

HylaFAX Enterprise Migration Guide

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1. Summary

This guide is for HylaFAX Enterprise customers planning to migrate to the CentOS 7.

HylaFAX Enterprise server migration services are available to customers preferring iFAX Solutions support engineers perform the migration. Please contact sales@ifax.com or 800-332-9750 for more information and pricing.

2. Licensing

HylaFAX Enterprise licenses are linked to the MAC address of the first Ethernet interface on the server. If you don't need to operate both the old and new servers concurrently, and you're able to configure your new server with the same MAC as the old server, your current license files will work just fine. This is the easiest approach to licensing. However, if you're using a physical bare metal server, we don't recommend cloning the MAC address.

If you can't retain your MAC address or are using a physical server, contact iFAX Support <support@ifax.com> for assistance with your licenses. Be sure to include the output to `lmhostid`. We can generate an evaluation serial number to test a new server before you officially migrate. Once the server is proven, we can add another fulfillment to your production serial numbers so that they can be activated on your new production machine.

2.1. License Upgrade

If you're still running HylaFAX Enterprise 5.x, you must verify whether your licenses support HylaFAX Enterprise version 6.x, which is used on CentOS 7.

On the old server, the `lmstat -i` command will report the version supported by your licenses. Verify that all features (except HylaFSP) are version '6.0'. If only version '5.0' or earlier is displayed, send the output to `lmhostid` to iFAX Support before proceeding.



If you have a current support and maintenance plan, we will provide upgrade licenses that will allow you to use HylaFAX Enterprise 6.x.

3. Prepare the New Machine

Migrating to CentOS 7 requires a complete new installation of the CentOS 7 operating system on a new bare metal or virtual machine. Prepare the new server by installing the HylaFAX Enterprise Appliance ISO, which will install CentOS 7 for you. Details are found here:

https://www.ifax.com/quickdocs/hylafax_appliance_quickstart.pdf

Once the installation is complete, execute `yum update` to upgrade any packages that require an update. If a new kernel was installed, then reboot the server into the new kernel before proceeding.

4. Backup the Old Machine

Verify that there haven't been any changes to the HylaFAX files that would need to be replicated on the new machine:

```
# rpm -V $(rpm -qa hyla\*)
```

If that command outputs a list of files, you should make a backup of them for comparing with the same files on the new machine.

Backup the following directories on your old server, ideally using `tar`, so they can be copied to the new server for safekeeping. The files in these directories will need to be compared with the files on the new server:

```
/etc/ifax/  
/etc/hylafax/  
/etc/postfix/  
/var/spool/hylafax/
```

Here is an example backup command using `tar`:

```
# tar cvfz backup.tgz /etc/hylafax/ /var/spool/hylafax/ /etc/ifax/ /etc/postfix/
```



There are many changes on CentOS 7 so you must **not** restore your back up from an older system overwriting the files on the CentOS 7 machine. If you do, that will require a complete reinstall of HylaFAX Enterprise on the new system.

If you're using the CUPS printer software, LDAP (or Active Directory) for authentication, the ODBC database connection, or Samba shares, be sure to backup the following as well:

```
/etc/cups/  
/etc/ldap.conf  
/etc/odbc*  
/etc/samba/
```

5. License Migration

5.1. Using the Old MAC Address

If you're retaining the same MAC address as the old server, the `*.lic` and `*.key` files in `/etc/ifax/` can be copied to the new server.

After copying the license files to `/etc/ifax/` on the new server, execute the following commands on the new server:

```
# lmreread
```

```
# lmstat -a
```

The output to `lmstat -a` should be similar to the output on the old server.

5.2. Using a New MAC Address

If you're using a new MAC address and you've been supplied with an evaluation serial number or you've received confirmation that we have added an additional fulfillment to your production serial numbers, use the Appliance Console to activate your serial numbers on the new machine.

6. HylaFAX Configuration Migration

If you're migrating from the CentOS 5-based Appliance, you can manually apply the same configuration changes in your Appliance menu system that you had on the old system, and your migration is complete. However, if there have been any custom changes — including changes made by iFAX Support on your behalf — those will need to be replicated on the new server.

6.1. Comparing Configurations

Instead of simply copying and overwriting the various files/directories from one server to the other, it's necessary to review and compare the configuration files on both servers, and make the adjustments to the new server manually, as needed.

