# **NSFOCUS ADS M Installation Guide**



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## Preface

#### Scope

This document describes the basic information and detailed installation procedure of ADS NX3-M 600A/1600A/1600E ("ADS M" for short).

This document is provided for reference only. It may slightly differ from the actual product due to version upgrade or other reasons.

#### Audience

This document is intended for the following users:

- Users who wish to know main features and usage of this product
- System administrator
- Network administrator

This document assumes that you have knowledge in the following areas:

- Network security
- Linux and Windows operating systems
- TCP/IP protocols

#### Organization

Chapter	Scope
1 Overview	Describes features and appearance of ADS M.
2 Preparation	Describes installation preparations of ADS M.
3 Installation	Describes the detailed installation procedure of ADS M.
4 Basic Configuration	Describes the basic configuration of ADS M.
A Default Parameters	Describes default parameters of ADS M.

#### Conventions

Convention	Description
Bold font	Keywords, names of screen elements like buttons, drop-down lists or fields, and user-entered text appear in bold font.
Italic font	Document titles, new or emphasized terms, and arguments for which you supply values are in italic font.
Note	Reminds users to take note.
C Tip	Indicates a tip to make your operations easier.
Caution	Indicates a situation in which you might perform an action that could result in equipment damage or loss of data.
<b>W</b> arning	Indicates a situation in which you might perform an action that could result in bodily injury.
A > B	Indicates selection of menu options.

## **Customer Support**

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#### 1.1 Introduction

As an integrated device, ADS M includes three models: ADS NX3-M 600A, ADS NX3-M 1600A, and ADS NX3-M 1600E.

ADS NX3-M 600A is a product of 100M series and applies to 100M network environments.

ADS NX3-M 1600A is a product of 1000M series and applies to 1000M and 100M network environments.

ADS NX3-M 1600E, in standard configuration, applies to 1000M network environments, but can be expanded to support the 10G capability. That is to say, ADS NX3-M 1600E can be expanded to be a high-end product.

#### **1.2 Product Appearance**

Real products of different lots or models may differ slightly. Images shown in this document are indicative only. If there is inconsistency between images and the real products, the actual product shall govern.

#### 1.2.1 ADS NX3-M600A

Figure 1-1 Appearance of ADS NX3-M 600A



#### **Front Panel**

Figure 1-2 Front panel of ADS NX3-M 600A



#### **Rear Panel**

Figure 1-3 Rear panel of ADS NX3-M 600A



#### 1.2.2 ADS NX3-M 1600A

Figure 1-4 shows the appearance of ADS NX3-M 1600A. Followed are the front panel and rear panel, which may slightly differ in different batches.



Figure 1-4 Appearance of ADS NX3-M 1600A

#### **Front Panel**

#### Figure 1-5 Front panel of ADS NX3-M 1600A



#### **Rear Panel**

Figure 1-6 Rear panel of ADS NX3-M 1600A



Power switch

Power port

## 1.2.3 ADS NX3-M 1600E

#### **Front Panel**

Figure 1-7 Front panel of ADS NX3-M 1600E



1	Management port	2	Management port	3	Serial port (RJ-45)	4	USB port
5	_	6	Power LED	$\bigcirc$	_	8	_
9	Working port: GE electrical (RJ45)	(10)	Working port: GE optical (SFP)		_		_

#### **Rear Panel**

Figure 1-8 Rear panel of ADS NX3-M 1600E



1	Ground connector	2	Heat dissipation holes	3	Power switch
4	Power supply 1	5	Power supply 2	6	Mute button: The device supports two power supplies. If only one power supply is configured, a sound alert will be generated. To clear the alert, press the mute button.

## 1.3 **Basic Information**

Table 1-1 describes basic information of ADS NX3-M 600A.

Interface	<ul> <li>1 x management interface</li> <li>1 x serial port (DB9)</li> <li>3 x 10/100Base-Tx interface</li> </ul>
Weight	7.5 kg
Height	44 mm (1U)
Width	430 mm
Depth	390 mm
Rack	19-inch rack mount model
Power Supply	AC input: 100 V AC–240 V AC Maximum power: 180 W
MTBF	60,000 hours
Operating Temperature	0°C to 45°C
Storage Temperature	$-20^{\circ}$ C to $+65^{\circ}$ C

Table 1-1 Hardware specifications of ADS NX3-M 600A

Table 1-2 describes basic information of ADS NX3-M 1600A.

