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# **NSFOCUS ADS M**

## **Installation Guide**

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**NSFOCUS**

Version: V4.5R90F00 (2017-12-01)

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# Preface

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## 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
<a href="#">1 Overview</a>	Describes features and appearance of ADS M.
<a href="#">2 Preparation</a>	Describes installation preparations of ADS M.
<a href="#">3 Installation</a>	Describes the detailed installation procedure of ADS M.
<a href="#">4 Basic Configuration</a>	Describes the basic configuration of ADS M.
<a href="#">A Default Parameters</a>	Describes default parameters of ADS M.

## Conventions

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

## Customer Support

Email: [support@nsfocusglobal.com](mailto:support@nsfocusglobal.com)

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- USA: +1-844-673-6287 or +1-844-NSFOCUS
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- Australia: +61 2 8599 0673 or +61 2 8599 0NSF
- Netherlands: +31 85 208 2673 or +31 85 208 2NSF
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- Singapore: +65 3158 3757
- Hong Kong +852 5803 2673 or +852 5803 2NSF
- Middle East: +973 1619 7607



# 1 Overview

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## 1.1 Introduction

As an integrated device, ADS M comes in 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 become 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. Actual colors may vary due to monitor display differences.

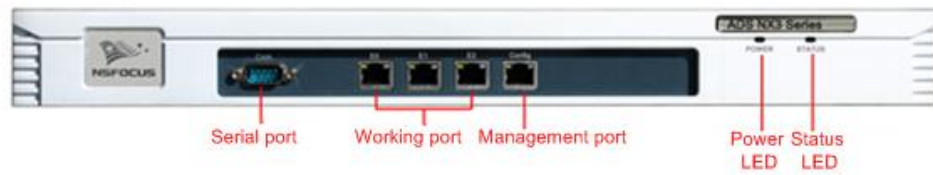
### 1.2.1 ADS NX3-M600A

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

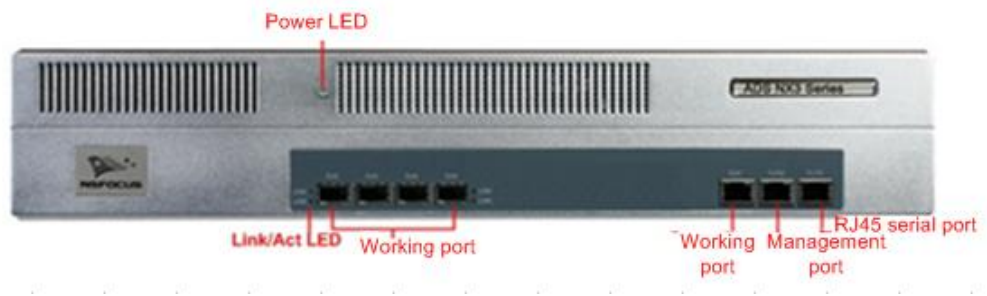
Figure 1-4 shows the appearance of ADS NX3-M 1600A. Following are the front panel and rear panel, which may slightly vary from batch to batch.

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



## Front Panel

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



## Rear Panel

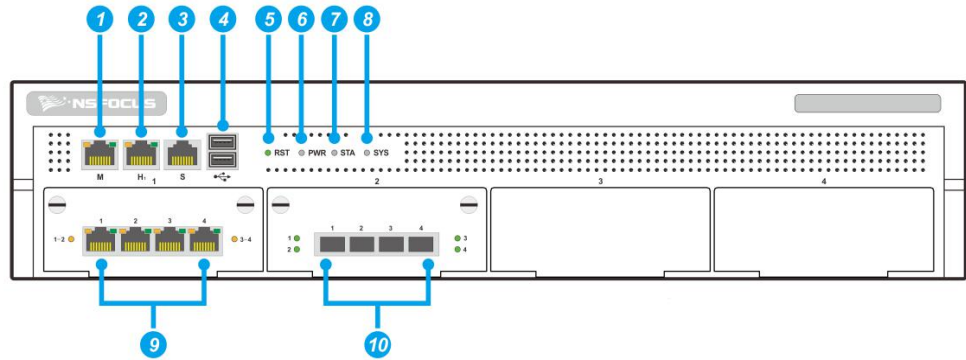
Figure 1-6 Rear panel of ADS NX3-M 1600A



