AirDefense Services Platform 9.1.2 Service Module
Installation Guide

Overview

Purpose

This document provides step-by-step instructions on how to install the AirDefense Services Platform (ADSP) 9.1.2 Service Module.

Document Conventions

The following graphical alerts are used in this document to indicate notable situations:

NOTE This symbol indicates something of special interest or importance to the reader. Failure to read the note will not result in physical harm to the reader, equipment or data.

CAUTION This symbol indicates that if this information is ignored, it is possible that damage to data or equipment may occur.

WARNING! This symbol indicates that if this information is ignored, it is possible that serious personal injury may occur.

System Requirements

Hardware Appliances

The following hardware appliances are supported:

- Model NX-95x0
- Model SV-4250
- Model SV-3652
- Model SV-1252

Legacy Appliances

- ADSP 9.0.x and later do not support legacy appliances without 64-bit OS support. If you have a 32-bit server you cannot upgrade beyond version 8.1.3.
- ADSP 9.1.x and later do not support legacy appliances without 2GB of RAM or greater. If you have a 1GB server you cannot upgrade beyond version 9.0.3.

Supported Browsers

- Firefox 32 and higher
- Internet Explorer 9 and higher
- Google Chrome 37 and higher

Supported OS

- Windows 7
- Linux
- Mac (Thin Client Applications Only)

System Upgrade and Migration

Upgrading Standalone to Later Version

You can upgrade your standalone system from version 8.x and later to version 9.1.2. If you are running version 7.3.4, you can only upgrade to an 8.x system. If the upgrade is done with the intention of going to a 9.x system, the 8.x system should be checked to assure the restore is correct prior to continuing the installation. Any 7.x system prior to 7.3.4 must be upgraded to 7.3.4 prior to making a backup/restore.

When restoring from a 7.x version, Group folders will become Building folders and Location folders will become Floor Folders. Also, not all 7.x floor plan formats are supported in later versions of ADSP, and unsupported floor plans will not be restored.

Migrating Standalone to UM

To migrate your standalone system to Unified Mode, version 9.1.2, the standalone system must be running version 9.1.0 or later. If a standalone system planned for migration to Unified Mode is running 9.0.x or earlier, then you must upgrade to 9.1.0 before you perform a backup. Be sure to check the 9.1.0 system to assure the restore is correct prior to continuing the installation.

The following Virtual Platforms are supported:

- Xen - Hypervisor 4.1.x
- VMWare - vSphere 5.0 (ESXi)
- Xen Cloud Platform (XCP)

Upgrading from Earlier Versions

In order to install version 9.1.2-17, you can only upgrade from 9.1.1-15 or later. Direct upgrade from any other version is not supported. If you are running 9.1.1-15 or later, proceed with installing 9.1.2-17. If you are running an earlier version, you must upgrade before you apply 9.1.2-17. Load the ADSP software version in this exact order:

1 Extract the earlier version(s) in sequence, beginning with the most recent. Save the version as an ISO image and copy it to a blank DVD that is bootable. (If the appliance does not have a DVD drive, you can use 2 CDs.)

2 Insert the DVD or CD into the CD Drive on the AirDefense Appliance and power on.

3 The system displays "Do you want to install the AirDefense Software?" Select **Yes**.

4 The system prompts you to choose the defaults option. Select **Use Defaults** to ensure a clean upgrade.

5 When you have successfully loaded the earlier ADSP version, you are prompted to restart. Select **Yes**.

> ✓ ***NOTE*** If you have an earlier version of ADSP, you must upgrade sequentially from the version you are running now to version 9.1.2-17. For each incremental upgrade, follow the same loading procedure described above. Restart the system after each service module is loaded.

Performing Back-Up

Back up your system configuration before beginning the upgrade process. (If you already have a recent configuration backup, you can skip this procedure.)

✓ ***NOTE*** To avoid losing your system configuration, be sure to back up your configuration to your local workstation. During the upgrade process you are required to use system defaults, so other configurations are lost. You can restore your configuration after the upgrade.

Follow these steps to back up your system configuration:

1   Log in to the ADSP GUI as an administrator.

2   Go to **Configuration** > **Appliance Manager** > **Configuration Backup**.

3   Click the **Backup Now** button. The Backup Now window displays.

4   You are prompted by a system message when the backup file is ready for download. Click the **Download** button and the **Select Location for Download** window displays.

