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# Training on Koha Integrated Library System (ILS) Organized by BALID

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IUB Library

# Training on Koha Integrated Library System (ILS)
# Organized by BALID


## 3-7 September 2013

- **Installation of Koha on Debian**
- **Post Installation of Koha**
- **OPAC Customization**
- **Some Important Commands of Mysql**

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Add root password and create koha as a user and enter password for koha At the time of Debian installation. While installing Debian, select web server Desktop Environment & Standard System options. Do not select Print Server, DNS Server, File Server, Mail Server and SQL Options.

**Log in as root user or go root**

```
sudo su
```

**Add Koha User**

```
root@localhost:~#adduser koha
```

**If you are behind proxy, first setup your proxy**

```
root@localhost:~#export http_proxy=http://example.com:8008
```

**Add source list**

root@localhost:~#`nano /etc/apt/sources.list`

**Comment or erase all and add the following:**

```
deb http://security.debian.org/ squeeze/updates main contrib
deb-src http://security.debian.org/ squeeze/updates main contrib non-free
deb http://http.us.debian.org/debian/ squeeze contrib non-free main
deb-src http://http.us.debian.org/debian/ squeeze contrib non-free main
deb http://debian.koha-community.org/koha squeeze main
```

**Upgrade the Software.**

```
root@localhost:~#sudo apt-get update
root@localhost:~#sudo apt-get dist-upgrade
```

**Create koha environment:**

```
root@localhost:~#gedit /etc/profile
```

**and add the following lines:**

```
export PERL5LIB=/usr/share/koha/lib
export KOHA_CONF=/etc/koha/koha-conf.xml
```

**Add Listen port 8080 in /etc/apache2/ports.conf**

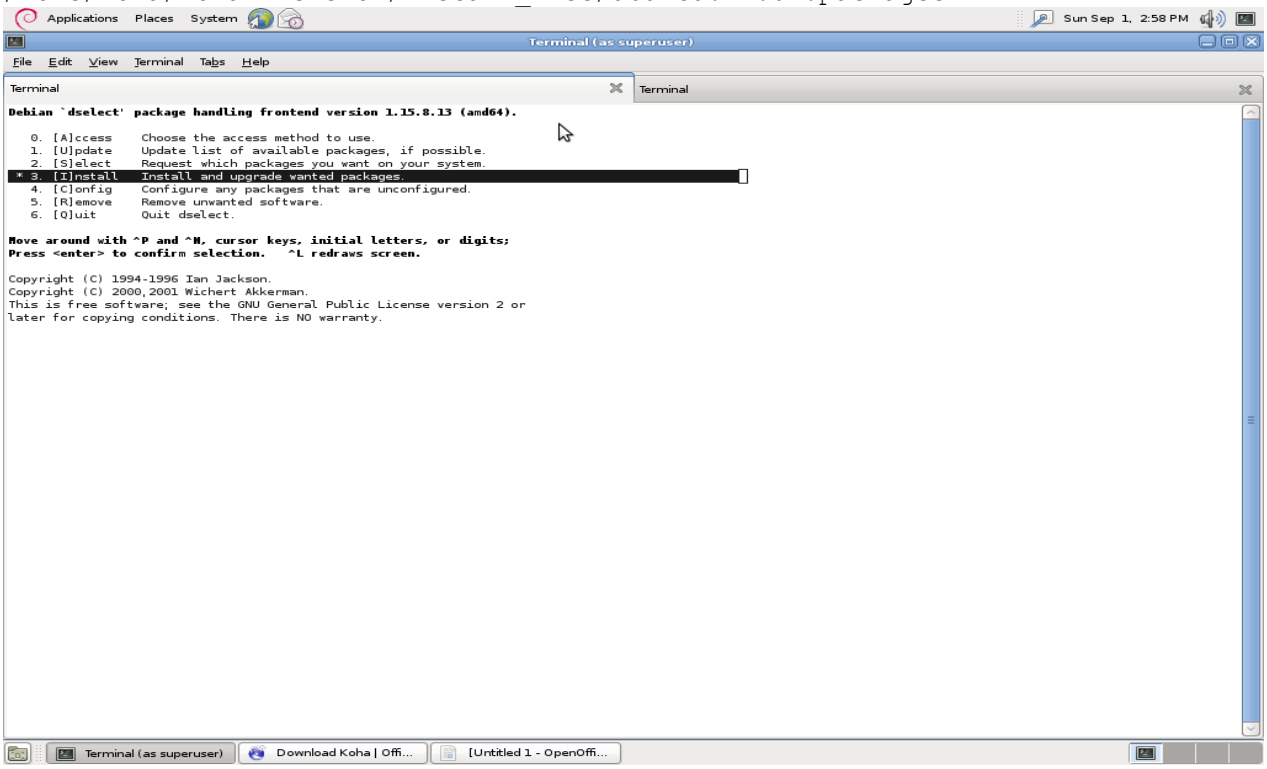
```
root@localhost:~#gedit /etc/apache2/ports.conf
      Listen 8080
```

**Download Koha**

```
root@localhost:/home/koha#wget http://download.koha-community.org/koha-latest.tar.gz
root@localhost:/home/koha#tar -xzvf koha-latest.tar.gz
root@localhost:/home/koha#cd koha-3.12.04
```

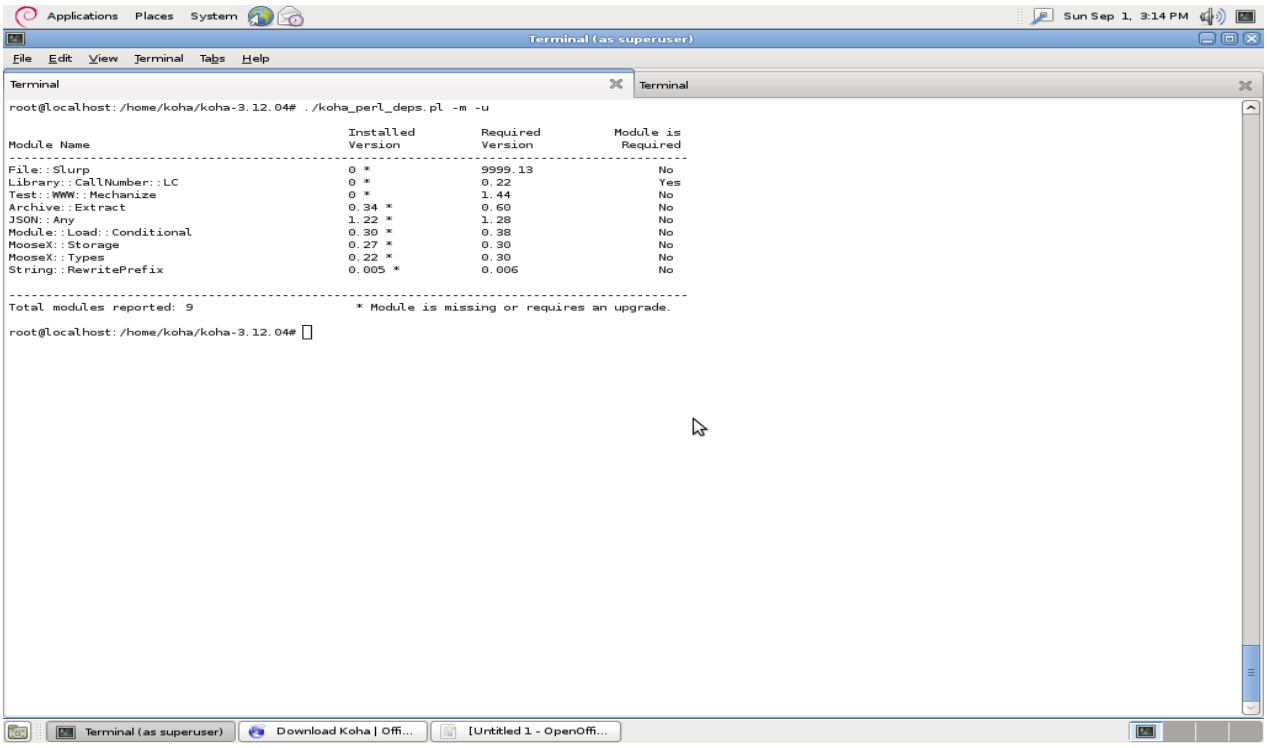
**Install dependencies:** root@localhost:/home/koha/koha-3.12.04# apt-get install dselect

```
root@localhost:/home/koha/koha-3.12.04#dpkg --set-selections <
/home/koha/koha- version/install_misc/ubuntu.12.04.packages
```




