Vital 8.0
Installation and Migration Instructions

Last updated June 30, 2017

Description

These are instructions for the installation of Vital 8.0, and for the migration to Vital 8.0 from earlier versions of Vital.

You can migrate directly to 8.0 from versions 6.2 and above, but not from earlier versions. If you wish to migrate from a version prior to 6.2, you must first migrate to 6.1, and then from 6.1 to 6.2, before migrating to 8.0.

Migration to 8.0 from versions prior to 6.2 cannot be carried out using these instructions; instead, the following migration paths and their associated instruction documents must be used:

From 5.4.X: Migrate 5.4.X to 6.1; then migrate 6.1 to 6.2; then migrate 6.2 to 8.0.

From 5.3: Migrate 5.3 to 5.4; then migrate 5.4 to 6.1; then migrate 6.1 to 6.2; then migrate 6.2 to 8.0.

From 5.2.X: Migrate 5.2.X to 5.3; then migrate 5.3 to 5.4; then migrate 5.4 to 6.1; then migrate 6.1 to 6.2; then migrate 6.2 to 8.0.

From 3.4.X: Migrate 3.4.X to 5.4.1; then migrate 5.4.1 to 6.1; then migrate 6.1 to 6.2; then migrate 6.2 to 8.0.

Note: Vital 8.0 includes Vitation citation software. Vitation is installed automatically when you install Vital, and no additional configuration is needed for you to use basic Vitation functionality. For Vitation customization instructions please see the Vital user documentation.

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Important Notes

Please request your software files from Innovative Customer Support at least one week prior to performing your upgrade. Innovative uses a strict, quality-driven procedure for software version control and distribution, and we will not be able to honor rush requests for upgrade software. Most software requests take at least three working days to process.

Please read these upgrade instructions completely before performing your upgrade, and contact Innovative Customer Support in advance of your upgrade if you have any questions.

Note the following important changes in Vital 8.0:

- Oracle is no longer supported in Vital 8.0.
- Authority control is not supported in Vital 8.0. If your institution currently uses authority control, you should NOT migrate to Vital 8.0. Contact Innovative Customer Support for more information.
- Vital 8.0 uses all new template files to generate the software interface. You cannot migrate previously customized template files to Vital 8.0. An upcoming version of Vital will provide you a graphical user interface that you can use to customize the Vital Access Portal interface.
- The Vital 8.0 migration script prompts you to choose whether to migrate locale strings. We recommend that locale strings from older versions NOT be migrated to Vital 8.0. In version 8.0, the locale files contain changes to formatting and strings that reflect the new user interface. If you choose to migrate locale files you may want to edit them after migration to remove unwanted bold markup.

These instructions are based on the installation of the 8.0 version of Vital, with notes on migration from previous versions. The directory structure used in the instructions and examples below is based on the default directory structure. Wherever you see **{VITAL_8.0_HOME}** in the instructions, if you are executing a command, replace **{VITAL_8.0_HOME}** with the location where you have installed Vital 8.0.

Also note that Vital requires that you have installed the following software packages, which are not included in the Vital installation and must be installed by your library's IT department:

- Ghostscript and ImageMagick (required by Vital for generation of thumbnail images).
- OpenJPEG 2.0.0+ (required by Vital's Mirador image viewer feature). Vital looks for the **opj_compress**, **opj_decompress**, and **opj_dump** executables.
- Ruby 2.0.0 (required by Vital's Mirador image viewer feature). Ruby can be managed by Ruby Version Manager (RVM), if you choose to use it.
- Bundler (required by Vital's Mirador image viewer feature).

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Preliminary Instructions

Recommended workflow:

If you are migrating from a previous version, it is best to first perform the migration on a test installation of Vital. This way you can compare functionality and customizations of both versions. Migrating your software to 8.0 from a previous version will migrate the databases directly, not create new databases and copy the data over. If migrating a test installation is not an option, be sure that you have a current backup of your Vital installation and the databases used, in case you wish to restore the previous version.

1. If you have not downloaded the Vital software already, please request and download the tar file and license from the Innovative FTP server in binary format. Please make sure you request the license from Innovative, prior to installation. This license is needed for Vital to function.

    Important MySQL Note: We do not include MySQL within the Vital install package. If you are not already using a 5.x version of MySQL, you will need to download one.

2. If you would like to mount a disk, be sure to use the location **/opt/vtls** (and **NOT /opt/vtls/vital** or **/opt/vtls/vital/store**). Mount the disk before starting the Vital installation.

3. If you have a previous version of Vital installed that you wish to migrate, back up any content, settings or customizations you wish to retain for your new installation. Otherwise, skip to step 4.
    a. Stop Vital with the **fedora.sh** script. Leave any associated databases running.
    b. Check that Vital process is shut down by examining the results of

        ```
        $ ps –ef | grep java
        ```

    c. Back up the directory where you have your current Vital installation.
    d. Make backups of any databases used by Vital or Fedora.
    e. Vital 8.0 comes with a script to assist in the migration of the Vital database, **vital.properties**, site directories, **vital.properties.site** files, statistics, reports, and locale files. (Note: We recommend that locale strings from older versions NOT be migrated to Vital 8.0. See the Important Notes for more information.) Leave your Vital 6.x or 7.x installation in its current location so the script can automatically find certain configuration files when you run the script later.

        (**Reminder:** See instructions on page 1 for migrating from versions prior to Vital 6.2; the instructions for migration contained in this document do not apply to migration from versions prior to Vital 6.2.)

