

Setting link speed

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Tivoli

IBM

IBM Security Network Active Bypass

Setting link speed



This is a self-running demonstration that shows you how to complete a task.
Controls are available at the bottom of the screen.

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Objectives

When you complete this module, you will be able to:

- Describe the appropriate link speed settings on the IBM Security Network Active Bypass unit
- Set the link speed on the IBM Security Network Active Bypass unit

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Connecting to the Network Active Bypass unit

- You can only set the link speed and duplex setting by using command line parameters
- You can access the command line interface for the Network Active Bypass (NAB) unit in one of two ways:
 - Through a serial terminal emulator using the Console port
 - Through an SSH remote shell emulator using the management port (22)
- After you connect, you use the administrator account to configure the NAB unit

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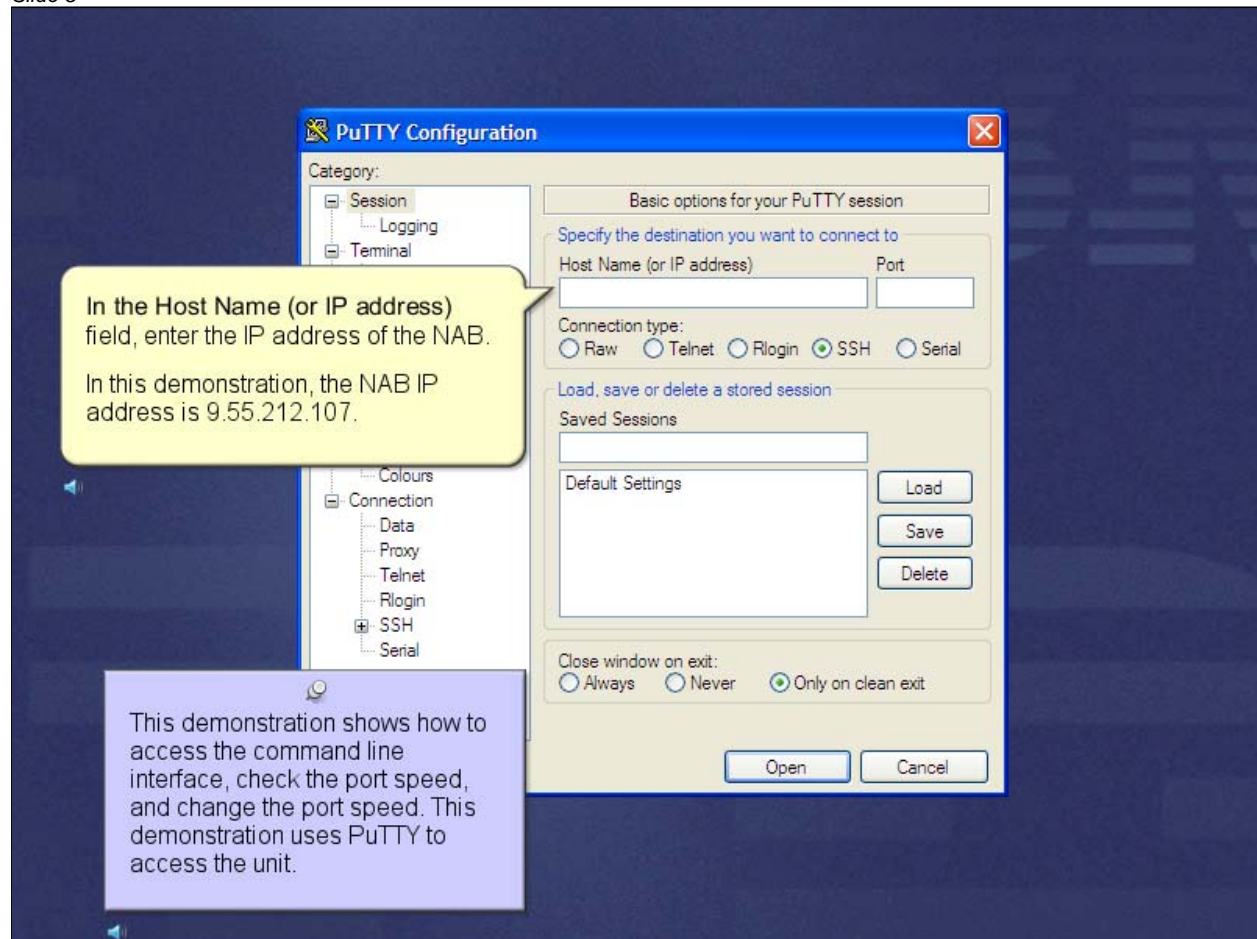


Link speed settings

- The NAB unit has 4 segments consisting of 16 ports
- If all devices connected to the NAB unit are 1 Gb devices, set the NAB and connected devices to auto-negotiation
- If connected devices support 10/100 Mb segments, set the NAB and connected devices to 10/100 Mb full duplex
- By default, all NAB ports are set to auto-negotiation

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The image shows a screenshot of the PuTTY Configuration dialog box. The dialog is titled "PuTTY Configuration" and has a tree view on the left with categories: Session, Logging, Terminal, Colours, Connection, Data, Proxy, Telnet, Rlogin, SSH (selected), and Serial. The main area is titled "Basic options for your PuTTY session" and contains the following fields and options:

