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# DQM Online training

## 1. Execution Environment

Request a virtual machine to the CERN Virtual Machine Service (<http://vmm.cern.ch>), the following are expected features:

- Operating System: SLC5-x86\_64
- RAM Memory: 2GB
- CPU: 1 core
- Hard Disk: 40G

## 2. DQM GUI Installation

```
mkdir testGui

cd testGui

DQM_HOME=$PWD

svn co svn+ssh://svn.cern.ch/repos/CMSDMWM/Infrastructure/trunk/Deployment cfg

# svn co -r 15374 svn+ssh://svn.cern.ch/repos/CMSDMWM/Infrastructure/trunk/Deployment cfg #

$DQM_HOME/cfg/Deploy -t MYDEV -s "prep sw post" $DQM_HOME dqmgui/bare
```

## 3. Starting the DQM GUI server

```
$DQM_HOME/current/apps/dqmgui/etc/profile.d/env.sh

$DQM_HOME/current/config/dqmgui/manage restart "I did read documentation"
```

Other options of the previous command include start, stop and status.

## 4. Setting the DQM GUI Index

```
cd $DQM_HOME/state/dqmgui/dev

visDQMIndex create ix
```

- In order to load a valid histogram, download one or more from <https://cmsweb.cern.ch/dqm/offline/data/browse/ROOT/> and then copy them to the virtual machine

```
scp [root file name].root [virtual machine hostname]:/$DQM_HOME/state/dqmgui/dev/uploads/

visDQMIndex add . $DQM_HOME/state/dqmgui/dev/ix .
$DQM_HOME/state/dqmgui/dev/uploads/*.root
```

## 5. STG Installation

STG is the patch manager used for the DQM GUI tool patches.

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```
sudo mkdir guiworkspace
cd guiworkspace/
STG_HOME=$PWD
sudo mkdir Infrastructure
sudo yum install git.x86_64 1.7.4.1-1.el5
sudo yum install git-all.x86_64 1.7.4.1-1.el5
sudo yum install gitk.x86_64 1.7.4.1-1.el5
sudo yum install gitweb.x86_64 1.7.4.1-1.el5
sudo yum install stgit.noarch
mkdir ~/.stgit
ln -s stg/stgit/templates ~/.stgit
git config --global user.name "[your name]"
git config --global user.email "[your CERN email]"
git config --global svn.addAuthorFrom true
git config --global svn.useLogAuthor true
git config --global color.diff auto
git config --global color.status auto
git config --global color.branch auto
(echo "Host *" echo " ControlMaster auto" ) >> ~/.ssh/config
ssh -Nf svn.cern.ch
nano ~/.ssh/config
```

**If it is present, delete the line: echo " ControlPath \$HOME/.ssh/%h.%p.%r" and save the changes.**

```
git svn clone svn+ssh://svn.cern.ch/repos/CMSDMWM/Infrastructure -s
cd Infrastructure/
git config branch.master.remote svn
git config stgit.pull-policy fetch-rebase
git config stgit.fetchcmd "git svn -i trunk fetch"
git config stgit.rebasecmd "git svn rebase"
touch .git/FETCH_HEAD
stg init
stg branch -c mydev
git config branch.mydev.remote svn
```

### 5. STG Installation

In your home directory:

```
sudo git clone git://repo.or.cz/stgit.git
cd stgit
sudo yum install asciidoc
sudo make prefix=/usr all doc
sudo make prefix=/usr install install-doc
```

## 6. Patch Management (Testing and deploying render plugins and layouts).

Remember to set \$DQM\_HOME variable as your DQMGUI installation directory (see step 2).

New patches will be available in the directory:

```
/afs/cern.ch/user/c/cmsdqm/scratch/gui-patch-dropbox/
```

They must be moved to the test directory:

```
mv /afs/cern.ch/user/c/cmsdqm/scratch/gui-patch-dropbox/*
/afs/cern.ch/user/c/cmsdqm/scratch/patches-under-test/[current month directory]
```

Remember to set STG\_HOME variable as your STG workspace (see step 5):

```
cd $STG_HOME/Infrastructure/Deployment/dqmgui/
```

Create a patch that will compile all of the pending patches that are not STG based (if there is one already in place for the current week just skip next line):

```
stg new -m "RP Layouts WS update" rp-layouts-ws-h$(date +%m%y)
```

For DQM general patches:

```
cat /afs/cern.ch/user/c/cmsdqm/scratch/patches-under-test/[current month directory]/[new
patch name] | patch -p[0-4] --dry-run
```

```
cat /afs/cern.ch/user/c/cmsdqm/scratch/patches-under-test/[current month directory]/[new
patch name] | patch -p[0-4]
```

For DQM STG based patches:

```
stg import /afs/cern.ch/user/c/cmsdqm/scratch/patches-under-test/[current month
directory]/[ new patch name]
```

Then for both cases:

```
stg refresh
```

```
stg series
```

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This command should show the current patches.

Then you should mix the new patch with the one that you have created in order to compile the patches:

```
stg squash -n rp-layouts-ws-h$(date +%m%y) rp-layouts-ws-h$(date +%m%y) [patch name]
stg refresh
stg series
stg show
```

This command should show the mixed body of the patches.

```
cd $DQM_HOME/cfg/dqmgui
svn revert -R .;svn status | awk '/?/{print $2}' | xargs rm -rv; svn up ;
```

This command will reverts the directory to its original state and apply the latest updates.

```
cd Infrastructure/Deployment/dqmgui/
stg export -d $DQM_HOME/cfg/dqmgui -p -n
. $DQM_HOME/current/apps/dqmgui/etc/profile.d/env.sh
cd $DQM_HOME/cfg/dqmgui
cat [patch name] | patch -p[0-4] --dry-run
cat [patch name] | patch -p[0-4]
$DQM_HOME/cfg/Deploy -t MYDEV -s sw $DQM_HOME dqmgui/bare
monControl rebuild all from $DQM_HOME/current/config/dqmgui/[config file changed]
$DQM_HOME/current/config/dqmgui/manage restart "I did read documentation".
```

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This topic: [Sandbox > InstallingNewDQMGUI](#)

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