CentOS 6.7 with Vault MySQL 5.1

OS

Following instruction is based on the CentOS6 installation as Minimal package.

After installing the OS, please change the SELinux setting to be Permissive or Disable.
Configuration file is located at /etc/sysconfig/selinux

```
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
#     enforcing - SELinux security policy is enforced.
#     permissive - SELinux prints warnings instead of enforcing.
#     disabled - No SELinux policy is loaded.
SELINUX=Permissive
# SELINUXTYPE= can take one of these two values:
#     targeted - Targeted processes are protected,
#     mls - Multi Level Security protection.
SELINUXTYPE=targeted
```

The above setting allow you to boot the system as Permissive mode.
 Please also change the current mode to be Permissive.

```
setenforce Permissive
```

Network connection is required in the following procedure.
Edit /etc/sysconfig/network-scripts/ ifcfg-eth0 to be ONBOOT=yes.

```
DEVICE=eth0
HWADDR=08:........
TYPE=Ethernet
UUID=89.....
ONBOOT=yes
NM_CONTROLLED=yes
BOOTPROTO=dhcp
```

Then restart network.

```
sudo service network restart
```

In order to modify firewall setting for http and https, please install following program for easy to setup.
The dbus setting is required before installing the firewall UI.

```
sudo yum -y install dbus dbus-python
sudo service messagebus start
sudo yum -y install system-config-firewall-tui
```

Then setup firewall

```
sudo system-config-firewall-tui
```

Go to "Customize" then check "Secure WWW (HTTPS)" and "WWW (HTTP)"

Middleware Installation

Web Server, MySQL and PHP

There are version dependency between MySQL and Mroonga which will be installed in the next section.
In order to solve the dependency, MySQL have to be installed from the CentOS Vault.

```
sudo yum install -y httpd
sudo yum remove -y mysql-libs
sudo rpm -ivh http://vault.centos.org/6.5/updates/x86_64/Packages/mysql-libs-5.1.73-3.el6_5.x86_64.rpm
sudo yum install -y perl-DBD-MySQL
sudo rpm -ivh http://vault.centos.org/6.5/updates/x86_64/Packages/mysql-5.1.73-3.el6_5.x86_64.rpm
sudo rpm -ivh http://vault.centos.org/6.5/updates/x86_64/Packages/mysql-server-5.1.73-3.el6_5.x86_64.rpm
sudo yum install -y php php-mbstring php-gd php-xml php-mysql
sudo chkconfig httpd on
sudo chkconfig mysqld on
sudo service httpd start
sudo service mysqld start
```

At this moment, don't set the root password for MySQL

Full Text Search and MySQL

WEKO utilize Groonga and Mroonga for the full text search engine.
In order to solve the dependency, version of the groonga have to be 4.1.0.1.

```
sudo rpm -ivh http://packages.groonga.org/centos/groonga-release-1.1.0-1.noarch.rpm
sudo yum makecache
sudo yum install -y groonga-4.1.0-1.el6
sudo yum install -y groonga-tokenizer-mecab-4.1.0-1.el6
sudo yum install -y mysql-mroonga
```

Library for extract the text from PDF file.

```
sudo yum install -y poppler-utils
```

Other Middleware

Library for making PDF thumbnail

```
sudo yum install -y ImageMagick
```

Add package repository
Additional repository RPM is different depending on the server environment.
Please check appropriate RPM from the http://dag.wieers.com/rpm/packages/rpmforge-release/

```
sudo rpm -ivh [RPM URL for additional repository]
```

Library for making PDF cover page.

```
sudo yum install -y pdftk
```

Library for showing multimedia contents.

```
sudo yum install -y ffmpeg
```

Middleware Setup and Configuration

Database

Setup root password

```
sudo /etc/init.d/mysqld restart
/usr/bin/mysqladmin -u root password 'root-no-password'
```

Delete anonymous user from the initial database.

```
mysql -u root -proot-no-password
use mysql
delete from user where user='';
```

Create database for WEKO(NetCommon) installation

```
create database nc2db default character set UTF8;
```