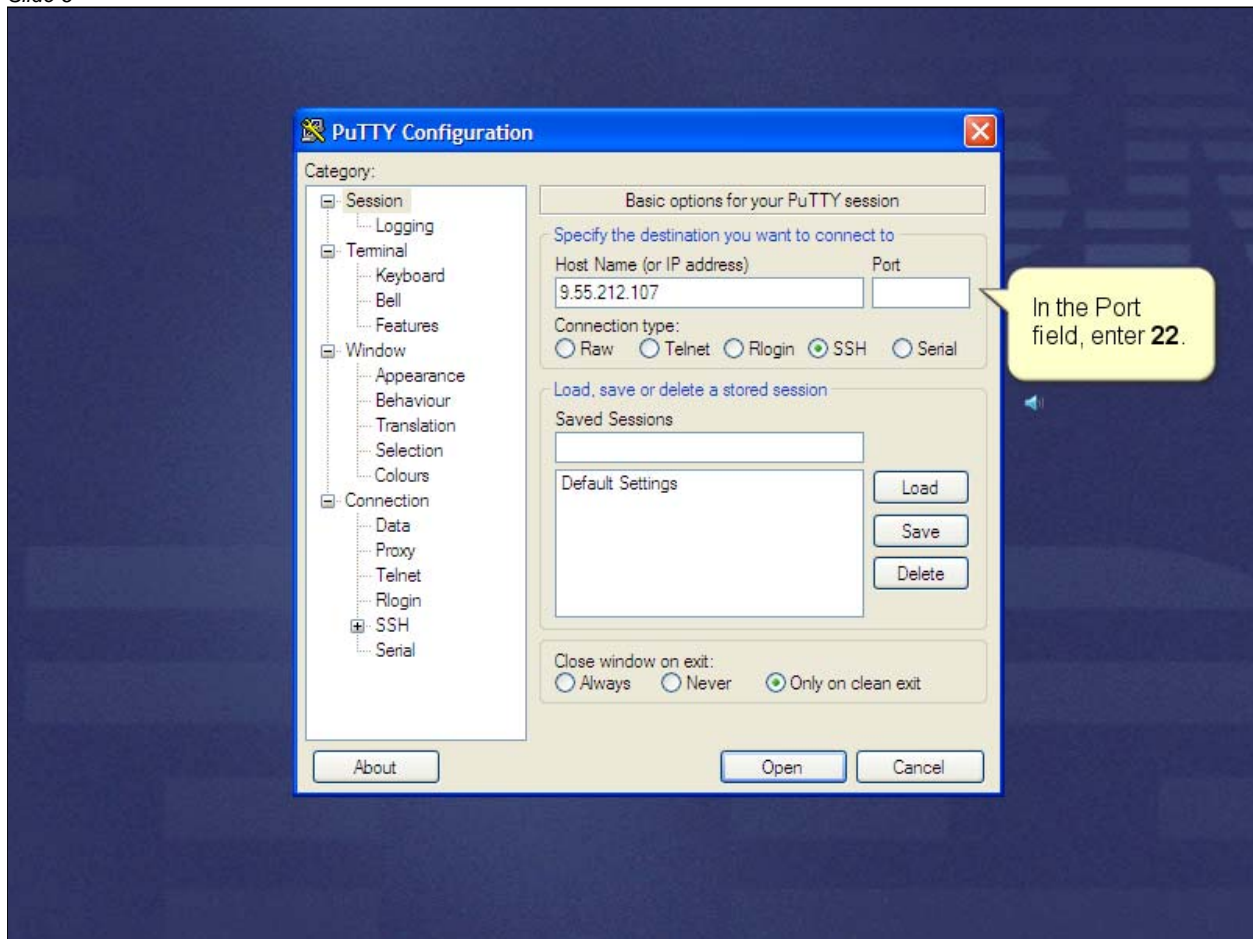
- Specify the destination you want to connect to:**
 - Host Name (or IP address): [Empty text box]
 - Port: [Empty text box]
- Connection type:**
 - Raw
 - Telnet
 - Rlogin
 - SSH
 - Serial
- Load, save or delete a stored session:**
 - Saved Sessions: [Empty list box]
 - Default Settings: [Empty text box]
 - Buttons: Load, Save, Delete
- Close window on exit:**
 - Always
 - Never
 - Only on clean exit
- Buttons: Open, Cancel

Two callout boxes are present:

- A yellow callout box pointing to the "Host Name (or IP address)" field contains the text: "In the Host Name (or IP address) field, enter the IP address of the NAB. In this demonstration, the NAB IP address is 9.55.212.107."
- A purple callout box at the bottom left contains the text: "This demonstration shows how to access the command line interface, check the port speed, and change the port speed. This demonstration uses PuTTY to access the unit."

