



XELOS
Social Workplace

Installation: XELOS 7.x on CentOS 7

Please note that we are offering fully configured VMs of XELOS, ready for use and deployment at <http://www.xelos.net/download> .

This installation guide is meant for customers who would like to configure the server for XELOS on their own.

Planning

If you are planning on using a single server for XELOS you will run the following main services on your server:

- Database Server (mysql, mariadb or **percona server***)
- Web Server (apache or **nginx***)
- Application Server (**php-fpm***)
- Optional: Caching Server (memcache, redis)

**recommended application packages used in this guide*

RAM / CPU requirements will differ from your usage scenario, but please take the following example calculation as reference:

CPU Requirements

- DB: 1 CPU core
- NGINX: 1 CPU core for each worker
(1 worker handles 1024 connections in the default configuration, you can usually increase this to 4096 connections without worries)
- PHP-FPM: 1-2 CPU cores
(the application process is CPU hungry, you should calculate 1 core for about 5 php-fpm processes)
- OS / Background Processes: 1 CPU Core
(keep 1 core as spare in your calculation for your operating system and XELOS background daemons which are used for search indexing, backup and image processing)
- (Optional) Other Applications
(think about what you also are running on this server which might need processing power, e.g. libreoffice for document previews [if you enable this feature], third party monitoring and backup processes, etc.)

For production use, it is recommended that you **have at least 4 CPU cores for your XELOS server.**



XELOS

Social Workplace

RAM Requirements

- DB: 2-4 GB RAM
(this can totally differ depending on your data growth, but keep in mind that the database performance is heavily affected by the amount of RAM available)
- PHP-FPM: ~60MB RAM per process + 200MB for spike usage (e.g. for administrative tasks)
(with 2 CPU cores you should have a limit of 10 processes configured, i.e. 10x60MB + 200MB = 800MB RAM)
- OS / Background processes: 2-3 GB RAM
(linux will use leftover RAM to efficiently cache files accessed by your processes and speed things up. XELOS usually runs 3-4 background processes idling at 150MB, but can spike to 500MB for specific tasks during document processing)

For production use, it is recommended that you **have at least 8 GB RAM available**.

User / Process Calculation

The typical request to XELOS will take approx. 200-300ms to complete within the application process. With a pool of 10 PHP-FPM processes you should therefore be able to serve 30-50 concurrent requests without noticable delays. Depending on your usage scenario this could be 20 power users **heavily** using webDAV (large uploads will block processes for a longer period) or 500 users surfing your intranet (reading, searching, downloading).

NGINX will be accept incoming connections up to the connection limit substracted by the connections required for PHP-FPM (1024 would end up being 10 inward connections to the application server and 1014 connections to browsers etc.). NGINX will handle static files and cached content without the application server and will wait 30 to 60 seconds (see NGINX config) for a new PHP-FPM process to become available.

A production server, with the specs mentioned above, is usually good enough to serve **~300 users online**.

Please note that the actual performance will depend on your hardware / virtual enviroment. (If you are using the latest enterprise CPU model on real hardware you will do much better and if you are running an unmaintained old ESX dating back to 2005 you will do much worse!)



XELOS

Social Workplace

Preparation / Required Packages

It is highly recommended to use current vendor repositories for the services mentioned instead of old outdated distribution repositories.

Some tasks mentioned in this section are not necessarily required and can be skipped if its not applicable, not required or you wish to use an alternative.

Installation: Operating System

It is assumed that you have a CentOS 7 Minimal installation running with SELinux disabled . You could also be running RHEL 7 or any other yum-based distribution to use this guide.

If you prefer Debian, Ubuntu or another distribution you need to adapt the steps and use packages available for your distribution. The XELOS support may not be able to help you with distribution specific problems.

Installation: Database (Percona Server)

Percona is a free open source drop-in replacement for MySQL that provides superior performance, scalability and instrumentation.

More Information at: <https://www.percona.com/software/mysql-database/percona-server>

Quick Installation:

1. Install / Activate Yum Repository
2. Install Percona Server Package
3. Activate Service
4. Start Service
5. Secure Installation (Set Password, Remove Test Database)
6. Import TZ Information into Database

```
# yum install http://www.percona.com/downloads/percona-release/redhat/0.1-3/percona-release-0.1-4.noarch.rpm
# yum install Percona-Server-server-57
# systemctl enable mysqld
# systemctl start mysqld
# mysql_secure_installation
# mysql_tzinfo_to_sql /usr/share/zoneinfo | mysql -u root mysql
```



XELOS

Social Workplace

Installation: Webserver (NGINX)

NGINX is a very efficient http and reverse proxy server.

More Information at: <http://nginx.org/>

To set up the yum repository for CentOS 7, create the file named `/etc/yum.repos.d/nginx.repo` with the following contents:

```
[nginx]
name=nginx repo
baseurl=http://nginx.org/packages/mainline/centos/7/$basearch/
gpgcheck=0
enabled=1
```

For other distributions see: http://nginx.org/en/linux_packages.html#mainline .