## Check which dependencies are not installed

```
root@localhost:/home/koha/koha-3.12.04#./koha_perl_deps.pl -m -u
```



**Install remaining dependencies by using cpan**

```
root@localhost:#cpan
cpan[2]> install Data:Pagination
……..
```

**If Cpan do not work without proxy, set proxy**

```
cpan[2]> o conf init /proxy/
```

**Create Koha database**

```
root@localhost:#mysql -u root -p
create database koha;
exit
```

**After installing all dependencies and creating koha database compile koha for installation**

```
root@localhost:/home/koha/koha-3.12.04#perl Makefile.PL
```

**After running the above command you have to answer some questions.**

Installation mode (dev, single, standard) [standard]

Base installation directory [/usr/share/koha]

User account [koha]

Group [koha]

DBMS to use (Pg, mysql) [mysql]

Database server [localhost]

Please specify the port used to connect to the

DMBS [3306]

used by Koha [koha]

used by Koha [kohaadmin] root

database to be used by Koha [katikoan]

Install the Zebra configuration files? (no, yes) [yes]

MARC format for Zebra indexing (marc21, normarc, unimarc) [marc21]

Primary language for Zebra indexing (en, es, fr, nb, ru, uk) [en]

Bibliographic indexing mode (dom, grs1) [dom]

Authorities indexing mode (dom, grs1) [dom]

characters. (chr, icu) [chr]

Please specify Zebra database user [kohauser]

Please specify the Zebra database password [zebrastripes]

Install the SRU configuration files? (no, yes) [yes]

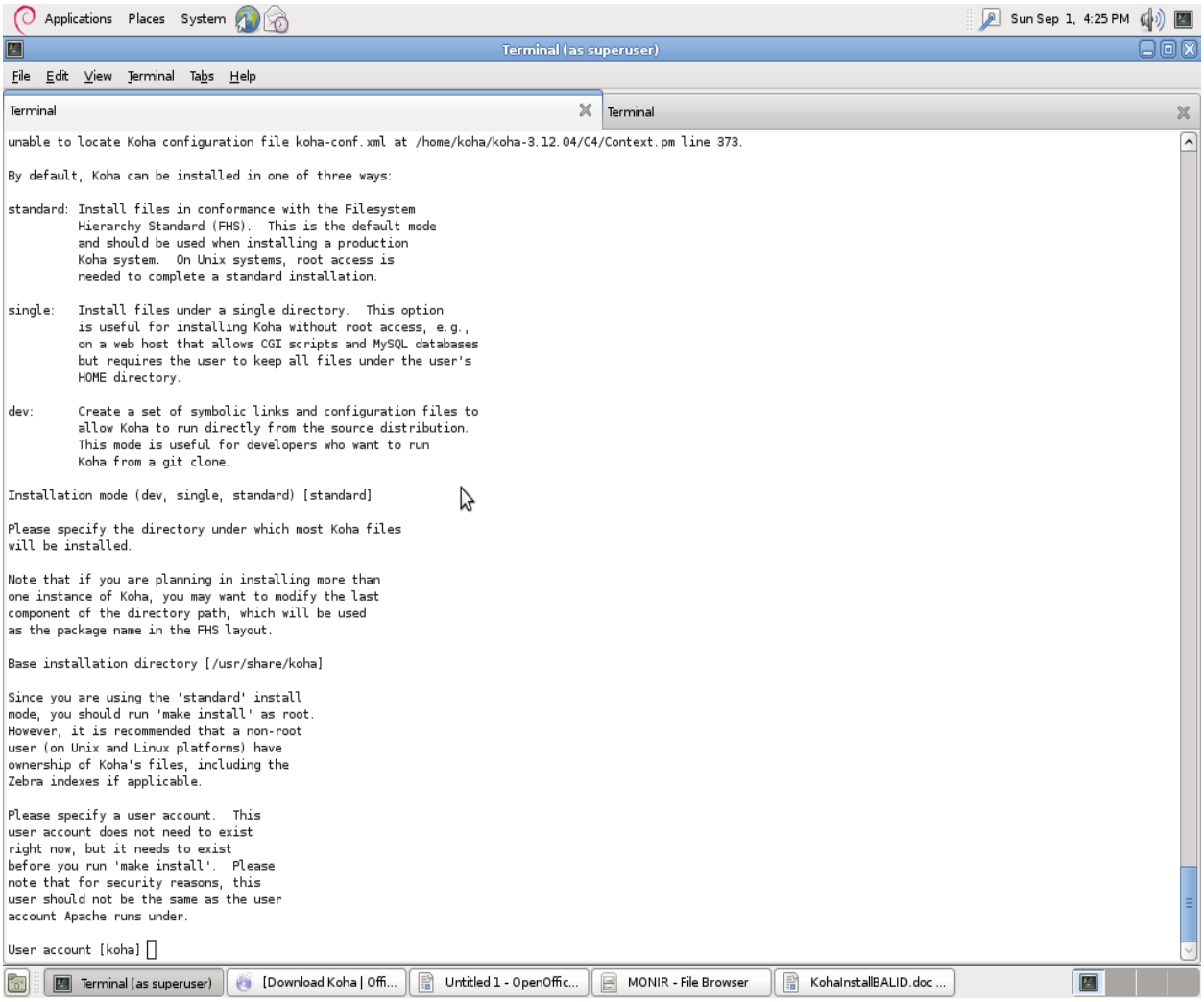
SRU Database host? [localhost]

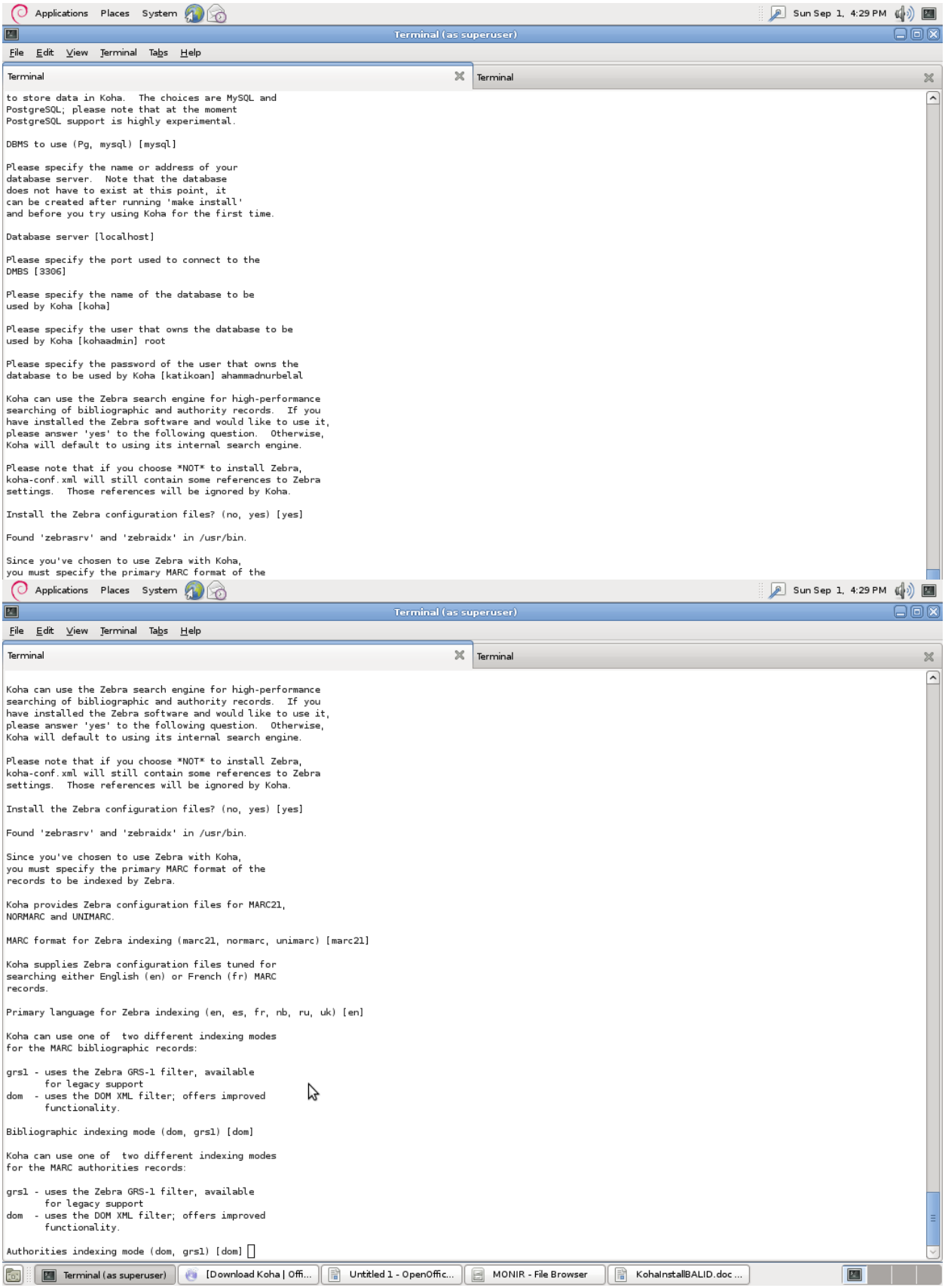
SRU port for bibliographic data? [9998]