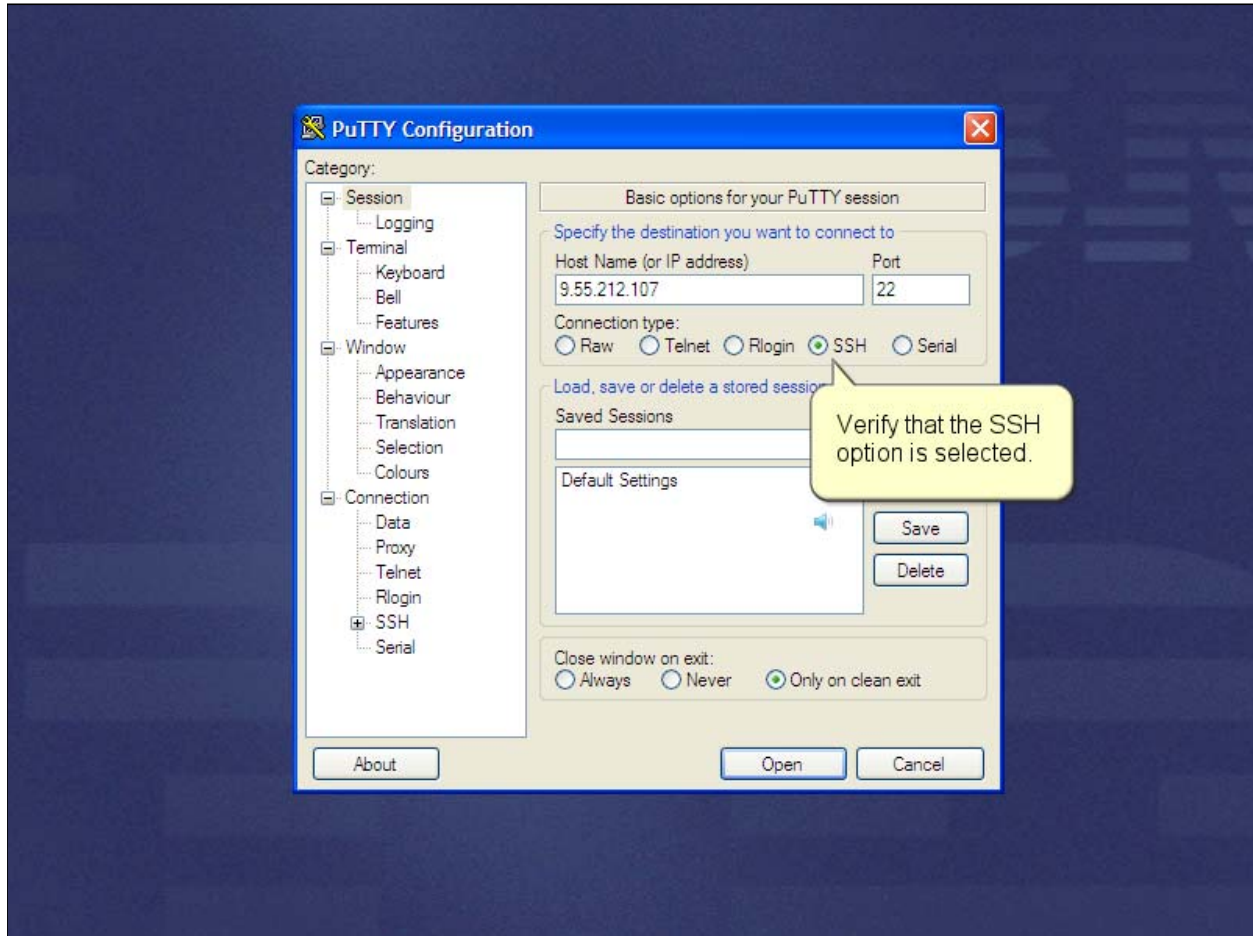
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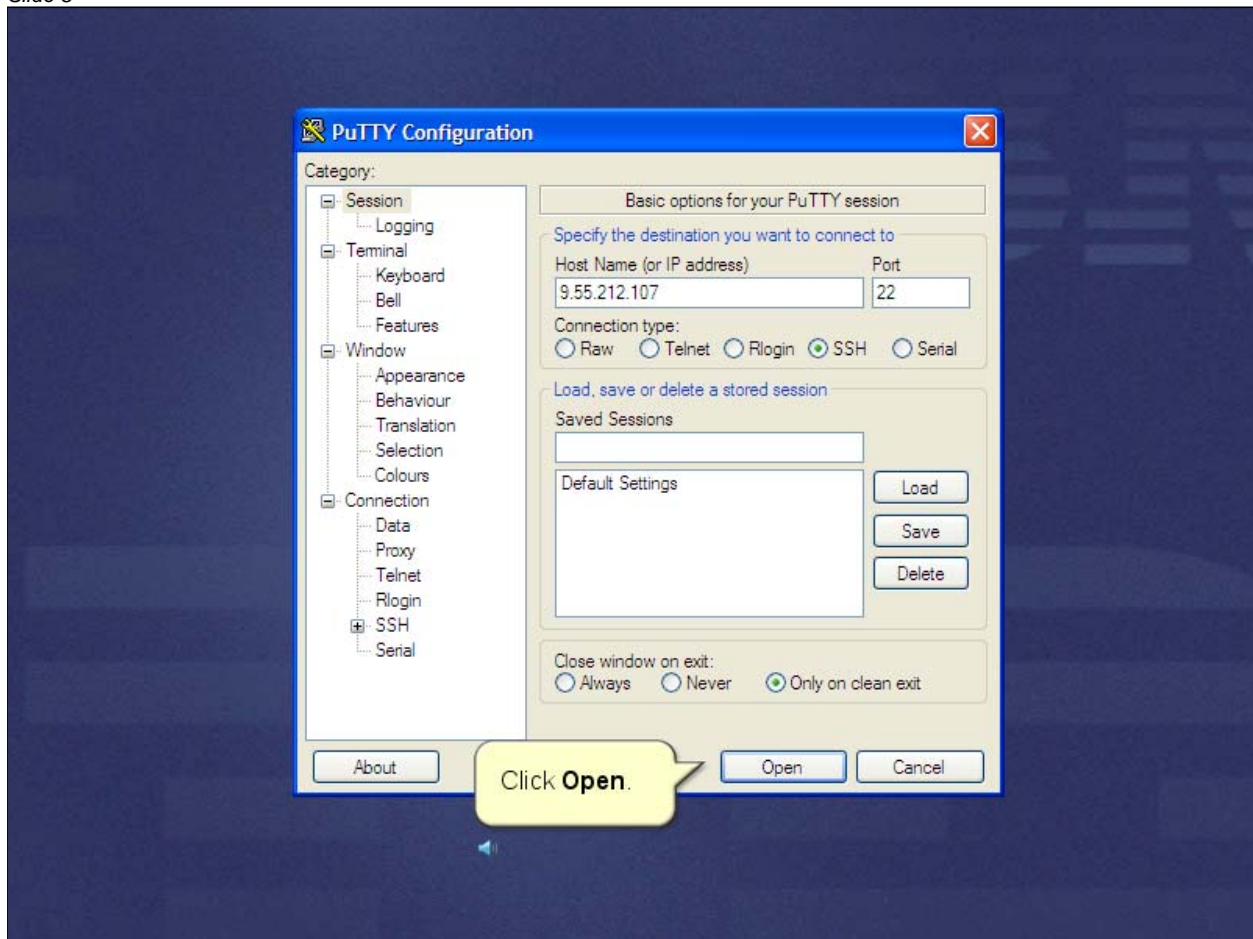
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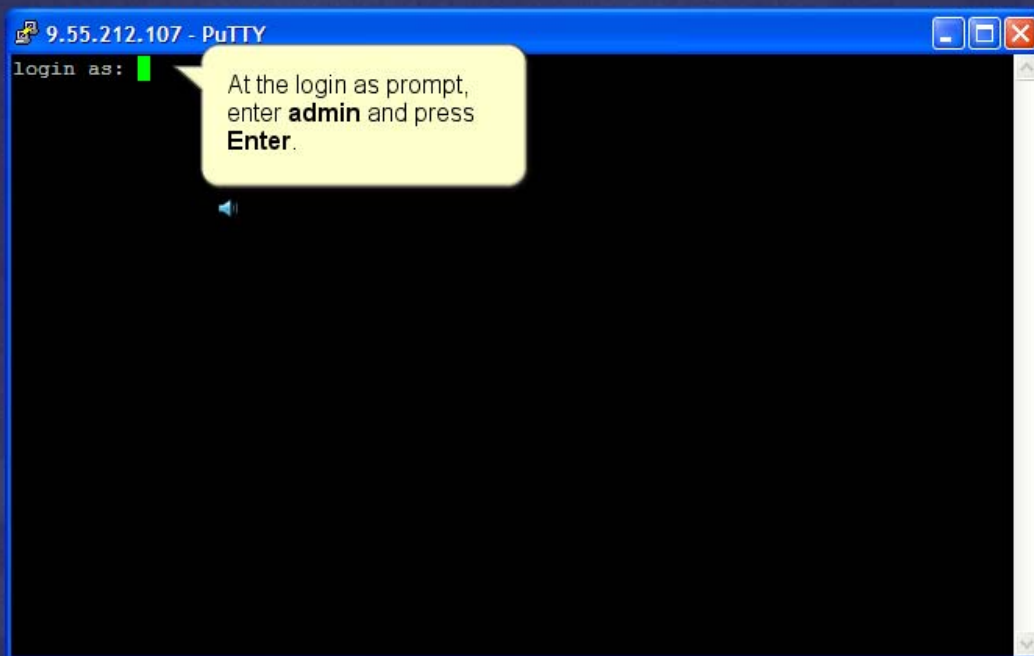
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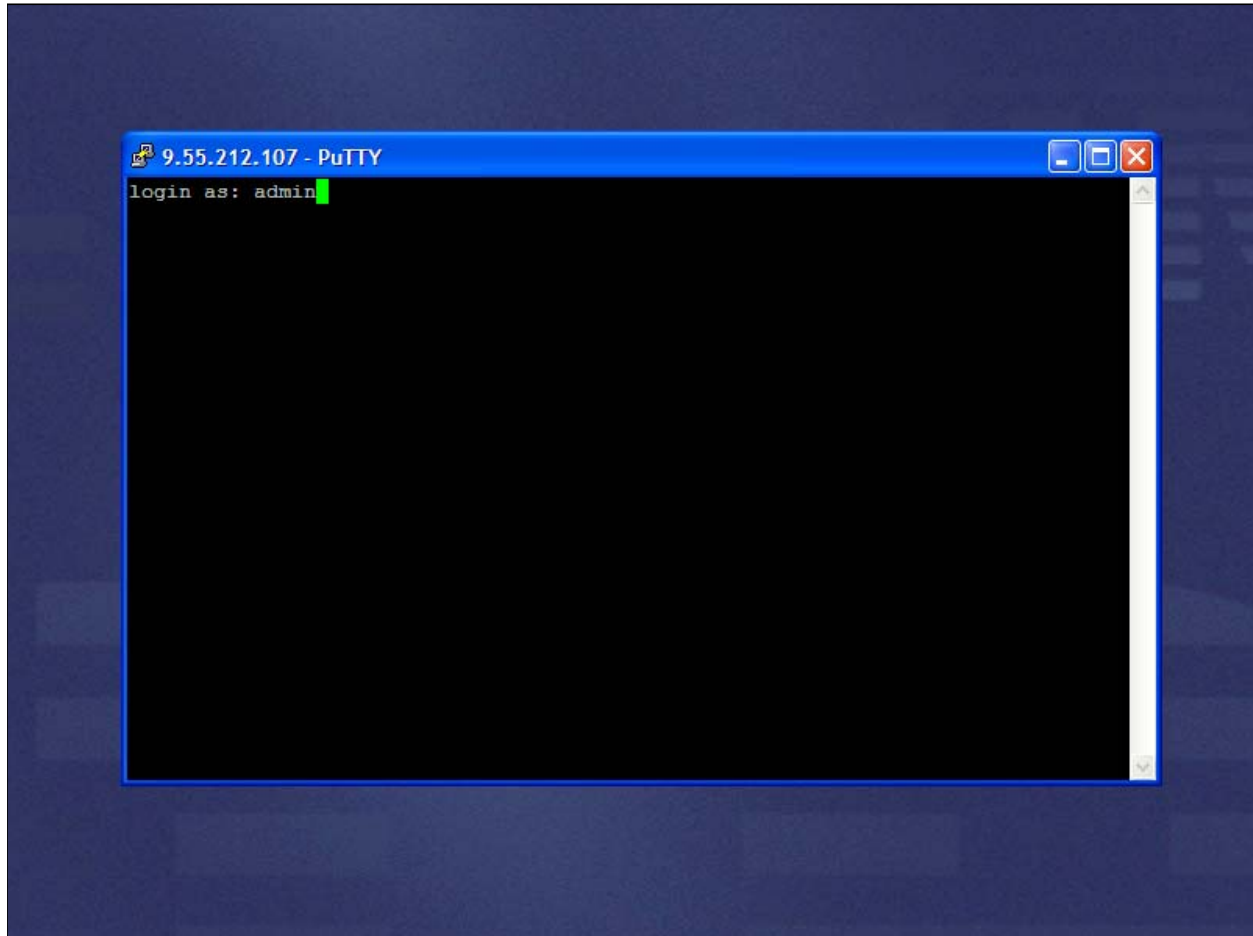
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```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