4. Copy the Vital tar file that you downloaded (in this example, **vital-8.0-r46cb3be.20170619-linux-x86_64.tar.gz**) into this directory and then untar it.

   $ /opt/vtls/: `tar -xzvf vital-8.0-r46cb3be.20170619-linux-x86_64.tar.gz`

5. Once the files are untarred, change directories into the newly created directory:

   $ /opt/vtls/: `cd vital-8.0-r46cb3be.20170619-linux-x86_64`

6. If you have downloaded a copy of MySQL that you wish to install and configure along with Vital, move it into this directory. If you already have a running installation of MySQL, this is not necessary.

7. If you plan to use PostgreSQL for your databases, the following will need to be added to your **LD_LIBRARY_PATH**:

   /opt/vtls/pgsql/lib

   (Or, whichever directory location you plan on using)

   This can be done temporarily for the installation only by executing the following command:

   $ `export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/opt/vtls/pgsql/lib`

8. Consult your copy of **installation.xml** from your previous installation, if you wish to use the same passwords, ports, etc. as your previous installation.

10. As of Vital 7.0, Java 8 is now required to run the application. A suitable version (Java 1.8.0 update 45) is provided with Vital. You should use this Java for Vital; do not try to use Vital with a different Java package. The Vital installer will warn the user if a suitable version of the Java JDK is not present and will install one if necessary.

11. If you do not have a **JAVA_HOME** variable set in your bash profile, you should also set this variable before you run the installation. It is recommended that you install Java in this location or create a symlink from your Java installation to the location below:

   $ `export JAVA_HOME=/opt/vtls/java`

12. Vital supports the use of the third-party tool Tesseract. If you have PDF objects in your collection that are not associated with a FULLTEXT datastream, Tesseract performs optical character recognition (OCR) on the text of each PDF, and Vital uses the results to derive an OCR datastream for each PDF.

    If you would like to use Tesseract, you must install it before you install Vital. See the instructions below.

    If you choose NOT to install and use Tesseract, you MUST disable the OCR functionality by setting **vital.pdf.performOcr** to 'false' in the **vital.properties** configuration file. You will be reminded to perform this step as part of the Post-Installation Instructions.

    > **Important:** To start Vital 8.0,
    > - Tesseract must be installed and configured correctly.
    >   -OR-
    > - OCR functionality must be disabled.

    To install Tesseract,

    a) Download Tesseract from this location: https://github.com/tesseract-ocr.

    b) Follow these directions to install Tesseract on your server: https://github.com/tesseract-ocr/tesseract/blob/master/README.md.

       Note that the **fedora.sh** script contains the following two default variable paths:

       ```
       JNA_LIBRARY_PATH=/opt/vtls/tesseract/lib

       TESSDATA_PREFIX=/opt/vtls/tesseract/share
       ```

       You must either install Tesseract here or, if you choose to install elsewhere, create symlinks to your installation locations. To create symlinks:

       ```
       ln -s TESSERACT_INSTALL_LOCATION /opt/vtls/tesseract/lib

       ln -s TESSERACT_TEST_DATA_PREFIX_LOCATION /opt/vtls/tesseract/share
       ```

    c) To confirm that Vital can recognize your Tesseract installation, type at the command line: **tesseract -v**

13. Use the following commands to install OpenJPEG (version 2.0.0 or higher):

    ```
    $ sudo yum install openjpeg2
    ```

```
$ sudo yum install openjpeg2-tools

$ sudo yum install openjpeg2-devel

$ cd /usr/bin

$ sudo ln -s opj2_compress opj_compress

$ sudo ln -s opj2_dump opj_dump

$ sudo ln -s opj2_decompress opj_decompress
```

14. Install Ruby 2.0.0. Ruby can be downloaded by your operating system's package manager, or may already be present on the server. Note that older versions (prior to Ruby 2.0.0) that may already be installed on your server will not work with Vital. Ruby can also be managed by Ruby Version Manager (RVM), if you choose to use it.

15. Install Bundler, a Ruby package manager that is used to manage Ruby dependencies (gems). Note that Ruby must be installed before you attempt to install Bundler. To install Bundler, run the following command:

```
$ gem install bundler
```

16. Run the install program (**install.sh**) to start the installation. Follow the prompts to enter in the required information.

```
$ vital-8.0-r46cb3be.20170619-linux-x86_64: ./install.sh
```

Installation Instructions

```
Welcome to the Vital Software Installation

----------------------------------------

During the course of this installation process you will

be prompted for various pieces of information.  Default

answers are provided whenever possible.

If you need to exit the installation script at any

time, you may press CTRL-C.


Press <ENTER> to continue
```

<HIT ENTER>

Note: If Tesseract is not installed in the path you will see the following error message. See the Preliminary Instructions for more information about Tesseract.

```
WARNING: The Tesseract OCR executable 'tesseract' was not found in the path.  This is
required for OCR functionality.

If Tesseract is not installed, please do so after Vital installation.  If it is
installed, please add 'tesseract' to the path after installation.

Press <ENTER> to continue
```

<HIT ENTER>

```
Perl Installation

-----------------

Please enter the path to the Perl version that will be used by

the VITAL Install at the prompt below.  You will then

see the version message for the perl you have specified.  If it

is correct, press <ENTER>.


Perl path: (/usr/vtls/perl/bin/perl)?
```

You will either hit enter or type a different path. Please note that the most recent Perl package provided by Innovative is installed in **/usr/vtls/virtua/perl11/bin/perl**. Depending on the OS that you have, the install will output to the screen lots of background information regarding the version of Perl that you are utilizing. At the very end, it should prompt:

```
Is this the correct version of Perl (y)?
```

