CONFIGURATION

MANAGEMENT

Purpose This document is part of the user's guide to the installation and configuration of bintec gateways running software release 7.1.4 or later. For up-to-the-minute information and instructions concerning the latest software release, you should always read our **Release Notes**, especially when carrying out a software update to a later release level. The latest **Release Notes** can be found at www.bintec.net.

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Guidelines and standards bintec gateways comply with the following guidelines and standards:

R&TTE Directive 1999/5/EG

CE marking for all EU countries and Switzerland

You will find detailed information in the Declarations of Conformity at www.bintec.net.

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1   Introduction

The following chapters present various possible ways of handling configurations in bintec routers.

They describe operations such as saving, loading, copying, renaming and deleting configurations in the flash ROM memory. The TFTP server is also presented together with the possible ways of transferring configurations to this server and loading them into the router again.

The Setup Tool is used for the configuration, parallel to the shell.

1.1   Scenario
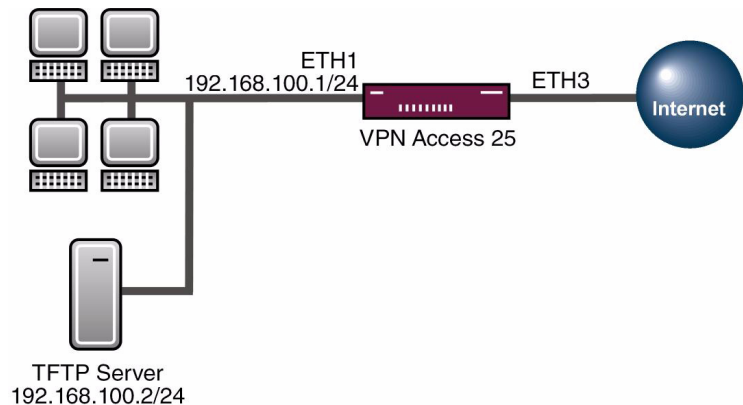
1.2   Requirements

The following requirements must be fulfilled for the configuration:

- ■   Basic configuration of router. The basic configuration using the Wizard is recommended.

- A boot image of version 7.1.1 or later.

- A TFTP server is required for saving the configuration on a PC, e.g. **DIME Tools**.

2 Configuration

The configuration management functions are located in the menu:

CONFIGURATION MANAGEMENT

or, if you work in the shell, in the table:

BIBOADMCONFIGTABLE

2.1 Saving, Loading and Deleting Configurations in the Flash ROM

2.1.1 Setup Tool

■ Go to *MAIN MENU* ➜ *CONFIGURATION MANAGEMENT*.

```
VPN Access 25 Setup Tool                 Bintec Access Networks GmbH
[CONFIG]: Configuration Management                      Head_Office


     Operation                 save    (MEMORY -> FLASH)



     Name in Flash             boot

     Type of last operation    save    (MEMORY -> FLASH)
     State of last operation   done



        START OPERATION                     EXIT

```

The following fields are relevant:

Field	Meaning
Operation	For selecting the operation you wish to perform. The information in brackets indicates the location and destination of the configuration.
Name in Flash	Give the configuration a name for storing it in the flash ROM memory.
START OPERATION	Start your operation via this field.

Table 2-1: Relevant fields in *MAIN MENU* ➜ *CONFIGURATION MANAGEMENT*

You would like to take your current configuration in the RAM and save it in the flash ROM memory under the name Firewall.

Proceed as follows to save a configuration:

■ Set *OPERATION* to *save (MEMORY -> FLASH)*.

■ Enter the name under *NAME IN FLASH*, e.g. *Firewall*.

■ Start the operation with the menu item **START OPERATION**.

You would like to take your configuration named Firewall from the flash ROM memory and load it into the RAM.

Proceed as follows to load a configuration:

■ Set *OPERATION* to *load (FLASH -> MEMORY)*.

■ Select the name under *NAME IN FLASH*, e.g. *Firewall*.

■ Start the operation with the menu item **START OPERATION**.

You would like to delete your configuration named Firewall from the flash ROM memory.