Execute the following commands one-by-one on both servers and compare the configuration files.

```
cd /var/spool/hylafax
egrep -v '^(^#|\s*$)' etc/config
egrep -v '^(^#|\s*$)' etc/config.boston00
egrep -v '^(^#|\s*$)' etc/CONFIG/boston
egrep -v '^(^#|\s*$)' etc/config.ttyS4
egrep -v '^(^#|\s*$)' etc/CONFIG/mainpine
egrep -v '^(^#|\s*$)' etc/CONFIG/site
egrep -v '^(^#|\s*$)' etc/CONFIG/site.conf
egrep -v '^(^#|\s*$)' etc/CONFIG/web.conf
egrep -v '^(^#|\s*$)' etc/CONFIG/database
egrep -v '^(^#|\s*$)' etc/FaxDispatch
egrep -v '^(^#|\s*$)' etc/FaxDispatch.appliance
egrep -v '^(^#|\s*$)' etc/FaxNotify
egrep -v '^(^#|\s*$)' etc/FaxNotify.appliance
egrep -v '^(^#|\s*$)' etc/FaxModify
egrep -v '^(^#|\s*$)' ifax/bt/config/callctrl-appliance.cfg
egrep -v '^(^#|\s*$)' ifax/bt/config/callctrl.cfg
egrep -v '^(^#|\s*$)' ifax/bt/config/btcall.cfg
egrep -v '^(^#|\s*$)' /etc/hylafax/hfaxd.conf
egrep -v '^(^#|\s*$)' /etc/hylafax/hyla.conf
egrep -v '^(^#|\s*$)' /etc/hylafax/typerules
egrep -v '^(^#|\s*$)' /etc/hylafax/sendfax.conf
egrep -v '^(^#|\s*$)' /etc/hylafax/faxmail.conf
egrep -v '^(^#|\s*$)' /etc/odbc.ini
egrep -v '^(^#|\s*$)' /etc/odbcinst.ini
egrep -v '^(^#|\s*$)' /etc/postfix/master.cf
egrep -v '^(^#|\s*$)' /etc/postfix/main.cf
egrep -v '^(^#|\s*$)' /etc/postfix/virtual_alias-fax
cat etc/hosts.hfaxd
```



The `egrep` command above will hide empty lines and comments in order to make it easier to compare files.

6.2. Important Considerations

You must simply edit the files on the new server and not overwrite them. File and directory permissions and ownership are very important and should not be changed. The `uucp` user has been replaced with `hylafax`.

You'll want to compare all files that are 'Included' by other configuration files and make the necessary additions/changes on the new server.

On the old server, you'll want to verify whether the `etc/config.bostonXX` file (or `etc/config.tySX` for Mainpine systems) are all the same size. If they aren't, then the ones that differ may have additional configuration parameters in them that you may want to replicate in the respective files on the new server.

In `btcall.cfg`, 'v34_enable' may be set to 'False', but that value is invalid should be changed to '0'. Also, our default value for 'ced_timeout' has changed to '6000' and that setting should be retained unless the old server's setting is higher.

In `callctrl-appliance.cfg`, most configuration for the file is under 'host_module.1', and can be copied verbatim with the addition of the recommended new parameter 'sip_RFC6913_enable=TRUE' in '[host_module.1/t38parameters]'. If there is more than one network interface on the system, specify the interface to be used for SIP/RTP in '[module.0/ethernet.1]'.

In `bin/` and `ifax/bin/`, there may be custom scripts like `jobcontrol-cid.sh` and `dynconf` that should be copied to the new server.

Remember to add the user accounts in `etc/hosts.hfaxd` from the old server on the new server.

Custom email templates like `etc/templates/custom/` can be safely copied over to the new server. Remember to change the ownership to `hylafax`.

6.3. Mainpine Modem Systems

To complete the Mainpine setup on CentOS 7, see the **HylaFAX Enterprise Installation Guide** regarding Mainpine modems.

https://www.ifax.com/quickdocs/hylafax_enterprise_guide.pdf

6.4. Postfix Configuration

The basic configuration for Postfix is managed by the Appliance console, but some customers have additional configuration requirements like using a specific email server for relay with a password.

Be sure to copy `/etc/postfix/relay_passwd` if it is in use, set its permissions to 0600, and run `postmap relay_passwd` to recreate the hash of the file.

Be sure the correct any IP addresses in `/etc/postfix/virtual_alias-fax`.

If you have TLS certificates installed manually, those will have to be migrated as well (if they're still valid).