5   Navigate to the directory where you want to store your server configuration backup file.

6   Click **Save** to store the file in the selected destination.

7   Log out of the ADSP GUI.

Installing 9.1.2 Service Module

Installing Service Module File

Follow these steps to install the Service Module on your ADSP appliance:

1   Download the ADSP 9.1.2-17 Service Module file from the Motorola Solutions Support website and SCP (Secure Copy Protocol) it to a directory on your ADSP appliance, such as **/usr/local/tmp**.

2   Go to https://portal.motorolasolutions.com/Support/US-EN to request the download site credentials to obtain the Service Module file.

> **Important**   Some browsers may modify the filename. The Service Module file name must exactly match the file name as shown below. If your browser changes the file name, you must change it back before proceeding.

Once the download is complete, you will need to launch the command line interface.

Launching Command Line Interface

To launch the command line interface, you must have the following information available:

•   The default command line user name and password for your system.

•   The ADSP appliance IP address.

You can connect to the command line interface in one of two ways: directly to the appliance via the console or remotely using the SSH protocol 2. To launch the command line remotely using the SSH protocol 2, follow these steps:

1   Launch your SSH client and connect to the ADSP appliance's IP address. See the following example:

```
NAME
     ssh -- OpenSSH SSH client (remote login program)

SYNOPSIS
     ssh [-1246AaCfgkMNnqsTtVvXxY] [-b bind_address] [-c cipher_spec] [-D
         [bind_address:]port] [-e escape_char] [-F configfile]
         [-i identity_file] [-L [bind_address:]port:host:hostport]
         [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port] [-R
         [bind_address:]port:host:hostport] [-S ctl_path]
         [-w local_tun[:remote_tun]] [user@]hostname [command]

DESCRIPTION
     ssh (SSH client) is a program for logging into a remote machine and for
     executing commands on a remote machine.  It is intended to replace rlogin
     and rsh, and provide secure encrypted communications between two
     untrusted hosts over an insecure network.  X11 connections and arbitrary
     TCP ports can also be forwarded over the secure channel.
```

> ✓   **NOTE**   You must have a client that supports SSH protocol 2 installed on the remote workstation used to connect to the ADSP appliance. If your client attempts to use SSH protocol 1, you will receive protocol error messages in syslog.

2   At the login prompt, enter **smxmgr** as your command line user name, followed by your command line user password. The **ADSPadmin** main screen is displayed.

3   From the **ADSPadmin** main screen, type **servmod**, then press <**Enter**> to display the **servmod** screen.

4   At the prompt, you are asked to enter the fully-qualified directory name where the Service Module resides on the appliance file system. Enter the directory name, such as **/usr/local/tmp/**, and then press <**Enter**>. A numbered list of the available Service Modules appears:

5   Enter the line number of the Service Module (in this example **1**), and then press <**Enter**>. This action initiates the installation of the Service Module.

6   When the following message displays:

Type <**yes**> and then press <**Enter**>. The system installs the service module files.

7   Once the installation is complete, the system will need a reboot. The follow message displays:

```
Installing the service module via script
Health Monitor Not Currently Running[ OK ]
Graphical User Interface shutdown[ OK ]
Report Server Not Currently Running[ OK ]
Action Manager Not Currently Running[ OK ]
Backup Server Not Currently Running[ OK ]
RMI Registry Not Currently Running[ OK ]
Schedule Server Not Currently Running[ OK ]
Device Management Server Not Currently Running[ OK ]
RF Modeling Engine shutdown[ OK ]
Protocol Analysis Engine Not Currently Running[ OK ]
Forensic Server Not Currently Running[ OK ]
Database Maintenance[ OK ]

Preparing...              ######################################### [100%]
    1:bash                ######################################### [ 25%]
/
    2:AD-service7         ######################################### [ 50%]
    3:openssl             ######################################### [ 75%]
    4:openssl             ######################################### [100%]


!!!!!!!!!!!!!!!!!   YOU MUST REBOOT THE SYSTEM NOW   !!!!!!!!!!!!!!!!!!
                   Press ENTER to reboot:
```

8   Press <**Enter**> and you receive a message:

```
Broadcast message from smxmgr@localhost
           (/dev/pts/1) at 5:02 ...

The system is going down for reboot NOW!
```

The ADSP processes are restarted.

