Direct Benefit Transfer (DBT)

DBT App
System Utility

Installation& Configuration Guide

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Contents

1. Objective

The purpose of this document to provide complete information to install and configure the Scheme Management Utility to Windows or Linux Operating System (OS) along with minimum specification of Hardware as well as software.

To get the server (VMs) on NIC cloud environment, a checklist has been provided in section 5 – Annexure 1 for reference. Based on ministry / department needs all or relevant steps must be completed to host the application.

2. Minimum / Maximum Specifications

Below mentioned specification are uniform for hosted (in premise) servers or cloud based environment to configure. You need to keep your hard disk space based on your data volume like (documents/ images)

a. Hardware Requirement – Linux / Windows

- OS - Linux 6.5/ Linux 6.7 (for Linux)
- OS - Windows 7/Windows 8.2/ Windows 10 (for Windows)
- 1GB RAM
- 20GB virtual hard drive space
- 1 vCPU

b. Virtual Machine – Cloud Computing

As recommendation to setup the Scheme Management System in ministry / department, there should be two VMs on cloud. The below is details:

- Virtual Machine 1 (Web Server / Application Server)
- Virtual Machine 2 (Database Server)

c. Software Version Requirement

- PHP 5.3.3
- MySQL 5.1.66
- Apache 2.2.15

d. Maximum Software version with testing

- PHP 5.5.36
- MySQL 5.1.69
- Apache 2.x

e. Minimum Browser Version Requirement

Here is an incomplete list of browsers that are known to work well with Scheme Management utility and support all of its features:

- Internet Explorer 9+
- Latest Google Chrome
- Firefox 10+
- Latest Safari

3. Linux Operating System Environment - Configuration Steps

It is assumed that, server identified has Linux OS installed. Below mentioned steps to configure the Yum server, Apache and MySQL servers.
These steps are uniform either to install and configure on Hosted environment or on cloud environment.

a. Installation of Yum server, PHP, Apache & MySQL on Linux server

Step1. Mount cd to mnt folder
[root@localhost ~]# mount /dev/cdrom /mnt and press enter

Step2. Create directory for yum server
[root@localhost ~]# mkdir /var/rpms

Step3. Go to Media directory
[root@localhost ~]# cd /media/RHEL_6.7\ x86_64\ Disc\ 1/Packages/

Step4. Copy all packages from media to directory
 [root@localhost Packages]# cp -v * /var/rpms

Step5. First installed the createrepo and its dependency
[root@localhost Packages]# rpm -ivh deltarpm-3.5-0.5.20090913git.el6.x86_64.rpm
[root@localhost Packages]# rpm -ivh python-deltarpm-3.5-0.5.20090913git.el6.x86_64.rpm
[root@localhost Packages]# rpm -ivh createrepo-0.9.8-5.el6.noarch.rpm

Step6. Run the createrepo
[root@localhost Packages]# createrepo -v /var/rpms

Step7. Create yum repository file
[root@localhost Packages]# vi /etc/yum.repos.d/server.repo and write the below command in this file
[server]
name = server repo file
baseurl=file:///var/rpms
gpgcheck=0

step8. Check the list of all packages in yum server
[root@localhost Packages]# yum list and press enter

Step9. installed the packages through yum install command
[root@localhost Packages]# yum install php*   and press enter
[root@localhost Packages]# yum install mysql* and press enter
[root@localhost Packages]# yum install httpd* and press enter
[root@localhost Packages]# yum install sendmail* and press enter

Step10. Restart Apache and MySQL
[root@localhost]# service httpd start and press enter
[root@localhost]# service mysqld start and press enter

b. Configuration Changes

There are some changes required in the following configuration files:

- **Apache configuration file**
  The Apache Virtual host configuration must contain the directive Allow Override All to allow in apache configuration for .htaccess file.

  Open apache configuration file and change AllowOverride None to All.

- **PHP configuration file**
  by default configuration file contains short_open_tag =Off so please change it to On.

  Please also keep display error off i.e display_errors=Off

  Please set default time zone "Asia/Kolkata" in php.ini file

  date.timezone = Asia/Kolkata

  Kindly increase the size of the following:

  - upload_max_filesize=256M
  - memory_limit=1024M
  - post_max_size=256M

  Note: Please check whether these extensions have been enabled in the php.ini file by removing semicolon (;) in front of the following extension:

  - Xml rpc
  - Pdo
  - GD library

- Dom
- Soap
- Xmlreader
- Xmlwriter
- Xsl
- Zend OPcache
- mcrypt
- mbstring
- curl

After completing above changes, please restart the apache server for reflecting all changes.

c. Database Creation

Now MySQL database has been installed on the server and user can login and create their own database.