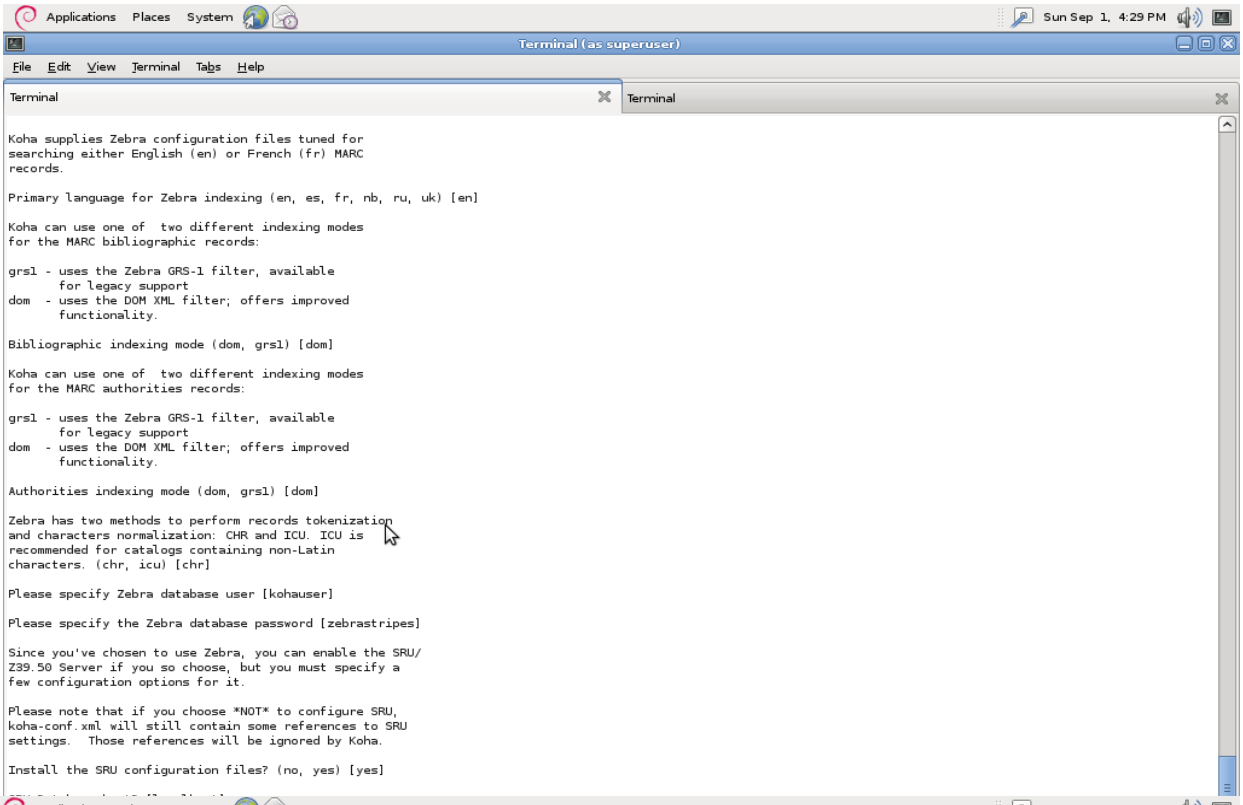
SRU port for authority data? [9999]

Install the PazPar2 configuration files? [no]

**You will need a Memcached server running. (no, yes) [no]**




Applications Places System
Sun Sep 1, 4:29 PM
Terminal (as superuser)
File Edit View Terminal Tabs Help
Terminal
Terminal
to store data in Koha. The choices are MySQL and
PostgreSQL; please note that at the moment
PostgreSQL support is highly experimental.
DBMS to use (Pg, mysql) [mysql]
Please specify the name or address of your
database server. Note that the database
does not have to exist at this point, it
can be created after running 'make install'
and before you try using Koha for the first time.
Database server [localhost]
Please specify the port used to connect to the
DMBS [3306]
Please specify the name of the database to be
used by Koha [koha]
Please specify the user that owns the database to be
used by Koha [kohaadmin] root
Please specify the password of the user that owns the
database to be used by Koha [katikoan] ahammadnurbelal
Koha can use the Zebra search engine for high-performance
searching of bibliographic and authority records. If you
have installed the Zebra software and would like to use it,
please answer 'yes' to the following question. Otherwise,
Koha will default to using its internal search engine.
Please note that if you choose *NOT* to install Zebra,
koha-conf.xml will still contain some references to Zebra
settings. Those references will be ignored by Koha.
Install the Zebra configuration files? (no, yes) [yes]
Found 'zebrasrv' and 'zebraidx' in /usr/bin.
Since you've chosen to use Zebra with Koha,
you must specify the primary MARC format of the
Applications Places System
Sun Sep 1, 4:29 PM
Terminal (as superuser)
File Edit View Terminal Tabs Help
Terminal
Terminal
Koha can use the Zebra search engine for high-performance
searching of bibliographic and authority records. If you
have installed the Zebra software and would like to use it,
please answer 'yes' to the following question. Otherwise,
Koha will default to using its internal search engine.
Please note that if you choose *NOT* to install Zebra,
koha-conf.xml will still contain some references to Zebra
settings. Those references will be ignored by Koha.
Install the Zebra configuration files? (no, yes) [yes]
Found 'zebrasrv' and 'zebraidx' in /usr/bin.
Since you've chosen to use Zebra with Koha,
you must specify the primary MARC format of the
records to be indexed by Zebra.
Koha provides Zebra configuration files for MARC21,
NORMARC and UNIMARC.
MARC format for Zebra indexing (marc21, normarc, unimarc) [marc21]
Koha supplies Zebra configuration files tuned for
searching either English (en) or French (fr) MARC
records.
Primary language for Zebra indexing (en, es, fr, nb, ru, uk) [en]
Koha can use one of two different indexing modes
for the MARC bibliographic records:
grs1 - uses the Zebra GRS-1 filter, available
for legacy support
dom - uses the DOM XML filter; offers improved
functionality.
Bibliographic indexing mode (dom, grs1) [dom]
Koha can use one of two different indexing modes
for the MARC authorities records:
grs1 - uses the Zebra GRS-1 filter, available
for legacy support
dom - uses the DOM XML filter; offers improved
functionality.
Authorities indexing mode (dom, grs1) [dom]
Terminal (as superuser)
[Download Koha | Offi...
Untitled 1 - OpenOffic...
MONIR - File Browser
KohaInstallBALID.doc ...


