NETWORK TECHNOLOGIES INCORPORATED

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Automatic Firmware Change Scripts

The enclosed scripts were created to provide an automatic method for downloading and upgrading (or downgrading) ENVIROMUX-16D/5D/2D Enterprise Environment Monitoring Systems with the desired firmware version.   For them to work, the following requirements must be met:

1. The enclosed file, **upgrade_script.sh, or change_script.sh** must be saved to a directory on a server running the Linux/Unix platform.   The server must also have Perl and Curl installed.

2. The server needs to have internet access to the NTI firmware download page http://www.networktechinc.com/download/d-environment-monitor-16.html.

3. It is recommended that the server be on the same subnet as the ENVIROMUX unit to be upgraded/downgraded. (The script will effect one unit at a time.)

4. It is recommended to read and verify firmware release notes before triggering a change in firmware. Release notes are found on the download page.

If you want to just upgrade your ENVIROMUX to the latest firmware available, use the instruction for "Edit the upgrade_script" below.   If you want to control which version of firmware that will be loaded (perhaps you are downgrading the version),   use the instruction for "Edit the change_script.sh" on page 2.

Edit the upgrade_script

Before executing the script, the parameters for using it must be edited for the parameters of the ENVIROMUX to be upgraded.   The file (upgrade_script.sh) can be opened and edited in any text editor.

```
# NTI Enviromux-xD Auto Firmware Upgrade Script

# http://www.networktechinc.com

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#

# Instructions: It is recommended to verify firmware release notes before triggering
upgrade.

# Requirements: Curl, Perl

# Usage: bash upgrade_script.sh

# Downloads latest firmware from website and upgrades one E-xD unit as set below

# Version: 1.0
```

```
# Username and password of Enviromux-xD unit with admin privileges

USERNAME=root        Enter a valid username

PASSWORD=nti         Enter a valid password



# IP Address or domain name of Enviromux-xD unit

IP_ADDRESS=192.168.3.221        Enter the IP address of the unit to receive a firmware upgrade



# Enviromux-xD unit protocol to be used: http/https

PROTOCOL=http        Make sure the protocol that is enabled is entered (http is the default)



# update script log file

LOGFILE=/dev/stdout        If you want a text file record of what the script did, enter a path and filename

                            here.  Otherwise, it will just print on the terminal screen when you execute the

                            script.
```

If the ENVIROMUX is already at the latest firmware version, the script will note that, cancel the upgrade and report it.

Be sure to save the script file after making any edits.

Edit the change_script

Before executing the script, the parameters for using it must be edited for the parameters of the ENVIROMUX to be affected.   The file (change_script.sh) can be opened and edited in any text editor.

```
#!/bin/bash



# NTI Enviromux-xD Firmware Change Script

# http://www.networktechinc.com

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#

# Instructions: It is recommended to verify firmware release notes before triggering
upgrade.

# Requirements: Curl, Perl

# Usage: bash change_script.sh
```

```
# Downloads the specified firmware version from website and updates one E-xD unit as
set below

# Version: 1.0

# Username and password of Enviromux-xD unit with admin privileges
```
USERNAME=root   **Enter a valid username**

PASSWORD=nti   **Enter a valid password**

```
# IP Address or domain name of Enviromux-xD unit
```
IP_ADDRESS=192.168.3.221   **Enter the IP address of the unit to receive a firmware change**


```
# Enviromux-xD unit protocol to be used: http/https
```
PROTOCOL=http   **Make sure the protocol that is enabled is entered (http is the default)**


```
# update script log file
```
LOGFILE=/dev/stdout   **If you want a text file record of what the script did, enter a path and filename**

here. Otherwise, it will just print on the terminal screen when you execute the

script.


```
# Firmware version to update the unit with.
# Example: if unit is to be updated with version 2.48, specify
#         2 for major version and 48 for minor version
```
TARGET_MAJOR_VERSION=2   **Enter the characters for the version of code you want**

TARGET_MINOR_VERSION=48   **to upgrade/downgrade the firmware to.**

Be sure to save the script file after making any edits.

Use the Edited Script

Use the following command to execute the script on the Linux/Unix server:

bash upgrade_script.sh   or

bash change_script.sh

If you haven't assigned a path and filename for the LOGFILE to be written to, the terminal screen will display the process and indicate that the ENVIROMUX is rebooting when it is finished.   Once it has rebooted, the process is complete.

If the process is being recorded in a logfile, then nothing will be displayed during the firmware change, but when the process is complete a prompt will be displayed.