Upgrading & Migrating CONTENTdm®
Problems Encountered & Lessons Learned

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Upper Midwest CONTENTdm User Group Meeting
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curious

• how many people running hosted vs. own?
• how many run on Linux?
• comfort level w/ Apache httpd files?

U of Minnesota Morris Digital Collections
http://contentdm.morris.umn.edu/
context

• Acquisition Station ver 4 cannot upload photos: Edit > Upload

• Need to retire older server, put on VMware

• Jing [video of old site]
goal

CONTENTdm®
version 4

CONTENTdm®
version 6
on VMware®
initial plan

• version 4 server kept running (live)
• install CONTENTdm version 5 on new VMware server
• copy collections - migrate existing data from old server to new VMware
• migrate VMware server to version 6
• patch
• go live with new server
initial attempt

- attempt to install version 5.4 on the VMware failed
- PHP versioning issue (version 5.x. requires PHP 5.1 or 5.2 and we already had version 5.3 on the VMware machine because CONTENTdm 6 requires PHP 5.3)

```
Where is php? []: /usr/local/lib/
Use of uninitialized value in concatenation (.) or string at ./question s.pl line 260, <STDIN> line 11.
Your PHP command line is version ()

Use of uninitialized value in substitution (s///) at ./questions.pl lin e 265, <STDIN> line 11.
Use of uninitialized value in substr at ./questions.pl line 266, <STDIN 
> line 11.
Use of uninitialized value in concatenation (.) or string at ./question s.pl line 272, <STDIN> line 11.
This version of CONTENTdm does not have phplib for the PHP version you entered (PHP )

Install a compatible PHP version and rerun the installer.
```
initial attempt

• CONTENTdm 5.4 requires PHP 5.1 or 5.2 only


• HOWEVER would break our VM standard - not recommended
revised plan

• shut down CONTENTdm version 4 server
• take snapshot of server
• migrate to version 5.4
• test - add data - check existing data, etc.
• shut down server
• take snapshot of server
• migrate to version 6
• test
• copy to new OIT supported VMware server
fatal flaw

copy to new OIT supported VMware server

bad idea
don‘t do this

detailed plan:
create a tar file of the current CONTENTdm version 6, despite it being 32-bit
on the VMware box: copy the tar file via scp (secure copy)
then change the path to PHP within the Apache config file
why not?

** Not registered **

Register your CONTENTdm Server in one click.
Your registration was successful.
Sorry, registration cannot be completed at this time.
Please try again later.
week wasted
detailed plan:
create a tar file of the current CONTENTdm version 6, despite it being 32-bit on the VMware box: copy the tar file via scp (secure copy)
then change the path to PHP within the Apache config file
before migrating

essential to know what you have & where it is located

find / -name whatyouneed –print

documented in CONTENTdm 5.4 Server Installation Guide for Linux
change the Perl script before running ./questions.pl in /usr/local/Content5/inst/install_defs.Linux_RedHat_5.3

apache_ctl /usr/local/apache2/bin/apachectl
apache_conf /usr/local/apache2/conf/httpd.conf
php_cli_exe /usr/local/bin/php
running ./questions.pl

It looks like the <Server root> directory for the install is /usr/local/Content5. If this does not look right then quit this installer and untar the files in your desired location.

Proceed? [yes]: y

This installer normally stops and starts Apache, examines httpd.conf file, and also adds a line to httpd.conf to point to the needed CONTENTdm configuration file. Optionally, these steps can be skipped by this installer and left to be done manually.

Do you want the installer to handle these steps?

Affirmative, Do these steps. [yes]: y
Where is apachectl? []: /usr/local/apache2/bin/
Where is httpd.conf? []: /usr/local/apache2/conf/

--------------------
Apache PHP configuration. I found an php.ini at /etc. Is this the one to use for Apache PHP scripts?
CONTENTdm detected some PHP configuration problems

• date.timezone must be set
• so add this to PHP.ini

date.timezone = "America/Chicago"
5.4 - Web template file migration

• if customized Web template files, need to either:
  – copy new templates and then adapt
  – or copy your old templates and adapt

• point to our logo in
/usr/local/Content5/docs/cdm4/images
5.4 - Web template file migration

• if customized Web template files, need to either:
  – copy new templates and then adapt
  – or copy your old templates and adapt

• point to our logo in
/usr/local/Content5/docs/cdm4/images
success! so far...