### 1.2.3 ADS NX3-M 1600E

#### Front Panel

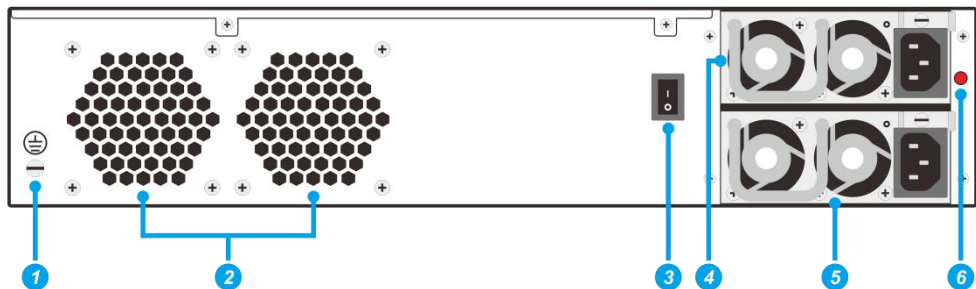
Figure 1-7 Front panel of ADS NX3-M 1600E



① Management port	② Management port	③ Serial (RJ-45) port	④ USB port
⑤ —	⑥ Power LED	⑦ —	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.
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## 1.3 Basic Information

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

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

<b>Interface</b>	<ul style="list-style-type: none"> <li>• 1 x management port</li> <li>• 1 x serial port (DB9)</li> <li>• 3 x 10/100Base-Tx expanding port</li> </ul>
<b>Weight</b>	7.5 kg
<b>Height</b>	44 mm (1U)
<b>Width</b>	430 mm
<b>Depth</b>	390 mm
<b>Rack</b>	19-inch rack-mount model
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• AC input: 100 V AC–240 V AC</li> <li>• Maximum power: 180 W</li> </ul>
<b>MTBF</b>	60,000 hours
<b>Operating Temperature</b>	0°C to 45°C
<b>Storage Temperature</b>	-20°C to +65°C

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

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

<b>Interface</b>	<ul style="list-style-type: none"> <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>
<b>Weight</b>	13.3 kg
<b>Height</b>	88 mm (2U)
<b>Width</b>	430 mm
<b>Depth</b>	512 mm
<b>Rack</b>	19-inch rack-mount model
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• AC input: 100 V AC–240 V AC</li> <li>• Maximum power: 400 W</li> </ul>
<b>MTBF</b>	60,000 hours
<b>Operating Temperature</b>	0°C to 45°C
<b>Storage Temperature</b>	–20°C to +65°C

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

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

<b>Interface</b>	<ul style="list-style-type: none"> <li>• 1 x serial port (RJ45)</li> <li>• 2 x USB 2.0 port</li> <li>• 2 x management port (RJ45)</li> <li>• 4 x 1000M electrical port</li> <li>• 4 x 1000M SFP optical port</li> </ul>
<b>Weight</b>	16.6 kg
<b>Height</b>	88 mm
<b>Width</b>	432 mm
<b>Depth</b>	575 mm
<b>Rack</b>	2U rack-mount model
<b>Power Supply</b>	<ul style="list-style-type: none"> <li>• AC input: 100 V AC–240 V AC</li> <li>• Maximum power: 350 W</li> </ul>
<b>MTBF</b>	60,000 hours
<b>Operating Temperature</b>	0°C to 45°C
<b>Storage Temperature</b>	–20°C to +65°C

## 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 LED

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 port 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-mount ears  
Used to fasten the device onto the rack
- Rack-mount 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 following 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
  - Internet Explorer 10 or later, Chrome, or Firefox

## 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°C–45°C
- Relative humidity: 10%–95% (non-condensing)

### ESD Prevention

- Make sure that ADS M and the floor are well grounded.
- Take dust-proof measures for the equipment room.
- Maintain the temperature and humidity at a proper level.
- Always wear ESD gloves or wrist straps when touching a circuit board.

