

Workload Management: How do I install HTCondor from EPEL repository on Bright?

How do I install HTCondor from EPEL repository on Bright?

On the head node

1. Install the HTCondor packages:

```
# yum install condor
```

2. Modify /etc/condor/condor_config so that the following configuration settings are in place:

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

```
ALLOW_READ = *.cm.cluster
```

```
ALLOW_WRITE = *.cm.cluster
```

```
DAEMON_LIST = COLLECTOR, MASTER, NEGOTIATOR, SCHEDD
```

3. Remove the 00personal_condor.config from /etc/condor/config.d because it is unnecessary and may cause conflicts with condor_config:

```
# rm -f /etc/condor/config.d/00personal_condor.config
```

4. Enable and start the condor service:

```
# systemctl enable condor.service
```

```
# systemctl start condor.service
```

In the software image

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

1. Install the HTCondor packages:

```
# yum --installroot=/cm/images/default-image install condor
```

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2. Modify `/cm/images/default-image/etc/condor/condor_config` so that the following configuration settings are in place:

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

```
ALLOW_READ = *.cm.cluster
```

```
ALLOW_WRITE = *.cm.cluster
```

```
DAEMON_LIST = MASTER, STARTD
```

3. Remove the `00personal_condor.config` from `/cm/images/default-image/etc/condor/config.d` because it is unnecessary and may cause conflicts with `condor_config`:

```
# rm -f /cm/images/default-image/etc/condor/config.d/00personal_condor.config
```

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

Add condor service to compute nodes in Bright

```
# cmssh -c "device foreach -n node001..node003 (services; add condor; set autostart yes; set monitored yes; commit)"
```

Check status from the head node after the nodes are up

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```
# condor_status
Name OpSys Arch State Activity LoadAv Mem ActvtyTime
slot1@node001.cm.c LINUX X86_64 Unclaimed Idle 0.000 1976 0+00:24:41
slot2@node001.cm.c LINUX X86_64 Unclaimed Idle 0.000 1976 0+00:25:05
slot1@node002.cm.c LINUX X86_64 Unclaimed Idle 0.000 1976 0+04:22:46
slot2@node002.cm.c LINUX X86_64 Unclaimed Idle 0.100 1976 0+15:10:09
slot1@node003.cm.c LINUX X86_64 Unclaimed Idle 0.010 1976 0+04:45:06
slot2@node003.cm.c LINUX X86_64 Unclaimed Idle 0.000 1976 0+15:10:10
Machines Owner Claimed Unclaimed Matched Preempting
X86_64/LINUX 6 0 0 6 0 0
Total 6 0 0 6 0 0
```

Submitting a job

As with most other workload managers, submitting jobs as root is not allowed by HTCondor; therefore, switching to any other user allows jobs to be submitted.

```
# su - cmsupport
```

```
$ cat hostname.sh
```

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

```
hostname -f
```

```
sleep 20
```

```
date
```

```
echo "exit"
```

```
$ cat hostname.condor
```

```
#####
```

```
#
```

```
# Example job file
```

```
#
```

```
#####
```

```
Universe = vanilla
```

```
Executable = hostname.sh
```

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

```
output = hostname.out
```

```
error = hostname.error
```

```
Queue
```

```
$ condor_submit hostname.condor
```

```
$ condor_q
```

```
-- Schedd: sme-b80devc7u3.cm.cluster : <10.141.255.254:23723?...  
ID      OWNER      SUBMITTED  RUN_TIME ST PRI SIZE CMD  
2.0    cmsupport  5/31 17:13 0+00:00:03 R 0 0.0 hostname.sh  
1 jobs; 0 completed, 0 removed, 0 idle, 1 running, 0 held, 0 suspended
```

```
$ cat hostname.out
```

```
node002.cm.cluster  
Wed May 31 17:14:13 CEST 2017  
exit
```

Unique solution ID: #1359

Author: Frank Furter

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