Your registration was successful.

About CONTENTdm

View server information and update license code. If the server is not yet registered, click register to automatically register with OCLC in one click.

next copied over collections
Campus Historic District

The Historic District collection documents the buildings and spaces that make up the West Central School of Agriculture and Experiment Station Historic District, 42 acres and 18 buildings that lie at the heart of the University of Minnesota, Morris campus.

UMM Heritage

The UMM Heritage collection contains photographs spanning the 119-year history of the campus, from an American Indian boarding school, to the West Central School of Agriculture, to the campus’ current occupant for nearly 50 years—the University of Minnesota, Morris.

UMM Today

The UMM Today collection holds current photographs of University of Minnesota, Morris people and places that are frequently requested from UMM University Relations and Media Services.

Click the title of a collection to browse items in that collection. You may also use the links in the top navigation bar to browse or search the collections. To get help with search functions—or to learn about My Favorites and Preferences—click the help link in the top navigation bar.

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Welcome to UMM Digital Collections

A collaborative effort of Admissions, Briggs Library, Computing Services, Media Services, and University Relations.

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no PHP support due to short tags=off
Appendix, Section 2, under php.ini File

Edit the /etc/php.ini file to enable short PHP tags:

short_open_tag=On
PHP programmer slugfest

Debate over PHP short tags vs. long tags

"<?" vs. "<?php"

Short tags “more efficient” and “faster” vs. Short tags “bad” or “not recommended”

solution for CONTENTdm:
within file php.ini
short_open_tag=On
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migrate to 6.0
confusion

• 6 Migration Guide says:

“If you want to retain your 5.x public interface while you evaluate the CONTENTdm Website, set up the CONTENTdm 6 Server on port 80 when you install it, rather than using the default (port 81).” (Section 2, Step 2)
confusion

port 81 didn’t work, so reverted to 80

really bad idea! – don’t do this

photo courtesy of Calsidyrose http://www.flickr.com/photos/calsidyrose/5837364262/
instead should have had ...

Server port 8080

Website port 80

photo courtesy of Calsidyrose http://www.flickr.com/photos/calsidyrose/5837364262/
nevertheless apparent success, so far...

Your registration was successful.

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<table>
<thead>
<tr>
<th>Version</th>
<th>6.0.0.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of items on server</td>
<td>31</td>
</tr>
<tr>
<td>Maximum number of items allowed</td>
<td>10000</td>
</tr>
<tr>
<td>License code</td>
<td>00000-00000-00000-00000</td>
</tr>
<tr>
<td>License expiration</td>
<td>None</td>
</tr>
<tr>
<td>Registration</td>
<td>Registered</td>
</tr>
</tbody>
</table>

More information

www.contentdm.com
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advanced search doesn’t work
• search will not work until after start the processes
  cd /usr/local/Content5/scripts
  ./cdmServices.pl –start
bummer

Server & Website port 80

photo courtesy of Calsidyrose http://www.flickr.com/photos/calsidyrose/5837364262/
next attempt
new plan

- decided to leave messed up 6 in place w/ port issue
- clean install version 6.0 on Vmware box
- migrate collections from messed up version to new working 6
fix access

- ask network admin to open 2\textsuperscript{nd} port on campus

Server

port 8080

Website

port 80

- Web admin: need to go to URL colon port

\texttt{umm-contentdm.oit.umn.edu:8080/cgi-bin/admin/start.exe}

photo courtesy of Calsidyrose http://www.flickr.com/photos/calsidyrose/5837364262/
improved
user login issues

issue logging in to Web admin module

Error:
Invalid username or password reported by server. Please select Options from the Tools menu, click the Upload tab and check the user name and password for the SFTP server.

Error:
Application-defined or object-defined error
user login issues

SOLUTION:

/usr/local/apache2/bin
./htpasswd -c /usr/local/Content5/conf/.htpasswd user

be careful with -c
./htpasswd /usr/local/Content5/conf/.htpasswd user
issue: controlled vocabulary
get rid of quotation marks
controlled vocabulary

migrate54Linux.pdf says:

If you have created any shared controlled vocabularies on your version 4.x server, copy all files in your version 4.x `conf/vocab` directory to the version 5.4 `<ServerDir>/conf/vocab` directory. Where `<ServerDir>` denotes your version 5.4 server installation directory.
solution

copy the Controlled Vocabulary over from 4 to 6
i.e. go to /usr/local/Content5/conf/vocab

cp -p /usr/local/Content4/conf/vocab/3.txt 3.txt
cp -p /usr/local/Content4/conf/vocab/2.txt 2.txt

then re-index the server

./cdmServices.pl –indexALL
if indexing gets stuck

go to ...