After changing Postfix settings, run `systemctl restart postfix` to apply them.

6.5. Email Aliases

Check whether email aliases were configured for 'FaxMaster' and 'root':

```
# grep ^FaxMaster /etc/aliases
```

```
# grep ^root: /etc/aliases
```

Make the necessary changes to `/etc/aliases` on the new server and then execute: `newaliases`

6.6. ODBC Database

If you're not using the ODBC database, then `etc/CONFIG/database` and `/etc/odbc.ini` may not exist or contain any useful information.

If you are using the ODBC database, you can find the best practices for setting up the ODBC connection on CentOS 7 here:

https://www.ifax.com/quickdocs/hylafax_odbc_guide.pdf

6.7. CUPS Printing

If you're running CUPS for printing services, we recommend you configure the printers directly via the CUPS web interface instead of restoring the old configuration files.

Details are found in the **HylaFAX Enterprise Installation Guide**.

6.8. LDAP / Active Directory

If you're using LDAP/Active directory for authentication, the setup has changed on CentOS 7. The following script can help you with the new configuration:

<http://people.ifax.com/~david/scripts/setup-ldap.sh>

6.9. Crontabs

HylaFAX's default crontabs are located at the paths below:

```
/etc/cron.daily/hylafax
/etc/cron.hourly/hylafax
```

Any changes should be duplicated on the new server as needed.

7. Faxmail and SELinux

The SELinux security subsystem defaults to 'enforcing' on new systems, and that may cause issues for the email-to-fax subsystem, 'faxmail'. To switch SELinux to 'permissive' so that it will log potential issues that it finds instead of preventing operation, run the command:

```
# setenforce permissive
```

`setenforce` only affects the SELinux status until the next reboot.

To make that change permanent, edit the file `/etc/sysconfig/selinux` and change the line:

```
selinux=enforcing
```

to:

```
selinux=permissive
```

8. Migrating the Web Interface

If you plan to migrate the web interface and its data from the old server to the new server, follow the steps below. Otherwise, you may skip this section.

8.1. On the old machine

Verify that there haven't been any changes to the web interface that would need to be replicated on the new machine:

```
# rpm -V hylafax-enterprise-web
```

If that command outputs a list of files, you should make a backup of them for comparing with the same files on the new machine.

Make sure you're running the latest version of the web interface and its database schema before proceeding:

```
# rpm -Uvh http://repo.ifax.com/yum/ifax-ee-6.1.rpm
```

```
# yum update hylafax-enterprise-web
```

Perform a dump of the 'hylafaxweb' MySQL database:

```
# mysqldump hylafaxweb | gzip > migrate.sql.gz
```

Backup the following files and directories:

```
/var/www/fax/includes/local_config.php  
/var/www/fax/app/images/  
/var/www/fax/faxes/
```



/var/www/fax/faxes can be quite large since it contains all your sent and received faxes. You may prefer to use `rsync` to copy the files to the new server instead of including it in a tarball. See the next section for details.

8.2. On the new machine

Load the MySQL database from your old machine:

```
# gunzip migrate.sql.gz
```

```
# mysql hylafaxweb < migrate.sql
```

If you're retaining the fax archive from the old machine, everything in `/var/www/fax/faxes/` should be copied to the new server. If the servers are able to connect to each other over the network, simply use the `rsync` command.

For example, as 'root' on the new server, execute:

```
# OLDHOST=10.21.6.22
```

```
# rsync -urlptvz $OLDHOST:/var/www/fax/faxes/ /var/www/fax/faxes/
```

Once the synchronization is complete on the new machine, run this command to ensure that the ownership is set correctly on the new machine:

```
# chown -R apache:hylafax /var/www/fax/faxes
```

Any custom cover pages and logos should be copied from `/var/www/fax/app/images/` on the old server to the new server.

Finally, compare the settings in `local_config.php` and make any necessary changes in the version on the new server.

8.3. Web Interface Crontab

The Web Interface has a single crontab located at:

```
/etc/cron.d/hylafax-enterprise-web
```

This crontab allows you to automatically move faxes from the Inbox to the Archive area after a specific number of days. It also deletes temporary files that are no longer needed. It can also be used to set the retention period for faxes by using the '-d' option. If that hasn't been set on the old system, you may want to revisit that policy on the new system. This option specifies the number of days worth of faxes to keep in the Web Interface's fax archive. Thus, '-d 180' means to delete faxes older than 180 days.