Step1. Login into MySQL database
[root@localhost]#   mysql – u root –p and press enter

Note: It will ask for password so please enter only.

Step2. Create your database "dbtapp"
Mysql >   create database dbtapp; and press enter

Now the database has been created.

Step3. Exit from MySQL
Mysql >   exit; and press enter

Step4. Import DBT database (which is available along with source code)
[root@localhost]# mysql –u root –p dbtapp < /home/dbtapp.sql and press enter.

Without any error message this database should be imported.

Step4. Use the database and view tables
First follow step 1 again and view database with below command.

Mysql >   use dbtapp; and press enter

Now user (technical person, who is configuring) is using "dbtapp" database.

Mysql >   show tables; and press enter

Now user can view all the tables related to "dbtapp" database.

d. Copy source code to specific folder

Copy the source code (available on DBT Bharat Portal) to below folder:

Folder Path /var/www/html/

And run the application from browser with http://serverip/index.php

- o If you want to run this utility with in a folder like "dbtapp" then change following lines in Bootstrap.php file.

  You can find Bootstrap.php file from this location:
  application/Bootstrap.php and change "FOLDER_NAME" with your folder name on line number 114 & 115:

  a. define("BASE_PATH","FOLDER_NAME");
  b. define("DOCUMENT_ROOT",$_SERVER['DOCUMENT_ROOT']."FOLDER_NAME/");
  c. define("WEB_LINK","www.example.com/");   - Please change with your website url;
  d. define("MAIL_FROM","info@example.com"); - Please change with your Email Id on line number 208 & 220;
  e. define("ADMIN_EMAIL"," feedback@example.com"); - Please change with your Email Id on line number 268;

Please check your document root path. If your root path has slash("/") in last then above point (b) will work otherwise you have to add extra slash before folder name like below mentioned.

  f. define("DOCUMENT_ROOT",$_SERVER['DOCUMENT_ROOT']."/FOLDER_NAME/");

- o If you want to change your database configuration then please open application.ini from this path /application/configs/application.ini and here you can change your database name, database username and database password.

4. Windows Operating System Environment – Configuration Steps

We assumed that, you have windows operating system in your machine. There are so many steps to configure PHP and MySQL on windows so we have come up with apache friend XAMPP to easily configure and run PHP application.

a. Installation of XAMPP on windows

Step1. Download xampp from below url
https://www.apachefriends.org/download.html

Please download and install xampp for windows as per your convience.

Step2. Install XAMPP
By default, Your XAMPP will be installed in "C Drive".

Step3. Start XAMPP Server
After XAMPP installation, you will have to start your XAMPP server C:\xampp\ and click xampp-control.exe file.

Step4. Start Web Server (Apache) and Database (MySQL)
Now XAMPP server stated and you will have to start your web server and database server from XAMPP panel.

Step5. Create your database "dbtapp"
After MySQL started, you will have to access PHPMYADMIN to create database with following URL: http://localhost/phpmyadmin/

Step6. Import database "dbtapp"
Once "dbtapp" database has been created, Database administrator will import the database from "**Import**" button from top menu.

b. Configuration Changes for Windows

There are some changes required in the following configuration files:

- **Apache configuration file**
  The Apache Virtual host configuration must contain the directive Allow Override All to allow in apache configuration for .htaccess file.

  Open apache configuration file and change AllowOverride None to All.

- **PHP configuration file**
  by default configuration file contains short_open_tag =Off so please change it to On.

  Please also keep display error off i.e display_errors=Off

  Please set default time zone "Asia/Kolkata" in php.ini file:

  date.timezone = Asia/Kolkata

  Kindly increase the size of the following:

- upload_max_filesize=256M
- memory_limit=1024M
- post_max_size=256M

- **PHPMYADMIN Configuration Changes**
  As we have large amount of data to import in new database for DBTAPP.

  Please do the below change in this file
  C:\xampp\phpMyAdmin\libraries\config.default.php on Line No-558.

  You might install XAMPP in your D drive so please change your drive accordingly.

  $cfg['ExecTimeLimit'] = 3000;

  Note: Please check whether these extensions have been enabled in the php.ini file by removing semicolon (;) in front of the following extension:

  - Xml rpc
  - Pdo
  - GD library
  - Dom
  - Soap
  - Xmlreader
  - Xmlwriter
  - Xsl
  - Zend OPcache
  - mcrypt
  - mbstring
  - curl

  After completing above changes, please restart the apache server for reflecting all changes.

c. Copy source code to htdocs folder

Now please keep the source code to "**htdocs**" folder C:\xampp\htdocs, after downloading from DBT Bharat Portal. And run the application from browser http://localhost/index.php/ or using the server IP.

- If you want to run this utility with in a folder then change following lines in Bootstrap.php file.