Applications Places System
Sun Sep 1, 4:29 PM
Terminal (as superuser)
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Terminal
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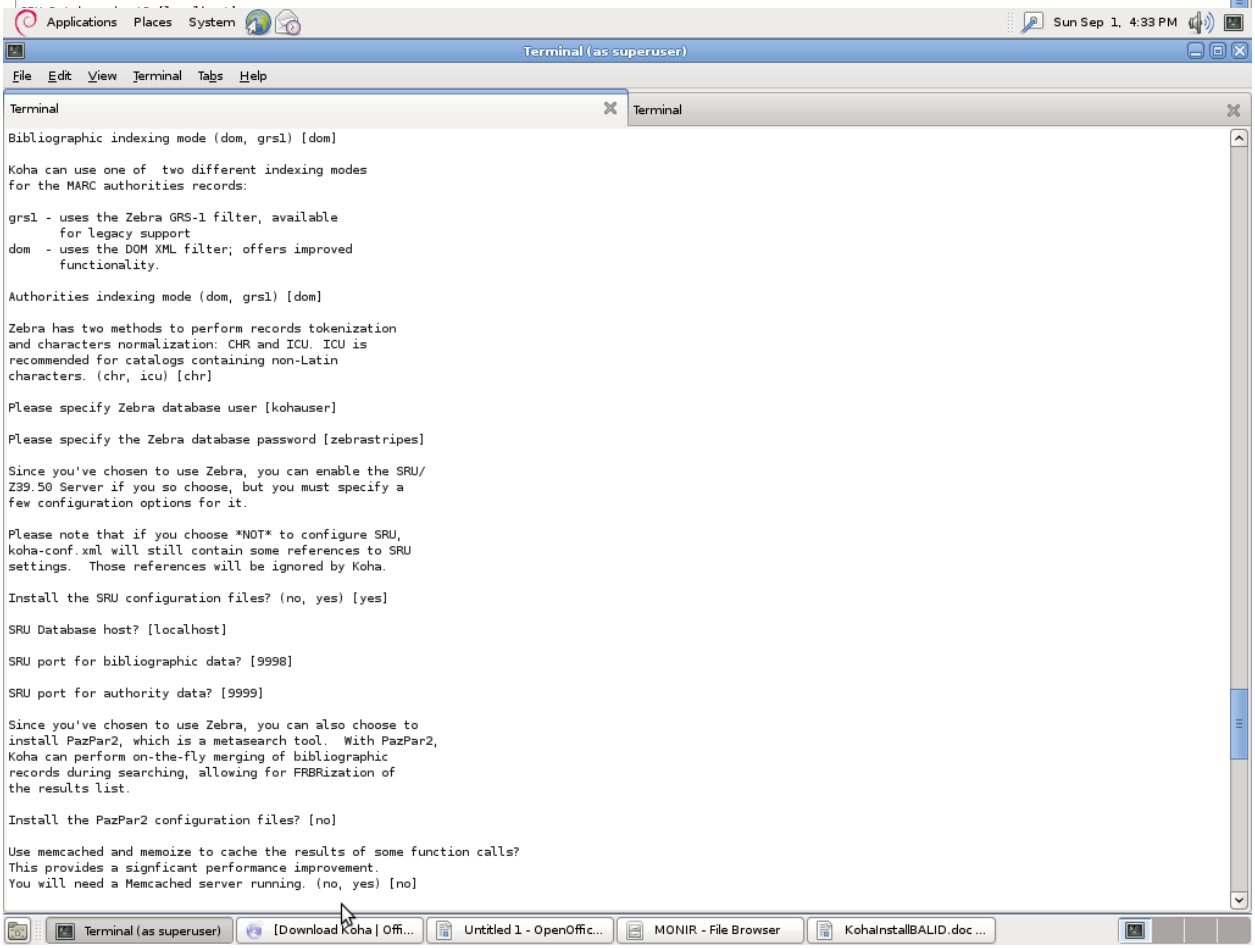
Primary language for Zebra indexing (en, es, fr, nb, ru, uk) [en]
Koha can use one of two different indexing modes
for the MARC bibliographic records:
grs1 - uses the Zebra GRS-1 filter, available
for legacy support
dom - uses the DOM XML filter; offers improved
functionality.
Bibliographic indexing mode (dom, grs1) [dom]
Koha can use one of two different indexing modes
for the MARC authorities records:
grs1 - uses the Zebra GRS-1 filter, available
for legacy support
dom - uses the DOM XML filter; offers improved
functionality.
Authorities indexing mode (dom, grs1) [dom]
Zebra has two methods to perform records tokenization
and characters normalization: CHR and ICU. ICU is
recommended for catalogs containing non-Latin
characters. (chr, icu) [chr]
Please specify Zebra database user [kohauser]
Please specify the Zebra database password [zebrastripes]
Since you've chosen to use Zebra, you can enable the SRU/
Z39.50 Server if you so choose, but you must specify a
few configuration options for it.
Please note that if you choose *NOT* to configure SRU,
koha-conf.xml will still contain some references to SRU
settings. Those references will be ignored by Koha.
Install the SRU configuration files? (no, yes) [yes]


Applications Places System
Sun Sep 1, 4:33 PM
Terminal (as superuser)
File Edit View Terminal Tabs Help
Terminal
Terminal
Bibliographic indexing mode (dom, grs1) [dom]
Koha can use one of two different indexing modes
for the MARC authorities records:
grs1 - uses the Zebra GRS-1 filter, available
for legacy support
dom - uses the DOM XML filter; offers improved
functionality.
Authorities indexing mode (dom, grs1) [dom]
Zebra has two methods to perform records tokenization
and characters normalization: CHR and ICU. ICU is
recommended for catalogs containing non-Latin
characters. (chr, icu) [chr]
Please specify Zebra database user [kohauser]
Please specify the Zebra database password [zebrastripes]
Since you've chosen to use Zebra, you can enable the SRU/
Z39.50 Server if you so choose, but you must specify a
few configuration options for it.
Please note that if you choose *NOT* to configure SRU,
koha-conf.xml will still contain some references to SRU
settings. Those references will be ignored by Koha.
Install the SRU configuration files? (no, yes) [yes]
SRU Database host? [localhost]
SRU port for bibliographic data? [9998]
SRU port for authority data? [9999]
Since you've chosen to use Zebra, you can also choose to
install PazPar2, which is a metasearch tool. With PazPar2,
Koha can perform on-the-fly merging of bibliographic
records during searching, allowing for FRBRization of
the results list.
Install the PazPar2 configuration files? [no]
Use memcached and memoize to cache the results of some function calls?
This provides a signficant performance improvement.
You will need a Memcached server running. (no, yes) [no]
Terminal (as superuser)
[Download Koha | Offi...
Untitled 1 - OpenOffic...
MONIR - File Browser
KohaInstallBALID.doc ...

```
root@localhost:/home/koha/koha-3.12.04#make

root@localhost:/home/koha/koha-3.12.04#make test
```

**Test Result should be successful**

```
/koha/koha-3.12.04/t/../C4/SIP/Sip/Checksum.pm line 24.
t/SIP_Sip.t ........................ ok
t/SMS.t ............................ ok
t/SocialData.t ..................... ok
t/Stats.t .......................... ok
t/SuggestionEngine.t ............... ok
t/SuggestionEngine_AuthorityFile.t .. ok
t/Templates.t ...................... ok
t/TmplToken.t ...................... ok
t/Utils.t .......................... ok
t/VirtualShelves_Merge.t ........... ok
t/XSLT.t ........................... ok
All tests successful.
Files=93, Tests=8342, 24 wallclock secs ( 1.22 usr  0.14 sys + 18.86
cusr  1.38 csys = 21.60 CPU)
Result: PASS

root@localhost:/home/koha/koha-3.12.04#make install
```

Koha's files have now been installed.
In order to use Koha's command-line batch jobs,
you should set the following environment variables:

export KOHA_CONF=/etc/koha/koha-conf.xml
export PERL5LIB=/usr/share/koha/lib
For other post-installation tasks, please consult the README

**Apache charset should be Unicode**

```
root@localhost:~#nano /etc/apache2/conf.d/charset
     AddCharset UTF-8 .utf8
     AddDefaultCharset UTF-8
```

**Make link Apacche to Koha**

```
root@localhost:~#ln -s /etc/koha/koha-httpd.conf /etc/apache2/sites-
available/koha
```

