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# Estimating Magento Upgrades

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by Tim Bezhashvyly

 Openstream Internet Solutions

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# About Me

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## Tim Bezhashvly

12 years of PHP

3 years of Magento



boy-named-sue



tim-openstream



# Problem

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- Magento Upgrade is a standard operation still hard to tell how much will it take
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- Magento Upgrade is a standard operation still hard to tell how much will it take
  - Upgrade can take from 1 to 20 hours
  - Lots of pitfalls that can be overseen or forgotten
  - Client still wants an exact quote
-

# Our Goal

---

- Provide an accurate quote for Magento Upgrade
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  - Building a rough quote should take under 15 minutes
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# Our Goal

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- Provide an accurate quote for Magento Upgrade
  - Building a rough quote should take under 15 minutes
  - Provide even more accurate quote within 30 minutes
-

# So what to do?

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- Compile the list of modifications
  - Analyse modifications
  - Valuate found potential issues
-

# Off-Core Modifications

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- Active Extensions
  - code / local / Mage
  - Custom Theme
-

# In-Core Modifications

---

- app / code / core
  - app / locale
  - Core Templates
  - js, lib, etc.
-

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# Off-Core Check

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---

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# Active Extensions

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# Real life example

---

Aitoc\_Aitinstall.xml  
Aitoc\_Aitmailrebate.xml  
Aitoc\_Aitpreorder.xml  
Aitoc\_Aitstabilityguard.xml  
Aitoc\_Aitsys.xml  
AW\_AdvancedReviews.xml  
AW\_All.xml  
AW\_Checkoutpromo.xml  
AW\_Core.xml  
AW\_Followupemail.xml  
AW\_Productquestions.xml  
BusinessDecision\_Interaktingslider.xml  
Ebizmarts\_Mailchimp.xml  
Ebizmarts\_SagePayReporting.xml  
Ebizmarts\_SagePaySuite.xml  
Find\_Feed.xml  
FreeLunchLabs\_ConstantContact.xml  
Inchoo\_Productfilter.xml  
MageParts\_BackorderButton.xml  
MageParts\_RestrictCategories.xml  
Magestore\_Addressformatter.xml  
Magestore\_Affiliatepluscoupon.xml  
Magestore\_Affiliateplusemail.xml  
Magestore\_Affiliateplusprogram.xml  
Magestore\_Affiliateplussync.xml

Magestore\_Affiliateplus.xml  
Magestore\_Affiliate.xml  
Magestore\_Catalogpermission.xml  
Magestore\_Customerreward.xml  
Magestore\_Customerservices.xml  
Magestore\_Faq.xml  
Magestore\_Fastcheckout.xml  
Magestore\_Fblogin.xml  
Magestore\_Groupdeal.xml  
Magestore\_Instantsearch.xml  
Magestore\_Magenotification.xml  
Magestore\_Magesitemap.xml  
Magestore\_Manufacturer.xml  
Magestore\_Membership.xml  
Magestore\_Onestepcheckout.xml  
Magestore\_Storepickup.xml  
Magestore\_Supportticket.xml  
Mage\_Weee.xml  
Mage\_Widget.xml  
MageWorx\_Adminhtml.xml  
MageWorx\_LinkExchange.xml  
MageWorx\_XContacts.xml  
MDN\_ExtensionConflict.xml  
MDN\_PointOfSales.xml  
MDN\_ProductReturn.xml

MDN\_Quotation.xml  
Phoenix\_Moneybookers.xml  
Reea\_Development.xml  
Reea\_Eventsearch.xml  
Reea\_Lightspeedcontent.xml  
Reea\_Teachers.xml  
TBT\_Bss.xml  
TBT\_Testsweet.xml  
TinyBrick\_FastCatalog.xml  
TinyBrick\_FastCms.xml  
TinyBrick\_LightSpeed.xml  
Uni\_Banner.xml  
Unirgy\_Giftcert.xml  
Velite\_Superstage.xml  
Webshopapps\_Invoicing.xml  
Webshopapps\_Premiumrate.xml  
Webshopapps\_Tracker.xml  
Webshopapps\_Vatchecker.xml  
Webshopapps\_Wsacommon.xml  
Webshopapps\_Wsalogger.xml

# 3rd-Party Extensions Checklist

---

- check if extension even enabled
-



# 3rd-Party Extensions Checklist

---

- check if extension even enabled
  - check if its functionality is not yet in the core
-

# Not Longer Required

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- Yoast\_CanonicalUrl
  - Mxperts\_CustomerAddress
  - Fontis\_Wysiwyg
  - ...
-

