



Condor Week 2012

Remote Condor Demo

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Remote Condor Demo

The following slides provide step by step what was seen in the live demo



Download RCondor

```
jdost@localhost:~  
File Edit View Terminal Tabs Help  
[jdost@localhost ~]$ ls  
Desktop  
[jdost@localhost ~]$ wget http://parrot.cs.wisc.edu//symlink/20120430071502/7/7.6/7.6.6/6e9189a8ddf788b3b31b2caccd330179/condor_src-7.6.6-all-all.tar.gz  
--2012-04-30 06:44:36-- http://parrot.cs.wisc.edu//symlink/20120430071502/7/7.6/7.6.6/6e9189a8ddf788b3b31b2caccd330179/condor_src-7.6.6-all-all.tar.gz  
Resolving parrot.cs.wisc.edu... 128.105.121.59  
Connecting to parrot.cs.wisc.edu|128.105.121.59|:80... connected.  
HTTP request sent, awaiting response... 200 OK  
Length: 16663204 (16M) [application/x-gzip]  
Saving to: `condor_src-7.6.6-all-all.tar.gz'  
  
100%[=====>] 16,663,204 648K/s in 25s  
  
2012-04-30 06:45:01 (654 KB/s) - `condor_src-7.6.6-all-all.tar.gz' saved [16663204/16663204]  
  
[jdost@localhost ~]$ ls  
condor_src-7.6.6-all-all.tar.gz Desktop  
[jdost@localhost ~]$
```



Install Epel Repo

```
jdost@localhost:/home/jdost
File Edit View Terminal Tabs Help
[jdost@localhost ~]$ su
Password:
[root@localhost jdost]# rpm -Uvh http://dl.fedoraproject.org/pub/epel/5/i386/epel-release-5-4.noarch.rpm
Retrieving http://dl.fedoraproject.org/pub/epel/5/i386/epel-release-5-4.noarch.rpm
warning: /var/tmp/rpm-xfer.KkdTlj: Header V3 DSA signature: NOKEY, key ID 217521f6
Preparing... ##### [100%]
 1:epel-release ##### [100%]
[root@localhost jdost]#
```



Install sshfs

```
jdost@localhost:/home/jdost
File Edit View Terminal Tabs Help
[root@localhost jdost]# yum install -y fuse-sshfs
Loaded plugins: fastestmirror, security
Loading mirror speeds from cached hostfile
 * base: dist1.800hosting.com
 * epel: ftp.osuosl.org
 * extras: mirror.ancl.hawaii.edu
 * updates: centos-distro.cavecreek.net
epel | 3.4 kB 00:00
epel/primary_db | 3.7 MB 00:03
Setting up Install Process
Resolving Dependencies
--> Running transaction check
---> Package fuse-sshfs.x86_64 0:2.3-1.el5 set to be updated
--> Processing Dependency: fuse >= 2.2 for package: fuse-sshfs
--> Processing Dependency: libfuse.so.2(FUSE_2.4)(64bit) for package: fuse-sshfs
--> Processing Dependency: libfuse.so.2(FUSE_2.7)(64bit) for package: fuse-sshfs
--> Processing Dependency: libfuse.so.2(FUSE_2.6)(64bit) for package: fuse-sshfs
--> Processing Dependency: libfuse.so.2(FUSE_2.2)(64bit) for package: fuse-sshfs
--> Processing Dependency: libfuse.so.2(FUSE_2.5)(64bit) for package: fuse-sshfs
--> Processing Dependency: libfuse.so.2()(64bit) for package: fuse-sshfs
--> Running transaction check
---> Package fuse.x86_64 0:2.7.4-8.el5 set to be updated
---> Package fuse-libs.x86_64 0:2.7.4-8.el5 set to be updated
--> Finished Dependency Resolution
```



Install sshfs

```
jdost@localhost:/home/jdost
File Edit View Terminal Tabs Help
(3/3): fuse-2.7.4-8.el5.x86_64.rpm | 83 kB 00:00
-----
Total 116 kB/s | 208 kB 00:01
warning: rpmts_HdrFromFdno: Header V3 DSA signature: NOKEY, key ID 217521f6
epel/gpgkey | 1.7 kB 00:00
Importing GPG key 0x217521F6 "Fedora EPEL <epel@fedoraproject.org>" from /etc/pk
i/rpm-gpg/RPM-GPG-KEY-EPEL
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : fuse-libs 1/3
  Installing      : fuse 2/3
  Installing      : fuse-sshfs 3/3

Installed:
  fuse-sshfs.x86_64 0:2.3-1.el5

Dependency Installed:
  fuse.x86_64 0:2.7.4-8.el5 fuse-libs.x86_64 0:2.7.4-8.el5

Complete!
[root@localhost jdost]#
```