Interface	<ul> <li>1 x serial port (RJ45)</li> <li>2 x 100/1000M Ethernet electrical port</li> <li>4 x 1000M SFP module slot</li> </ul>
Weight	13.3 kg
Height	88 mm (2U)
Width	430 mm
Depth	512 mm
Rack	19-inch rack-mounting model
Power Supply	AC input: 100 V AC–240 V AC Maximum power: 400 W
MTBF	60,000 hours
Operating Temperature	0°C to 45°C
Storage Temperature	-20°C to +65°C

Table 1-2 Hardware specifications of ADS NX3-M 1600A

Table 1-3 describes basic information of ADS NX3-M 1600E.

Interface	• 1 x serial port (RJ45)				
	• 2 x USB 2.0 port				
	• 2 x management port (RJ45)				
	• 4 x 1000M electrical port				
	• 4 x 1000M SFP optical port				
Weight	16.6 kg				
Height	88 mm				
Width	432 mm				
Depth	575 mm				
Rack	2U rack-mounting model				
Power Supply	AC input: 100 V AC-240 V AC				
	Maximum power: 350 W				
MTBF	60,000 hours				
Operating Temperature	0°C to 45°C				
Storage Temperature	$-20^{\circ}$ C to $+65^{\circ}$ C				

Table 1-3 Hardware specifications of ADS NX3-M 1600E

#### 1.4 LEDs

There are three types of LEDs on the front panel of the chassis: power LED, status LED, and link/Act LED.

#### **Power LED**

Table 1-4 describes the power LED.

#### Table 1-4 Power LED

LED Status	Description
On	The power is normal.
Off	The power is off or abnormal.

#### Status LED

Table 1-5 describes the status LED.

Table 1-5 Status LED

LED Status	Description
Blink	The system is reading and writing data
Off	The system is idle.

#### Link/Act LED

Table 1-6 describes the Link/Act LED.

Table 1-6 Link/Act LE	D
-----------------------	---

LED Status	Description
Link On	A link has been established.
Link LED Off	The link is not established.
Act On	The device is transmitting or receiving data.
Act Off	No data is transmitted or received.

# **2** Preparation

## 2.1 Accessories Supplied with the Device

Before the installation, verify that the accessory box delivered with the device includes the following items:

- Straight-through cable (green) Used for network connection.
- Crossover cable (yellow)

Used to connect a computer to the management interface of ADS M so that you can log in to the web-based manager.

- Power cable One or two power cables for each device.
- Rubber pad

Cut into four pieces along the dotted line and attached to four angles or tabs of the device chassis to avoid abrasion.

• Rack-mounting ears

Used to fasten the device to the rack.

• Rack-mounting screw

Used to fasten the device onto the rack.

• D89 serial cable

Used for the console-based configuration of the ADS NX3-M 600A.

• RJ45 serial cable

Used to connect the serial port (RJ45) on the front panel of the ADS NX3-M 1600A/1600E for the console-based configuration.



Accessories supplied may vary with the product model. Please refer to the packing list.

In addition to items in the accessory box, ensure that the followings are ready:

• IP Address

IP address reserved for ADS M.

Computer

Directly connected to the management interface of ADS M so that you can log in to the web-based manager of the device in HTTPS mode for management.

- Terminal software Connected to the console port, such as HyperTerminal, that comes with the Windows operating system.
- Browser

Verify that IE (V10 or later), Chrome, or Firefox browser is available on the computer.

### 2.2 User-Provided Tools

- Screwdrivers and screws of various specifications.
- Devices and meters such as terminal and multi-meter.
- Antistatic wrist strap.