✓   *NOTE*   If you receive a message stating **Pulse Shared Memory did not clear**, do not be alarmed. This message is informational only.

After the reboot, you will need to log back in to determine if the upgrade was a success. Please follow the instructions for *Checking System Status* provided in this document in the following section.

Checking System Status

Checking Process Status

When the Service Module installation is complete, perform the following steps:

1   Using SSH, re-login to **ADSPadmin**.

2   Type **m**, and then press <**Enter**>.The **Manage** screen appears.

3   Type **status**, and then press <**Enter**>. The system displays two choices: **Process Status** and **Disk Status**.

4   Type **p** and then press <**Enter**> to display the process status. The system displays the release and build number and lists the status of all system processes.

> **Important**   Do not launch the ADSP GUI until the following system processes indicate **RUNNING**:
>
> - Health Monitor,
> - Action Manager,
> - RMI Registry,
> - License Manager,
> - Report Server,
> - Backup Server,
> - Schedule Server,
> - Device Management Server,
> - RF Modeling Engine,
> - Protocol Analysis Engine,
> - Database,
> - Postmaster, and
> - Graphical User Interface.
>
> If any of these processes indicate **Stopped**, press <**Enter**> to go back to the **Manage** screen, type **restart**, and then type **yes** to continue. Check the Process Status again. If one or more processes are still **Stopped**, contact the *Customer Support Center*.

5   Press <**Enter**> to return to the **Manage** screen.

Check File System Usage

Follow these steps to check file system usage:

1   On the **ADSPadmin** main screen, type **m**, then press <**Enter**>. The **Manage** screen appears.

2   Type **status**, then press <**Enter**>.

3   Type **d**, then press <**Enter**>.

The system displays the current system status, including the usage of the /var partition, in percentage values.

> **Important**   If your system usage is s 60% or higher for /home, or 80% or higher for /var, DO NOT
> PROCEED WITH THIS SERVICE MODULE INSTALLATION. Contact the *Customer Support*
> *Center*.

4   Press <**Enter**> to return to the **Manage** screen.

5   Type **q** and then press <**Enter**> to return to the **ADSPadmin** main screen.

Once you have determined that the Service Module is successfully loaded to the ADSP appliance, type **q** and then press <**Enter**> to exit **ADSPadmin**.

> *NOTE*   You only have to type **q** and press <**Enter**> once if you are on the main screen of ADSPadmin. If
> you are inside of another sub-menu, type **q** and press <**Enter**> to get to the main screen.

Installing ADSP Toolkit

Before launching ADSP, you must install the Toolkit, which is required to run some of the advanced features of ADSP. When attempting to access a feature which requires the toolkit, the browser will download a launcher file "adeapp.adx" and use the toolkit to run it. If the toolkit is not installed, the file will download but the feature selected will not run.

Download Toolkit

To install the ADSP Toolkit, you must access the ADSP Login page. Follow these steps:

1   Type the IP address or URL you assigned to the computer hosting ADSP.

   Example:

   https://<server_ip_address>:8543
   https://<server_name>:8543

2   The login page displays.

3   Click the **Download Toolkit** link in the top right-hand corner of the login page. You may also click **Menu** >
   Download Toolkit if you are logged in to ADSP. The following pop-up displays, providing the tools to
   download the ADSP Toolkit for Windows Installation.

Windows Installation

1   Click on the link for ADSP-install.exe. A **Security Warning** window displays.

2   Click **Run** to install the ADSP Toolkit. A **Download Status** window displays. Then, another security window displays.

3   Click **Run** to verify that you want to install the application. A **License Agreement** displays.

4   Read the License Agreement and then click **I Agree**. The installation location window appears.

5   Accept the default location or browse to another location, and then click **Install**. An **Installation Status** window displays. Then, the **Complete Installation** window displays.

