

Workload Management: How do I install Condor on Bright?

How do I install HTCondor on top of a Bright Cluster?

HTCondor can be installed on top of a Bright Cluster as follows:

On the head node

1. Install Condor RPM package and its dependencies:

```
# yum install setools-console-3.3.7-4.el6.x86_64 policycoreutils-python-2.0.83-19.39.el6.x86_64 perl-Date-Manip.noarch
```

```
# rpm -ivh condor-8.2.1-256063.rhel6.5.x86_64.rpm
```

2. configure the head node to be the manager and submit host:

```
# condor_configure --type=manager,submit --verbose
```

3. Copy Condor environment variables scripts

```
# cp /usr/condor.* /etc/profile.d/
```

4. Modify the configuration script to expand the Condor pool beyond a single host:

[set ALLOW_WRITE to match all of the hosts]

```
# cat /etc/condor/condor_config | grep ALLOW_WRITE
```

```
ALLOW_WRITE = *
```

5. Start the Condor service:

```
# service condor start
```

In the software image

This is assuming default-image is the image currently used by the compute nodes.

1. Install Condor RPM package and its dependencies:

```
# yum --installroot=/cm/images/default-image/ install setools-console-3.3.7-4.el6.x86_64 policycoreutils-python-2.0.83-19.39.el6.x86_64 perl-Date-Manip.noarch  
libvirt-client-0.10.2-29.el6_5.2.x86_64
```

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```
# rpm --root=/cm/images/default-image/ -ivh condor-8.2.1-256063.rhel6.5.x86_64.rpm
```

2. configure the nodes to be execute hosts:

```
# cat /cm/images/default-image/etc/condor/condor_config.local
```

```
[...]
```

```
CONDOR_HOST = master.cm.cluster
```

```
[...]
```

```
DAEMON_LIST = MASTER, STARTD
```

3. Modify the configuration script to expand the Condor pool beyond a single host:

```
# cat /cm/images/default-image/etc/condor/condor_config
```

```
[...]
```

```
ALLOW_WRITE = *
```

4. reboot the compute nodes to be provisioned using the modified software image

Check status from the head node after the nodes are up

```
# condor_status
```

Name	OpSys	Arch	State	Activity	LoadAv	Mem	ActvtyTime
node001.cm.cluster	LINUX	X86_64	Unclaimed Idle		0.530	490	0+00:00:02
node002.cm.cluster	LINUX	X86_64	Unclaimed Idle		0.210	490	0+00:00:04
Total Owner Claimed Unclaimed Matched Preempting Backfill							
X86_64/LINUX	2	0	0	2	0	0	0
Total	2	0	0	2	0	0	0

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Submitting a job

Like for most other workload managers, submitting jobs as root is not allowed by Condor. So switching to any other user allows jobs to be submitted.

```
# su - cmsupport
```

```
[cmsupport@adel70-c6 ~]$ cat hostname.sh
```

```
#!/bin/bash
```

```
hostname -f
```

```
sleep 20
```

```
date
```

```
echo "exit"
```

```
[cmsupport@adel70-c6 ~]$ cat hostname.condor
```

```
#####
```

```
#
```

```
# Example job file
```

```
#
```

```
#####
```

```
Universe = vanilla
```

```
Executable = hostname.sh
```

```
input = /dev/null
```

```
output = hostname.out
```

```
error = hostname.error
```

```
Queue
```

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```
[cmsupport@adel170-c6 ~]$ condor_submit hostname.condor
```

```
[cmsupport@adel170-c6 ~]$ condor_q
```

```
-- Submitter: adel170-c6 : <10.150.8.241:40768> : adel170-c6
```

ID	OWNER	SUBMITTED	RUN_TIME	ST	PRI	SIZE	CMD
6.0	cmsupport	8/1 05:08	0+00:00:24	R	0	17.1	hostname.sh

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

```
[cmsupport@adel170-c6 ~]$ cat hostname.out
```

```
node002.cm.cluster
```

```
Fri Aug 1 05:09:22 PDT 2014
```

```
exit
```

Unique solution ID: #1221

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Last update: 2014-08-15 13:01