<HIT ENTER>

```
Perl Modules

------------

We will now test your Perl version (/usr/vtls/virtua/perl11/bin/perl) for

required modules.


Press <ENTER> to continue
```

<HIT ENTER>

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The installer will now check for the Perl Modules required by Vital. If any of these modules do not have an OK, please exit the installer and install the modules. Then, run the installer again. If you need help installing the modules, please contact Innovative Customer Support.

```
Perl Modules

------------

Testing Carp [OK]

Testing Cwd [OK]

Testing Exporter [OK]

Testing File::Copy [OK]

Testing File::Basename [OK]

Testing File::Path [OK]

Testing File::Temp [OK]

Testing FindBin [OK]

Testing Getopt::Long [OK]

Testing HTTP::Request::Common [OK]

Testing IO::Socket [OK]

Testing LWP::UserAgent [OK]

Testing MIME::Base64 [OK]

Testing Net::hostent [OK]

Testing Net::Ping [OK]

Testing SOAP::Lite [OK]

Testing Sys::Hostname [OK]

Testing Text::Template [OK]
```

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```
Testing Time::localtime [OK]

Testing Unicode::String [OK]

Testing utf8 [OK]

Testing XML::LibXML [OK]

Testing XML::LibXSLT [OK]

Testing XML::Parser [OK]

Testing XML::SAX::ParserFactory [OK]

Testing XML::Validator::Schema [OK]

Testing XML::XPath [OK]

Testing MARC [OK]



Press <ENTER> to continue
```

<HIT ENTER>

The installer will now check for the presence of Ruby, Bundler, and several OpenJPEG components, all of which are required by Vital's Mirador image server. If you have not already installed these, see steps 13 through 15 of the Preliminary Instructions.

```
Image Server Dependencies

-----------------------------

Checking for Image Server dependencies…

... Found OpenJpeg components (opj_compress, opj_decompress, opj_dump)

... Found ruby 2.0.0p598

... Found Bundler version 1.11.2
```

```
Checking and installing necessary Gems...

Rubygems 2.0.14 is not threadsafe, so your gems will be installed one at a time. Upgrade
to Rubygems 2.1.0 or higher to enable parallel gem installation.

Using jdbc-mysql 5.1.38

Using jdbc-postgres 9.4.1206

Using bundler 1.11.2

Bundle complete! 2 Gemfile dependencies, 3 gems now installed.

Use 'bundle show [gemname]' to see where a bundled gem is installed.


Press <ENTER> to continue
```

<HIT ENTER>

The installer will now prompt you to enter the location of Java. The installer will check this location for Java 8. If the version is correct, Vital will use the Java install you specified. If the installer finds an older version of Java, Vital will prompt you to overwrite your current Java installation with the new Java 8 included with the Vital install package. If you choose 'no' for overwriting your current Java installation, the installer will again prompt you to enter the location of Java, at which point you can enter a different location, either of an existing Java 8, or of a directory, existing or non-existing, in which you wish the installer to install Java 8. If you choose 'no' three times, the installer will exit and send you back to the command line.

```
Java Installation

-----------------

Vital requires Java 1.8.0 update 45.

Please enter the path to the Java SDK version that will be used by

the Vital Install at the prompt below.  You will then see the version

message for the Java SDK you have specified.  If it is correct, press
```

```
   <ENTER>.


Java path: (/opt/vtls/java)?


Java path: (/opt/vtls/java)?

 Searching for Java...

 Checking Java version...

 Found Java 1.8.0 update 45...

 Vital will use Java 1.8.0 update 45 at /opt/vtls/java


 Press <ENTER> to continue
```

<HIT ENTER>

At this point, it will send you to the Main Menu for the Vital installation.

```
   Innovative Vital Installer 8.0

   -----------------------


   1. Edit Global Settings

   2. Edit Fedora Repository Settings

   3. Edit Database Settings

   4. Show Summary

   5. Install Vital

   6. Startup Vital/Fedora
```

```
    7. Save & Exit

    8. Exit (without saving changes)


       ==>
```

Start with Step 1 and then work down in numerical order.

```
       ==>1
```

Edit Global Settings

The Global Settings Menu gives you the default settings for your Vital installation.

```
    Global Settings

    ---------------


    1. Installation ID................................................ vital

    2. Install Directory............................... /opt/vtls/vital-8.0

    3. Hostname (External)...................................... host.iii.com

    4. Internal IP/Hostname........................................ localhost

    5. Administrative Email........................... webmaster@host.iii.com

    6. vitalAdmin Password........................................ vitalAdmin

    7. defaultAdmin Username..................................... defaultAdmin

    8. defaultAdmin Password..................................... defaultAdmin

    9. Return to the Main Menu

    ==>
```

Adjust the settings as needed for your server.

Note: If you already have an installation in **/opt/vtls/vital**, specify a new (nonexisting) directory, such as **/opt/vtls/vital-8.0**. Once you are done migrating and no longer need the old **/opt/vtls/vital** directory, you can move or delete the old install in **/opt/vtls/vital** and create a symlink called **vital**, if you wish.

Enter '9' at the prompt to return to the Main Menu.