6   Click **Finish**.

Linux Installation

1   Click on the link for **ADSP.tar.gz**. A dialog window displays prompting you to open or save the file.

2   Save the file to a directory on your Linux system.

3   Unpack ADSP.tar.gz using the following command:
tar xzvf ADSP.tar.gz

The unpack files are placed in the ADSP installation directory. When you attempt to access an ADSP application that is part of the toolkit, your browser will prompt you on what to do with the file *adeapp.adx*. Select **Open with** and specify **adsp**. Make sure the **Do this automatically for files like this from now on** checkbox is checked, and then click **OK**. Now, when you attempt to open an ADSP application that is part of the toolkit, it will open automatically.
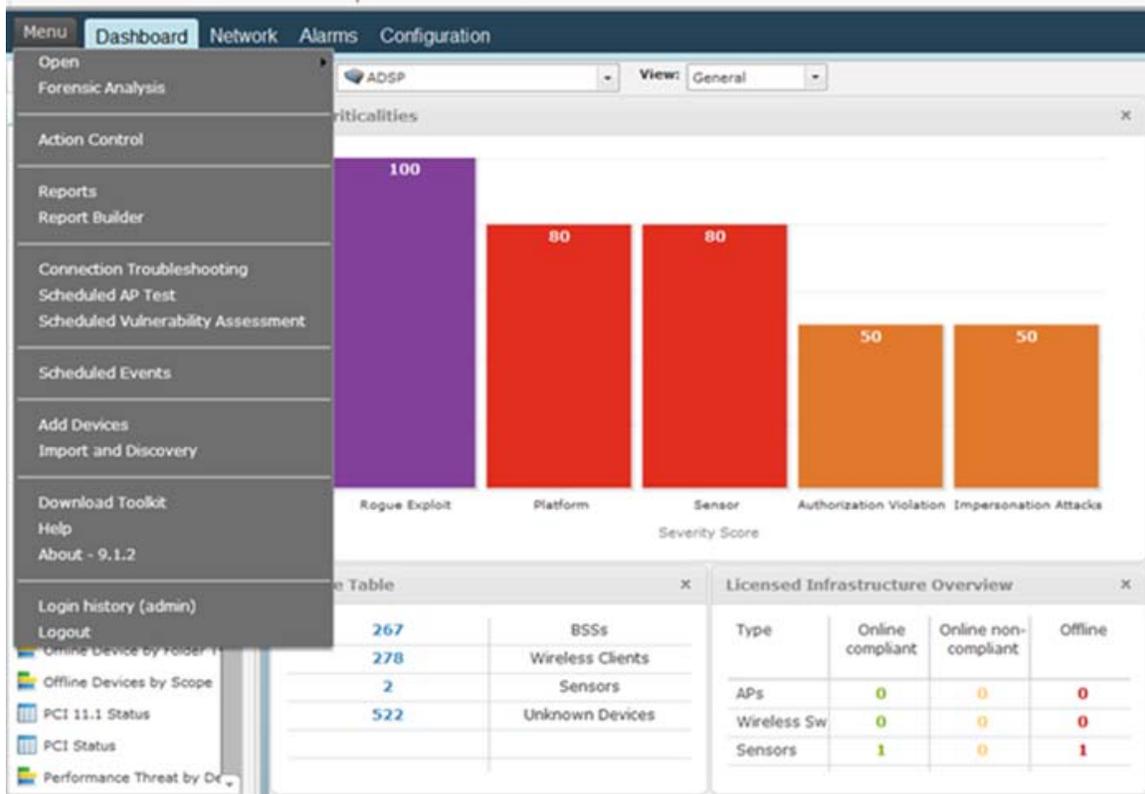
Launching ADSP

Once you have installed the ADSP Toolkit, log in to he ADSP system by entering your Username and Password.

Click Login and the ADSP main screen displays.

Installing ADSP in Unified Mode

In Unified Mode, ADSP runs as a virtual machine (VM) under WiNG.You can install ADSP 9.1.2 as a VM on an NX95x0 controller running WiNG 5.5.4 or later.

✓   **NOTE**   Unified Mode is supported only on WiNG NX95x0 SKU, not on ADSP NX95x0 SKU.

Install the ADSP VM by following the steps outlined in the following sections.

Installing ADSP as a VM

1   If an older version of ADSP is installed as a VM, you will need to uninstall the existing ADSP VM by following these steps:

   a.   From the NX95x0 command line, stop the current ADSP version by using the **virtual-machine stop adsp** command.

   b.   Uninstall ADSP using the **virtual-machine uninstall adsp** command.

CAUTION   Be sure to export and save the currently installed/running ADSP VM configuration and database prior to uninstalling. The **uninstall** command will wipe out the VM configuration and database entries.

