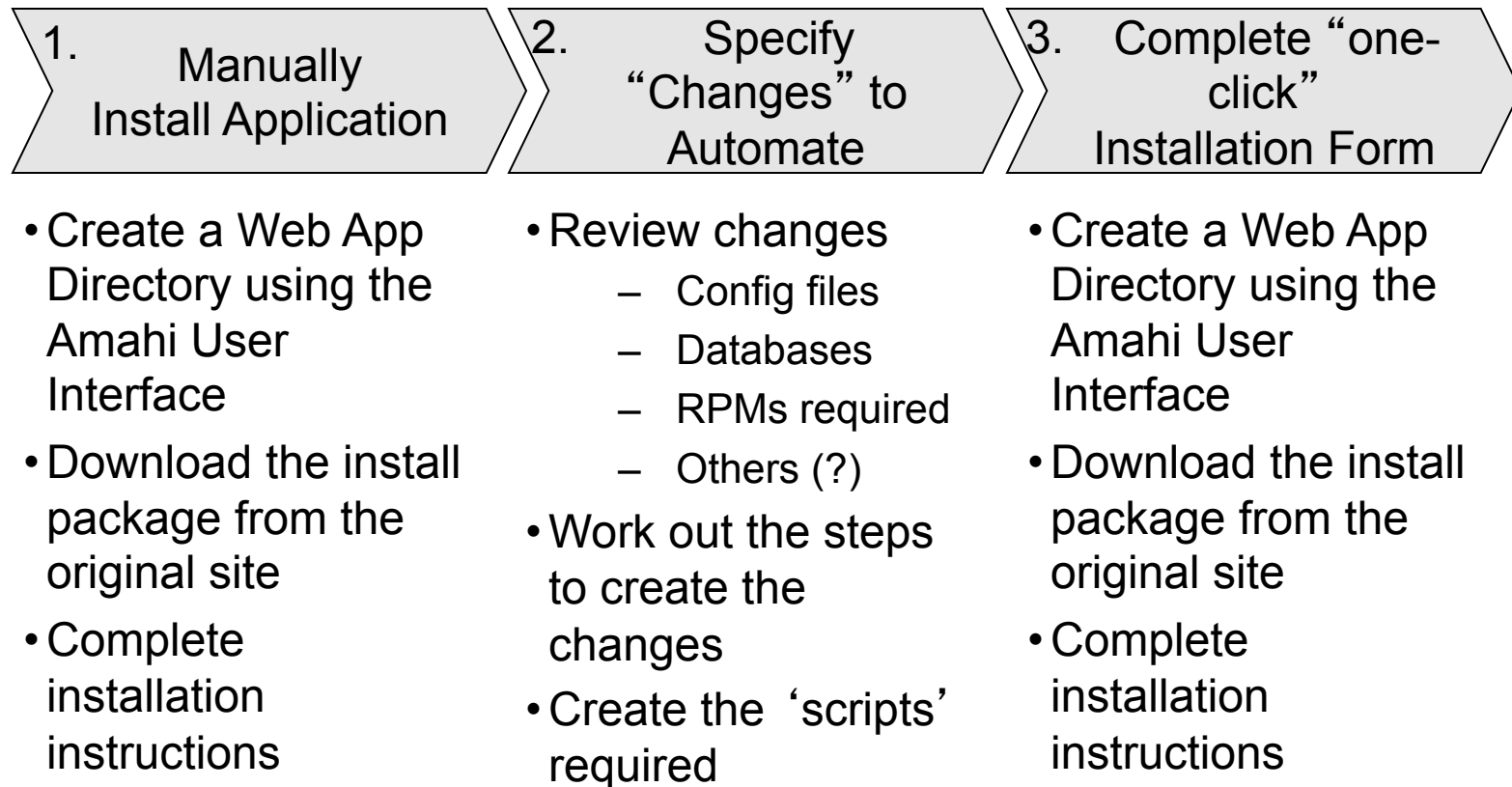


A tutorial describing how to package application for one-click installation on Amahi. The basic process is:



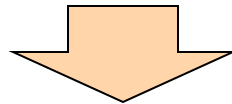
1(a) Manually Install the Application

This tutorial will use the application “Coppermine Gallery” as an example.