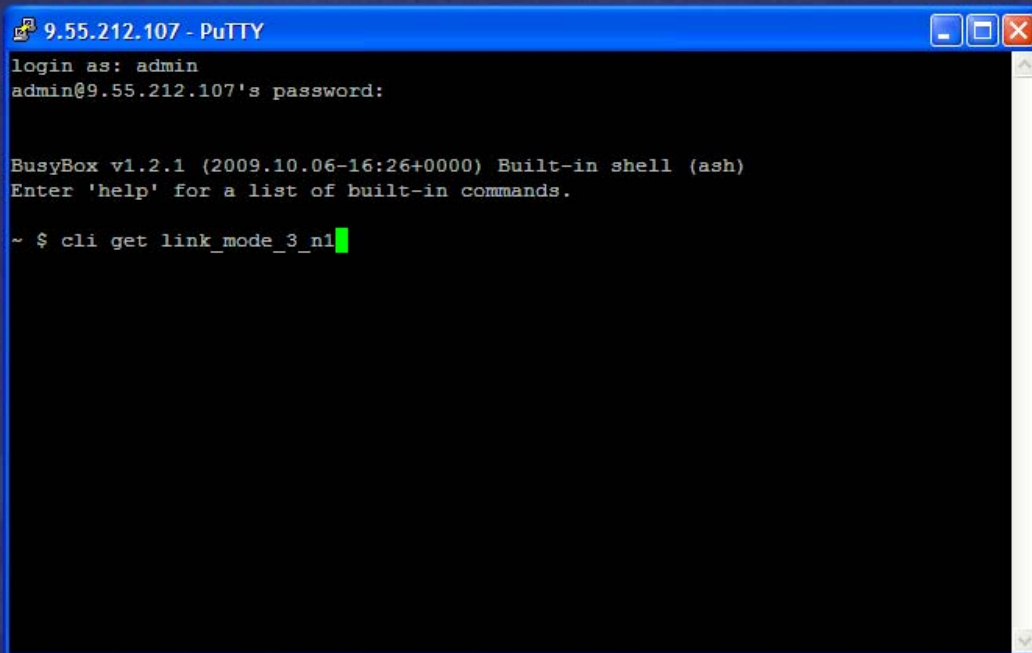
BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