Afterwards install nginx, activate and start the service:

```
# yum install nginx
# systemctl enable nginx
# systemctl start nginx
```

Installation: Application Server (PHP-FPM)

PHP-FPM ist the Fast-Process-Manager and will only execute the PHP application. By using PHP-FPM (instead of an apache module) we reduce overhead and make more efficient use of the available server resources.

We are using the repository of Remi Collet. While the repository is not an „official RHEL/centOS repository“, Remi Collet is working for Red Hat / Fedora and is providing one of the most reliable repos with recent versions of PHP, including most recent patches for security and features a like.

Please note: You will loose significant amount of performance, if you are using older versions of PHP. You should also note, that only PHP 5.6 and PHP7 is actively maintained. (PHP 5.5 is facing end of life in summer 2016). If you are installing XELOS 7 (official release will by Q1 2017) you can also use PHP 7. Please use PHP 5.6 for XELOS 6.5.



XELOS

Social Workplace

Quick Installation:

1. Install Remi Repository
2. Activate Generic Remi Repo
3. Activate PHP 7.0 Repo
4. Install PHP packages
5. Install converters, required for PDF preview, full text document search, etc. [optional]
6. Install PEAR Information Module
7. Activate Service
8. Start Service

```
# yum install http://rpms.remirepo.net/enterprise/remi-release-7.rpm
# yum-config-manager --enable remi
# yum-config-manager --enable remi-php70
# yum install php-fpm php-ldap php-mbstring php-mysql php-pear-
Image-GraphViz php-pear-XML-RSS php-pecl-apcu php-ioncube* php-mysql php-gd
php-posix php-soap php-pecl-imagick gd-last php-mcrypt
# yum install ImageMagick-last show zip catdoc antiword poppler-utils
graphviz
# pear install PEAR_Info
# systemctl enable php-fpm
# systemctl start php-fpm
```

Miscellaneous Considerations (optional)

Please make sure that your system is secured effectively. If you are using FirewallD please open the respective http/s ports for XELOS:

```
# firewall-cmd --permanent --add-service=http
# firewall-cmd --permanent --add-service=https
```

If you are planning to use direct mail relay instead of using an SMTP relay with XELOS you should consider using sendmail instead of postfix and add your PHP-FPM user to the authorized mail processes:

```
# yum install sendmail
# yum remove postfix
# vim /etc/mail/trusted-users
# systemctl enable php-fpm
# systemctl start php-fpm
```



XELOS

Social Workplace

Installation: XELOS 7.x PRO

Download XELOS

Download the XELOS application to a directory of your choice.

In this guide we will use the directory `/server/xelos`.

```
# mkdir -p /server/xelos
# cd /server/xelos
# wget https://repo.xelos.net/repo/xelos-pro.tar.gz
# tar xzf xelos-pro.tar.gz
```

You will have the XELOS PRO code now in `/server/xelos/xelos-pro`.

Use the installation wizard

Run the installation wizard:

```
# php /server/xelos/xelos-pro/xf install
```

During the interactive installation you will:

- Create the database, user and password
- Specify an administrator email account for error reporting
- Create a php-fpm pool configuration
- Create a nginx configuration
- Create an admin account

Once the wizard is completed you should write down the details of the admin account.

Afterwards restart nginx and php-fpm for the changed configuration to take effect.

```
# systemctl restart php-fpm
# systemctl restart nginx
```

You might want to remove the default nginx and php-fpm configurations which will still be present from the default package installation.

Please check your error logs in case you have used different user accounts (defaults are „nginx“ and „apache“), you might be forced to make adjustments for nginx to get access to your php-fpm socket.



XELOS

Social Workplace

Activate the XELOS crontab for background processes:

```
# XELOS CRON Trigger  
  
* * * * * /usr/bin/php /server/xelos/xelos-pro/system/cron/start_cron.php -  
ALL >> /server/xelos/xelos-pro/_log/cron.log 2>&1
```

Connectivity / Proxy Settings

XELOS needs to communicate with the update and license server under `repo.xelos.net`. Please make sure that you are able to connect from the server to this system. (You should be able to, as you downloaded the application package from this server).

If you need to configure a proxy, you can edit the file **system/config/config.custom.php**:

```
define('XF_PROXY_HOST', 'proxy.example.com');  
define('XF_PROXY_PORT', '8080');  
  
define('XF_PROXY_LOGIN', NULL); // NULL if not required  
define('XF_PROXY_PASSWORD', NULL); // NULL if not required
```

Online Configuration

At this point you should be able to browse to the XELOS site and login with your admin credentials.

You will need a license - if you don't have a license yet, you can get a free trial license at:

https://my.xelos.net/license_manager/