Create an database user and assign the privilege to the previously created db.

```
grant all on nc2db.* to nc2user@localhost identified by 'nc2pass';
```

PHP

Open /etc/php.ini by editor.
Modify memory related configuration. Each size have to have the relationship as follows.
upload_max_filesize < post_max_size < memory_limit
For example,

```
memory_limit = 128M;
post_max_size = 64M;
upload_max_filesize = 32M;
```

Configure for UTF-8 character code .

```
[mbstring]
mbstring.language = neutral
mbstring.internal_encoding = UTF-8
mbstring.http_input = auto
mbstring.http_output = pass
mbstring.encoding_translation = Off
```

You also need to specify the timezone in the /etc/php.ini

```
[Date]
; Defines the default timezone used by the date functions
; http://www.php.net/manual/en/datetime.configuration.php#ini.date.timezone
date.timezone = "Asia/Tokyo"
```

After modifying the configuration, httpd have to be restarted.

```
sudo /etc/init.d/httpd restart
```

NetCommons2

Before Install Preparation

Install wget first.

```
sudo yum install -y wget
```

Download the latest NetCommons core package (Following command download version 2.4.2.1).

```
wget -c "http://www.netcommons.org/%E3%83%80%E3%82%A6%E3%83%B3%E3%83%AD%E3%83%BC%E3%83%89/%E3%82%B3%E3%82%A2%E3%83%91%E3%83%83%E3%82%
B1%E3%83%BC%E3%82%B8/?action=cabinet_action_main_download&block_id=93&room_id=1&cabinet_id=1&file_id=2811&upload_id=6210" -O
netcommons-2.4.2.1.tar.gz
```

Uncompress the downloaded file.

```
tar zxvf netcommons-2.4.2.1.tar.gz
```

Copy it to the web application directory.

```
sudo cp -rp NetCommons-2.4.2.1/html /var/www/html/nc2
```

Change file owner to be able to access by web server

```
cd /var/www/html/nc2
sudo chown -R apache:apache *
```

If you would like to access to NetCommons as a top page, you should modify /etc/httpd/conf/httpd.conf as follows.

```
DocumentRoot "/var/www/html/nc2/htdocs"
```

This is not a requirement, however, if you add the following expression in the httpd.conf, you can utilize the URL-rewrite option in OAI-PMH Configuration.

Please refer to User Manual (3.2.9.3.3 OAI-PMH Configuration) to know how to utilize this .htaccess configuration.

```
    <Directory /var/www/html/nc2/htdocs>
        AllowOverride All
    </Directory>
```
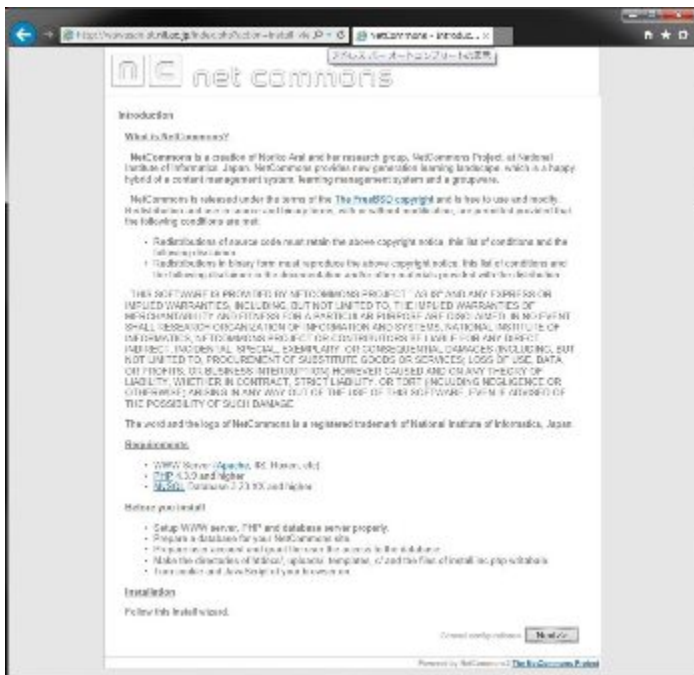
Then restart the httpd

```
sudo /etc/init.d/httpd restart
```

