RAPTOR General Install Guide

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Overview

Each RAPTOR site has its own Drupal 7 installation. The MySQL server and the datalayer (e.g., MDWS) and image viewer elements (e.g., VIX) are shared across all sites. The instructions in this document are a general setup guide and should be adapted to your specific configuration.

Setup Items

The setup order will vary depending on your installation approach and configuration choices. Some or all of the parts can be shared across sites, depending on your configuration choices. A complete RAPTOR setup will have all the following parts.

- PHP 5.4
- MySQL 5.6
- DRUPAL 7.x
- RAPTOR Application Software
- Datalayer handler (e.g., MDWS or EWD)
- Image viewer handler (e.g., VIX)
- VistA updates (KIDS build)

Each of the parts on which RAPTOR depends have their own configuration files and processes.   Some of the key paths are listed in Table 1.

Table 1 – Key File Locations

Name	Location
PHP Configuration File	*On windows you will find it here…* C:\Program Files (x86)\PHP\v5.4**php.ini**
Drupal Settings	<base drupal folder>\sites\default**settings.php**
RAPTOR Modules	<base drupal folder>\sites\all\modules\raptor*
RAPTOR Themes	<base drupal folder>\sites\all\themes\raptor*
MySQL Utils	*On windows you will find it here…* C:\Program Files\MySQL\MySQL Server 5.6\bin
PHP Log File	*On windows you will find it here…* C:\Windows\Temp**PHP54_errors.log**

Configuration of RAPTOR also depends on having privileged accounts.   Some key privileged accounts are shown in Table 2.

Table 2 – Key Accounts for Setup and Configuration

Context	Description
OS Privileged Account	You will need a "sudo" account to if installing into Linux or an "Administrator" account if installation into Windows.
RAPTOR site admin	This account is a Drupal administrator and has no access to VistA. The default demo admin account is called "admin". This is NOT a VistA account.
RAPTOR user	You will need a standard user account to test the installation. This account must have the same name as a valid VistA access string. The verify code is NOT stored in RAPTOR.

Context	Description
MySQL root	This account has root access to the MySQL database server
MySQL RAPTOR user	This account only has RAPTOR site specific database access.

In general, if you will have multiple RAPTOR sites; first you install and configure a test site and test it. Then you install additional RAPTOR sites primarily by copying files from the test site and changing configuration entries.

Interfacing with VistA

RAPTOR can work either through RAPTOR EWD or RAPTOR MDWS.   You can use either one of those two products.

RAPTOR MDWS

This is a Windows .NET web service and is installed using a Windows installer expressly build for that purpose. The general installation steps are as follows:

1. Run the installer
2. Test your installation using a web browser.

RAPTOR EWD

This is a Node.js based web service that is operating system agnostic.   In particular, this interface works in Windows and it works in Linux. The general installation steps are as follows:

1. Install the latest node.js
2. Install the latest ewd js
3. Install ewd-federator
4. Install the RAPTOR specific files into your implementation's **node_modules** folder.
5. Test your installation using a rest client.

Installation Details for Initial RAPTOR Site

As with any application, RAPTOR has prerequisites for the system on which it will be installed.   In the case of RAPTOR, you must have already installed the following products:

1. MySQL 5.6
2. PHP 5.4
3. Drupal 7.x

The prerequisite open source products shown above can be installed from scratch (numerous user community instructions available throughout the web); or you can use a polished installer such as **Acquia** or **Bitnami** (both available through the web too).

Setup of Application Parts – Configure RAPTOR instance for VistA Site

Before you start, you will need the following information:

1. Site ID (aka Station ID) of the VistA instance
2. IP and PORT number of the VistA instance

3. Descriptive name of the VistA instance
4. Name for the new RAPTOR MySql database **(Raptor###** where ### is the site id)
5. Username for the RAPTOR MySql database instance (**raptoruser###** where ### is the site id)

The general steps of the process are as follows:

1. Install Drupal 7 with VistA site ID as part of the URL or configure Drupal7 afterwards with that information.
2. Copy raptor500 database and create raptoruser account with grants on the database.
3. Copy raptor program files and set filesystem privileges
4. Modify copied configuration files
5. Test the new site as an admin and as a VistA user

Install the Module and Theme files

WARNING: Following these steps WILL delete all content from an existing site. Do not follow these steps if you are working with an existing site!

The RAPTOR application is a collection of Drupal modules and a custom Drupal theme. See Table 3 for the steps to install them.

Table 3 – Fresh Module and Theme installation

Category	Comment
RAPTOR Modules	Copy the module folders from the git repo and place them into this location of your application server: **<base drupal folder>\sites\all\modules**
RAPTOR Themes	Copy the theme folders from the git repo and place them into this location of your application server: **<base drupal folder>\sites\all\themes**
Activate the Modules and Theme	Log into your Drupal site as an administrator. Navigate to the Drupal **Modules** area and select all the **Simple Rules Engine** modules and all the **RAPTOR** modules (place checkmark on each). Click **Save** at the bottom. You should then see green success messages telling you that tables have been created and populated with default demo data. Using the Drupal administration panel (**Appearance** area), select RAPTOR OMEGA as the default theme. Using the Drupal administration panel (**Configuration->Performance** area) clear all the caches. You now have a baseline RAPTOR application ready for configuration.