2   Upload the ADSP IMG file to an FTP server.

3   Log in to the NX95x0 and install the ADSP IMG file using the following commands:

   nx950-000000>enable

   nx9500-000000#upgrade ftp://<user>:<passwd>@<hostname|IP>[:port]/path/file

   Example:

   nx9500-000000#upgrade ftp://moto:moto@192.168.0.100/adsp-9.1.02-01-5.5.1.0-017R.img

The file will now copy over. The installation will take approximately 20-30 minutes to complete. When the file is completely downloaded, go to the NX95x0 command line and enter the **virtual-machine install adsp** command:

   nx9500-000000#virtual-machine install adsp

This command will then unpack the IMG file and install the ADSP VM. If you drop into the console role you can watch the VM install.

Enter the **virtual machine console adsp** command to open the ADSP console CLI.

   nx9500-000000#virtual-machine console adsp

✓   **NOTE**   If you are using the CLI command option, it is recommended that you transfer the ADSP IMG file using the background option.

If you get a memory error message, use the following command: **virtual-machine set wing-memory 16384.**

   nx9500-000000#virtual-machine set wing-memory 16384

This command will set the memory. After entering the command, restart the NX95x0 controller.

> ✓ **NOTE** The memory allotment is based on customer requirements, so the number 16384 can vary.

When the installation is complete, log in to WiNG and open the WiNG App Center. The ADSP VM should be displayed. Click on the green arrow to go to ADSP.


Launching ADSP as a VM

Once installed, the ADSP virtual machine will automatically start. Once the ADSP virtual machine is started, ADSP automatically registers with WiNG. To launch the ADSP application, go to the user interface in WiNG.

> ✓ **NOTE** To log in to WiNG, you must have a user ID and password.

Open the WiNG UI and access the **Launch** menu by clicking on the launch icon on the right side of the top banner.
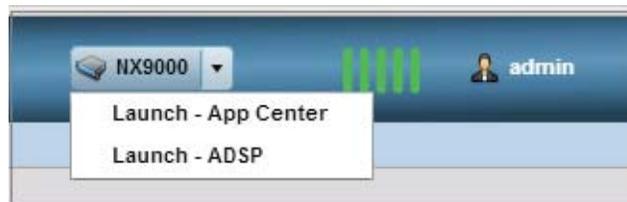
You can launch ADSP from WiNG in two ways:

1 Click the drop-down arrow and select **Launch - App Center**. This action takes you directly to the WiNG App Center where you can click on the ADSP VM image.

2 Click the drop-down arrow and select **Launch - ADSP**. This action takes you directly to the ADSP application.

Configuring ADSP as a VM

The Virtual Machine Console is a remote access feature that allows you to configure ADSP as well as perform maintenance functions. You can also use the console to monitor ADSP as it is booting up or shutting down.

```
nx9500-dc-1# virtual-machine console adsp

To disconnect from the console, press: 'CTRL+]'

ADSP release 9.1.2-17

adsp-1.tmelabs.local login: smxmgr
Password: smxmgr

****** ADSPadmin ******


choose from the following:

(M)   Manage
(D)   Dbase
(S)   Software
(C)   Config
```

1   From the NX95x0 command line, enter the command: **virtual-machine console adsp**. The system boots up as ADSP with the current release number.

2   Log in as *smxmgr* with the password: *smxmgr*. This logs you in to the **ADSPadmin** menu.

> ✓   **NOTE**   To disconnect from the console, press CTRL+].

Choose from the commands to monitor, configure and maintain ADSP. For details on configuring ADSP from the ADSPadmin console, refer to the ADSP User Guide and see the chapter on *Using ADSPadmin to Configure ADSP*.

Support and Sales

Customer Support Center

If you have a problem with your equipment, contact support for your region. Support and issue resolution is provided for products under warranty or that are covered by a services agreement. Contact Support Central at:

- North America – 1-800-722-6234

- International - +1-631-738-5200

When contacting support, please provide the following information:

- Serial number of the unit

- Model number or product name

- Software type and version number.

The Customer Support Center responds to calls by email or telephone within the time limits set forth in support agreements. If you purchased your business product from a business partner, contact that business partner for support.

Customer Support Website

The support website, located at https://portal.motorolasolutions.com/Support/US-EN provides information and online assistance including developer tools, software downloads, product manuals, support contact information and online repair requests.

Customer Manuals

https://portal.motorolasolutions.com/Support/US-EN

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