```
Innovative Vital Installer 8.0

------------------------


1. Edit Global Settings

2. Edit Fedora Repository Settings

3. Edit Database Settings

4. Show Summary

5. Install Vital

6. Startup Vital/Fedora

7. Save & Exit

8. Exit (without saving changes)


==> 2
```

Edit Fedora Repository Settings

Configure your Fedora repository, where the following applies:

Repository Name: Label to apply to your repository

Administrative password: Password for the user fedoraAdmin. Innovative highly recommends changing this value. Note that this password **must not** contain the "@" character.

Server Port: Port Fedora runs on; must be available on the server, and open to the outside world through your firewall. The server port **should not** be set to port 80, as Vital should not run as the root user.

Redirect Port: Redirect port for Fedora; needs only be available on the server

Shutdown Port: Shutdown port for Fedora; needs only be available on the server

PID Namespace: PID Namespace applied to objects in your repository

Storage Directory: Location on your server where the objects will be stored. The location should have the most space allocated to it.

```
     Fedora Settings Menu

       -------------------


       1. Repository Name....................................... VITAL Repository

       2. Administrative Password (fedoraAdmin)....................... fedoraAdmin

       3. Server Port........................................................ 8080

       4. Shutdown Port...................................................... 8005

       5. Redirect Port...................................................... 8443

       6. PID Namespace...................................................... vital

       7. Storage Directory............................ /opt/vtls/vital-8.0/store

       8. Return to the Main Menu

       ==>
```

Adjust the settings as appropriate for your server. Choose '**8**' to return to the main menu.

```
Innovative Vital Installer 8.0

------------------------


1. Edit Global Settings

2. Edit Fedora Repository Settings

3. Edit Database Settings

4. Show Summary

5. Install Vital

6. Startup Vital/Fedora

7. Save & Exit

8. Exit (without saving changes)


==> 3
```

Edit Database Settings

```
Select a Database Option

------------------------


1. Edit MySQL settings.

2. Select a different database.

3. Return to the Main Menu


==>
```

Note: In Vital version 4.0 and above, 2 SEPARATE databases are required. One, which Fedora uses for indexing, and one for Vital to store information about sites, users, groups, permissions, etc. You may choose for both of them to be MySQL or PostgreSQL. Select 1 if you are freshly installing a MySQL server, 2 if you are using PostgreSQL or an existing instance of MySQL.

Also note: If you have configured Vital to use handles (persistent identifiers for digital objects), changing the server port when you migrate to a new version will cause Vital to generate new handles for all objects. To avoid this, add an entry to **vital.properties vital.handle.format** that matches the port of existing handles.

If you are migrating from 6.x or 7.x and would like to retain your pre-existing databases: Use the same database names, user names and passwords for them so the Vital installer can use them for your 8.0 installation.

If you wish to use an existing database for Vital, but don't want to retain the content in the tables, for example, if you wish to drop all sites, users and groups, and start fresh, you will need to follow the instructions in **Appendix A** for purging the content of the Vital database.

If you have any questions, please contact Customer Support.

MySQL

```
MySQL Software Installation

 --------------------------


 1. Install a new MySQL instance.

 2. Use an existing (and currently running) MySQL installation.



 == >
```

If you chose option 1…

```
 MySQL Database Connection Settings (new installation)

 ----------------------------------------------------

 1. MySQL Database Host.......................................... localhost

 2. MySQL Fedora Database Name..................................... fedora33

 3. MySQL Vital Database Name....................................... vital5

 4. MySQL Username............................................... mysqlAdmin

 5. MySQL Password............................................... mysqlAdmin

 6. MySQL Port....................................................... 3306

 7. MySQL Root Password.......................................... ChangeMe

 8. MySQL Dialect..................... org.hibernate.dialect.MySQL5Dialect

 9. MySQL Installation Directory................................. /opt/vtls

10. MySQL Distribution mysql-standard-5.5.22-linux-x86_64-icc-glibc23.tar.gz

11. Return To Database Menu
```

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Adjust the settings to how you want your databases configured. Please note that MySQL Database names for Fedora and Vital cannot contain a hyphen. Also, be sure to verify that the MySQL distribution in option 10 matches the name of the file that you placed in the installation directory prior to running **install.sh**.

Choose '11' to return to the Database Menu.

If you chose option 2…

```
        MySQL Database Connection Settings (existing installation)

          ----------------------------------------------------------


            1. MySQL Database Host.......................................... localhost

            2. MySQL Fedora Database Name.................................... fedora33

            3. MySQL Vital Database Name....................................... vital5

            4. MySQL Username............................................. mysqlAdmin

            5. MySQL Password............................................. mysqlAdmin

            6. MySQL Port....................................................... 3306

            7. MySQL Root Password.......................................... ChangeMe

            8. MySQL Dialect...................... org.hibernate.dialect.MySQL5Dialect

            9. MySQL Data Directory............................. /opt/vtls/mysql/data

           10. MySQL 'bin' Directory.............................. /opt/vtls/mysql/bin

           11. MySQL Socket............................ /opt/vtls/mysql/data/mysql.sock

           12. Return To Database Menu


            ==>
```

Adjust settings to match your existing MySQL installation. The MySQL installation that you are running MUST be version 5.0.27 or above. Vital 5.4 and above support MySQL 5.5. If you have any questions, please contact Innovative Customer Support.

Choose '12' to return to the Database Menu.

```
        Select a Database Option

        -----------------------


        1. Edit MySQL settings.

        2. Select a different database.

        3. Return to the Main Menu
```

Choose '3' to return to the Main Menu.

PostgreSQL

```
        Select a Database Option

        -----------------------


        1. Edit MySQL settings.

        2. Select a different database.

        3. Return to the Main Menu


        ==>
```

Choose '2' to select PostgreSQL.

