


glideinWMS Training @ UCSD

Igor's position on the glideinWMS installer

by Igor Sfiligoi (UCSD)

Why?

- Two reasons
 - Burt singled me out yesterday 
 - Many people may not know what are the differences
- I hope it will help guide the discussion

Disclaimer

- **This is purely my view of the problem**
- I may speculate on some things
 - Will try to be as objective as I can
 - But expect me to be biased

What are the choices?

- Basically two tools:
 - The Q&A Installer
 - The “Ini” Installer
- There is also the RPM, but that's a different story
 - Will only briefly mention it in this talk

Q&A Installer Philosophy

- **Allow a novice to install what is needed by answering a few questions.**
 - “For dummies” if you like the term
- **Reading the manual should not be necessary**
 - Although it is always useful!

Ini Installer Philosophy

- Make it easy to re-install the same components many times
 - e.g. at node kickstart or after crashes
- You must understand what you are doing before starting
 - Carefully read the manual **before** attempting to use it

Q&A In Action 1/4

```
~/glideinWMS/install$ ./glideinWMS_install
```

What do you want to install?

(May select several options at one, using a , separated list)

[1] glideinWMS Schedds and Collector

[2] Glidein Factory

[3] GCB

[4] User Pool Collector

[5] User Schedd

[6] Condor for VO Frontend

[7] VO Frontend

[8] Components

Please select: **6**

[6] Condor for VO Frontend

Should be easy to pick



Q&A In Action 2/4

```
~/glideinWMS/install$ ./glideinWMS_install
...
Please select: 6
[6] Condor for VO Frontend
...
Where do you have the Condor tarball? /home/frontend/Downloads/condor-7.6.4-x86_rhap_5-stripped.tar.gz
Where do you want to install it?: [/home/condor/glidecondor] /home/frontend/glidecondor/glidecondor
If something goes wrong with Condor, who should get email about it?: me@myemail
Do you want to split the config files between condor_config and condor_config.local?: (y/n) [y] y
...
Do you want to get it from VDT?: (y/n) y
Do you have already a VDT installation?: (y/n) y
Where is the VDT installed?: /etc/osg/wn-client
```

Let's pick
the default

Ops... I need a Condor tarball???

Let me grab one.

Q&A In Action 3/4

```
~/glideinWMS/install$ ./glideinWMS_install
...
Please select: 6
[6] Condor for VO Frontend
...
Where do you have the Condor tarball? /home/frontend/Downloads/condor-7.6.4-x86_rhap_5-stripped.tar.gz
Where do you want to install it?: [/home/condor/glidecondor] /home/frontend/glidecondor/glidecondor
If something goes wrong with Condor, who should get email about it?: me@myemail
Do you want to split the config files between condor_config and condor_config.local?: (y/n) [y] y
...
Do you want to get it from VDT?: (y/n) y
Do you have already a VDT installation?: (y/n) y
Where is the VDT installed?: /etc/osg/wn-client
Will you be using a proxy or a cert? (proxy/cert) proxy
Where is your proxy located?: /home/frontend.globus/x509_service.proxy
My DN = 'DN1'
...
DN:
...
```

Uhm... I think I heard
I need a cert...
let me get one

Q&A In Action 4/4

```
~/glideinWMS/install$ ./glideinWMS_install
...
Please select: 6
[6] Condor for VO Frontend
...
Where do you have the Condor tarball? /home/frontend/Downloads/condor-7.6.4-x86_rhap_5-stripped.tar.gz
Where do you want to install it?: [/home/condor/glidecondor] /home/frontend/glidecondor/glidecondor
If something goes wrong with Condor, who should get notified about it? me@myemail
Do you want to split the config files between local and remote? (y/n) [y] y
...
Do you want to get it from VDT? y
Do you have already installed VDT? y
Where is the VDT installed? /home/frontend/vdt
Will you be using VDT? y
Where is your proxy? /home/frontend/proxy
My DN = 'DN=me@myemail'
...
DN: me@myemail
...
```

And so on...

I hope you get the idea

Major annoyances

- If you mistype something, you have to restart from scratch
 - Could potentially be fixed, but this is how it is now
- Optimized for once-in-a-lifetime installs
 - No config file to read from
 - Although one can always use the stdin
 - But not guaranteed to work between versions

```
.glideinWMS_install << EOF
4,5
condor
/root/condor-7.7.4-x86_rhap_5-stripped.tar.gz
/opt/glidecondor
y
isfillgoi@ucsd.edu
y
y
y
/etc/osg/wn-client/
cert
/etc/grid-security/hostcert.pem
/etc/grid-security/hostkey.pem
/DC=org/DC=doeagrids/OU=Services/CN=cabinet-10-10-7.t2.ucsd.edu
c7
y

5
testVO
9618
n

0
EOF
```

Complete
Condor install

Major annoyances

- If you mistype something, you have to restart from scratch
 - Could potentially be fixed by how it is now
- Optimized
 - No console
 - Although always
 - But not work between versions

