration > SDN Application 4. Orchestration > Certificates These operations should not be allowed, the created user accounts should have only read permissions on these pages.
SDN-2054	On a VM upgraded setup, running topology discovery from SDN HealthCareApp causes AFO discovery to run endlessly	AFO-UI	This is a UI refresh issue. If you do not see the discovery page updated every minute, please refresh the browser tab and open the Network > Discovery page again.
SDN-2119	ZTD - Factory Reset : the operation needs to enforce use of Console only	Deployment	Please only use the Console to perform the Appliance Factory reset. Details in the Install & deployment Guide.
SDN-2234	During Bulk ONA Upgrade, the Upgrade tasks are in “In Progress” forever and for some ONA’s, upgrade process is not started.	ONA Upgrade	**Description**: During the process of ONA upgrade, sometimes, the thread allocation to some ONA's is not happening properly (as seen in this case) which leads to these ONA's to be in "In-progress" state forever. **Occurrence**: Not always. But seen sometimes, when multiple upgrade tasks with 40 ONA’s associated are activated simultaneously. **Workaround:** Change the default “Concurrent ONA Firmware Upgrades limit” preference from 20 to 40 and activate the upgrade tasks one by one.
SDN-2061	Not able to open MSC properties to configure iLO for Master	AFO-UI	**Workaround:** Steps to configure Master iLO 1. Login to SDN (browser) 2. Open new browser tab: Go to URL https:// <master_node_FQDN>/ssd (not IP address!).

			3. Next to Home icon under the Solution Software Title, Click the MSC preferences icon 4. Enter Master iLO IP address into the field for iLO IP address. Apply & Close the window.
SDN-2197	Device Inventory does not auto refresh license count intermittently	SDN HealthCare Application	If SDNHCapp does not auto refresh license count, the Device Inventory shows different count than SDN Controller > SDN Licensing. SDN Licensing count is correct. The remedy is to open a different page in SDNHCapp (such as, Service Profile) and then move back to Device Inventory page. Returning to Device Inventory forces display refresh and license count. Alternatively, you can log out and log back in to SDNHCapp.

Documentation list

The following table lists the documents related to the Avaya SDN Fx Healthcare solution. Download the documents from the Avaya Support website at http://support.avaya.com

Document	Description
Avaya SDN Fx Healthcare Solution Description, (NN48200-100)	This document offers a high-level description of the Avaya SDN Fx Healthcare solution.
Avaya SDN Fx Healthcare User Guide, (NN48200-101)	This document describes how to use the Avaya SDN Healthcare Application features.
Locating the software and release notes for Avaya SDN Fx Healthcare, (NN48200-103)	This document describes where to find critical information to configure and deploy the Avaya SDN Fx Healthcare solution.
Deploying Avaya SDN Fx Healthcare, (NN48200-300)	This document contains Avaya SDN Fx Healthcare solution installation and deployment procedures
Maintaining Avaya SDN Fx Healthcare, (NN48200-500)	This document contains the Avaya SDN Fx Healthcare solution maintenance procedures and best practices for routine maintenance. Routine maintenance practices include regularly scheduled backup and restoration, daily monitoring, and verification testing.
Administering Avaya SDN Fx Healthcare, (NN48200-600)	This document contains information about how to perform the Avaya SDN Fx Healthcare solution administration tasks including how to use management tools, and how to manage data and security.
Troubleshooting Avaya SDN Fx Healthcare, (NN48200-700)	This document describes how to use the Avaya SDN Fx Healthcare solution troubleshooting tools and utilities. The document also describes the procedures to contact Avaya Support and contains typical error messages and resolution tasks.
Avaya Open Networking Adapter 1101GT Installation Job Aid (NN48800-300)	This installation job aid provides how to deploy an Open Networking Adapter (ONA).
Avaya Open Networking Adapter 1101GT Software Update Requirement (NN48800–302)	The software upgrade requirement document provides information about the requirement to upgrade your Open Networking Adapter (ONA) devices to the final software version.
Avaya Open Networking Adapter 1101GT Release Notes (NN48800-400)	The *Avaya Open Networking Adapter 1101GT Release Notes* (NN48800-400) provide important information about this release of the Open Networking Adapter (ONA).
Avaya Open Networking Adapter 1101GT Read Me(NN48800–401)	The read me document provides a brief description on where to find the documentation for the Open Networking Adapter (ONA) devices.