Proceed as follows to delete a configuration:

■ Set *OPERATION* to *delete (FLASH)*.

■ Select the name under *NAME IN FLASH*, e.g. *Firewall*.

■ Start the operation with the menu item **START OPERATION**.

Note

Please note that the configuration is immediately active after loading it into the memory. You could, for example, lock out settings in the firewall!

2.1.2 SNMP Shell

Everything you configure in the Setup Tool you can also create in the tables, likewise saving or loading configurations.

Open the table for configuration management with the following command in the shell: `biboAdmConfigTable`.

```
inx Cmd(*rw)      Object(rw)     Path(rw)       PathNew(rw)
    Host(rw)      State(ro)      File(rw)       Timeout(rw)

 00 save          .0.0           "boot"
    0.0.0.0        done                         0
```

The following fields are relevant:

Field	Meaning
Cmd	For selecting the operation you wish to perform.
Path	Give the configuration a name for storing it in the flash ROM memory.

Table 2-2:   Relevant fields in ***BIBOADMCONFIGTABLE***

You would like to take your current configuration in the RAM and save it in the flash ROM memory under the name *Firewall*.

Enter the following command in the shell to save a configuration:

`Cmd=save Path=Firewall`

You would like to load your configuration named *Firewall* from the flash ROM memory into the RAM.

Enter the following command in the shell to load a configuration:

```
Cmd=load Path=Firewall
```

You would like to delete your configuration named *Firewall* from the flash ROM memory.

Enter the following command in the shell to delete a configuration:

```
Cmd=delete Path=Firewall
```

2.2 Copying and Renaming Configurations in the Flash ROM

2.2.1 Setup Tool

■ Go to *MAIN MENU* ➜ *CONFIGURATION MANAGEMENT*.

```
VPN Access 25 Setup Tool                 Bintec Access Networks GmbH
[CONFIG]: Configuration Management                       Head_Office


    Operation                   move    (FLASH -> FLASH)



    Name in Flash               boot
    New Name in Flash           Firewall

    Type of last operation      save    (MEMORY -> FLASH)
    State of last operation     done


        START OPERATION                      EXIT

```

The following fields are relevant:

Field	Meaning
Operation	For selecting the operation you wish to perform. The information in brackets indicates the location and destination of the configuration.

Field	Meaning
Name in Flash	Select the configuration you wish to edit.
New Name in Flash	Enter a new name for the configuration.
START OPERATION	Start your operation via this field.

Table 2-3: Relevant fields in *MAIN MENU* ➜ *CONFIGURATION MANAGEMENT*

You would like to rename your configuration in the flash ROM memory from *boot* to *Firewall*.

Proceed as follows to rename a configuration:

■ Set *OPERATION* to *move (FLASH -> FLASH)*.

■ Select the name under *NAME IN FLASH*, e.g. *boot*.

■ Enter the new name under *NEW NAME IN FLASH*, e.g. *Firewall*.

■ Start the operation with the menu item **START OPERATION**.

You would like to copy your configuration in the flash ROM memory from *boot* to *Firewall*.

Proceed as follows to copy a configuration:

■ Set *OPERATION* to *copy (FLASH -> FLASH)*.

■ Select the name under *NAME IN FLASH*, e.g. *boot*.

■ Enter the new name under *NEW NAME IN FLASH*, e.g. *Firewall*.

■ Start the operation with the menu item **START OPERATION**.

2.2.2   SNMP Shell

Proceed as follows to copy or rename a configuration via the shell:

■ Open the table for configuration management with the following command in the shell: `biboAdmConfigTable`.

```
inx Cmd(*rw)      Object(rw)     Path(rw)      PathNew(rw)
    Host(rw)      State(ro)      File(rw)      Timeout(rw)

 00 save          .0.0           "boot"
    0.0.0.0       done                          0
```

The following fields are relevant:

Field	Meaning
Cmd	For selecting the operation you wish to perform.
Path	Enter the name of the existing configuration.
PathNew	Give the configuration a new name for storing it in the flash ROM memory.