```
PostgreSQL Software Installation

 -------------------------------


 1. Install new PostgreSQL and create databases.

 2. Use existing PostgreSQL installation with existing databases.


 ==>
```

If you wish to install PostgresSQL in a new location, OR if you wish to create new databases in an existing PostgreSQL installation, choose '1.' If you wish to use an existing PostgresSQL database, choose '2.'

Note: PostgreSQL now installs into **/opt/vtls/pgsql** instead of **/opt/vtls/vital/pgsql** as it did in the past.

```
PostgreSQL Database Connection Settings (new installation)

 ----------------------------------------------------------


 1. PostgreSQL Database Host..................................... localhost

 2. PostgreSQL Fedora Database Name................................ fedora33

 3. PostgreSQL Vital Database Name................................... vital5

 4. PostgreSQL Username............................................ dbadmin

 5. PostgreSQL Password............................................ dbadmin

 6. PostgreSQL Port.................................................... 5432
```

```
 7. PostgreSQL Root Password...................................... ChangeMe

 8. PostgreSQL Installation Directory............................. /opt/vtls

 9. PostgreSQL Distribution......................... postgresql-linux.tar.gz

10. Return To Database Menu


    ==>
```

Enter in configuration information as desired, and change the default passwords. Select '10' to return to the main menu.

If you selected an existing installation of PostgreSQL…

```
    PostgreSQL Database Connection Settings (existing installation)

    ------------------------------------------------------------


    1. PostgreSQL Database Host.................................... localhost

    2. PostgreSQL Fedora Database Name................................ fedora33

    3. PostgreSQL Vital Database Name................................... vital5

    4. PostgreSQL Username.......................................... dbadmin

    5. PostgreSQL Password.......................................... dbadmin

    6. PostgreSQL Port................................................. 5432

    7. PostgreSQL Root Password...................................... ChangeMe

    8. Return To Database Menu


    ==>
```

Enter in configuration information as desired, and change the default passwords. Select '8' to return to the main menu.

```
Innovative Vital Installer 8.0

------------------------


1. Edit Global Settings

2. Edit Fedora Repository Settings

3. Edit Database Settings

4. Show Summary

5. Install Vital

6. Startup Vital/Fedora

7. Save & Exit

8. Exit (without saving changes)



==>
```

Choose '4' to show the summary of your configuration. Verify that these are correct:

```
Installation Configuration Summary


Global Settings

--------------

Installation ID ...................................................... vital
```

```
Install Directory .................................... /opt/vtls/vital-8.0

Hostname (External) ........................................... host.iii.com

Internal IP/Hostname ............................................ localhost

Administrative Email ............................... webmaster@host.iii.com

vitalAdmin Password .......................................... vitalAdmin

defaultAdmin Username ........................................ defaultAdmin

defaultAdmin Password ........................................ defaultAdmin


Fedora Settings Menu

-------------------

Repository Name .......................................... Vital Repository

Administrative Password (fedoraAdmin) .......................... fedoraAdmin

Server Port .......................................................... 8080

Shutdown Port ........................................................ 8005

Redirect Port ........................................................ 8443

PID Namespace ....................................................... vital

Storage Directory ............................. /opt/vtls/vital-8.0/store


MySQL Database Connection Settings (existing installation)

----------------------------------------------------------

MySQL Database Host .............................................. localhost

MySQL Fedora Database Name ......................................... fedora33

MySQL VITAL Database Name ............................................ vital5

MySQL Username ................................................... mysqlAdmin

MySQL Password ................................................... mysqlAdmin
```

```
   MySQL Port ............................................................. 3306

   MySQL Root Password ............................................. ChangeMe

   MySQL Dialect .......................... org.hibernate.dialect.MySQL5Dialect

   MySQL Data Directory .................................. /opt/vtls/mysql/data

   MySQL 'bin' Directory .................................. /opt/vtls/mysql/bin

   MySQL Socket .............................. /opt/vtls/mysql/data/mysql.sock



   Hit <ENTER> to return to Main Menu ...
```

<HIT ENTER>

```
   Innovative Vital Installer 8.0

   -----------------------


   1. Edit Global Settings

   2. Edit Fedora Repository Settings

   3. Edit Database Settings

   4. Show Summary

   5. Install Vital

   6. Startup Vital/Fedora

   7. Save & Exit

   8. Exit (without saving changes)


   ==>
```

Choose '5' to Install Vital. There will be output to the screen as each module of Vital is installed.

```
        Installation Complete! Hit <ENTER> to return to the Main Menu
```

<HIT ENTER>

```
        Innovative Vital Installer 8.0

         -----------------------


         1. Edit Global Settings

         2. Edit Fedora Repository Settings

         3. Edit Database Settings

         4. Show Summary

         5. Install Vital

         6. Startup Vital/Fedora

         7. Save & Exit

         8. Exit (without saving changes)


         ==>
```

Important: Only choose '6' to start Vital and Fedora if you are not migrating any data. If you are migrating data, do not start Vital until after you have copied over objects and datastreams, rebuilt the Fedora database, and run the migration script. See the sections "Objects and Datastreams Migration" and "Vital Database Migration" below.

Note for MySQL users: If you have not installed the **mysql-connector** file from Step 2 of the Post-Installation Instructions you should choose 7 and complete this step before starting the databases.

Choose '7' to Save and Exit.

```
Saving current configuration settings as 'vital-config-20160608200426.xml'.
Press <ENTER> to save settings and exit...