# 3rd-Party Extensions Checklist

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  - optionally ask client if extension is still needed
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# 3rd-Party Extensions Checklist

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- check if extension even enabled
  - check if its functionality is not yet in the core
  - check compatibility
  - optionally ask client if extension is still needed
  
  - check config.xml for
    - class rewrites
    - layout updates
    - sql updates
-

# Unirgy/Giftcert/etc/config.xml

---

```
<config>
  ...
  <global>
    ...
    <resources>
      ...
      <ugiftcert_setup>
        <setup>
          <module>Unirgy_Giftcert</module>
        </setup>
        ...
      </ugiftcert_setup>
      ...
    </resources>
    ...
  </global>
  ...
</config>
```

---

# Unirgy/Giftcert/sql/ugiftcert\_setup

---

mysql4-install-0.1.0.php

mysql4-install-0.7.5.php

mysql4-upgrade-0.1.0-0.7.2.php

mysql4-upgrade-0.7.2-0.7.3.php

mysql4-upgrade-0.7.3-0.7.4.php

mysql4-upgrade-0.7.4-0.7.5.php

mysql4-upgrade-0.8.1-0.8.2.php

mysql4-upgrade-0.8.3-0.8.4.php

mysql4-upgrade-0.8.4-0.8.5.php

mysql4-upgrade-0.9.0-0.9.1.php

mysql4-upgrade-0.9.1-0.9.2.php

mysql4-upgrade-0.9.3-0.9.4.php

mysql4-upgrade-0.9.4-0.9.5.php

mysql4-upgrade-0.9.9-0.9.10.php

mysql4-upgrade-0.9.14-0.9.15.php

mysql4-upgrade-0.9.15-0.9.16.php

mysql4-upgrade-0.9.16-0.9.17.php

---

# mysql4-install-0.1.0.php

---

...

```
PRIMARY KEY (`history_id`),  
KEY `FK_ugiftcert_history` (`cert_id`),  
KEY `FK_ugiftcert_history_customer` (`customer_id`),  
KEY `FK_ugiftcert_history_order` (`order_id`),  
KEY `FK_ugiftcert_history_user` (`user_id`),  
CONSTRAINT `FK_ugiftcert_history` FOREIGN KEY (`cert_id`) REFERENCES  
`ugiftcert_cert` (`cert_id`) ON DELETE CASCADE ON UPDATE CASCADE,  
CONSTRAINT `FK_ugiftcert_history_customer` FOREIGN KEY (`customer_id`)  
REFERENCES `customer_entity` (`entity_id`) ON DELETE SET NULL ON UPDATE SET  
NULL,  
CONSTRAINT `FK_ugiftcert_history_order` FOREIGN KEY (`order_id`) REFERENCES  
`sales_order` (`entity_id`) ON DELETE SET NULL ON UPDATE SET NULL,  
CONSTRAINT `FK_ugiftcert_history_user` FOREIGN KEY (`user_id`)  
REFERENCES `admin_user` (`user_id`) ON DELETE SET NULL ON UPDATE SET  
NULL
```

...

---



# mysql4-upgrade-0.1.0-0.7.2.php

---

```
$conn = $this->_conn;  
$table = $this->getTable('ugiftcert_history');  
$conn->dropForeignKey($table, 'FK_ugiftcert_history');  
$conn->dropForeignKey($table, 'FK_ugiftcert_history_customer');  
$conn->dropForeignKey($table, 'FK_ugiftcert_history_order');  
$conn->dropForeignKey($table, 'FK_ugiftcert_history_user');
```

```
$conn->addConstraint('FK_ugiftcert_history', $table, 'cert_id', $this->getTable('ugiftcert_cert'),  
'cert_id', 'CASCADE', 'CASCADE');
```

```
$conn->addConstraint('FK_ugiftcert_history_customer', $table, 'customer_id', $this->getTable  
('customer_entity'), 'entity_id', 'SET NULL', 'SET NULL');
```

```
$conn->addConstraint('FK_ugiftcert_history_order', $table, 'order_id', $this->getTable  
('sales_order'), 'entity_id', 'SET NULL', 'SET NULL');
```

```
$conn->addConstraint('FK_ugiftcert_history_user', $table, 'user_id', $this->getTable  
('admin_user'), 'user_id', 'SET NULL', 'SET NULL');
```

---

# 3rd-Party Extensions Checklist

---

- check if extension even enabled
  - check if its functionality is not yet in the core
  - check compatibility
  - optionally ask client if extension is still needed
  