- Goto <http://setup>
- Select the Web App tab (‘soon’ to be a sub-menu in the Applications tab)
 - Create a new Web App ‘coppermine’ , this creates the directory **`/var/hda/web-apps/coppermine/html`** on your HDA
- From a command prompt in the directory:
`/var/hda/web-apps/coppermine`
- Download the installation package
`wget http://superb-west.dl.sourceforge.net/sourceforge/coppermine/cpg1.4.21.tar.bz2`
- Unzip/Untar the package
`tar -xvf cpg1.4.21.tar.bz2`
- Copy the contents of the unzipped web app folder into the html folder
`cp -rf cpg14x/* html`

Complete the installation:

- Try to launch the Application: <http://coppermine>
- It won't work and will redirect you to complete the installation
 - Follow the instructions to complete the installation
 - Note: the one-click installer normally runs as the apache user, so changing the permissions will not be required in the future
 - Create the database for use by coppermine using the command
hda-create-db-and-user coppermine
(creates a database with user and password named coppermine)
 - Also, there is an RPM required: *yum install ImageMagick*



- You are now ready to find the files/database create/edited by the installation process

Seek out and understand the changes performed by the installation.

- Look to see what installation files have changed. The “brute force method” is to take a “difference” of the original unzipped directory and the installed directory

```
diff -r -N -U3 /var/hda/web-apps/coppermine/cpg14x /var/hda/web-apps/coppermine/html > diff.install.txt
```

- You can view the created text file *diff.install.txt* and you can see the files edited

```
-include/config.inc.php
```

```
-include/install.lock
```

- From this file you will create part of the install script (each diff command can be used to apply the changes to the original files!)

See how the database was created!

- Look for the database creation script in the install directory. You will find three .sql script files:
 - schema.Sql, basic.sql, update.sql
(on inspection the first two have to be run to create the database)
- Experimenting with these shows they are NOT complete enough to build the installed database – we will use another method to do this. From the command line dump the database:

```
mysqldump --add-drop-table -u coppermine -pcoppermine coppermine >db.txt
```

(unfortunately this makes a file too big to be in the install script)
- Comparing the dump with the schema.sql file, a smaller install script for the database can be created – (see next page for the MySQL script!)



(Supplemental Install Script for DB)

Note: Download the file to see the actual text (if you want all the detail!)

```
SET @scc      = @@character_set_client;
SET character_set_client = utf8;

INSERT INTO `CPG_bridge` VALUES ('short_name',''),('license_number',''),('db_database_name',''),('db_hostname',''),('db_username',''),('db_pa
INSERT INTO `CPG_categories` VALUES (1,0,'User galleries','This category contains albums that belong to Coppermine users.','0,0,0');
INSERT INTO `CPG_config` VALUES ('albums_per_page','12'),('album_list_cols','2'),('display_pic_info','0'),('alb_list_thumb_size','50'),('allc
INSERT INTO `CPG_filetypes` VALUES ('jpg','image/jpg','image',''),('jpeg','image/jpeg','image',''),('jpe','image/jpe','image',''),('gif','ima
INSERT INTO `CPG_usergroups` VALUES (1,'Administrators',0,1,1,1,1,1,1,0,0,3,0,5,3), (2,'Registered',1024,0,1,1,1,1,1,0,3,0,5,3), (3,'Anonymou

CREATE TABLE `cpg14x_albums` (
  `aid` int(11) NOT NULL auto_increment,
  `title` varchar(255) NOT NULL default '',
  `description` text NOT NULL,
  `visibility` int(11) NOT NULL default '0',
  `uploads` enum('YES','NO') NOT NULL default 'NO',
  `comments` enum('YES','NO') NOT NULL default 'YES',
  `votes` enum('YES','NO') NOT NULL default 'YES',
  `pos` int(11) NOT NULL default '0',
  `category` int(11) NOT NULL default '0',
  `thumb` int(11) NOT NULL default '0',
  `keyword` varchar(50) default NULL,
  `alb_password` varchar(32) default NULL,
  `alb_password_hint` text,
  PRIMARY KEY (`aid`),
  KEY `alb_category` (`category`)
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COMMENT='Used to store albums';
SET character_set_client = @scc;

CREATE TABLE `cpg14x_banned` (
  `ban_id` int(11) NOT NULL auto_increment,
  `user_id` int(11) default NULL,
  `ip_addr` tinytext,
  `expiry` datetime default NULL,
  `brute_force` tinyint(5) NOT NULL default '0',
  PRIMARY KEY (`ban_id`)
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COMMENT='Data about banned users';
SET character_set_client = @scc;
```