Creating a new RAPTOR Database

The RAPTOR database is the same database used by your Drupal site. When you install the RAPTOR modules into your Drupal site, the RAPTOR tables will be created and initialized with demo data. All the RAPTOR specific tables follow the naming convention of *raptor_**.

A default raptor site includes an administrator account with the following credentials:

- Login name: *admin*
- Default password: *apass*

TIP: Change the password to the admin account now. This account has administrator level access to the Drupal site.

Drupal Configuration Files

Each instance of RAPTOR is a unique Drupal website with its own Drupal configuration settings.

Set the Site ID

The login page shows the "site_name" value defined in settings.php file. Set it to say "VistA Site XXX" where XXX is the site number.

```
/**
 * Variable overrides:
 *
 * To override specific entries in the 'variable' table for this site,
 * set them here. You usually don't need to use this feature. This is
 * useful in a configuration file for a vhost or directory, rather than
 * the default settings.php. Any configuration setting from the 'variable'
 * table can be given a new value. Note that any values you provide in
 * these variable overrides will not be modifiable from the Drupal
 * administration interface.
 *
 * The following overrides are examples:
 * - site_name: Defines the site's name.
 * - theme_default: Defines the default theme for this site.
 * - anonymous: Defines the human-readable name of anonymous users.
 * Remove the leading hash signs to enable.
 */
$conf['site_name'] = 'VistA Site 500';
# $conf['theme_default'] = 'garland';
# $conf['anonymous'] = 'visitor';
```

Set the database connection for the raptor instance

The setting is in **settings.php** file.

```
$databases = array( 'default' => array( 'default' => array ('database' => 'Raptor500', 'username' => 'raptoruser500', 'passwo
```

RAPTOR Application Configuration Files

The application configuration files for RAPTOR are found in the **core** folder of the **raptor_glue** module. The key configuration files are highlighted in Table 4.

Table 4 – Key RAPTOR Application Configuration Files

Category	Name	Comment
Main Configuration File	config.php	This is the main configuration file for RAPTOR which in turn loads all other configuration files needed. Edit this file to load your site specific RSite*.inc file.
Server Instance Specific Settings	*RSite*.inc*	Contains site specific settings unique to the hardware and software configuration of the box on which it is running. If such a file does not already exist for your VistA site, copy the file for RSite500 and give it a name using your VistA site ID. Edit the contents of the file to fit your server configuration details and then update config.php to load it.
General Settings	GeneralDefs.inc	General values for site customization.
Workflow Settings	WorkflowDefs.inc	Customize workflow behavior of RAPTOR for a site
MDWS Settings	MdwsDefs.inc	Key connection details between RAPTOR and MDWS
VistA Settings	VistaDefs.inc	Key connection details between RAPTOR and VistA
Time Settings	TimeDefs.inc	Contains settings for timeouts
Measurements	UOMDefs.inc	Declares default units of measure for the site.
Internal	InternalDefs.inc	These application settings should not be edited and customized.
Errors	ErrorCodeDefs.inc	Declaration of some key error codes. In general, do not edit this file.
User QA	QualityAssuranceDefs.inc	Declaration of quality assurance labels for reports and user interfaces.

Electronic Health Record Data layer and Image Viewer Configuration

RAPTOR can be customized to work with any number of EHR (Electronic Health Record) and image viewer systems. See documentation for the specific subsystem chosen to integrate with RAPTOR.

- MDWS
- EWD
- VIX
- VistA

Test the Initial site

Login as the admin account in RAPTOR and verify that you can configure accounts and run reports. Login as a VistA user through RAPTOR and verify you can properly utilize the system.

Checking Version Numbers at Runtime

You can inspect some of the key version numbers of your configuration at any time by selecting the **About** option from the Administer menu.   This option is available to all users of the system.

The version numbers shown in the dialog are from the configuration files.   Be sure to update the version number declarations in the configuration files if you edit them.

Installation Details for Additional Sites

Web Site Files

Create a new RAPTOR site folder and copy the files from the test site into it.   For example, if your test site was installed here:

- C:\inetpub\wwwroot\RSite500

And you want to create a new site called RSite123, copy the files into this folder:

- C:\inetpub\wwwroot\RSite123

Then configure the files in RSite123 as you did for the initial site.

Database

Copy the test database and rename it.   One way to do this is to dump the test RAPTOR database by following these steps on the database server.

```
mysqldump -u [uname] -p[pass] Raptor500 > db_backup.sql
```
Edit the db_backup.sql file to have the new database name and to create the new **raptoruser** account. The database name should follow the naming convention Raptor### where ### is the site ID.

Then we create the new database like this…

```
$ mysql -u username -p -h localhost DATA-BASE-NAME < data.sql
```

The new database name should follow our **Raptor###** naming convention, but that is not required.

Production Considerations

For a production site, ensure you periodically back up the raptor database of that site. If the raptor database is lost, all content not already committed to VistA will be lost.

WARNING: Do not run a PRODUCTION site without a periodic backup of the RAPTOR database.

Revision History

When	Who	What
20150817	Frank Font	Updated for upload to repository
20150917	Frank Font	Updated with more information about the installation process.
20151001	Frank Font	Added information about MDWS and EWD installation.