~ $ █
```

At the prompt, enter **cli get link_mode_3_n1** and press **Enter**.

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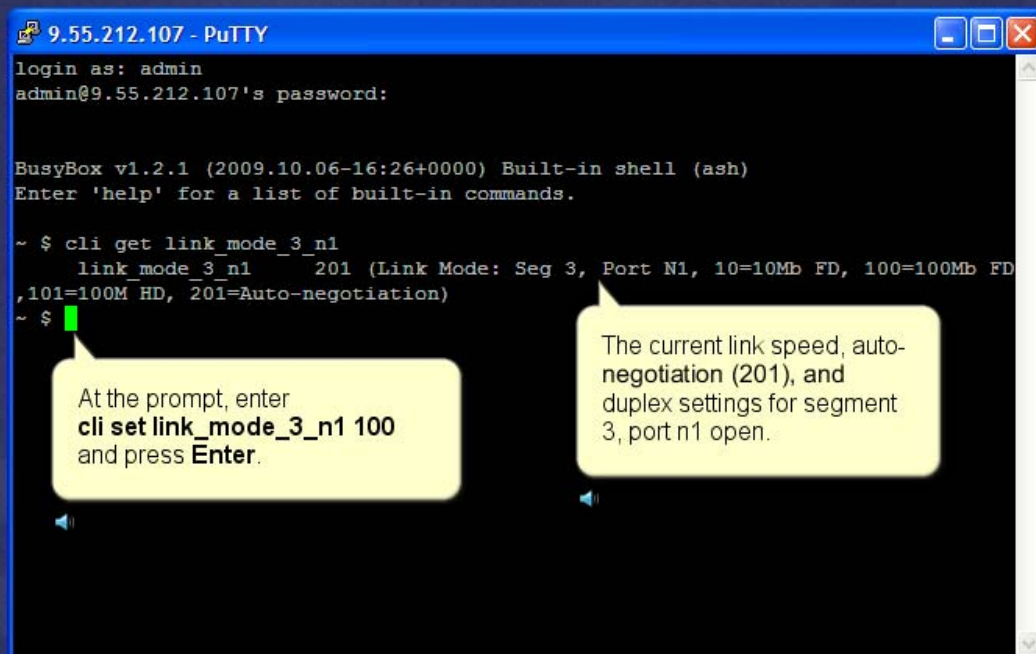
```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

