

Third Party Software: How do I replace ntpd for chrony on a Bright Cluster?

The following procedure was tested on Bright 8.2 on CentOS 7.

WARNING: Please note that an update of certain Bright packages can remove some of the changes that were done manually here. If the packages node-installer or node-installer-nfsroot are updated/reinstalled on the head node, then step 7 of this article has to be done again.

1 - Disable ntpd on the head node

Run the following commands on the head node:

```
# systemctl disable ntpd
```

```
# systemctl stop ntpd
```

```
# cmsh
```

```
% device use master
```

```
% services
```

```
% use ntpd
```

```
% stop
```

```
% set autostart no
```

```
% set monitored no
```

```
% commit
```

2 - Disable ntpd on the software images

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Run the following commands on the head node (this has to be done for every software image)

```
# chroot /cm/images/<software images>
```

```
# systemctl disable ntpd
```

```
# exit
```

3 - Install chrony on the head node and software images

Run the following commands on the head node:

```
# yum install chrony
```

```
# yum install chrony --installroot=/cm/images/<software image>
```

... repeat this last step for every software image

4 - Configure chrony on the head node

On the head node, edit the `/etc/chrony.conf` file, and add the following line to it (replace the network with the network from which the compute nodes will access the head node)

```
allow 10.141.0.0/16
```

5 - Configure chrony on the software images

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In every software image, edit the /etc/chrony.conf file. Within the file, comment all the lines starting with "server" and add a line which points to the IP address that the compute nodes use to reach the head node. For example:

```
server 10.141.255.254 iburst
```

6 - Configure the head node and compute nodes to manage chronyd

Run the following commands on the head node:

```
# cmsg
```

```
% device use master
```

```
% services
```

```
% add chronyd
```

```
% set monitored yes
```

```
% set autostart yes
```

```
% commit
```

```
% start
```

```
% category use <category of the nodes>
```

```
% services
```

```
% add chronyd
```

```
% set monitored yes
```

```
% set autostart yes
```

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```
% commit
```

7 - Configure node-installer to use chrony instead of ntpd

Run the following commands on the head node:

```
# yumdownloader chrony libseccomp
```

```
# rpm -ivh chrony-3.2-2.el7.x86_64.rpm libseccomp-2.3.1-3.el7.x86_64.rpm --root=/cm/node-installer
```

Then configure the node-installer so the initial time synchronization will be done using chronyd. For this, edit the `/cm/node-installer/linuxrc` file in the head node and replace the line `“timeout 10s ntpd -c /tmp/ntp.conf -q -g”` with literally the following line (it automatically uses the IP address that the compute nodes use to reach the head node):

```
timeout 10 chronyd -q "server $NET_MASTER iburst"
```

8 - Reboot nodes to apply the changes

All the compute nodes have to be rebooted so the changes in the software images will be applied.

Unique solution ID: #1482

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Last update: 2019-07-25 17:47