  - check config.xml for
    - class rewrites
    - layout updates
    - sql updates --> foreign keys
-

---

**code/local/Mage**

---

---

# code / local / Mage

---

- some changes may be extensions
  - some may be PHP or Zend patches
  - otherwise diff and migrate
-

---

# Custom Theme

---

---

# "Custom" theme

---

- beware of default theme fallbacks while upgrading from version before 1.4.0.0
  - beware of XML overrides
-

---

# In-Core Check

---

---





# In-Core Modifications

---

- app / code / core
  - app / locale
  - Core Templates
  - js, lib, etc.
-

# Tracking down in-core modifications

---

- Make a copy of your files and put it under .git

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  - Copy clean Magento installation over
-

# Tracking down in-core modifications

---

- Make a copy of your files and put it under .git
  - Copy clean Magento installation over
  - Run "git status"
-

---

```
# On branch master
# Changes not staged for commit:
# (use "git add <file>..." to update what will be committed)
# (use "git checkout -- <file>..." to discard changes in working directory)
#
#   modified:   app/code/core/Mage/Sales/Model/Quote/Address/Total/Shipping.php
#   modified:   app/design/adminhtml/default/default/template/newsletter/queue/edit.phtml
#   modified:   app/design/frontend/base/default/layout/checkout.xml
#   modified:   app/design/frontend/base/default/layout/review.xml
#   modified:   app/design/frontend/base/default/template/page/3columns.phtml
#   modified:   app/design/frontend/base/default/template/payment/form/purchaseorder.phtml
#   modified:   downloader/pearlib/php/.depdb
#   modified:   downloader/pearlib/php/.filemap
#   modified:   downloader/pearlib/php/Archive/Tar.php
#   modified:   downloader/pearlib/php/Structures/Graph/Node.php
#   modified:   index.php
#   modified:   skin/frontend/default/default/images/btn_trash.gif
#
# Untracked files:
# (use "git add <file>..." to include in what will be committed)
#
#   LICENSE.txt
#   index.php.sample
#   php.ini.sample
no changes added to commit (use "git add" and/or "git commit -a")
```

---

# Tracking down in-core modifications

---

- Make a copy of your files and put it under .git
  - Copy clean Magento installation over
  - Run "git status" or "**git status --porcelain**"
-

---

M app/code/core/Mage/Sales/Model/Quote/Address/Total/Shipping.php  
M app/design/adminhtml/default/default/template/newsletter/queue/edit.phtml  
M app/design/frontend/base/default/layout/checkout.xml  
M app/design/frontend/base/default/layout/review.xml  
M app/design/frontend/base/default/template/page/3columns.phtml  
M app/design/frontend/base/default/template/payment/form/purchaseorder.phtml  
M downloader/pearlib/php/.depdb  
M downloader/pearlib/php/.filemap  
M downloader/pearlib/php/Archive/Tar.php  
M downloader/pearlib/php/Structures/Graph/Node.php  
M index.php  
M skin/frontend/default/default/images/btn\_trash.gif  
?? LICENSE.txt  
?? index.php.sample  
?? php.ini.sample

---

# Tracking down in-core modifications

---

- Make a copy of your files and put it under .git
  - Copy clean Magento installation over
  - Run "git status" or "git status --porcelain"
  - Run "git diff" on each file or the whole batch
-



---

```
diff --git a/app/design/frontend/base/default/layout/checkout.xml b/app/design/front
index f066054..cf48556 100644
--- a/app/design/frontend/base/default/layout/checkout.xml
+++ b/app/design/frontend/base/default/layout/checkout.xml
@@ -56,7 +56,7 @@ Default layout, loads most of the pages
    <checkout_cart_index translate="label">
      <label>Shopping Cart</label>
      <remove name="right"/>
-
+    <remove name="left"/>
    <!-- Mage_Checkout -->
    <reference name="root">
      <action method="setTemplate"><template>page/1column.
phtml</template></action>
```

---

- ▶ skin
- ▶ var
- .gitignore
- .htaccess
- cleanup.php
- cron.php
- cron.sh
- favicon.ico
- index.php
- index.php.sample
- install.php
- LICENSE.html
- LICENSE.txt

Changes: Local Log



Z: Structure 2: Favorites

▼ Default (12 files)