~ $ cli get link_mode_3_n1
```

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```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

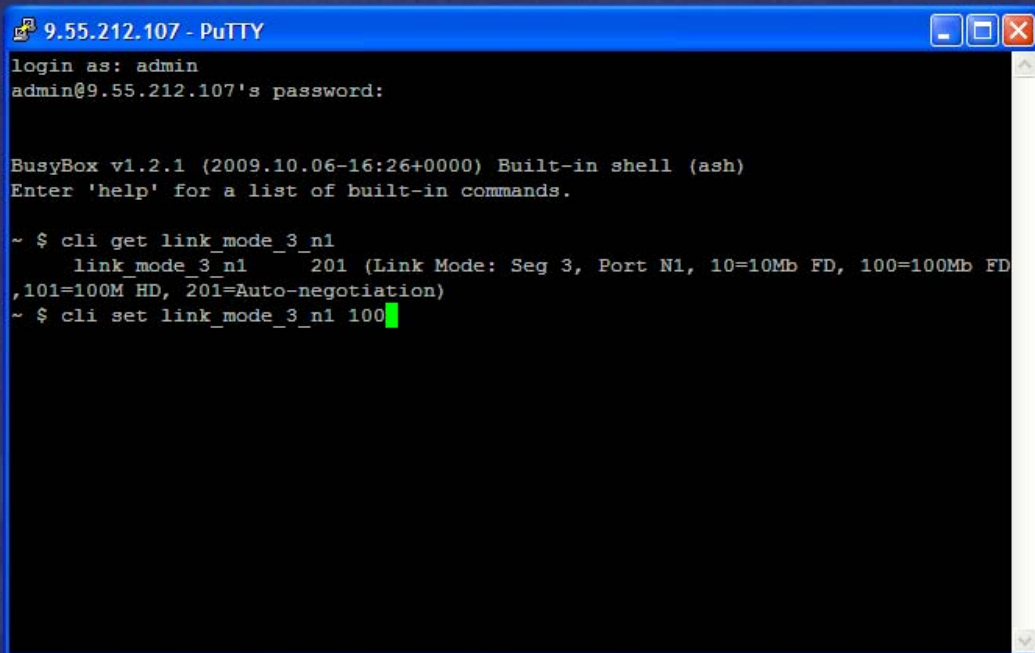
~ $ cli get link_mode_3_n1
link_mode_3_n1      201 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $
```

At the prompt, enter **cli set link_mode_3_n1 100** and press **Enter**.

The current link speed, auto-negotiation (201), and duplex settings for segment 3, port n1 open.