<HIT ENTER>
```

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Installation and Migration Instructions

Post-Installation Instructions

Note: As of version 7.0, Vital comes with apache-tomcat-7.0.69 as an update to the previously used apache-tomcat-7.0.61. Please keep this in mind when navigating to files in the **$VITAL_1.0_HOME/applications/fedora/server/apache-tomcat-7.0.69** path.

1. Apply your Vital license to this installation. Innovative will have provided you with a file entitled **vital.license**. You may reuse your previous license if it is for the same hostname. Otherwise, request a new license from Innovative. This needs to be placed in the **{VITAL_8.0_HOME}/config/license** directory.

   ```
   $ /: cd {VITAL_8.0_HOME}/config/license

   $ {VITAL_8.0_HOME}/config/license: ftp ftp.vtls.com

   ftp> cd /pub/customers/DIRECTORY_NAME

   ftp> get vital.license

   ftp> bye
   ```

2. If using MySQL as the Fedora/Vital database, download a copy of the MySQL/J Connector (version 5.1.7) from a suitable download site (if not already present). It is important **NOT** to download and use a newer version, as newer versions will not work properly with Vital's migration tool. Once downloaded, it should be placed in the following directory:

   {VITAL_HOME}/applications/fedora/server/apache-tomcat-7.0.69/webapps/ROOT/WEB-INF/lib

   The file should be named **mysql-connector-java-5.1.7.jar** and may be available for download from the following site (or similar JAR repository):

   https://downloads.skysql.com/files/mysql-connector-java-5.1

   If there is already another version of a MySQL/J Connector present in the directory specified above, it should be temporarily moved to a different directory outside of the Vital directory structure for the duration of the migration. After migration is complete, the 5.1.7 version may be replaced with the version present before migration if desired. It would be wise to reserve the 5.1.7 version in another location in case it is needed for future migrations.

3. In your user profile add a variable for **$VITAL_HOME** and set it to **/opt/vtls/vital**. You should make a symlink from your installation to this location each time you upgrade.

4. Please refer to the section entitled "Migrating Data, Settings and Customizations" to bring contents of a 6.x or 7.x installation into this new 8.0 installation.

> **Important:** If you are migrating data, do not start Vital until after you have copied over objects and datastreams, rebuilt the Fedora database, and run the migration script. See the sections "Objects and Datastreams Migration" and "Vital Database Migration" below.

5. If you chose not to install and use Tesseract when following the Preliminary Instructions, you MUST disable the OCR functionality by setting **vital.pdf.performOcr** to 'false' in the **vital.properties** configuration file.

> **Important:** To start Vital 8.0,
> *   Tesseract must be installed and configured correctly.
>   -OR-
> *   OCR functionality must be disabled.

6. Start Vital, or restart if Vital is already running.

    ```
    $ {VITAL_8.0_HOME}/config/license/: cd {VITAL_8.0_HOME}/bin

    $ {VITAL_8.0_HOME}/bin/: ./stop

    $ {VITAL_8.0_HOME}/bin/: ./start
    ```

    Note that to start the image server at the same time as Vital, Vital must be started from the **bin** directory. If Vital is instead started from **applications/fedora**, the image server must be started separately, using the command

    ```
    ./cantaloupe.sh start
    ```

    in the **VITAL/image-server** directory. The command

    ```
    ./cantaloupe.sh status
    ```

    can be used to check whether or not the image server is running.

Also note that to use the image server, port 8182 must be available on your server, and must be open to the outside world through your firewall.

(Port 8182 is the default, preconfigured port for the image server. You can choose to use a different port number, but if you do so, you must update both the **vital.imageServer.baseUrl** setting in the **vital.properties** file and the **http.port** setting in the **cantaloupe.properties** file to reflect the new port number. The new port must also be available on your server and open to the outside world.)

7. Verify Vital is running correctly. Open a web browser, and go to the Vital Access Portal. The port you will use for access is the server port (Fedora runs on this port).

    http://hostname:port/vital/access/manager/Index

    You will not see your objects immediately, but they will appear when they are automatically committed to Vital's index.

8. Please refer to the "Cleaning Files from the Server" section in the Vital user documentation for instructions on how to run the scripts to remove temp files on your server.

9. For Vital 8.0 you will use VALET 1.3. Please refer to the VALET documentation for installing and configuring VALET.

10. If you have configured Vital to use handles (persistent identifiers for digital objects), you should review the handles settings in the **vital.properties** and **vital.properties.site** files after migrating to a new version. Note that if you have changed the server port during the migration, you must either:

    • Update the port number in the **vital.handle.format** setting found in the **vital.properties.site** configuration file (if using handles for the first time and migrated data contains no handles). -OR-
    • Add a new entry to **vital.handle.format** that matches the port of existing handles (if migrated data already contains handles).

Migrating Data, Settings and Customizations

For migrating customizations, it is best to compare the old files with the new and move or update individual snippets. Always remember to back up the original files included with your new Vital installation before making changes and read the **README.txt** file located in your **/migration/docs** directory for additional instructions.

A Note about Stylesheets and Indexing Rules

If you have customized XSLT stylesheets, or have modified indexing rules, you MUST migrate them before migrating and indexing objects and datastreams.

Migrating XSL Transformation Stylesheets

If you have customized stylesheets that define metadata transformation, these must be in place before migrating and indexing objects and datastreams. Copy the applicable stylesheets into **{VITAL_8.0_HOME}/config/stylesheets**.

Migrating XSD Schema definitions

Copy the applicable schema definition files into **{VITAL_8.0_HOME}/config/stylesheets**.

Migrating Indexing Rules

If you have customized indexing rules through the administrative interface or **indexing.xml**, these rules should be in place before indexing Vital. There are changes to **indexing.xml** in Vital from version to version, and it is preferable to use the file provided in the most recent version, and make piece-by-piece changes,

following the format already defined in the file. Innovative can migrate the **indexing.xml** file for customers if requested.

Statistics Migration

In 8.0, statistics are migrated by the migration script.

Policies Migration

In Vital 8.0, policies are not migrated by the migration script. If you have customized any policies, you will need to repeat the customizations in the 8.0 versions. Do not overwrite the 8.0 versions with earlier versions.

Objects and Datastreams Migration

The following steps will migrate your objects and datastreams.

1. Ensure Fedora is stopped and the databases are running.

2. Copy the contents of your previous installation's objects and datastreams directories into **{VITAL_8.0_HOME}/store/objects and {VITAL_8.0_HOME}/store/datastreams**.

3. You now need to rebuild the database used by Fedora. Please note, the database MUST be rebuilt prior to the Resource Index. Fedora must be shut down. This script tries to automatically shut down Fedora, and if you see an error saying "Connection refused," it just means that Fedora is already shut down.