Add user to fuse group

```
jdost@localhost:/home/jdost
File Edit View Terminal Tabs Help
Importing GPG key 0x217521F6 "Fedora EPEL <epel@fedoraproject.org>" from /etc/pk
i/rpm-gpg/RPM-GPG-KEY-EPEL
Running rpm_check_debug
Running Transaction Test
Finished Transaction Test
Transaction Test Succeeded
Running Transaction
  Installing      : fuse-libs                                1/3
  Installing      : fuse                                    2/3
  Installing      : fuse-sshfs                              3/3

Installed:
  fuse-sshfs.x86_64 0:2.3-1.el5

Dependency Installed:
  fuse.x86_64 0:2.7.4-8.el5          fuse-libs.x86_64 0:2.7.4-8.el5

Complete!
[root@localhost jdost]# groups jdost
jdost : jdost vboxsf
[root@localhost jdost]# /usr/sbin/usermod -a -G fuse jdost
[root@localhost jdost]# groups jdost
jdost : jdost vboxsf fuse
[root@localhost jdost]#
```



Persistent ssh passphrase (optional)

The screenshot shows a Linux desktop environment with a terminal window and a Sessions dialog box. The terminal window displays the following commands and output:

```

Complete!
[root@localhost ~]# jdst : jdst
[root@localhost ~]# /usr/sbin/usermod -s /dev/null jdst
[root@localhost ~]# groups jdst
jdst : jdst vboxsf fuse
[root@localhost ~]#

```

The Sessions dialog box is open, showing the Startup Programs tab. The list of startup programs includes:

- esc
- gnome-power-manager
- bt-applet --sm-disable
- krb5-auth-dialog
- gnome-volume-manager --sm-disable
- /usr/bin/VBoxClient-all
- nm-applet --sm-disable

The dialog box also has buttons for Add, Edit, Delete, and Disable, and a Close button at the bottom right.

Persistent ssh passphrase (optional)

Applications Places System 8:48 AM

Computer
jdost's Home
VBOXADDITIONS_4.1.12_77245
Trash

idost@localhost:/home/idost

File Edit View

Importing GPG
i/rpm-gpg/RPM
Running rpm_c
Running Trans
Finished Tran
Transaction T
Running Trans
Installing
Installing
Installing

Installed:
fuse-sshfs.

Dependency In
fuse.x86_64

Complete!
[root@localho
jdost : jdost
[root@localhost jdost]# /usr/sbin/usermod -s /dev/null fuse jdost
[root@localhost jdost]# groups jdost
jdost : jdost vboxsf fuse
[root@localhost jdost]#

Sessions

Session Options Current Session Startup Programs

Additional startup programs:

Command
esc

Add Startup Program

Startup Command: /usr/bin/ssh-add

nm-applet --sm-disable

1/3
2/3
3/3

jdost@localhost:/home/jdost Sessions



Install RCondor

```
jdost@localhost:/home/jdost/condor-7.6.6/src/condor_contrib/rcondor/src [ - _ x ]
File Edit View Terminal Tabs Help
[jdost@localhost ~]$ tar -xzf condor_src-7.6.6-all-all.tar.gz
[jdost@localhost ~]$ ls
condor-7.6.6 condor_src-7.6.6-all-all.tar.gz Desktop
[jdost@localhost ~]$ cd /home/jdost/condor-7.6.6/src/condor_contrib/rcondor/src
[jdost@localhost src]$ ls
Makefile rcondor_configure rcondor_mnt rcondor.sh
[jdost@localhost src]$ su
Password:
[root@localhost src]# make install
install -d /usr/local/libexec/rcondor
install -d /usr/local/bin
install -d /usr/local/share/doc/rcondor
install -m 644 ../author.txt /usr/local/share/doc/rcondor
install -m 644 ../license.txt /usr/local/share/doc/rcondor
install -m 644 ../README /usr/local/share/doc/rcondor
install -m 755 rcondor.sh /usr/local/libexec/rcondor
install -m 755 rcondor_mnt /usr/local/bin
install -m 755 rcondor_configure /usr/local/bin
ln -s /usr/local/libexec/rcondor/rcondor.sh /usr/local/bin/condor_q
ln -s /usr/local/libexec/rcondor/rcondor.sh /usr/local/bin/condor_rm
ln -s /usr/local/libexec/rcondor/rcondor.sh /usr/local/bin/condor_status
ln -s /usr/local/libexec/rcondor/rcondor.sh /usr/local/bin/condor_submit
[root@localhost src]#
```



Configure RCondor

```
jdost@localhost:~  
File Edit View Terminal Tabs Help  
[jdost@localhost ~]$ mkdir submit  
[jdost@localhost ~]$ pwd  
/home/jdost  
[jdost@localhost ~]$ ls  
condor-7.6.6 condor_src-7.6.6-all-all.tar.gz Desktop submit  
[jdost@localhost ~]$ rcondor_configure jdost@submit-1.chtc.wisc.edu:/home/jdost/  
submit /home/jdost/submit  
[jdost@localhost ~]$ cat ~/.rcondor/rcondor.conf  
USR_HOST = jdost@submit-1.chtc.wisc.edu  
LOCAL = /home/jdost/submit  
REMOTE = /home/jdost/submit  
[jdost@localhost ~]$
```