- .depdb (/Users/tim/Work/lollobi.ch/downloader/pearlib/php)
- .filemap (/Users/tim/Work/lollobi.ch/downloader/pearlib/php)
- 3columns.phtml (/Users/tim/Work/lollobi.ch/app/design/frontend/base/default/template/page)
- btn\_trash.gif (/Users/tim/Work/lollobi.ch/skin/frontend/default/default/images)
- checkout.xml (/Users/tim/Work/lollobi.ch/app/design/frontend/base/default/layout)
- edit.phtml (/Users/tim/Work/lollobi.ch/app/design/adminhtml/default/default/template/newsletter/queue)
- index.php (/Users/tim/Work/lollobi.ch)
- Node.php (/Users/tim/Work/lollobi.ch/downloader/pearlib/php/Structures/Graph)
- purchaseorder.phtml (/Users/tim/Work/lollobi.ch/app/design/frontend/base/default/template/payment/form)
- review.xml (/Users/tim/Work/lollobi.ch/app/design/frontend/base/default/layout)
- Shipping.php (/Users/tim/Work/lollobi.ch/app/code/core/Mage/Sales/Model/Quote/Address/Total)
- Tar.php (/Users/tim/Work/lollobi.ch/downloader/pearlib/php/Archive)

▼ Unversioned Files (3 files)

- index.php.sample (/Users/tim/Work/lollobi.ch)
- LICENSE.txt (/Users/tim/Work/lollobi.ch)
- php.ini.sample (/Users/tim/Work/lollobi.ch)

Version Control

9: Changes

6: TODO

```
bf968580e4743a8a3d60a0f747a0acd46e9ecbf5 (Read-only)
/cart_item_renderer_configurable</block><template>checkout/cart
/sidebar/default.phtml</template></action>
  <block type="core/text_list" name="cart_sidebar
.extra_actions" as="extra_actions" translate="label"
module="checkout">
  <label>Shopping Cart Sidebar Extra
Actions</label>
  </block>
</reference>
</default>

<checkout_cart_index translate="label">
  <label>Shopping Cart</label>
  <remove name="right"/>
  <!-- Mage_Checkout -->
  <reference name="root">
    <action method="setTemplate"><template>page/1column
.phtml</template></action>
  </reference>
  <reference name="content">
    <block type="checkout/cart" name="checkout.cart">
      <action method="setCartTemplate"><value>checkout
/cart.phtml</value></action>
    <action
method="setEmptyTemplate"><value>checkout/cart/noItems
.phtml</value></action>
    <action method="chooseTemplate"/>
  </reference>
  <action method="addItemRender"><type>simple</type><block>checkout
/cart_item_renderer</block><template>checkout/cart/item/default
.phtml</template></action>
  <action method="addItemRender"><type>grouped
</type><block>checkout/cart_item_renderer_grouped</block
><template>checkout/cart/item/default.phtml</template></action>
  <action method="addItemRender"><type>configurable</type><block>checkout
/cart_item_renderer_configurable</block><template>checkout/cart
/item/default.phtml</template></action>
  <block type="core/text_list" name="checkout.cart
.top_methods" as="top_methods" translate="label">
    <label>Payment Methods Before Checkout
  </block>
```

Your version

```
/cart_item_renderer_configurable</block><template>checkout/cart
/sidebar/default.phtml</template></action>
  <block type="core/text_list" name="cart_sidebar
.extra_actions" as="extra_actions" translate="label"
module="checkout">
  <label>Shopping Cart Sidebar Extra
Actions</label>
  </block>
</reference>
</default>

<checkout_cart_index translate="label">
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  <reference name="root">
    <action method="setTemplate"><template>page/1column
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  </reference>
  <reference name="content">
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      <action method="setCartTemplate"><value>checkout
/cart.phtml</value></action>
    <action
method="setEmptyTemplate"><value>checkout/cart/noItems
.phtml</value></action>
    <action method="chooseTemplate"/>
  </reference>
  <action method="addItemRender"><type>simple</type><block>checkout
/cart_item_renderer</block><template>checkout/cart/item/default
.phtml</template></action>
  <action method="addItemRender"><type>grouped
</type><block>checkout/cart_item_renderer_grouped</block
><template>checkout/cart/item/default.phtml</template></action>
  <action method="addItemRender"><type>configurable</type><block>checkout
/cart_item_renderer_configurable</block><template>checkout/cart
/item/default.phtml</template></action>
  <block type="core/text_list" name="checkout.cart
.top_methods" as="top_methods" translate="label">
    <label>Payment Methods Before Checkout
  </block>
```

1 difference

Deleted

Changed

Inserted

# Or Copy Your Code Over Clean One

---

- + You will also see off-core modifications
  - The list of modifications will be unreadable
-

---

# Summary

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---

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- in-core mods have to be ported off-core
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  - beware of custom theme layout xml mods
-

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- in-core mods have to be ported off-core
  - each class rewrite is a potential problem
  - each sql update is a potential problem
  - beware of custom theme layout xml mods
  - app/local/Mage files have to be updated
-

---

**github.com/  
magento-hackathon/  
upgrade-checklist**

---

pull requests are always welcomed!