    /usr/local/Content6/Server/scripts

    ./cdmServices.pl -info

it should say something like:

Now running as user 'swadm' (defined in
    ...

    /usr/local/Content6/Server/scripts/..

    /conf/scripts.conf)

Find conf port is set to: (17777)
Find conf URL is set to: (http://127.0.0.1:17777)
Find Log Level is set to: (2)
Find is answering on port 17777
if indexing gets stuck

may have to do this:
./cdmServices.pl -start

and perhaps
./cdmServices.pl –indexALL

contact OCLC to get help with determining stalled PID process
may need to kill stuck process
patching to version 6.0.1

Can't exec "groupadd": No such file or directory at /swadm/usr/local/Content6/Server/scripts/perms.pl line 67. Use of uninitialized value in concatenation (.) or string at /swadm/usr/local/Content6/Server/scripts/perms.pl line 67. Can't exec "usermod": No such file or directory at /swadm/usr/local/Content6/Server/scripts/perms.pl line 73. Use of uninitialized value in concatenation (.) or string at /swadm/usr/local/Content6/Server/scripts/perms.pl line 73. chown: `swadm:content': invalid group

Patching Server Finished

despite errors, patch worked!
going live

switch to new VMware server:

add a DNS alias of

contentdm.morris.umn.edu

to the DNS A record entry for

umm-contentdm.oit.umn.edu
success
problems with secured VM

• chown files may not work, e.g. Apache error_log file
• Apache user and group can be set, but not given higher privileges
• inability to copy files directly to the server without VPN – have to first login to intermediate server
version 6.01 issues

• images automatically sized to “Fit to Width” instead of “Fit to Window”
• spaces in links to full resolution images render the links inoperable
• searches default to “Within results” rather than “New search”
• no Preferences and no Favorites
• selecting only one or two collections to search is maddening
version 6.1 improved

• fixed: can set automatically size to “Fit to Window” instead of “Fit to Width”
• download option in Website Configuration Tool
• Enable Print button
• Project Client 6.1.1 available
version 6.1 improved
version 6.1 improved
version 6.1 issues

• searches default to “Within results” rather than “New search” despite radio buttons in Website Configuration Tool
• no Preferences and no Favorites
• no slideshow
• comments disappeared?
ongoing issues

• some entries in controlled vocabulary disappeared last month
• 6.1 update was quick & painless, yet did not fix everything we need
• archiving the full resolution images = linking full resolution images
• still no full-res linked images even with linking?
full-res images - need hot links
lessons learned

- pay attention to PHP versions
  CONTENTdm 5.4 requires PHP 5.1 or 5.2 only
- can’t run both CONTENTdm 5 & 6 at same time on same server unless two versions of PHP installed
- get assistance, but don’t necessarily believe
- 5.x is better for users than 6.01
- fix for many problems: ./cdmServices.pl –indexALL
lessons learned

• get info. about server before starting upgrade
• take notes & screenshots during upgrade
• edit Perl install script for ./questions.pl
• in PHP.ini
  
  set date.timezone

  short_open_tag=On

• ensure 2 different ports for version 6.x
lessons learned

• yes, use tar (zip) to compress & to migrate collections to new server
• do **NOT** use tar (zip) to copy whole server – even if tech folks say it will “save time”
lessons learned

• upgrade on 2\textsuperscript{nd} server if possible
• copying Web template files \textit{not} necessary
• httpd error file helpful – check it
• search will not work until after start

\texttt{cd ../Content6/Server/scripts}
\texttt{./cdmServices.pl –start}
lessons learned

• RTFM but make own determination
• check final user interface on different browsers including Google Chrome & Safari
• call OCLC tech support
if had to do over again

contact OCLC

CONTENTdm version 4

CONTENTdm version 5.4

clean install CONTENTdm version 6 on VMware

patch to version 6.1
be patient
& flexible
contact

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