```
$ {VITAL_8.0_HOME}/store/: cd {VITAL_8.0_HOME}/applications/fedora

$ {VITAL_8.0_HOME}/applications/fedora/: ./fedora.sh rebuild


Fedora Rebuild Utility

.........................

WARNING: Live rebuilds are not currently supported.

Make sure your server is stopped before continuing.

Server directory is /opt/vtls/vital-8.0/applications/fedora/server


----------------------------------------------------------------

Getting rebuilder... null

What do you want to do?

1) Rebuild the Resource Index.

2) Rebuild SQL database.

3) Rebuild the FeSL policy cache

4) Exit

Enter (1-4) --> 2

Rebuild SQL database.

No options to set. Start rebuilding?

1) Yes

2) No, exit.

Enter (1-2) --> 1

It will now rebuild the SQL Database, then place you back at the command prompt.
```

4. You will now rebuild Fedora's Resource Index. Step 3 MUST be completed prior to rebuilding the Resource Index.

```
$ {VITAL_8.0_HOME}/applications/fedora/: ./fedora.sh rebuild

Fedora Rebuild Utility

.........................

WARNING: Live rebuilds are not currently supported.

Make sure your server is stopped before continuing.

Server directory is /opt/vtls/vital-8.0/applications/fedora/server


------------------------------------------------------------------

Getting rebuilder... null

What do you want to do?

1) Rebuild the Resource Index.

2) Rebuild SQL database.

3) Rebuild the FeSL policy cache

4) Exit

Enter (1-4) --> 1

Rebuild the Resource Index.

No options to set. Start rebuilding?

1) Yes

2) No, exit.

Enter (1-2) --> 1
```

Fedora will now rebuild the Resource Index. There will be output to the screen as it completes. Once finished, it will exit the program and place you at the command prompt.

5. Change to the server directory and remove the 'status' file.

> **Important:** If you are migrating data, do not start Vital until after you have run the migration script. See the section "Vital Database Migration" below.

Vital Database Migration

Innovative has provided a script to assist in the migration of the Vital database, **vital.properties**, site directories, **vital.properties.site** files, statistics, reports, and locale files. Note that locale files can be migrated, but that we do not recommend migrating locale strings from older versions to Vital 8.0. See the Important Notes section for more information.

To run the migration script:

```
${VITAL_8.0_HOME}/migration/: ./migrateVITAL.sh migrate {location of Vital 6.x or 7.x}
```

Be sure **NOT** to include a trailing '/' character after the directory name.

Correct: **/opt/vtls/vital71**

Incorrect: **/opt/vtls/vital71/**

This script will produce output such as:

```
Copying over stats

Copying over reports

Migrating Sites and vital.properties....
```

```
Migrating locale files automatically from a pre-8.0 version is not
recommended. Are you sure you want to migrate locale files? (y/n): n

Skipping locale file migration....

Determining appropriate database migration procedure...

Database migrated!
```

or

```
Copying over stats

Copying over reports

Migrating Sites and vital.properties....

Migrating locale files automatically from a pre-8.0 version is not
recommended. Are you sure you want to migrate locale files? (y/n): y

Migrating locale files....

Determining appropriate database migration procedure...

Baseline set to 1.0

Database migrated!
```

depending upon which version you are migrating from.

This script will do the following:

1. Migrate **vital.properties** from 6.x or 7.x into this Vital (8.0).

2. Copy over all Sites directories in 6.x or 7.x into this Vital (8.0).

3. Merge over all changes in your **vital.configuration** directory into this Vital (8.0).

4. Copy over statistics and report index data from 6.x or 7.x.

5. *(If you have chosen to migrate locale files)* Merge all locale files in your Vital 6.x or 7.x to this Vital (8.0). All new tags added to locale files in 8.0 will be appended to the bottom of the locale file.

6. Migrate the database that this Vital (8.0) is configured for.

After the script has finished running, start Vital. The software will begin indexing automatically.