Installation

Access to the site you will install the NC2 by browser. You can see the installation page like this.
In this page, select English anyway from the pull-down menu.
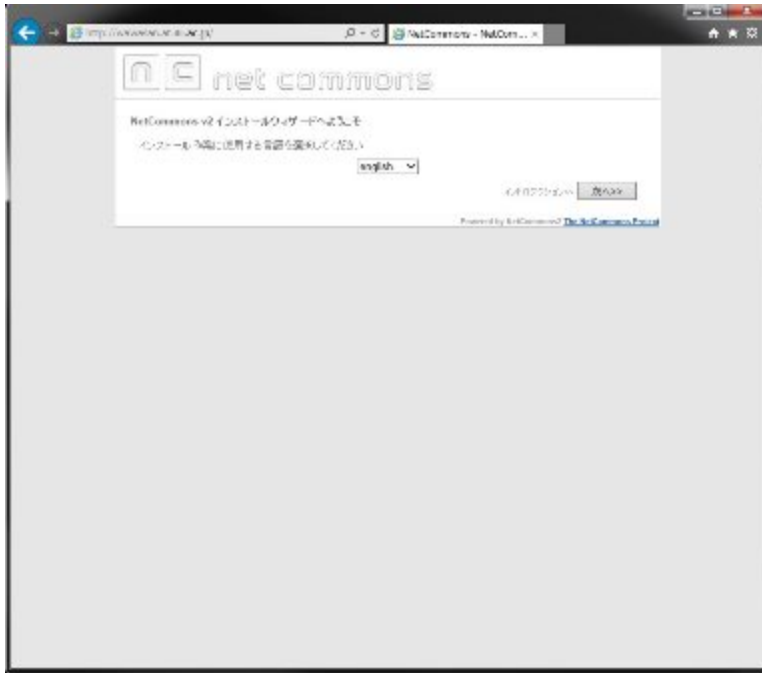
Press Next button.

This step requires to input general configuration parameters like this.

Paramter	Value
Site Name	"as you want"
Database	mysqli
Database Hostname	localhost

Database Username	nc2user
Database Password	nc2pass
Database Name	nc2db
Table Prefix	nc2
Use persistent connection?	No
NetCommons Virtual Path	"your server address"

Just need to confirm your parameters. Press Next if it is OK.

Green signal means there is no problem with your installation process so far, then Next.

Here is also then press Next.
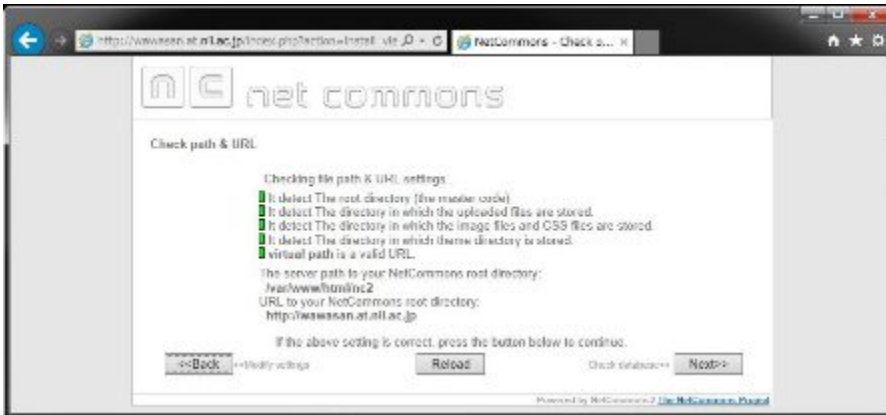
Here is also then press Next.

Here is also then press Next.

Here is also then press Next.

In this page, you will create an administrator account.

Press Next button, if there is no problem.

