

Moab

How can I write a fairshare tree for multiple partitions?

Issue: How can I write a fairshare tree for multiple partitions?

Example: I have 4 partitions configured and I would like to write a tree so that each partition has its own separate credentials.

Solution:

Moab has a custom XML solution for defining Fairshare trees. For example:

```
FSTREE[tree] '<fstree>
  <tnode partition="blue" name="root" type="acct" share="1"
qlist="normal,standby">
    <tnode name="temp" type="acct" share="1" qlist="normal,standby">
      <tnode name="jbooth" ADEF="lux"
ALIST="sa,lc,temp,dxdiv,texas,a,bdev,b,clbdivp,wprod,ee,lux" type="user"
share="1" qlist="normal,special,standby,test,exempt,expedite,super" />
    </tnode>
  </tnode>
  <tnode partition="green" name="root" type="acct" share="1"
qlist="normal,standby,exempt,expedite,super">
    <tnode name="pdesr" type="acct" share="50000" qlist="normal,standby">
      <tnode name="jbooth" ADEF="lc"
ALIST="sa,lc,temp,dxdiv,texas,a,bdev,b,clbdivp,wprod,ee" type="user" share="1"
qlist="normal,special,standby,test,exempt,expedite,super" />
    </tnode>
  </tnode>
  <tnode partition="red" name="root" type="acct" share="1"
qlist="normal,standby">
    <tnode name="temp" type="acct" share="1" qlist="normal,standby">
      <tnode name="jbooth" ADEF="dxdiv"
ALIST="sa,lc,temp,dxdiv,texas,a,bdev,b,clbdivp,wprod,ee" type="user" share="1"
qlist="normal,special,standby,test,super" />
    </tnode>
  </tnode>
  <tnode partition="black" name="root" type="acct" share="1"
qlist="normal,standby,exempt,expedite,super">
    <tnode name="root" type="user" share="1" qlist="normal,standby" />
    <tnode name="jbooth" ADEF="ucla"
ALIST="sa,lc,temp,dxdiv,texas,a,bdev,b,clbdivp,wprod,ee" type="user" share="1"
qlist="normal,standby" />
  </tnode>
</fstree>'
```

In the above example I have a tree defined with parent "tnode" and a few children

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"tnode" entries. The rules for defining a tnode are as follows.

1) If the tnode is a parent you begin with "<tnode ...>" and end with "</tnode>". You should have a child tnode defined when using this format.

e.g.

```
<tnode partition="aztek" name="root" type="acct" share="1"
qlist="normal,standby,exempt,expedite,super">
```

```
  <tnode name="jbooth" ADEF="ucla"
ALIST="sa,lc,temp,dxdiv,texas,a,bdev,b,clbdivp,wprod,ee" type="user" share="1"
qlist="normal,standby" />
```

```
</tnode>
```

2) If the tnode is a child you terminate the child with "/>" and not a "</tnode>". There is one exception. When you have a child that has a child of its own then you use the format from rule 1.

Now that the rules have been defined you now understand how to write a multi partition faishare tree and have child credentials under each partition.

Note that it is a good idea to look into "PERPARTITIONSCHEDULING TRUE" if you are going to use a tree as there are some added benefits to using this parameter. For example per-partition job priorities.

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Author: Jason Booth

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