#### 2.3 Others

#### Environment

- Well-ventilated and excellent heat elimination
- Temperature:  $0^{\circ}C-45^{\circ}C$
- Relative humidity: 10%–95% (non-condensing)

#### **Antistatic Protection**

- ADS M and floor are well grounded.
- Dust-proof room.
- Proper temperature and humidity.
- Wear antistatic gloves or wrist strap when handling the circuit board.

#### **Rack Mounting**

The rack must be secure enough and fitted to install the device.

# **3** Installation

## 3.1 Installation Procedure



Figure 3-1 Installation flowchart

## 3.2 Connecting to the Power Supply

ADS NX3-M 600A uses the AC power supply only, while ADS NX3-M 1600A/1600E support both the AC and DC power supplies. The following sections describe how to connect to the power supply.

## 3.2.1 AC Power Supply

For the AC power supply, the 100–240 V input voltage is appropriate to ADS M. Before the power connection, verify that the power supply specification is consistent with that of the device room to avoid possible damage.

To connect the AC power cable, follow these steps:

- Step 1 Make sure that the power switch on ADS M is in the OFF position.
- Step 2 Connect one end of the power cable to the power socket on ADS M'S rear panel.
- Step 3 Connect the other end of the power cable to AC power supply socket.

----End

#### 3.2.2 DC Power Supply

For the DC power supply, the -48V input voltage is appropriate to ADS M. Before the power connection, verify that the power supply specification is consistent with that of the device room to avoid possible damage.

To connect the DC power cable, follow these steps:

- Step 1 Make sure that the power switch on ADS M is in the OFF position.
- Step 2 Take out the DC power plug from the accessory box. The socket is as shown in Figure 3-2. (The DC power supply module of ADS M has a plug and socket. The plug is included in the accessory box, and the socket is integrated in the chassis).

Figure 3-2 DC power supply module of ADS M



Step 3 Insert three leads of the -48V DC power supply into the three jacks on the plug respectively (ensure that leads match jacks). As shown in Figure 3-3, the jack marked "+" is connected to the anode of the power supply; the jack marked "-" is connected to the cathode of the power supply; the jack marked " ( ) " is connected to the PGND cable.

Figure 3-3 DC power supply plug of ADS M



- **Step 4** Insert the DC power plug into the DC socket at the rear panel of the DC power supply, and fasten the two screws on both ends of the plug with a screw driver to tighten the power cables.
- Step 5 For the dual power supply, repeat Step 3 and Step 4 to connect the other power cable.

----End

#### 3.3 Connecting to the Network

Please connect the ADS M to the network according to the actual network structure.

Pay attention to the followings during the connection:

Use straight-through cables to connect the switch to the communication interface of the device.

ADS M can be deployed anywhere in the network. However, to achieve the optimal performance, you are recommended to connect it to the switch in the backbone network of the company.

After deployment, please modify network settings immediately to ensure smooth network connections. For details on default parameters of ADS M, see appendix A Default Parameters.

•	You can modify network settings at the following interfaces:
	Console management interface.
Note	• Web management interface. For details, see chapter 4 Basic Configuration.

## 3.4 Rack Mounting

For the rack mounting, you need to first install rack-mounting ears, as shown in Figure 3-4. Then place the device on the rack and fasten it with screws.

Figure 3-4 Installing rack-mounting ears



## 3.5 Shutdown

To shut down ADS M, switch the power switch to the OFF position.

# **4** Basic Configuration

The device can operate properly after you complete simple network configuration and import a valid license. The network configuration involves the following:

- IP address
- Subnet mask
- Gateway
- DNS server

The network configuration can be conducted on the console or web-based manager. Both approaches require a computer and accessories (included in the accessory box). Choose an approach as required.

To perform configurations on the console, you need to connect the device to a computer with a serial cable. The console port rate of ADS M is 115200 bps. After login, you can perform configurations by selecting menus. For details, see section 4.2 Network Configuration on the Console.

To perform configurations on the web-based manager, perform the following steps:

- **Step 1** Use a crossover cable (included in the accessory box) to connect the operating interface on the device to the network interface on the computer.
- **Step 2** Configure computer-related parameters to make it on the same network segment as the device. See appendix A Default Parameters.
- **Step 3** Log in to the web-based manager in HTTPS mode and configure the device. For details, see sections 4.3 Login to the Web-based Manager and 4.4 Network Configuration on the Web-based Manager.