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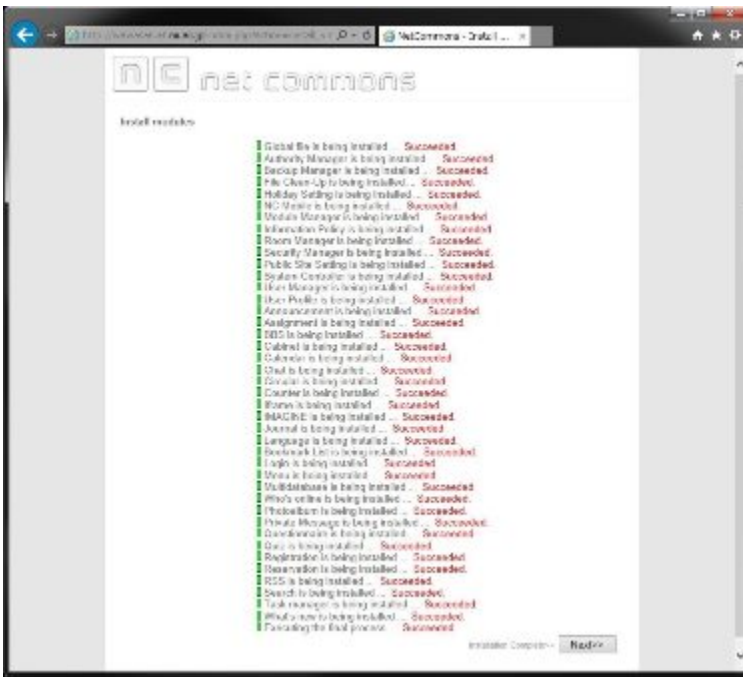
Congratulations! Installation of NetCommons2 has been completed.

WEKO

Checkout WEKO module

In order to download the latest WEKO module from the source code repository, install the svn first

```
sudo yum install -y subversion
```

Checkout multilingual WEKO from the SVN site, then copy it to the NC2 module directory.
The current instruction is to utilize the trunk source code but we will prepare the stable one soon.

```
svn co http://forge.at.nii.ac.jp/svn/nc/repository/trunk repository
sudo cp -rp repository /var/www/html/nc2/webapp/modules/
```

Install WEKO module

Login to the NC2 and click Control Panel in the header menu.

Click the "Module Manager" icon, then you can find WEKO in the "Modules not yet installed" tab. Let's click "Install" link which located right hand side of WEKO module name.
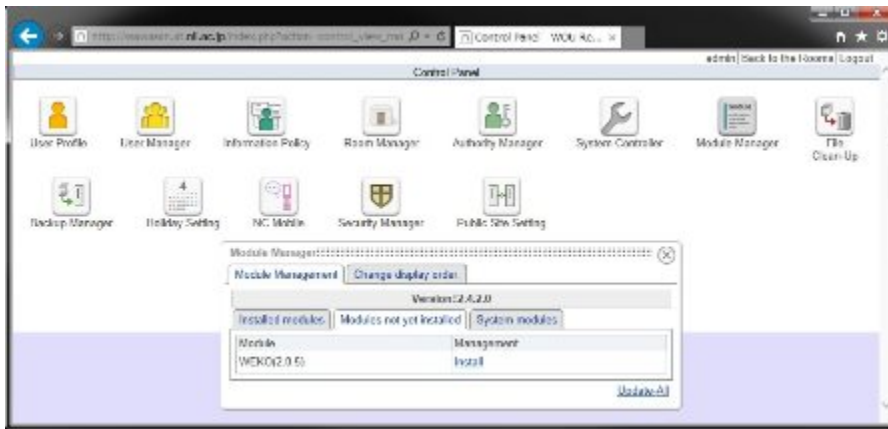
If you can find the word "Succesfully installed." at the end of the install log, congratulations! Installation WEKO into the NC2 has been completed.
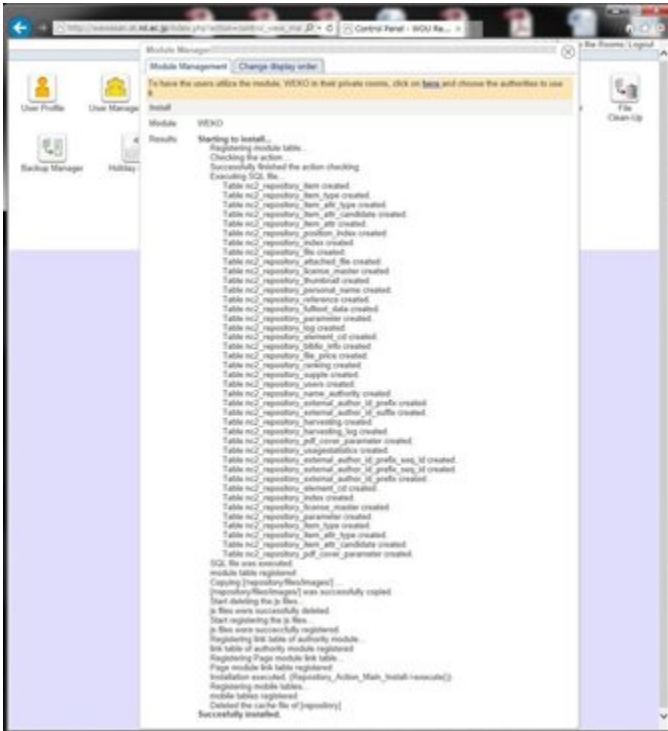
Customization for Multilingual