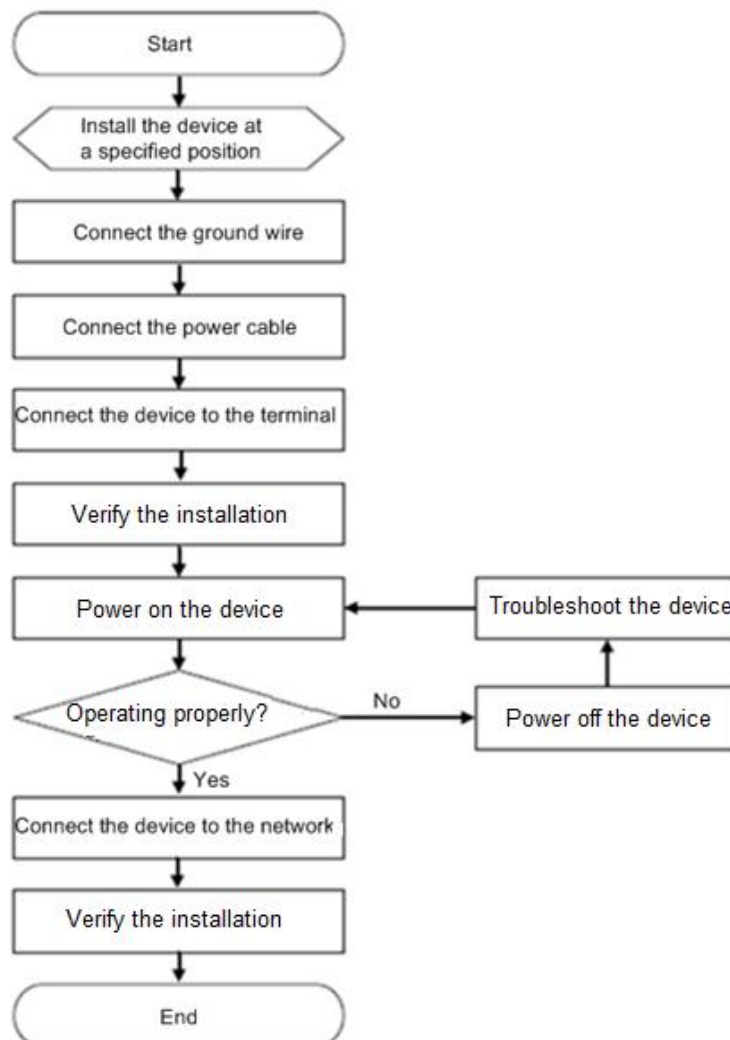
### Rack-mounting

Make sure that the rack is sturdy enough and its size is appropriate for 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:

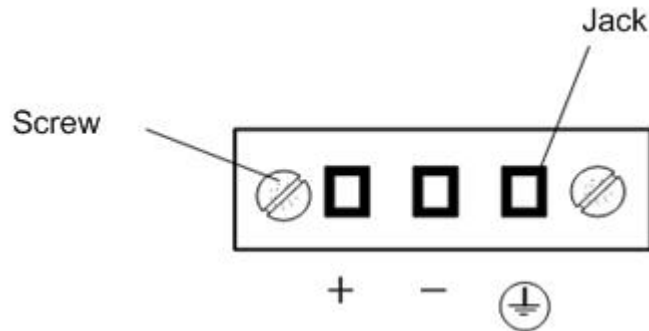
- Step 1** Make sure that the power switch on ADS M is in the **OFF** position.
- Step 2** Take out the DC power plug from the accessory box. The socket is as shown in [Figure 3-2](#). (The DC power supply module of ADS M has a plug and socket. The plug is included in the accessory box, and the socket 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 " $\oplus$ " 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 following 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](#).



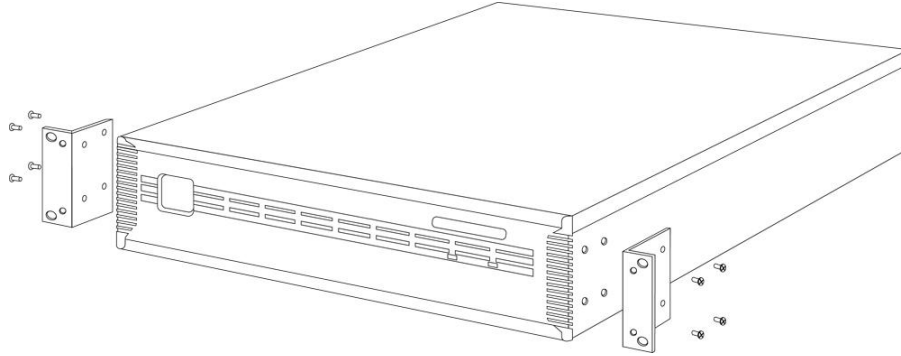
You can modify network settings at the following interfaces:

- Console management interface.
- Web management interface. For details, see chapter [4 Basic Configuration](#).

## 3.4 Rack-mounting

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

Figure 3-4 Installing rack-mount 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 configuration on the web-based manager, follow these 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)
- ADS M (hardware) connected to the computer with 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



**Step 2** Click **Cancel**.

The **Connection Description** dialog box appears. See [Figure 4-2](#).



Figure 4-2 Connection Description dialog box



**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



**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.

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

```
welcome to nsfocus ADS M
=====
s) Display system status
  setup
    1) Network
    2) Datetime
    3) Timezone
    4) Locale
    5) Console password(initial password being used. Please change it immediately.)
    6) Reset web admin password
    7) Factory default
    8) Recover database
    9) Set web server port
  r) Restart system services
  b) Reboot
  h) Shutdown
  x) Logout
=====
Input your selection:█
```

