

# License Upgrade Procedure

## 1. Licensing Introduction

The EtherHaul 1200 provides for easy migration to support Gigabit throughput, enabling operators to enhance bandwidth capacity on a “pay as you grow” basis as well as adding features and capabilities according to their networks evolutions.

You can order the following EtherHaul 1200 software (capacity steps and feature availability depend on your platform):

- Data rate (capacity)  
EH1200 data rates [Mbps, Half-Duplex]: 100 | 200 | 400 | 500 | 1000
- Layer 2 networking capabilities – Provider Bridging (IEEE 802.1ad), classification and scheduling, OAM, and Ethernet Ring Protection
- Synchronization – Synchronous Ethernet (ITU-T G.8261)
- Encryption – AES

## 2. License Upgrade Overview

License upgrade keys are generated by Siklu based on ODU’s serial number upon order.

The license key is a signature file containing the license configuration that can be loaded on the ODU it was generated for only.

To obtain a license key, submit a request to Siklu using the “License Generation Request Form”, summarizing the required information. You will be asked to provide the ODU’s details (such as product type, serial number and current license configuration), requested license configuration and license order details.

Once received, and following the receipt of a purchase order, Siklu will generate and send you a license key for the requested license configuration.

The license key should be loaded to ODU using FTP via the CLI.

Once license key was loaded, the different licensing components can be enabled.

## 3. Verifying License Key

License key content can be verified by viewing it with any text editor.

Before loading the license key, verify the serial number and license components by checking the [settings] and [license] sections of the digitally-signature file:

```
...
...
[settings]
host-id = 00-26-C6-82-EE-11
date = 2011.09.01
time = 08:08:11
type-of-bind = unit
binding-number = F114003133
signing-certificate = d2:a9:cc:4b:78:9b:b5:22

[license]                                1=enable, 0=disable
encryption = 1
oam = 0
synce = 0
provider-bridge = 1
data-rate = 200
...
...
```

## 4. Loading License Key

License key is loaded to the ODU using FTP via the CLI.

A running FTP server has to be available, storing the license key.

Any FTP server software available on the web can be used for loading the license key. In appendix A of this document, you can find an example of FTP server setup using Sysax Multi Server (30 days trial period available).

Use the CLI to load the license file:

```
copy license://<ftp_user>:<ftp_password>@<FTP server IP
address>/<license_file_name>
```

*for example:*

```
copy license ftp://user:admin@192.168.0.100/F124003133.lic
Done
```

```
....
License file replaced successfully.
```

Before loading the license key:

1. Verify the license key name matches the ODU's serial number.

The ODU's serial number is available in the CLI (`'show inventory 1 serial'`) or in the Web-GUI (container 0 on the 'Inventory' tab on the 'System' menu).

2. Verify ODU's time and date are correctly set.

Setting the ODU's time and date is available in the CLI (`'set system date YYYY.MM.DD time HH:MM:ss1'`) or in the Web-GUI ('System' menu).

## 5. Licensing Components

After license key is loaded, license components may be enabled, based on the requested configuration. Note that by default, all license component are disabled and data rate is set to 100Mbps).

License components relate to the license ordered, where license components `'provider-bridge'` and `'oam'` are related to the Layer 2 networking license.

*Checking the license components settings:*

```
show license
```

```
license provider-bridge      : enable
license oam                  : disable
license synce                : disable
license encryption          : disable
license data-rate           : 200
```

*Configuring license components:*

```
Default>set license data-rate 1000
```

```
Set done: license
```

## Appendix A – FTP Server Setup

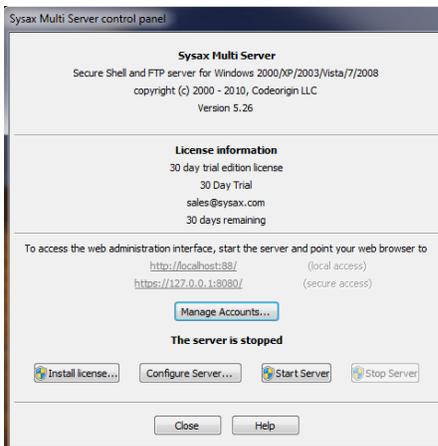
Loading license key requires FTP server, storing the license file. The EtherHaul ODU’s internal FTP client will access the external FTP server, retrieving and activating the license file.

### Sysax Multi Server Installation and Setup

1. Download Sysax Multi Server from <http://www.sysax.com/download.htm>.

Before download starts, you will be asked for your name and email details but you can also select “No, just let me download Sysax Multi Server”.

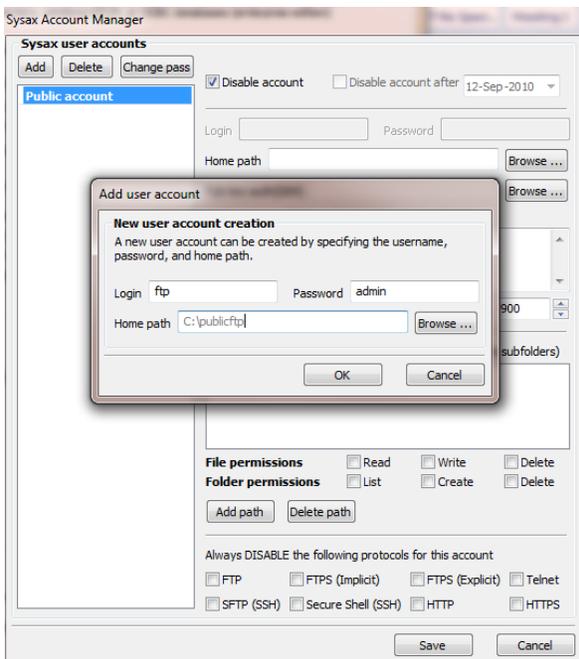
2. Run setup and use default configuration (select “Next”, “Accept” and “Install” when prompted). Select “Finish” when installation is completed.
3. Launch the “Sysax Multi Server Administrator” application. The “Sysax Multi Server Control Panel” is displayed.



4. Select “Manage Accounts” to create and configure FTP account.
5. Use default configuration (select “Next” on each screen) until the “Multi Server Account Setup” screen.
6. In the “Multi Server Account Setup” screen select “Configure Accounts”.



7. In the “Sysax Account Manager” select “Add” to add a new user account. In the “New User Account Creation” enter (for example):  
Login: ftp  
Password: admin
8. Homepath: C:\publicftp (create new folder, or select different home directory where the SW version files will be stored)
9. “OK” and then “Save”.
10. Continue the installation process with default configuration (select “Next” when prompted). Select “Finish” when setup is completed.



## Running the Sysax FTP Server

1. The SW version files should be stored in the home path directory of the FTP server. Store the license file under C:/publicftp.
2. Launch the “Sysax Multi Server Administrator” application. The “Sysax Multi Server Control Panel” will be displayed.
3. Select “Start Server” and verify server is running.