  You can find Bootstrap.php file from this location:
  application/Bootstrap.php and change "FOLDER_NAME" with your folder name on line number 114,115 & 117:

  g. define("BASE_PATH","FOLDER_NAME");

h. define("DOCUMENT_ROOT",$_SERVER['DOCUMENT_ROOT']."FO
LDER_NAME/");

Please add one more line:

i. define("WEB_LINK","www.example.com/");   - Please change with
your website url;

Please check your document root path. If your root path has slash("/") in last then
above point (e) will work otherwise you have to add extra slash before folder
name like below mentioned.

j. define("DOCUMENT_ROOT",$_SERVER['DOCUMENT_ROOT']."/FO
LDER_NAME/");

o If you want to change your database configuration then please open
application.ini from this path /application/configs/application.ini and here
you can change your database name, database username and database
password.

d. Administrator Login

Please login with this application by below credentials:

Username: administrator
Password: Test@123

e. Mail Configuration in Xamp (Windows)

➢ We will change some configuration step by step in sendmail.ini which is located on the path
C:\xampp\sendmail\sendmail.ini.
➢ There are some lines which are commented by semicolon (;), you need to remove the semicolon
from required lines.
➢ See the below changes in sendmail.ini.

```
o   smtp_server=smtp.gmail.com
o   smtp_port=465
o   smtp_ssl=ssl
o   error_logfile=error.log
o   debug_logfile=debug.log
o   auth_username=[your_email]@gmail.com
o   auth_password=[your_email password]
o   pop3_server=
o   pop3_username=
o   pop3_password=
o   force_sender=[your_email]@gmail.com
o   force_recipient=
o   hostname=smtp.gmail.com
```

➢ Now we will update step by step php.ini file which is located at path **C:\xampp\php\php.ini**

```
o  SMTP = smtp.gmail.com
o  smtp_port = 465
o  sendmail_path = "\"C:\xampp\sendmail\sendmail.exe\" -t"
o  mail.add_x_header=Off
```

➢ In Google mail you have to allow **Less Security** option in account setting.

After above changes in the sendmail.ini and php.in, Please restart your apache service and then run your DBT APP.

5. Web Service Database connection

Please update the below code for web services in this file
yoursite/application/dbtappservice/config.php in line no. 4

```
$db = new PDO('mysql:host=localhost;dbname=dbtappnew', "root",
"password");
```

Please use your database name, username and password.

6. Troubleshooting in DBT APP

➢ For any issue in the DBT APP, Please write mail to DBT Bharat at **feedback@dbtbharat.gov.in.**
➢ If you are stuck in any issue of DBT APP, Please enable status of phpSettings.display_errors =1
   in **yoursite/application/configs/application.ini** and then Refresh your page, kindly take
   screenshot of the error and send us that screenshot so that we can rectify the issue and
   provide support to resolve the issue with delay.

7. NPCI And UIDAI Installation Document

You can download the configuration document from the webpage.

8. Annexure – 1

This checklist is just for reference to help ministries / departments to execute relevant steps to complete the hosting of application apart from source code provided by DBT Mission.

Here are steps, which needs to be carried out by the ministry/department to get the NIC cloud environment (Virtual Machines – VMs) to setup the application using the steps mentioned in section 3 (for Unix/ Linux) or 4 (for Windows).

Activities	Descriptions
NIC Cloud Request for Servers (VMs) via https://cloud.gov.in/	If Ministry wants to use NIC Cloud environment
Domain Name Registration via https://registry.gov.in/	If Ministry wants to access this application via Internet in public domain. There should be a domain name as DBT Mission took dbtbharat.gov.in for DBT Bharat Portal. Details information is available in given link.
Public IP Request	A public IP from NIC to map application server with assigned public IP and registered domain name
Application Security and Vulnerability Report	DBT Mission is providing the application security and vulnerability report for this Utility along with code, which can be used by ministry to host as –is application. *Any changes made by Ministry / Department, requires new Application security and Vulnerability Audit Report and need to submit to NIC security team.
NIC Security Clearance	Before opening the public ports on Public IP to deployed application on NIC cloud, Final application as well server security report has been audited by NIC security team. Ministry / Department Technical team needs to complete this step to access the application over Internet.
Port opening Request on Public IP via http://farps.nic.in	This is final step once all above steps are completed. A request needs to raise for Portal 80 or 443.
SSL certificate procurement	To secure the application, ministry should procure the SSL certificate (root and intermediate) on the assigned Domain name via empanelled SSL certificate provider.
SSL implementation on Application	This needs to be taken care by technical team of ministry to enable https to access application. If SSL certificate has been procured, that needs to be installed and configured to access application via HTTPS.

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