**Enable Koha site and rewrite**

```
root@localhost:~#a2enmod rewrite
root@localhost:~#a2ensite koha
```

**Then Reload/Restart apache2**

```
root@localhost:~#/etc/ini.d/apache2 restart
```

**Add zebra in startup**

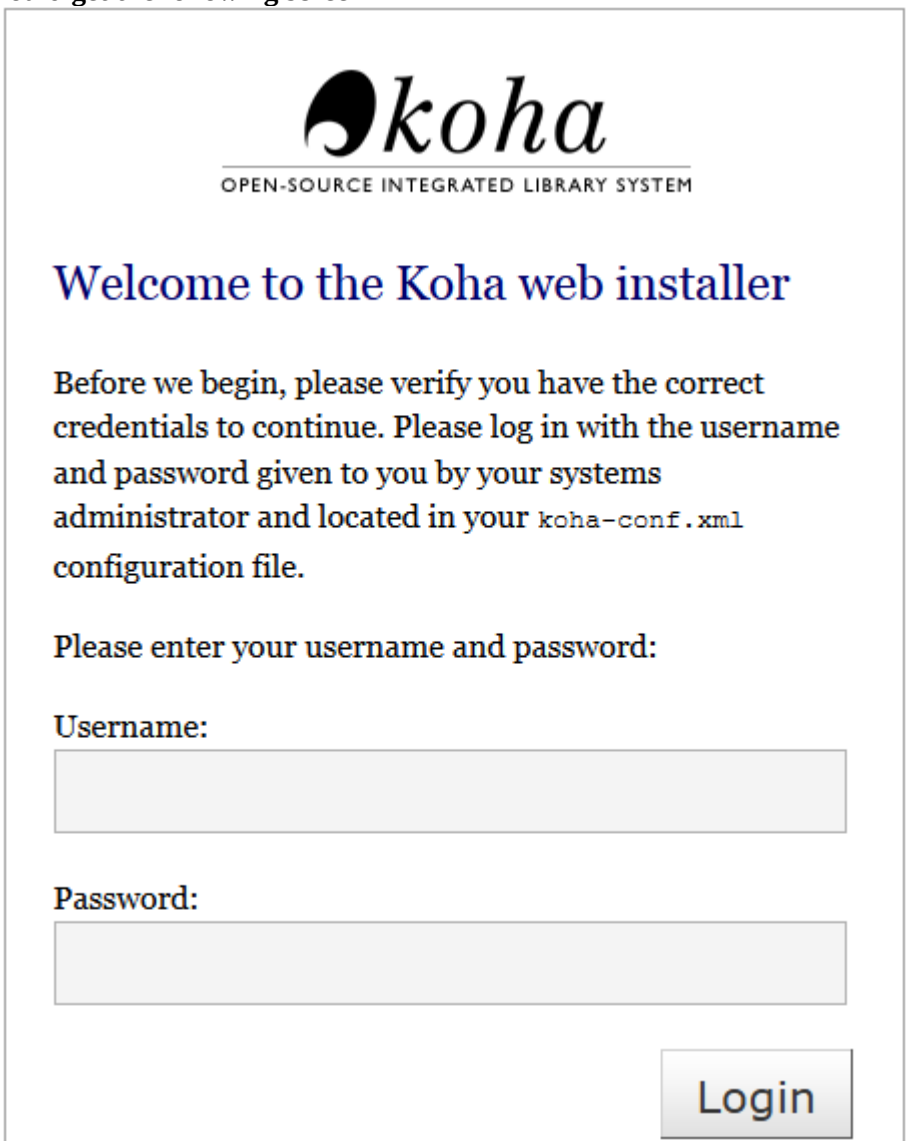
```
root@localhost:~#ln -s /usr/share/koha/bin/koha-zebra-ctl.sh
/etc/init.d/koha-zebra-daemon
root@localhost:~#update-rc.d koha-zebra-daemon defaults
```

**Now Start koha web installation by pointing :-**
**http://localhost:8080**

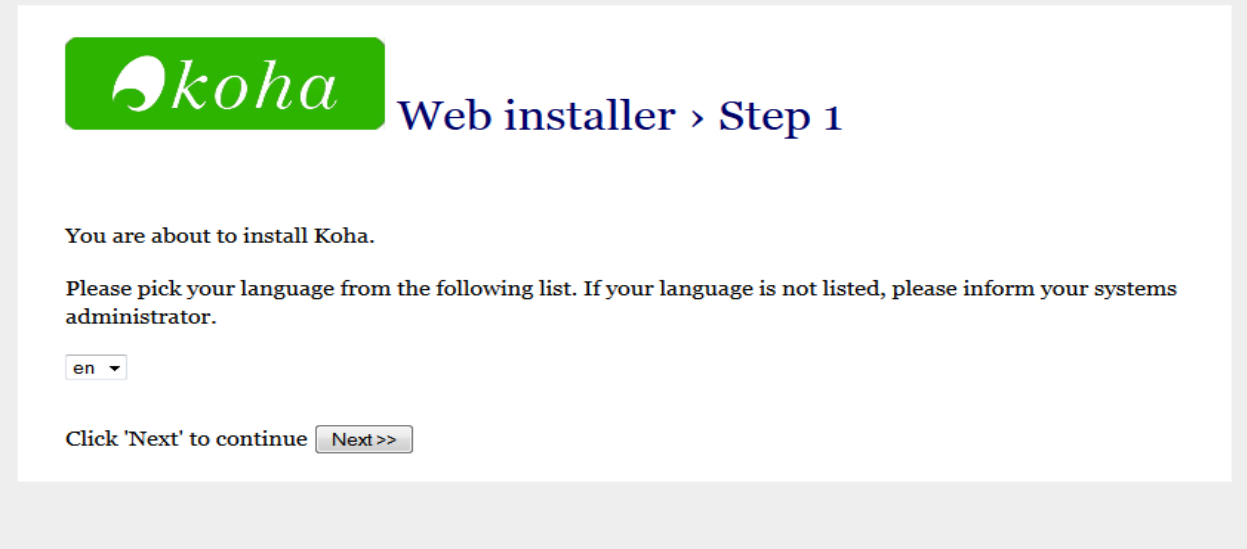
**If you do not able to start koha web installation, check the address and password in koha web configuration file and database connection configuration file**

```
nano /etc/koha/koha-httpd.conf
nano /etc/koha/koha-conf.xml
```

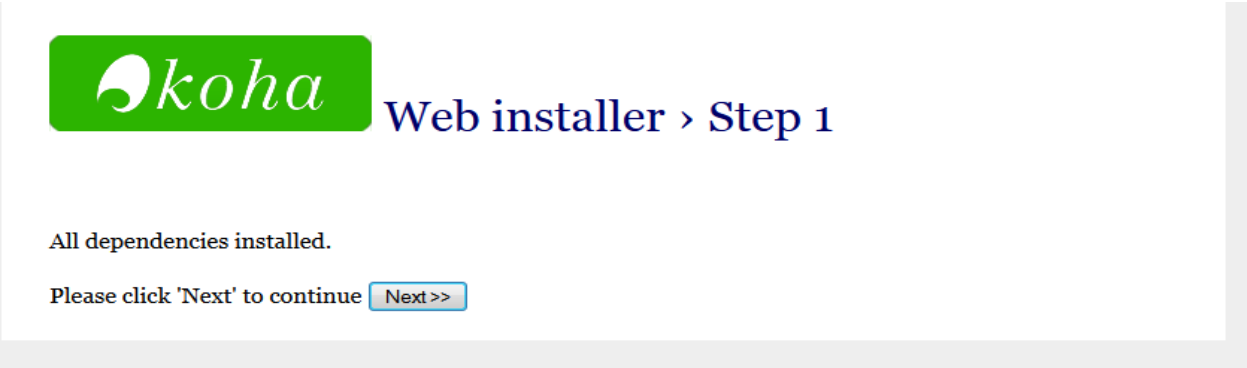
**At first you should get the following screen**