Table 2-4:   Relevant fields in ***BIBOADMCONFIGTABLE***

You would like to rename your configuration in the flash ROM memory from *boot* to *Firewall*.

Enter the following command in the shell to rename a configuration:

```
Cmd=move Path=boot PathNew=Firewall
```

You would like to copy your configuration in the flash ROM memory from *boot* to *Firewall*.
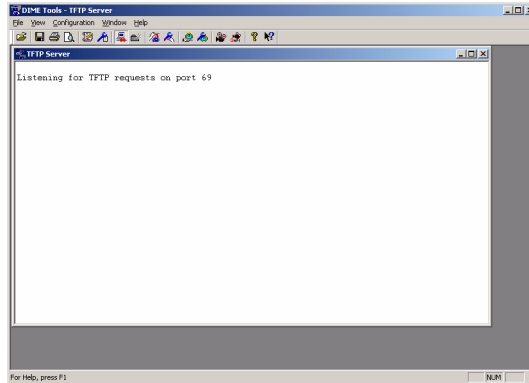
Enter the following command in the shell to copy a configuration:

```
Cmd=copy Path=boot PathNew=Firewall
```

2.3   Saving and Loading Configurations with a TFTP Server

A TFTP server must be running in your network before you can transfer configurations from a Bintec router to a PC.

A TFTP server is available if you start **DIME Tools**, which are part of **Brickware**.

Make sure the TFTP Deamon is running. To start the TFTP server, press the following key combination in **DIME Tools**:

CTRL + T

You can use the *CONFIGURATION* menu item in the **DIME Tools** to assign the TFTP server a path, which it uses to save or provide the configurations.

2.3.1   Setup Tool

■   Go to *MAIN MENU* → *CONFIGURATION MANAGEMENT*.

```
VPN Access 25 Setup Tool                    Bintec Access Networks GmbH
[CONFIG]: Configuration Management                         Head_Office


        Operation                   put    (FLASH -> TFTP)

        TFTP Server IP Address      192.168.100.2
        TFTP File Name              Firewall.cf

        Name in Flash               boot


        Type of last operation      save   (MEMORY -> FLASH)
        State of last operation     done



           START OPERATION                      EXIT

```

The following fields are relevant:

Field	Meaning
Operation	For selecting the operation you wish to perform. The information in brackets indicates the location and destination of the configuration.
TFTP Server IP Address	Enter the IP address of your TFTP server.
TFTP File Name	Give the configuration a file name.
Name in Flash	Select the configuration you wish to save or load.
START OPERATION	Start your operation via this field.

Table 2-5:   Relevant fields in *MAIN MENU* ➜ *CONFIGURATION MANAGEMENT*

You would like to take your configuration named *boot* in the flash ROM memory and save it under the name *Firewall.cf* in a TFTP server.

Proceed as follows to transfer a configuration to a TFTP server:

■ Set *OPERATION* to *put (FLASH -> TFTP)*.

■ Enter a *TFTP SERVER IP ADDRESS*, e.g. *192.168.100.2*.

■ Enter the file name, e.g. *Firewall.cf* under ***TFTP FILE NAME***.

■ Select the name under ***NAME IN FLASH***, e.g. *boot*.

■ Start the operation with the menu item **START OPERATION**.

You would like to load your configuration named *Firewall.cf* from a TFTP server and save it under the name *boot* in the flash ROM.

Proceed as follows to import a configuration from a TFTP server:

■ Set ***OPERATION*** to *get (TFTP -> FLASH)*.

■ Enter a ***TFTP SERVER IP ADDRESS***, e.g. *192.168.100.2*.

■ Enter the file name, e.g. *Firewall.cf* under ***TFTP FILE NAME***.

■ Enter the name under ***NAME IN FLASH***, e.g. *boot*.

■ Start the operation with the menu item **START OPERATION**.

Note

The configuration file you have transferred to the PC by TFTP is a normal ASCII file. This can be opened and edited without problems using a text editor, e.g. Notepad.