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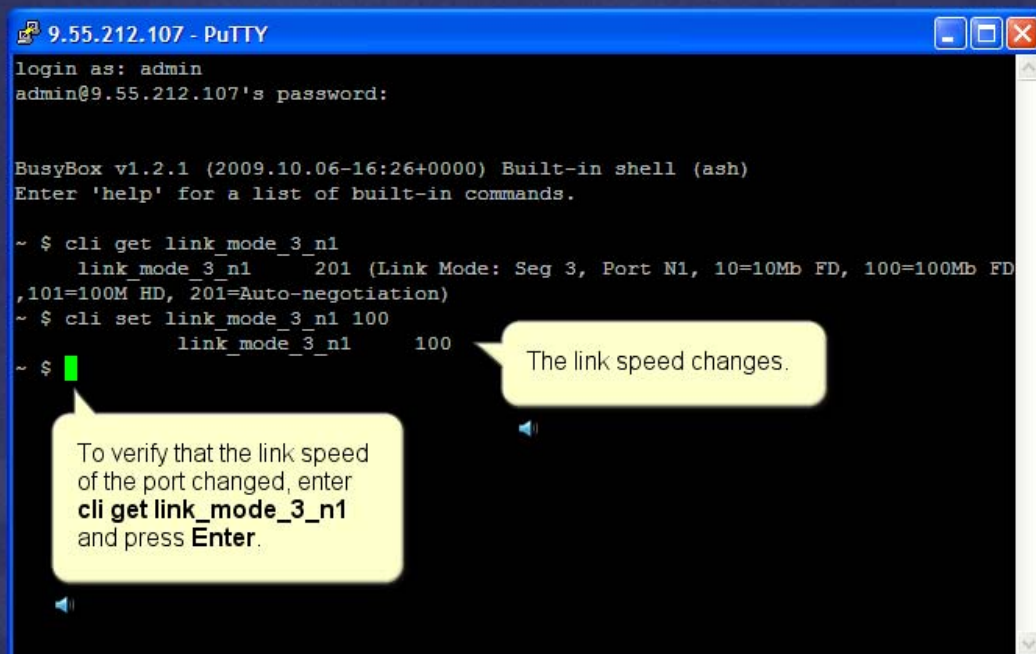
```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

~ $ cli get link_mode_3_n1
    link_mode_3_n1      201 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $ cli set link_mode_3_n1 100
```

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```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

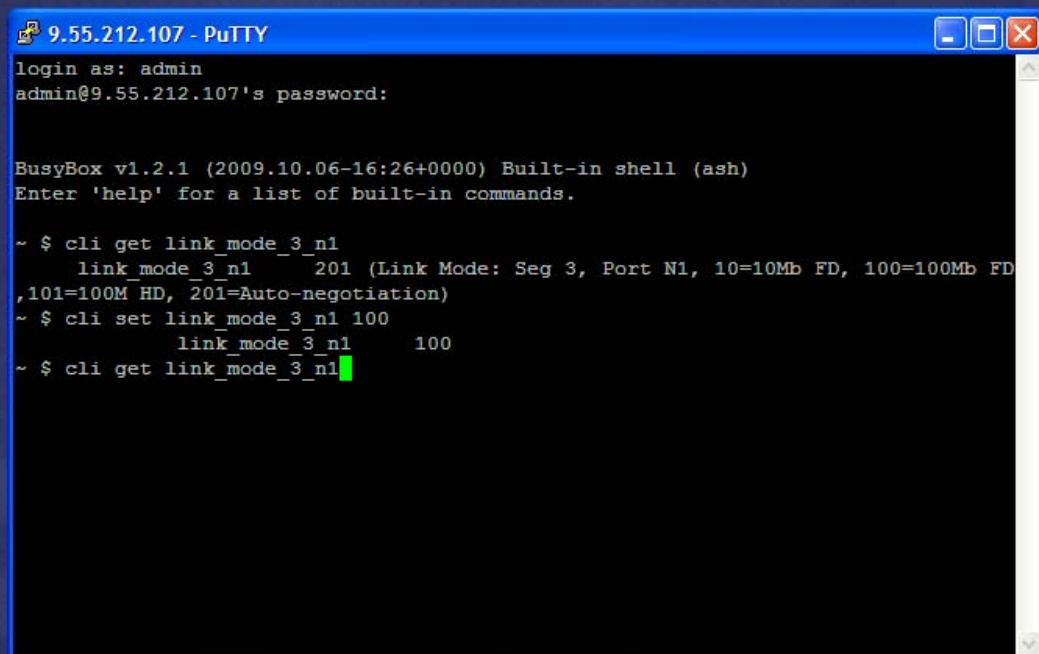
~ $ cli get link_mode_3_n1
link_mode_3_n1      201 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $ cli set link_mode_3_n1 100
link_mode_3_n1      100
~ $
```

The link speed changes.

To verify that the link speed of the port changed, enter **cli get link_mode_3_n1** and press **Enter**.

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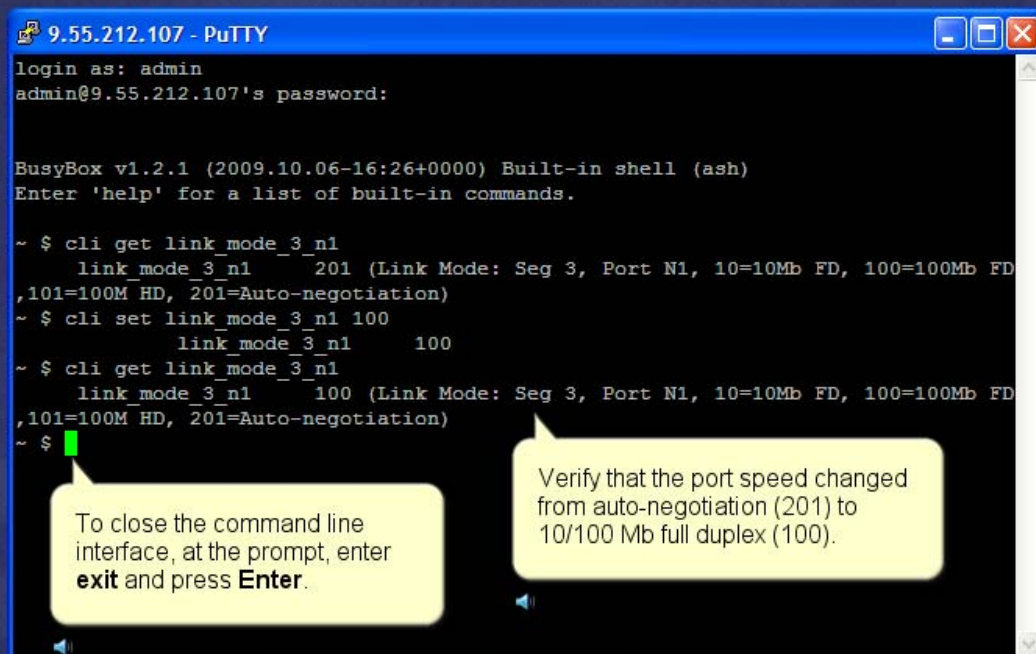
```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