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

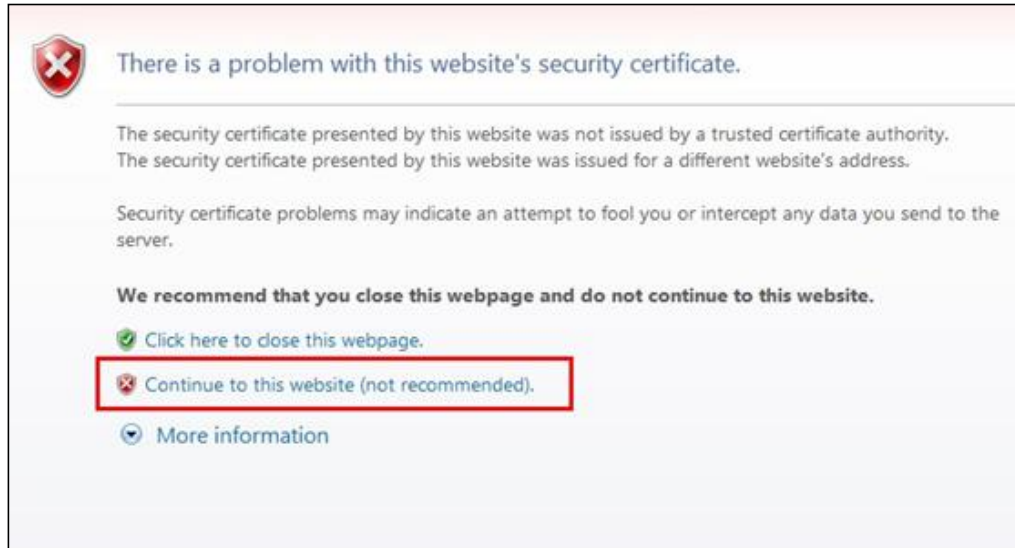
For the initial login to the web-based manager, perform the following steps:

- Step 1** 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, type **https://192.168.1.100** in the address bar.

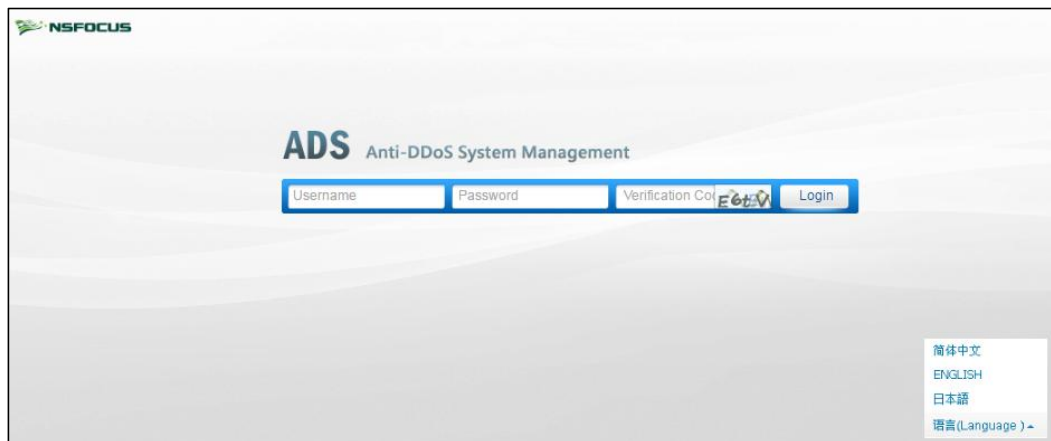
A security alert dialog box appears. See [Figure 4-7](#).

Figure 4-7 Security alert dialog box



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

Figure 4-8 Login page



**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.

Figure 4-9 Change Password page

The screenshot shows a web interface for changing a password. At the top, there is a blue header with the text 'ADS [M]'. Below this, the main heading is 'Change Password'. To the right of this heading is a form titled 'Set New Password'. This form contains two text input fields: the first is labeled 'New Password' and the second is labeled 'Confirm Password'. Below these two fields is a blue button labeled '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.

Figure 4-10 Selecting the UI language



**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.

Figure 4-11 Configuring the time zone

**Step 7** Click **Submit**.

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

----End




Note

- 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.
- If a user stays at pages under **Traffic monitoring** 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 **Traffic monitoring**, 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 *NSFOCUS ADS M User Guide*.

## 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 Default Parameters

---

## A.1 Default Parameters for the Communication Interface

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

<b>Management Interface</b>	1.1.1.1
<b>Subnet Mask</b>	255.255.255.0

For ADS NX3-M 1600E:

<b>Management Interface</b>	192.168.1.100
<b>Subnet Mask</b>	255.255.255.0
<b>Gateway</b>	192.168.1.1

## A.2 Default Account of the Web Administrator

<b>User Name</b>	admin
<b>Password</b>	nsfocus

## A.3 Default Account of the Console Administrator

<b>User Name</b>	admin
<b>Password</b>	nsfocus

## A.4 Communication Parameters of the Console Port

Baud Rate	115200
Data Bits	8