2.3.2   SNMP Shell

Proceed as follows to transfer a configuration to or from a TFTP server via the shell:

■ Open the table for configuration management with the following command in the shell: `biboAdmConfigTable`.

```
inx Cmd(*rw)      Object(rw)      Path(rw)      PathNew(rw)
    Host(rw)      State(ro)       File(rw)      Timeout(rw)

 00 save          .0.0            "boot"
    0.0.0.0       done                          0
```

The following fields are relevant:

Field	Meaning
Cmd	For selecting the operation you wish to perform.
Path	Enter the name of the existing configuration.
Host	Enter the IP address of your TFTP server.
File	Enter the file name.

Table 2-6:   Relevant fields in *biboAdmConfigTable*

You would like to take your configuration named *boot* in the flash ROM memory and save it under the name *Firewall.cf* in a TFTP server.

Enter the following command in the shell to save a configuration to a TFTP server:

```
Cmd=put Path=boot Host=192.168.100.2 File=Firewall.cf
```

You would like load your configuration under the name *Firewall.cf* from a TFTP server and save it under the name *boot* in the flash ROM.

Enter the following command in the shell to load a configuration from a TFTP server:

```
Cmd=get Path=boot Host=192.168.100.2 File=Firewall.cf
```

Note

The commands *put* or *get* do not secure any preshared keys and host keys. This was changed in software version 7.1.4.

For this purpose, use the commands *put_all* and *get_all* instead of *put* or *get*.

Please note that the new commands are only available in the shell!

2.4   Other Shell Operations

2.4.1   List of Configurations

If you would like a list of the configurations in the flash ROM memory, open the following table in the shell:

`biboadmconfigdir`

```
inx Name(*ro)         Count(ro)   Content(ro)

 00 "boot"             160         "<all>"

 01 "Basic"            140         "tblno:1:3:8:9:10:11:12:

 02 "ipsec-callback"   140         "tblno:1:3:8:9:10:11:12:

 03 "dyn_enc"          140         "tblno:1:3:8:9:10:11:12:

 04 "Firewall"         160         "<all>"

 05 "<bytes free>"     137778
```

Here you will find a list with the names of the configurations in the flash ROM, the space occupied and the free flash ROM memory.

2.4.2   Sorting the Flash ROM Memory

It is sometimes possible that no space is available for storing more configurations in the flash ROM memory.

This may be because you have renamed, saved, copied or deleted configurations too often.

This means the configurations are scattered throughout the memory. It it recommended that you reorganize the free memory in the flash ROM with the following command to make this memory available as a block:

`Cmd=reorg`

2.4.3   Saving by Xmodem

If TFTP is not available for saving the configuration to a PC, you can also cause the router to transfer the file over the serial interface to a terminal program using a command in the shell.

Enter the following in the shell to transfer the boot configuration.

```
Cmd=put Path=boot File=xmodem
```

After you have executed the command, you must set your terminal program to receive mode to be able to save the file on the PC.

Select the Xmodem protocol for the transfer.

Configuration Management

3   Overview of Configuration Steps

MAIN MENU ➜ *CONFIGURATION MANAGEMENT*

Save

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*save (MEMORY -> FLASH)*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *Firewall*

Load

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*load (FLASH -> MEMORY)*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *Firewall*

Delete

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*delete (FLASH)*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *Firewall*

Rename

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*move (FLASH -> FLASH)*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *boot*
New Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *Firewall*

Copy

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*copy (FLASH -> FLASH)*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *boot*
New Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *Firewall*

Save via TFTP

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*put (FLASH -> TFTP)*
TFTP Server IP Address	*CONFIGURATION MANAGEMENT*	e.g. *192.168.100.2*
TFTP File Name	*CONFIGURATION MANAGEMENT*	e.g. *Firewall.cf*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *boot*

Load from TFTP

Field	Menu	Description
Operation	*CONFIGURATION MANAGEMENT*	*get (TFTP -> FLASH)*
TFTP Server IP Address	*CONFIGURATION MANAGEMENT*	e.g. *192.168.100.2*
TFTP File Name	*CONFIGURATION MANAGEMENT*	e.g. *Firewall.cf*
Name in Flash	*CONFIGURATION MANAGEMENT*	e.g. *boot*