Only English, Chinese and Japanese are available by the original NC2. Therefore, we need to apply patch for more multilingual function. First you need to checkout the patch and just copy it to the NC2 application directory.

```
svn co http://forge.at.nii.ac.jp/svn/nc/nc2multilang/trunk nc2multilang
cd nc2multilang
sudo cp -rp webapp /var/www/html/nc2/
```

MySQL DB also have to be modify for this customization.
In this SQL file database prefix for NC2 is assumed as "nc2" as has been instructed previously.
If you apply different prefix, please modify SQL file appropriately.

```
mysql -u nc2user -pnc2pass
mysql> use nc2db
mysql> source AddLanguageForNC2SQL.sql
```

Completed!

Show WEKO Block

Go to the NC2 top page and click "Setting mode on" link in the header.
After switching to the Setting Mode, you can select WEKO module in the drop down menu.
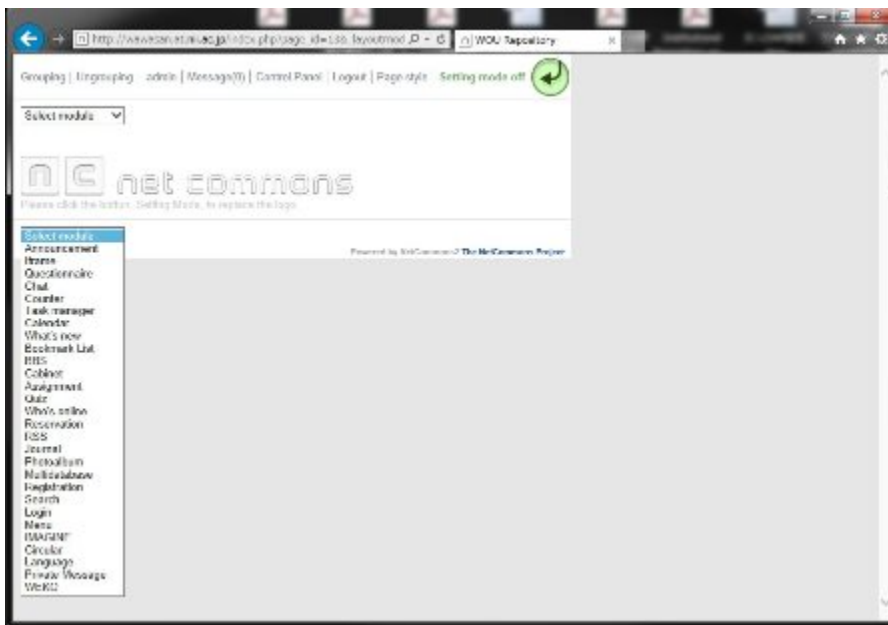
Now you paste WEKO module on the top page. Here is the control panel page of WEKO.
In order to show the language select function, please click the "management" tab.
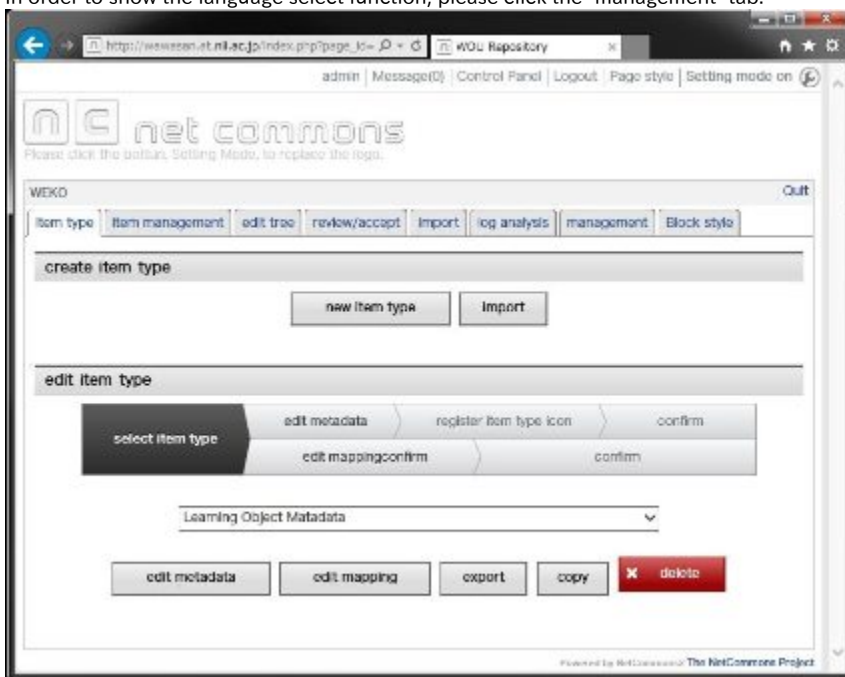
In the [management] => [display setting] tab, you can find "language setting" menu.
In this menu, that is, [language setting] => [select language setting], please select "Display" (default is "Hide") from the drop down list.