**Select Language and Click next**

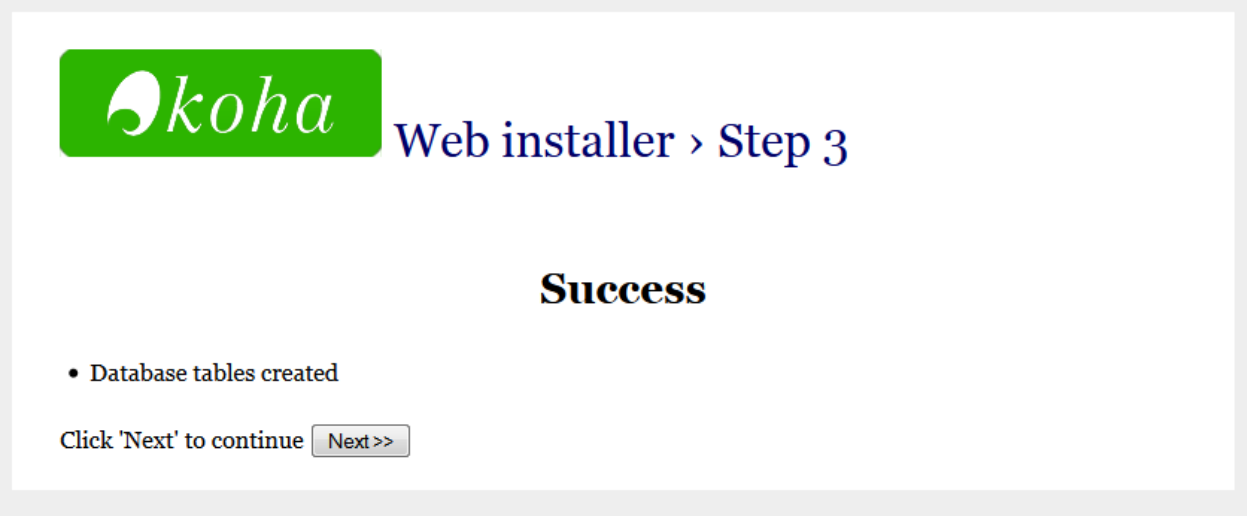



**If all dependencies installed, click next**

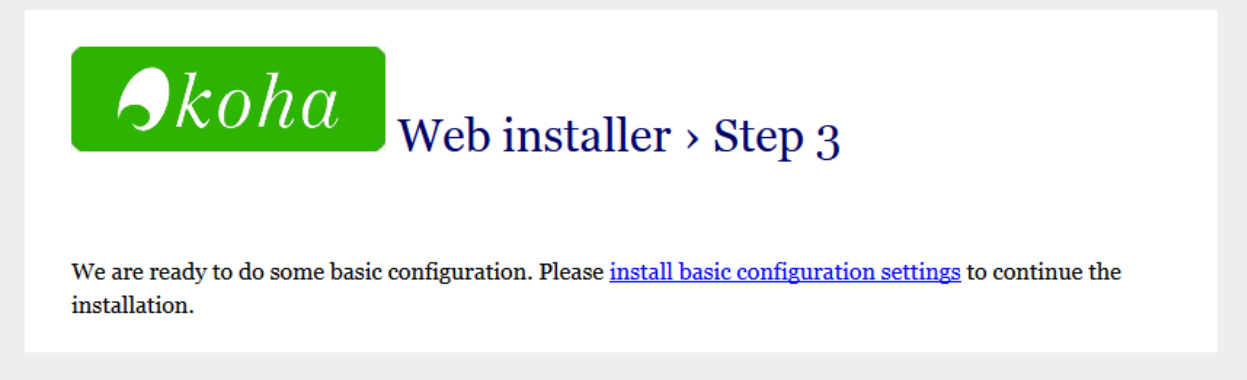



**Click next if all settings of database is ok**

**Click Next**

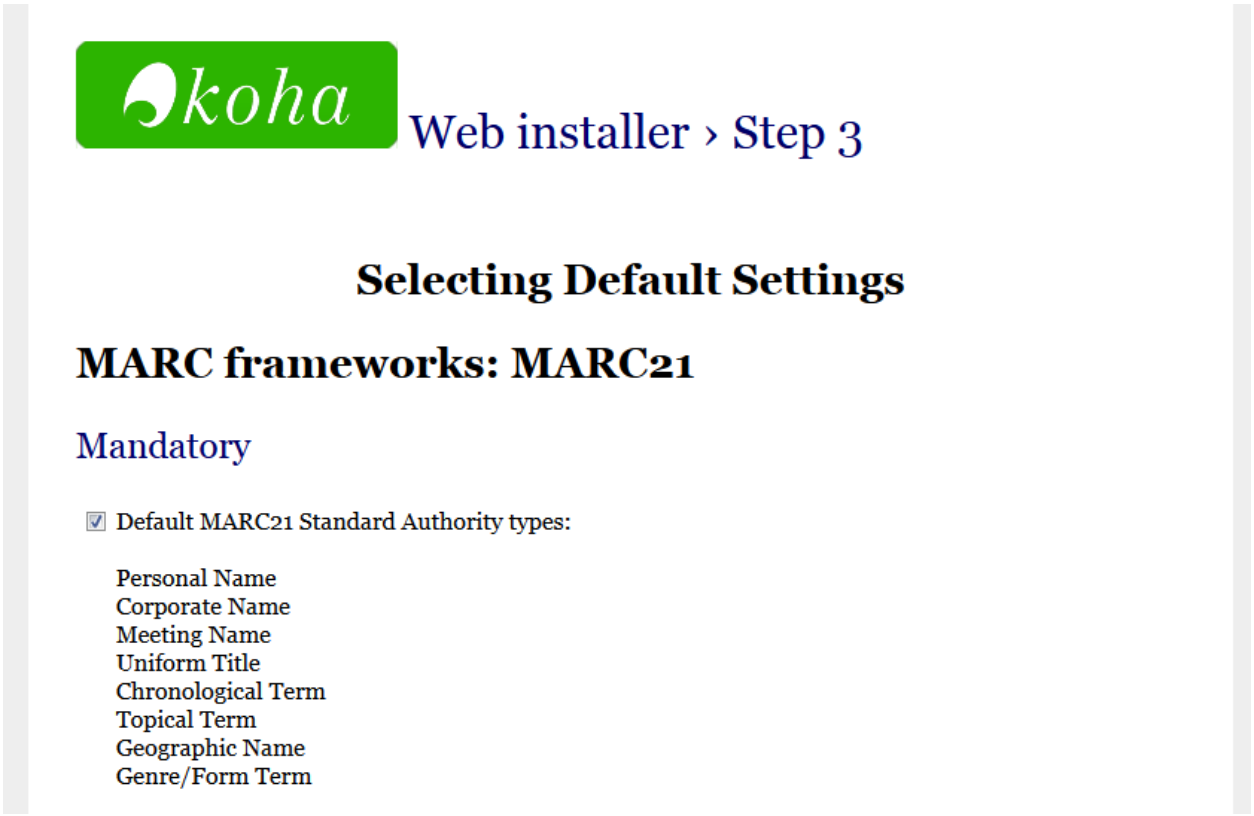


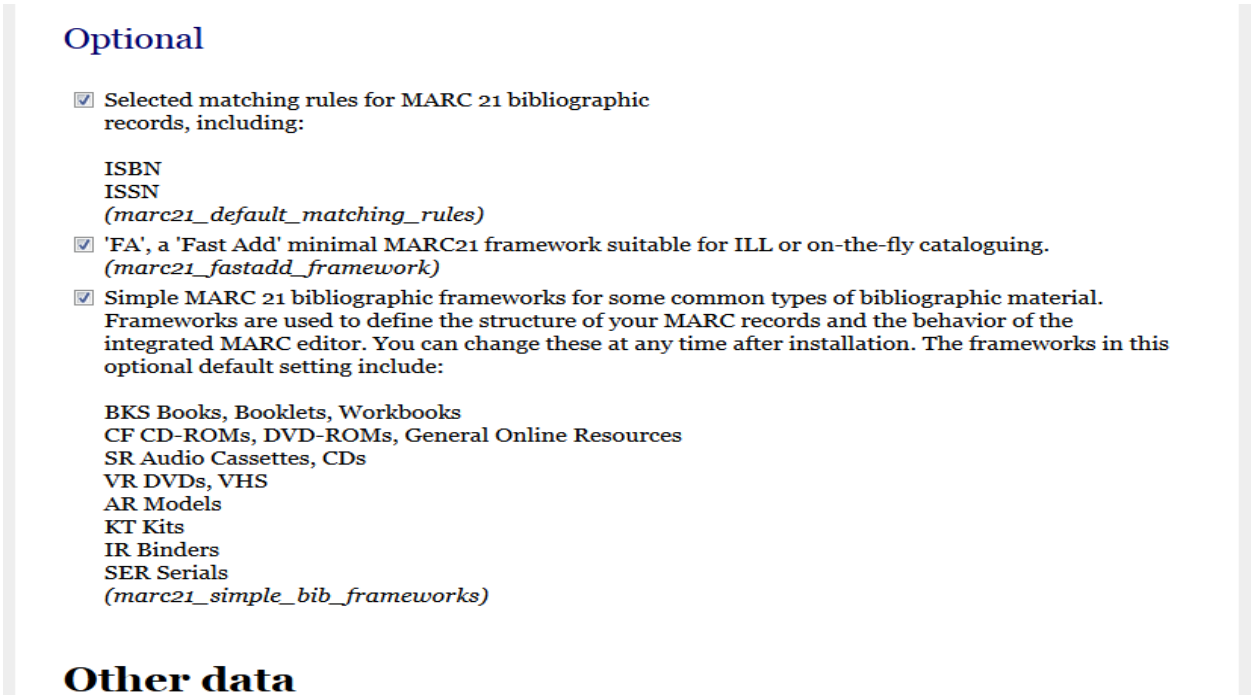

**Start basic configuration settings**




**Select MARC21 and Click Next**

**Ensure all mandatory options are cheeked and also import some optional data**



## Mandatory

- ☑ Default Koha system authorised values
  *(auth_values)*
- ☑ Default classification sources and filing rules
  *(class_sources)*
- ☑ Defines default message tranports for email and sms.

  *(message_transport_types)*
- ☑ Sample notices
  *(sample_notices)*
- ☑ Defines default messages for the enhanced messaging configuration.
  *(sample_notices_message_attributes)*
- ☑ Defines default message transports for sending item due messages and advance notice messages through email and SMS.
  *(sample_notices_message_transports)*
- ☑ English stop words. You can change this after installation.
  *(stopwords)*
- ☑ Koha I18N support

  BIDI Stuff, Arabic and Hebrew
  Default mappings between script and language subcodes
  Language extensions
  *(subtag_registry)*
- ☑ Default user permissions flags
  *(userflags)*

## Optional

- ☑ Some basic default authorised values for library locations, item lost status, etc. You can change these at any time after installation.
  *(auth_val)*
- ☑ Coded values conforming to the Z39.71-2006 holdings statements for bibliographic items.
  Refer to http://www.niso.org/standards/index.html for details.
  *(marc21_holdings_coded_values)*
- ☑ MARC code list for relators, as of http://www.loc.gov/marc/relators/relaterm.html
  *(marc21_relatorterms)*
- ☑ Some basic settings including USD currency, and a sampling of Z39.50 servers.
  *(parameters)*
- ☑ Useful patron atribute types:
  * SHOW_BCODE - Show barcode on the patron summary screen items listings
  *(patron_atributes)*
- ☑ Sample patron types and categories:

  Type: Categories:

  Adult patron - default patron type
  PT - Patron
  ST - Student
  BH - Homebound

  Child - patron with a guarantor
  K - Kid
  J - Juvenile

Types are currently hardcoded, but you can add/edit/delete categories after installation from the administration module.
*(patron_categories)*

- [x] Sample label and patron card data
*(sample_creator_data)*
- [x] Sample holidays:
Sundays
Christmas
New Year's
*(sample_holidays)*
- [x] A set of default item types.
*(sample_itemtypes)*
- [x] A few sample libraries.
*(sample_libraries)*
- [x] Sample news items
*(sample_news)*
- [ ] Sample patrons
*(sample_patrons)*
- [x] Sample quotes
*(sample_quotes)*
- [x] LIBRARY OF CONGRESS
COLUMBIA UNIVERSITY
SMITHSONIAN INSTITUTION LIBRARIES
*(sample_z3950_servers)*

When you've made your selections, please click 'Import' below to begin the process. It may take a while to complete, please be patient.

Import >>

koha Web installer › Step 3

## mysql data added

- sysprefs.sql

## mandatory data added

- auth_values.sql
- authorities_normal_marc21.sql
- class_sources.sql
- marc21_framework_DEFAULT.sql
- message_transport_types.sql
- sample_notices.sql
- sample_notices_message_attributes.sql