And could be made more user friendly

Peeks to the manual still needed

/CN=cabinet-10-10-7.t2.ucsd.edu

n
0
EOF

Complete
Condor install

Ini Installer in Action ^{1/3}

- Start by reading the manual

http://tinyurl.com/glideinWMS/doc.prd/components/configuration_install.html

- Don't even try to get help from the tool

```
./manage-glideins
```

```
Usage: manage-glideins --<action> <service> --ini <ini_file> [--ssh]
```

```
action: validate, install, configure, start, stop, status
```

```
services: wmscollector usercollector factory submit vofrontend rpm
```

```
all - can only be used with start/stop/status actions
```

```
...
```

```
The install/install-node/create-entries can only be used on the node for that service.
```

```
manage-glideins --install-node --ini <ini_file>
```

```
This option allows you to install all services for the node you are installing on. There are some limitation to this.
```

```
...
```

```
ERROR: No command line arguments specified
```

Not meant
“for Dummies”



Ini Installer in Action ^{2/3}

- Create the “ini file”
 - Essentially a configuration file that the installer reads
- Similar info to what you would put in Q&A
 - But no guidance by the tool
 - Use **gedit** instead (and of course the manual)

About 40 lines
for the frontend

```
[DEFAULT]
vdt_location = /home/frontenduser/vdt
x509_cert_dir = %(vdt_location)s/globus/share/certificates
glideinwms_location = /home/frontenduser/v2.5.1/glideinWMS

;-----
[VOFrontend]

hostname = cmssrv99.fnal.gov
username = frontenduser
service_name = Frontend-v2_5_1-cmssrv99
install_location = /home/frontenduser/v2.5.1/frontstage
logs_dir = /home/frontenduser/v2.5.1/frontlogs
instance_name = v1_0
condor_location = /home/frontenduser/v2.5.1/glidecondor
condor_tarball = /home/frontenduser/installers/condor-7.5.5-x86_64_rhap_5-stripped.tar.gz
condor_admin_email = condor-admin@fnal.gov
x509_proxy = /home/frontenduser/security/grid_proxy
x509_gsi_dn = /DC=org/DC=doe grids/OU=People/CN=Parag Mhashilkar 209917
glidein_proxy_files = %(x509_proxy)s
glidein_proxy_dns = %(x509_gsi_dn)s
glxec_use = optional
expose_grid_env = True
group_name = main
userjob_constraints = (JobUniverse==5)
match_string = glidein["attrs"]["GLIDEIN_Site"] in job["DESIRED_Sites"].split(",")
web_url = http://cmssrv99.fnal.gov:8000
web_location = /var/www/html/vofrontend-v2.5.1
javascriptrrd_location = /home/frontenduser/javascriptrrd

;-----
[UserCollector]

hostname = cmssrv99.fnal.gov
service_name = User_Pool
x509_gsi_dn = /DC=org/DC=doe grids/OU=Services/CN=condor/cmssrv99.fnal.gov
collector_port = 9618
condor_location =
number_of_secondary_collectors = 2

;-----
[Submit]

x509_gsi_dn = /DC=org/DC=doe grids/OU=People/CN=Parag Mhashilkar 209917
hostname = cmssrv99.fnal.gov
service_name = UserSchedd
condor_location =
```

Ini Installer in Action ^{3/3}

- Then run the actual installer
`./manage-glideins --install vofrontend --ini glideinWMS.ini`



**And hopefully everything
is ready to be used**

Major annoyances

- No help from the tool
 - It is actually expected, but...
 - Difficult to put together the ini file the first time
 - Not “For Dummies”
- Current implementation requires way too many config lines
 - Even as it does not use half of them!
 - Burt promised to fix that, so I will not insist on this point

Major annoyances

- No help from the tool

- It is actually very expensive

- Difficult to use

- Not "friendly"

- Current

configuration

- Even

- But promises
point

**May be great for
experienced users**

**But a nightmare
for beginners**

And even Igor
does not like it!



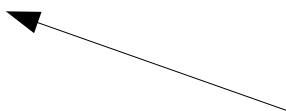
Why Igor does not like it

- Three main reasons:
 - I hardly ever install the same component twice
 - I value help much more than repeatability
 - And I can always use STDIN with Q&A for the few times I do
 - The installer is essentially just creating config files
 - Seems weird to create a config file to create a config file!
 - The result of the installers needs to be tweaked
 - Really just a template
 - Not really usable at kickstart or for rebuilding a (production) node
 - A good backup way more valuable

Nevertheless

- I understand why the development team needs the configuration-based installer
 - Makes for a great testing tool
- Could have just improved the Q&A
 - But oh well...
- My proposal is to take the best of both worlds
 - Create a Q&A tool to create the INI file
 - Then run the ini installer


This is what one of my students is working on



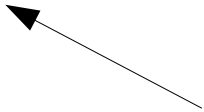
Alternative

- The alternative is to provide the needed templates of
 - The Condor config files
 - The glideinWMS config files
- This is what the Installer does in the end
- And then provide tools to tweak them
 - Piece by piece
 - Either/both Q&A and as arguments to the tools

Pretty much what the RPM is doing



We should have these anyhow
Things evolve and nobody wants to re-install from scratch



Closing words

- This is my position on the installer problem
- I am really interested to know what other people think
 - I have had major feedback only from Jeff and the glideinWMS development team members until now

The End

Pointers

- The official glideinWMS project Web page is <http://tinyurl.com/glideinWMS>
- glideinWMS development team is reachable at glideinwms-support@fnal.gov

Acknowledgments

- The glideinWMS is a CMS-led project developed mostly at FNAL, with contributions from UCSD and ISI
- The glideinWMS factory operations at UCSD is sponsored by OSG
- The funding comes from NSF, DOE and the UC system