```
${VITAL_8.0_HOME}/bin/: ./start
```

Note that to start the image server at the same time as Vital, Vital must be started from the bin directory. If Vital is instead started from applications/fedora, the image server must be started separately, using the command

```
./cantaloupe.sh start
```

in the **VITAL/image-server** directory. The command

```
./cantaloupe.sh status
```

can be used to check whether or not the image server is running.

Batch Tool Migration

You may copy over your load configurations from your previous installation, but be mindful of configuration differences in your new installation.

Reports Migration

In 8.0, reports are migrated by the migration script.

Vital 8.0
Installation and Migration Instructions

Template and Configuration Migration

Vital 8.0 uses all new template files to generate the software interface. You cannot migrate previously customized template files to Vital 8.0.

An upcoming version of Vital will provide you a graphical user interface that you can use to customize the Vital Access Portal interface.

Appendix A: Purging the Contents of the Vital Database

Follow the instructions below if you wish to purge the Vital database of all content related to sites, users, and groups, and recreate the tables with a properly-constructed yet empty Vital database.

Note that we recommend that you back up all of your existing content before proceeding.

1. Edit the **applications/flyway-4.0/conf/flyway.conf** file to comment out the **flyway.cleanDisabled** line:

    ```
    # Whether to disabled clean. (default: false)

    # This is especially useful for production environments where running clean
    can be quite a career limiting move.

    # flyway.cleanDisabled=true



    # The version to tag an existing schema with when executing baseline.
    (default: 1)
    ```

2. Clear all database tables by running the following command:

    ```
    applications/flyway-4.0/flyway clean
    ```

3. Recreate the database tables by running the following command:

    ```
    applications/flyway-4.0/flyway migrate
    ```

Appendix B: Troubleshooting Tesseract

If you have chosen to use the third-party tool Tesseract, it must be installed and configured correctly in order for you to start Vital successfully. Configuration instructions are provided in step 12 of the section "Preliminary Instructions."

In most cases, if Vital detects a problem with your Tesseract configuration at start-up, the software will display an error message and provide detailed instructions for correcting your Tesseract configuration settings. If this occurs, follow the instructions given and then re-start Vital.

In some rare situations, Vital may start briefly and then stop, logging error messages such as "Tesseract couldn't load any languages" or "missing libraries" to the **catalina.out** log file. If this occurs, follow these steps to troubleshoot your Tesseract configuration and then re-start Vital:

1. Verify that the **eng.*** files are present in **/opt/vtls/tesseract/share/tessdata**.

    Example:

```
dbadmin;/opt/vtls/tesseract/share: tree tessdata

tessdata
├── configs
│   ├── ambigs.train
│   ├── api_config
│   ├── bigram
│   ├── box.train
│   ├── box.train.stderr
│   ├── digits
│   ├── hocr
│   ├── inter
│   ├── kannada
│   ├── linebox
│   ├── logfile
│   ├── makebox
│   ├── pdf
│   ├── quiet
│   ├── rebox
│   ├── strokewidth
│   └── unlv
├── eng.cube.bigrams
├── eng.cube.fold
├── eng.cube.lm
├── eng.cube.nn
```

```
├── eng.cube.params
├── eng.cube.size
├── eng.cube.word-freq
├── eng.tesseract_cube.nn
├── eng.traineddata
├── pdf.ttf
└── tessconfigs
├── batch
├── batch.nochop
├── matdemo
├── msdemo
├── nobatch
└── segdemo
```

2. If issues persist, verify that the shared libraries are linked properly (assuming the Tesseract executable is in **/usr/bin**):

ldd /usr/bin/tesseract

```
linux-vdso.so.1 =>  (0x00007ffdda706000)
libtesseract.so.3 => /lib64/libtesseract.so.3 (0x00007f3dac4e8000)
librt.so.1 => /lib64/librt.so.1 (0x00007f3dac2e0000)
liblept.so.4 => /lib64/liblept.so.4 (0x00007f3dabea5000)
libpthread.so.0 => /lib64/libpthread.so.0 (0x00007f3dabc89000)
libstdc++.so.6 => /lib64/libstdc++.so.6 (0x00007f3dab981000)
libm.so.6 => /lib64/libm.so.6 (0x00007f3dab67e000)
libgcc_s.so.1 => /lib64/libgcc_s.so.1 (0x00007f3dab468000)
libc.so.6 => /lib64/libc.so.6 (0x00007f3dab0a7000)
/lib64/ld-linux-x86-64.so.2 (0x00007f3daccaa000)
libz.so.1 => /lib64/libz.so.1 (0x00007f3daae90000)
libpng15.so.15 => /lib64/libpng15.so.15 (0x00007f3daac65000)
libjpeg.so.62 => /lib64/libjpeg.so.62 (0x00007f3daaa10000)
libgif.so.4 => /lib64/libgif.so.4 (0x00007f3daa805000)
libtiff.so.5 => /lib64/libtiff.so.5 (0x00007f3daa592000)
libwebp.so.4 => /lib64/libwebp.so.4 (0x00007f3daa342000)
libSM.so.6 => /lib64/libSM.so.6 (0x00007f3daa139000)
libICE.so.6 => /lib64/libICE.so.6 (0x00007f3da9f1d000)
libX11.so.6 => /lib64/libX11.so.6 (0x00007f3da9bdf000)
libjbig.so.2.0 => /lib64/libjbig.so.2.0 (0x00007f3da99d2000)
libuuid.so.1 => /lib64/libuuid.so.1 (0x00007f3da97cd000)
libxcb.so.1 => /lib64/libxcb.so.1 (0x00007f3da95ab000)
libdl.so.2 => /lib64/libdl.so.2 (0x00007f3da93a6000)
libXau.so.6 => /lib64/libXau.so.6 (0x00007f3da91a2000)
```

If there are omissions in the listed dependencies, that could cause problems.