---

---

# Actual Upgrade Recommendations

---

---

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---

- Don't let them change anything while you upgrading
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  - Check which extensions were initially disabled
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  - Check which extensions were initially disabled
  - Disable all 3rd-party extensions
-

# Actual Upgrade Recommendations

---

- Don't let them change anything while you upgrading
  - Check which extensions were initially disabled
  - Disable all 3rd-party extensions
  - Check there's a cleanup script. Otherwise clean
-



# Truncate

---

dataflow\_batch\_export  
dataflow\_batch\_import  
log\_customer  
log\_quote  
log\_summary  
log\_summary\_type  
log\_url  
log\_url\_info  
log\_visitor  
log\_visitor\_info  
log\_visitor\_online  
index\_event  
report\_event  
report\_compared\_product\_index  
report\_viewed\_product\_index  
catalog\_compare\_item  
catalogindex\_aggregation  
catalogindex\_aggregation\_tag  
catalogindex\_aggregation\_to\_tag

---

# Actual Upgrade Recommendations

---

- Don't let them change anything while you upgrading
  - Check which extensions were initially disabled
  - Disable all 3rd-party extensions
  - Check there's a cleanup script. Otherwise clean
  - Revert default theme on upgrade time
-

# Actual Upgrade Recommendations

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- Don't let them change anything while you upgrading
  - Check which extensions were initially disabled
  - Disable all 3rd-party extensions
  - Check there's a cleanup script. Otherwise clean
  - Revert default theme on upgrade time
  - In too complicated cases consider starting from scratch
-

---

# Troubleshooting

---

---

---

# Call to a member function toHtml() on a non-object in .../Layout.php

before:

```
<block type="core/profiler" output="toHtml"/>
```

after:

```
<block type="core/profiler" output="toHtml"  
name="core_profiler"/>
```

---

# Invalid method

## Mage\_Wishlist\_Block\_Links:: addWishlistLink

before:

```
<action method="addWishlistLink"></action>
```

after:

```
<action method="addLinkBlock">  
  <blockName>wishlist_link</blockName>  
</action>
```

---

# Missing Pagination

add:

```
<block type="page/html_pager" name="product_list_toolbar_pager"/>
```

inside:

```
<block type="catalog/product_list_toolbar" name="product_list_toolbar" template="catalog/product/list/toolbar.phtml">
```

and update your theme's:

```
template/catalog/product/list/toolbar.phtml
```

and

```
template/page/html/pager.phtml
```

---

---

**Fatal error: Call to a member  
function getAllOptions() on a non-  
object in  
/path/to/app/code/core/Mage/Core/Model/Cache.php**

Caused by old Aitoc extensions. Solved by removing the extension completely and then re-installing after upgrade.

---



---

# 1005 Can't create table {table name} (errno: 150)

Problem with FOREIGN KEYS

---

# Fatal error: Undefined class constant 'ENGINE\_MEMORY' in {here hoes the installer script}

this is a new bug i did not yet had a chance to examine. The line that throws an error reads something like:

```
$connection->changeTableEngine($installer->getTable($table), Varien_Db_Adapter_Pdo_Mysql::ENGINE_MEMORY);
```

`ENGINE\_MEMORY` constant is defined at lib/Varien/Db/Adapter/Pdo/Mysql.php line 54 but somehow ignored.

So the quick workaround is to replace Varien\_Db\_Adapter\_Pdo\_Mysql::ENGINE\_MEMORY with 'MEMORY' string on all occurrences.

---

---

# Fixing Integrity constraint violation: 1062 Duplicate entry '0-918' for key 'UNQ\_BY\_CUSTOMER'

Comment out

```
<initStatements>SET NAMES utf8</initStatements>
```

in app/etc/config.xml

But don't forget to put it back afterwards!!!

---

---

# Invalid mode for clean() method

Happens while copying new files over old ones

Solved with:

```
rm -fr app/code/core/Zend/Cache/*
```

---

**Do It Clean!**

---

---

---

**Dankeschön!**

---

---