This information is provided as background.

- In general this is the order of the process the one-click installer does:
 - 1. Install (if any) RPM dependencies
 - 2. Install (if any) RPM packages (cross check SHA1SUM for download)
 - 3. Create the “Web App” for the installation
 - 4. Download (if any) tarball
 - 5. cross check tarball SHA1SUM for validity of download
 - 6. untar the tarball (assume the tarball untars into a single folder)
 - 7. rename the untarred folder ‘html’ in the install directory



3(a). Complete One-Click Install Form

Details on the Field to complete are at

http://wiki.amahi.org/index.php/Application_Packaging

- “Special things” (beyond the obvious) to complete for this install:
 - RPM dependencies: ImageMagick
 - Install script based on the diff file created, and the need to create the database

Diff for the config.inc.php file

```
Patch -p0 -f -E <<'EOF'
--- /var/hda/web-apps/coppermine/cpg14x/include/config.inc.php      1969-12-31 16:00:00.000000000 -0800
+++ /var/hda/web-apps/coppermine/html/include/config.inc.php      2009-04-28 13:22:42.000000000 -0700
@@ -0,0 +1,13 @@
+<?php
+// Coppermine configuration file
+
+// MySQL configuration
+$CONFIG['dbserver'] =          'localhost';          // Your database server
+$CONFIG['dbuser'] =           'coppermine';         // Your mysql username
+$CONFIG['dbpass'] =           'coppermine';         // Your mysql password
+$CONFIG['dbname'] =           'coppermine';         // Your mysql database name
+
+
+// MySQL TABLE NAMES PREFIX
+$CONFIG['TABLE_PREFIX'] =     'cpg14x_';
+?>
EOF
```


Diff for the install.lock file

```
Patch -p0 -f -E <<'EOF'
@@ -0,0 +1 @@
+locked
EOF
```

- Create the database for Coppermine:

```
mysql -u coppermine -pcoppermine coppermine < html/sql/schema.sql
mysql -u coppermine -pcoppermine coppermine <<'EOF'
SET @scc      = @@character_set_client;
SET character_set_client = utf8;

INSERT INTO `CPG_bridge` VALUES ('short_name',''),('license_number',''),('db_database_name',''),
('db_hostname',''),('db_username',''),('db_password',''),('full_forum_url',''),
('relative_path_of_forum_from_webroot',''),('relative_path_to_config_file',''),('logout_flag',''),
('use_post_based_groups',''),('cookie_prefix',''),('table_prefix',''),('user_table',''),('session_table',''),
('group_table',''),('group_relation_table',''),('group_mapping_table',''),('use_standard_groups','1'),
('validating_group',''),('guest_group',''),('member_group',''),('admin_group',''),('banned_group',''),
('global_moderators_group',''),('recovery_logon_failures','0'),('recovery_logon_timestamp','');
```

.....

All the content of this file:



WordPad Document

.....

```
) ENGINE=MyISAM DEFAULT CHARSET=latin1 COMMENT='Stores votes for individual pics';
SET character_set_client = @scc;
EOF
```

- If you get stuck, don't hesitate to
 - come by the IRC channel
 - post questions <http://forums.amahi.org>