- sample_notices_message_transports.sql
- stopwords.sql
- subtag_registry.sql
- userflags.sql
- userpermissions.sql

## optional data added

- auth_val.sql
- marc21_default_matching_rules.sql
- marc21_fastadd_framework.sql
- marc21_holdings_coded_values.sql
- marc21_relatorterms.sql
- marc21_simple_bib_frameworks.sql
- parameters.sql
- patron_atributes.sql
- patron_categories.sql
- sample_creator_data.sql
- sample_holidays.sql
- sample_itemtypes.sql
- sample_libraries.sql
- sample_news.sql
- sample_patrons.sql
- sample_quotes.sql
- sample_z3950_servers.sql

## All done!

Installation complete.

Click on 'Finish' to complete and load the Koha Staff Interface.

Finish

All done! Log in to Koha by using mysql koha database username and password.

# Post Installation

Setup cron jobs of koha to properly in production system

```
root@localhost:~#cd /usr/share/koha/bin/cornjobs/

crontab -u koha crontab.example

root@localhost:~#crontab –e
```

Ensure the followings:

```
## SETUP ENVITRONMENT VARIABLES ##
# See: /etc/environment and /etc/bash.bashrc
PERL5LIB=/usr/share/koha/lib
KOHA_CONF=/etc/koha/koha-conf.xml

## FINES ##
@hourly /usr/share/koha/bin/cronjobs/fines.pl

## ADVANCE NOTICES ##
# Enable "EnhancedMessagingPreferences" system preference using the staff web
client, then uncomment below
#@hourly /usr/share/koha/bin/cronjobs/advance_notices.pl -c

## PRINT NOTICES ##
@hourly /usr/share/koha/bin/cronjobs/gather_print_notices.pl /var/www

## SEND EMAILS ##
@hourly /usr/share/koha/bin/cronjobs/process_message_queue.pl

## HOURLY HOLDS ##
@hourly /usr/share/koha/bin/cronjobs/holds/build_holds_queue.pl

## EXPIRED HOLDS ##
@hourly /usr/share/koha/bin/cronjobs/holds/cancel_expired_holds.pl

## CART TO SHELF UPDATE ##
@hourly /usr/share/koha/bin/cronjobs/cart_to_shelf.pl -h 8

## RSS FEEDS ##
# Check config files in /usr/share/koha/bin/cronjobs/rss/ and apply as
required, then uncomment below
#@hourly /usr/share/koha/bin/cronjobs/rss/rss.pl
/usr/share/koha/bin/cronjobs/rss/lastAcquired.conf

## UPDATE SERIALS ##
@hourly /usr/share/koha/bin/cronjobs/serialsUpdate.pl

## BUILD BROWSER CONTENT ##
# Define cloud an browser fields, then uncomment below
#@hourly /usr/share/koha/bin/cronjobs/build_browser_and_cloud.pl -b -c

## DATABASE CLEANUP ##
```

```
@hourly /usr/share/koha/bin/cronjobs/cleanup_database.pl --sessions --
zebraqueue 10

## UPDATE ISSUES ##
@daily /usr/share/koha/bin/cronjobs/update_totalissues.pl --commit=1000 --
use-stats --incremental --interval=1d

## DELETE OLD PURCHASE SUGGESTIONS ##
@weekly /usr/share/koha/bin/cronjobs/purge_suggestions.pl --days 14

## OVERDUE NOTICES ##
@monthly /usr/share/koha/bin/cronjobs/overdue_notices.pl -t

## PROCESS LONG OVERDUES ##
# updates item status from available to longoverdue for items long overdue
@monthly /usr/share/koha/bin/cronjobs/longoverdue.pl --lost 90=1 --confirm

## CHECK URL's ##
@monthly /usr/share/koha/bin/cronjobs/check-url.pl

## BUILD CLOUD KEYWORDS ##
# Check the /usr/share/koha/bin/cronjobs/cloud-sample.conf file and adjust,
then uncomment below to enable
#@monthly /usr/share/koha/bin/cronjobs/cloud-kw.pl --
conf=/usr/share/koha/bin/cronjobs/cloud-sample.conf

## SERVICES THROTTLE ##
59 23 * * *  /usr/share/koha/bin/cronjobs/services_throttle.pl
```