Then click "commit" button at the bottom of the page.

You can exit from the control panel by clicking "Quit" link at the right hand side of the WEKO block header.
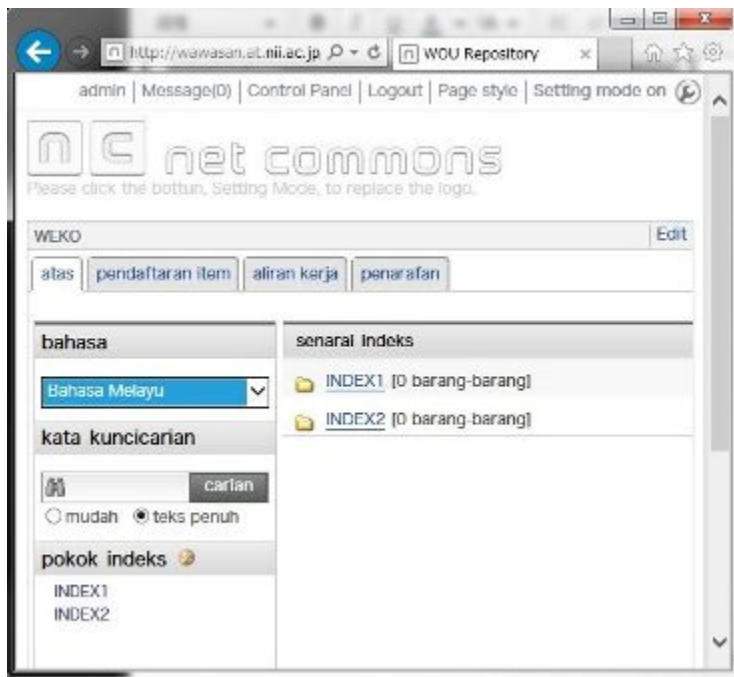
For multilingual, web page for each language have to be prepared by the following procedure.

1. As same as showing the WEKO block, go to Setting Mode and show language and menu module.

2. In the language module, select the language which can to be selected in your page.

3. After selecting an language, create a new page under the public space by using the menu module.

4. In the page created in 2, show WEKO block.

5. Same procedure have to be repeated for other language.