----End

The certificate file can be imported only on the web-based manager. You are advised to import a certificate file the first time you log in to the web-based manager.

#### 4.1 Login to the Console

Before logging in to the console, prepare the following:

- One computer.
- One serial cable included in the accessory box.

- Terminal software that can connect to the console port (for example, the HyperTerminal software that comes with the Windows operating system).
- Connect ADS M to the computer by using the serial cable.

Here, the HyperTerminal software is used as an example to detail the connection process:

Step 1 Choose Start > All Programs > Accessories > Communications > HyperTerminal.

The Location Information dialog box appears. See Figure 4-1.

Figure 4-1 Location Information dialog box

Location Information	2
	Before you can make any phone or modem connections, Windows needs the following information about your current location. What country/region are you in now?
	China 💌
K	What area gode (or city code) are you in now?
	The phone system at this location uses:
	⊙ ⊥one dialing ○ Pulse dialing
	OK Cancel

Step 2 Click Cancel.

The Connection Description dialog box appears. See Figure 4-2.

Figure 4-2 Connection Description dialog box

Connection Description	? 🔀
New Connection	
Enter a name and choose an icon for the connection:	
Name:	
ADS M	
lcon:	
S S S I S	<b>%</b>
ОК Са	ncel

Step 3 Type the connection name (for example, ADS M), and then click OK.

The Location Information dialog box appears. See Figure 4-1.

Step 4 Click Cancel.

Select a serial port (COM1 for example) to connect to the computer via a serial cable. See Figure 4-3.

Figure 4-3 Connect To dialog box

Connect To	? 🔀
ADS M	
Enter details for	the phone number that you want to dial:
Country/region:	China (86) 🔽
Ar <u>e</u> a code:	8080
Phone number:	
Co <u>n</u> nect using:	СОМ1
	OK Cancel

Step 5 Set port properties, as shown in Figure 4-4. Set Bits per second to 115200 and Flow control to None and leave other parameters at default values.

COM1 Properties			
Port Settings			
	'		
<u>B</u> its per second: 1152	200 🔽		
<u>D</u> ata bits: 8	×		
Paritur More			
Stop bits: 1	~		
Elow control: None	•		
	Bestore Defaults		
ΠΚ			

Figure 4-4 COM1 Properties dialog box

#### Step 6 Click OK and press Enter

The **login:** prompt appears. Type the user name and password of the console administrator. By default, the user name is **admin** and password is **nsfocus**.

Figure 4-5 Login to the console

nsfocus-adsm login: admin Password:

If the user name and password are correct, you can successfully log in to the console.

----End



Note that you can only operate on the keyboard on the console. Type a sequence number as prompted and press **Enter** to open the console management menu.

#### 4.2 Network Configuration on the Console

After you successfully log in to the console of ADS M, the main menu is displayed, as shown in Figure 4-6. Type a sequence number as prompted and press **Enter** to open a menu.

Figure 4-6 Main menu of the console

Perform the following steps to configure network parameters as required:

- Step 1 On the main menu, type 5 to open the Console password menu
- Step 2 Type the new password, which must be at least 6 bits long. Then type y and press Enter to make the setting take effect.
- Step 3 On the main menu, type 1 and press Enter to open the network configuration menu.
- **Step 4** Under the **Network** menu, type **2**, press **Enter**, and configure the IP address and subnet mask as prompted. After you confirm the configuration, press **Enter** to make the settings take effect.
- Step 5 Under the Network menu, type 5 and press Enter to configure the DNS server. After you confirm the configuration, type y and press Enter to make the settings take effect.
- Step 6 Type 0 and press Enter to return to the main menu.
- Step 7 On the main menu, type 2 and press Enter to configure the system time and press any key to return to the main menu.
- Step 8 On the main menu, type 3 and press Enter to configure the system time and press any key to return to the main menu.
- Step 9 After the configuration is complete, type 6 on the main menu and press Enter to log out of the console management interface.