~ $ cli get link_mode_3_n1
    link_mode_3_n1    201 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $ cli set link_mode_3_n1 100
    link_mode_3_n1    100
~ $ cli get link_mode_3_n1
```

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```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

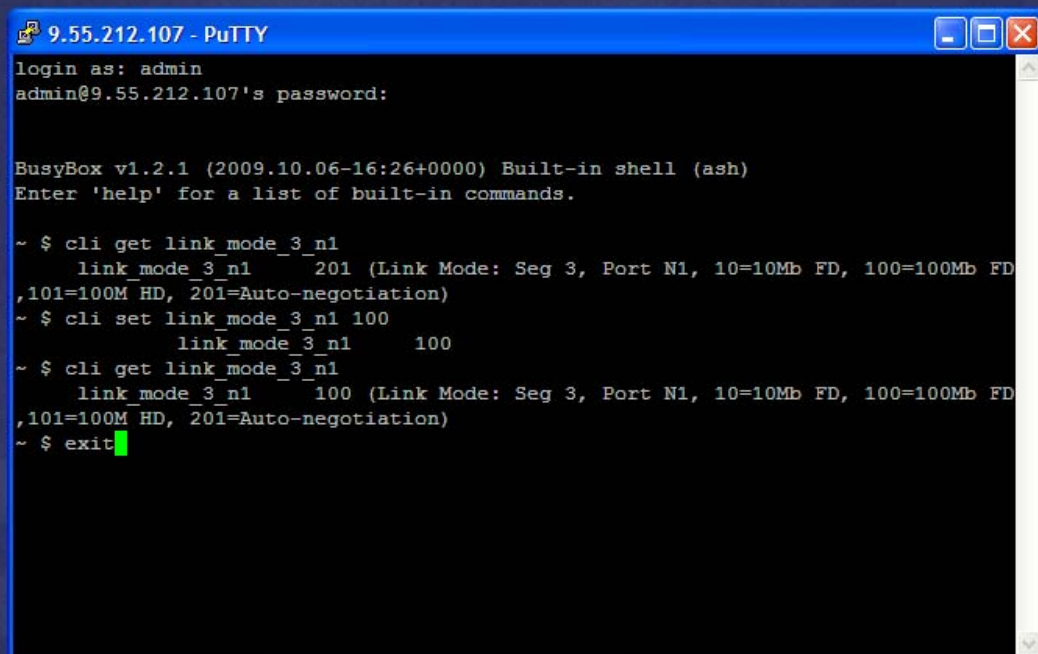
~ $ cli get link_mode_3_n1
link_mode_3_n1 201 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $ cli set link_mode_3_n1 100
link_mode_3_n1 100
~ $ cli get link_mode_3_n1
link_mode_3_n1 100 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $
```

To close the command line interface, at the prompt, enter **exit** and press **Enter**.

Verify that the port speed changed from auto-negotiation (201) to 10/100 Mb full duplex (100).

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```
9.55.212.107 - PuTTY
login as: admin
admin@9.55.212.107's password:

BusyBox v1.2.1 (2009.10.06-16:26+0000) Built-in shell (ash)
Enter 'help' for a list of built-in commands.

~ $ cli get link_mode_3_n1
    link_mode_3_n1    201 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $ cli set link_mode_3_n1 100
    link_mode_3_n1    100
~ $ cli get link_mode_3_n1
    link_mode_3_n1    100 (Link Mode: Seg 3, Port N1, 10=10Mb FD, 100=100Mb FD
,101=100M HD, 201=Auto-negotiation)
~ $ exit
```

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Further reference

For more information about setting the link speed for the ports on the Network Active Bypass unit, see [TechNote 1437281](#)

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