**Add some free MARC record in koha-**

http://www.gutenberg.org/wiki/Gutenberg:Offline_Catalogs

http://archive.org/details/marc_lendable_books

**After adding some records in koha try this for zebra indexing**

root@localhost:~#cd /usr/share/koha/bin/migration_tools/

./rebuild_zebra.pl –b –w

**There are some alternative ways to install Koha's dependencies. In Training kits, we provide a DVD which has all dependencies of koha in .deb file extension. You can install all .deb file with one command.**

**First in enter in the directory which contain .deb files**

root@localhost:~#cd /media/cdrom/ KohaDebPackages/

root@localhost:/media/cdrom/KohaDebPackages# dpkg –i *.deb

# Koha OPAC Customization:

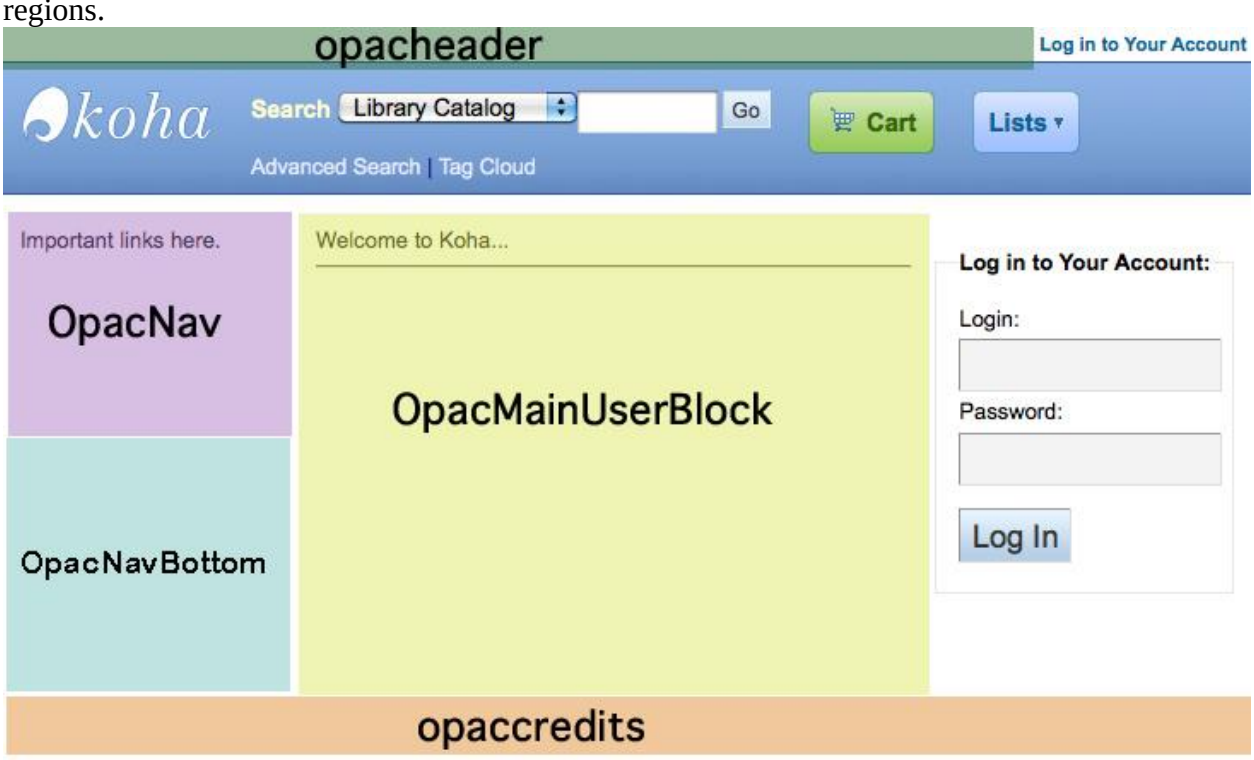
You can customize your OPAC page according to your choice. From Systempreference in koha you can do it easily.

- opacbookbag : Decide if patrons can save items into their cart
- OPACXSLTResultsDisplay : Decide if you want to use the XSLT stylesheets on the OPAC search results
- OPACXSLTDetailsDisplay : Decide if you want to use the XSLT stylesheets on the bib records in the OPAC
- LibraryName : Enter your library name for display in the <title> tag and on the top of the OPAC
- opacsmallimage : Choose a logo to replace the Koha logo
- opaccredits : Enter HTML to appear at the bottom of every page in the OPAC
- OpacMainUserBlock : Enter HTML that will appear in the center of the main OPAC page
- OpacNav : Enter HTML that will appear to the left on the main OPAC page
- OpacNavBottom : Enter HTML that will appear below OpacNav
- opacheader : Enter the HTML that will appear above the search box on the OPAC
- OPACNoResultsFound : Enter the HTML that will appear when no results are found
- OPACResultsSidebar : Enter the HTML that will appear below the facets on your search results
- OPACMySummaryHTML : Enter the HTML that will appear in the far right of the circulation summary in the OPAC
- Customize your stylesheets:
  - OPACUserCSS : Enter any additional fields you want to define styles for
  - opaclayoutstylesheet : Point to a CSS file on your Koha server
  - opacstylesheet : If you have a custom CSS enter the link to that file
  - opaccolorstylesheet : Point to a CSS file on your Koha server
- BiblioDefaultView : Decide what view is the default for bib records on the OPAC
- OPACShelfBrowser : Decide if you want to enable the shelf browse functionality
- OPACURLOpenInNewWindow : Decide if URLs clicked in the OPAC are opened in a new window
- OpacAuthorities : Decide if you want patrons to be able to search your authority file
- OpacBrowser : Decide if you want patrons to browse your authority file
- OPACSearchForTitleIn : Choose which libraries you want patrons to be able to re-run their search in

Editable OPAC Regions

Using the OPAC system preferences you can customize various regions, the following graphics will define what preferences update each

regions.




Important links for learning HTML and CSS

- http://learnlayout.com
- http://www.csstutorial.net
- http://www.echoecho.com/css.htm
- http://htmldog.com
- http://htmlhelp.com/reference/css
- http://www.fontsquirrel.com
- http://validator.w3.org
- http://jigsaw.w3.org/css-validator

## Reference

**http://www.koha-community.org**
**http://manual.koha-community.org**
**http://www.koha-communiy.org/documentation**
**http://wiki.koha-community.org/wiki/Main_Page**

# Some Important MySQL commands:

**Creating a database**
```
create database DBNAME;
```

**Displaying all available databases on the server**
```
show databases;
```

**Selection a database for usage**
```
use DBNAME;
```

**Creating a table inside the selected database**
```
create table users(
name varchar(30),
password int,
email varchar(30)
);
```

**Displaying all tables inside a database**
```
show tables;
```

**Getting information about the table (columns, key, NULL values, etc)**
```
describe TABLENAME;
```

**Inserting an entry into a table**
```
insert into users(name, password, email)
values('daniel',12345,'daniel@test.com');
```

**Delete an entry from a table**
```
delete from users where name='daniel';
```

**Add a new column in table**
```
alter table users add facebook varchar(30);
```

**Adding a new id column to work as the primary key**
```
alter table users add id int not null auto_increment first, add primary
key(id);
```

**Change the value of a column**
```
alter table users modify column email varchar(30) default 'test@test.com';
```

**Update value of a column**
```
update users set email='test@test.com' where id=5;
```

**Retrive the last 5 rows of a table**
```
select * from users order by id desc limit 5;
```

## Replacing values

```
REPLACE INTO patron (id,sur_name,email) VALUES
('2','Sumona','sumona@hotmail.com')";
```

## Close MySQL

```
quit/exit
```