----End

## 4.3 Login to the Web-based Manager

For the initial login to the web-based manager, perform the following steps:

 $Step 1 \quad Verify \ that \ the \ client \ is \ connected \ to \ the \ Internet.$ 

Step 2 Open a browser (for example, Microsoft Internet Explorer) and connect to the management IP address of ADS M over HTTPS, for example, enter https://192.168.1.100 in the address bar.

A security alert dialog box appears. See Figure 4-7.

Figure 4-7 Security alert dialog box

	The security certificate presented by this website was not issued by a trusted certificate authority. The security certificate presented by this website was issued for a different website's address.
1.	Security certificate problems may indicate an attempt to fool you or intercept any data you send to th server.
1	We recommend that you close this webpage and do not continue to this website.
	Ø Click here to close this webpage.
1	Continue to this website (not recommended).
1	More information

Step 3 Click Continue to this website (not recommended) to accept the channel encrypted by the ADS M certificate.

Figure 4-8 Login page

NSFOCUS			
ADS An	ti-DDoS System Management		
Username	Password	Login	
			第三日

Step 4 Type the initial user name and password, and click Login.

The **Change Password** page appears, as shown in Figure 4-9. For the first login, you must the change password.

The new password should contain a minimum of 8 characters of at least two types of the following: letters, digits, and special characters.



ADS [M]	
Change Password	
	Set New Password
	New Password
	Confirm Password
	Next

**Step 5** Set a new password and click **Next**. After the system prompts a message indicating that the password is successfully changed and returns to the login page, type the user name and new password to log in the system again.

The dialog box for selecting a UI language appears, as shown in Figure 4-10.

For the first login with the default user name and password, the configuration wizard appears only after you change the initial password and log into the system again.



During the first login to ADS M that has just been upgraded to V4.5R89F03, you need to set the locality, system time zone, and system time, but do not need to change the initial password.



Language/语言/言語	
(	● English ● 简体中文 ● 日本語

**Step 6** Select a language. After the system directs you to the page shown in Figure 4-11, set the locality of the device, time zone, and system time.



Region and Time Settings	
Region	
North America 🔻	
System Time Zone	
(GMT+8:00) Chongqing,Harbin,Kashgar,Shanghai,Ur 🔻	
System Time	
2017-06-16 15:29:52	
Back Submit	

#### Step 7 Click Submit.

After the settings take effect, you can directly log in to the web-based manager.

----End

-

	The browser you use must support JavaScript, cookies, and Frame.
	• You are advised to use IE 10.0 and later, Chrome, or Firefox browsers with the resolution greater than 1280x700. If you use the IE-based tabbed browsers (for example MyIE and Maxthon), pages may be displayed improperly.
	• You must change the password immediately after the first login.
Caution .	• If a user stays at pages under <b>Traffic monitoring</b> after a successful login, the system will never logs the user out of the web-based manager even if the user remains inactive. If the user remains inactive for over 10 minutes on other pages than those under <b>Traffic monitoring</b> , the system will return to the login page.
	• For the first login, you must import a valid license before using the system. For details, see the <i>NSFOCUS ADS M User Guide</i> .

## 4.4 Network Configuration on the Web-based Manager

On the web-based manager, you can configure network parameters as required.

Choose Administration > Local Settings > Network Settings and click in the list to edit network parameters. Then click Save to make the settings take effect.

After the configuration is complete, the device is ready for use. For detailed usage, see the *NSFOCUS ADS M User Guide*.



#### A.1 Default Parameters for the Communication Interface

For ADS NX3-M 600A/NX3-M 1600A:

Management Interface	1.1.1.1
Subnet Mask	255.255.255.0

For ADS NX3-M 1600E:

Management Interface	192.168.1.100
Subnet Mask	255.255.255.0
Gateway	192.168.1.1

## A.2 Default Account of the Web Administrator

User Name	admin
Password	nsfocus

#### A.3 Default Account of the Console Administrator

User Name	admin
Password	nsfocus

## A.4 Communication Parameters of the Console Port

Baud Rate	115200
Data Bits	8