Mount RCondor

```
jdost@localhost:~/submit
File Edit View Terminal Tabs Help
[jdost@localhost ~]$ ls submit
[jdost@localhost ~]$ rcondor_mnt
[jdost@localhost ~]$ ls submit
logs test.sh test.submit
[jdost@localhost ~]$ cd submit
[jdost@localhost submit]$
```



Sample Test Job

```
jdost@localhost:~/submit
File Edit View Terminal Tabs Help
[jdost@localhost submit]$ cat test.sh
#!/bin/bash

whoami
date
uname -a
echo $PWD

sleep $1
[jdost@localhost submit]$ cat test.submit
universe=vanilla
executable=test.sh
when_to_transfer_output = ON_EXIT
arguments=600
log=logs/test.log
output=logs/test.out.%(Cluster)
error=logs/test.err.%(Cluster)
notification=Never
queue
[jdost@localhost submit]$ $
```



Command Examples

```
jdost@localhost:~/submit
File Edit View Terminal Tabs Help
[jdost@localhost submit]$ condor_submit test.submit
Submitting job(s).
1 job(s) submitted to cluster 1290643.
[jdost@localhost submit]$ condor_q jdost

-- Submitter: submit-1.chtc.wisc.edu : <128.104.100.43:9618?sock=664_af8f_2> :
ubmit-1.chtc.wisc.edu
  ID      OWNER      SUBMITTED  RUN_TIME ST PRI SIZE CMD
1289748.0  jdost      4/30 12:31  0+00:09:41 R  0   0.0 test.sh 600
1290152.0  jdost      4/30 12:37  0+00:04:59 R  0   0.0 test.sh 600
1290643.0  jdost      4/30 12:42  0+00:00:00 I  0   0.0 test.sh 600

3 jobs; 0 completed, 0 removed, 1 idle, 2 running, 0 held, 0 suspended
```



Command Examples

```

jdost@localhost:~/submit
File Edit View Terminal Tabs Help
[jdost@localhost submit]$ condor_q 1290152 -format '%s\n' remotehost
slot5@e016.chtc.wisc.edu
[jdost@localhost submit]$ condor_status slot5@e016.chtc.wisc.edu

Name                OpSys      Arch   State   Activity LoadAv Mem   ActvtyTime
slot5@e016.chtc.wi LINUX      X86_64 Claimed Busy    0.000 1024 0+00:05:02
      Total Owner Claimed Unclaimed Matched Preempting Backfill
      X86_64/LINUX    1    0    1    0    0    0    0
      Total          1    0    1    0    0    0    0
[jdost@localhost submit]$ condor_rm 1290643
Cluster 1290643 has been marked for removal.
[jdost@localhost submit]$ condor_q jdost

-- Submitter: submit-1.chtc.wisc.edu : <128.104.100.43:9618?sock=664_af8f_2> :
ubmit-1.chtc.wisc.edu
  ID      OWNER      SUBMITTED      RUN_TIME ST PRI SIZE CMD
1290152.0  jdost      4/30 12:37    0+00:07:07 R  0   0.0 test.sh 600

1 jobs; 0 completed, 0 removed, 0 idle, 1 running, 0 held, 0 suspended

```



Results

```

jdost@localhost:~/submit
File Edit View Terminal Tabs Help
[jdost@localhost submit]$ ls -ltr logs
total 12
-rw----- 1 20278 20278  0 Apr 30 10:31 test.err.1289748
-rw----- 1 20278 20278  0 Apr 30 10:37 test.err.1290152
-rw-rw-r-- 1 20278 20278  0 Apr 30 10:42 test.out.1290643
-rw-rw-r-- 1 20278 20278  0 Apr 30 10:42 test.err.1290643
-rw----- 1 20278 20278 185 Apr 30 10:43 test.out.1289748
-rw----- 1 20278 20278 185 Apr 30 10:47 test.out.1290152
-rw-rw-r-- 1 20278 20278 3058 Apr 30 10:47 test.log
[jdost@localhost submit]$ cat logs/test.out.1290152
slot5
Mon Apr 30 12:36:26 CDT 2012
Linux e016.chtc.wisc.edu 2.6.18-238.5.1.el5 #1 SMP Tue Mar 1 18:58:43 EST 2011
x86_64 x86_64 x86_64 GNU/Linux
/var/lib/condor/execute/slot5/dir_28593
[jdost@localhost submit]$ tail -n 15 logs/test.log
005 (1290152.000.000) 04/30 12:47:57 Job terminated.
    (1) Normal termination (return value 0)
        Usr 0 00:00:00, Sys 0 00:00:00 - Run Remote Usage
        Usr 0 00:00:00, Sys 0 00:00:00 - Run Local Usage
        Usr 0 00:00:00, Sys 0 00:00:00 - Total Remote Usage
        Usr 0 00:00:00, Sys 0 00:00:00 - Total Local Usage
185 - Run Bytes Sent By Job
54 - Run Bytes Received By Job
185 - Total Bytes Sent By Job
54 - Total Bytes Received By Job
Partitionable Resources : Usage Request
Cpus                    :           1
Disk (KB)               :          11          11
Memory (MB)             :           2           2
...

```




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