

WP4 Fault Tolerance Task

Tutorial



Tutorial overview:

- Getting the FT software
- Installing the binary FT RPM
- Configuring the FT software
- Starting the WP4 Monitoring system
- Controlling the FT daemon
- Creating FT rules
- Examples



Getting the software

```
FT /tmp/tutorial$ wget 'http://datagrid.in2p3.fr/distribution/autobuild/i386-rh7.3/wp4/fault-tolerance/RPMS/edg-fabricFaultTolerance-1.1.24-1.i386.rpm'
--09:47:16-- http://datagrid.in2p3.fr/distribution/autobuild/i386-rh7.3/wp4/fault-tolerance/RPMS/edg-fabricFaultTolerance-1.1.24-1.i386.rpm
           => `edg-fabricFaultTolerance-1.1.24-1.i386.rpm'
Connecting to proxy.kip.uni-heidelberg.de:3128... connected!
Proxy request sent, awaiting response... 200 OK
Length: 785,664 [audio/x-pn-realaudio-plugin]

  OK -> ..... [ 6%]
 50K -> ..... [ 13%]
100K -> ..... [ 19%]
150K -> ..... [ 26%]
200K -> ..... [ 32%]
250K -> ..... [ 39%]
300K -> ..... [ 45%]
350K -> ..... [ 52%]
400K -> ..... [ 58%]
450K -> ..... [ 65%]
500K -> ..... [ 71%]
550K -> ..... [ 78%]
600K -> ..... [ 84%]
650K -> ..... [ 91%]
700K -> ..... [ 97%]
750K -> ..... [100%]

09:47:16 (10.86 MB/s) - `edg-fabricFaultTolerance-1.1.24-1.i386.rpm' saved [785664/785664]

FT /tmp/tutorial$ ls -la
total 796
drwx-----  2 pister  users      93 Sep 24 09:47 .
drwxrwxrwt 165 root   root    27935 Sep 24 09:37 ..
-rw-----  1 pister  users    785664 Sep 22 09:18 edg-fabricFaultTolerance-1.1.24-1.i386.rpm
FT /tmp/tutorial$ █
```



Installing the PDM

```
FT /tmp/tutorial# ls -la
total 776
drwx-----  2 pister  users      93 Sep 24 09:53 .
drwxrwxrwt  23 root    root     7133 Sep 24 09:57 ..
-rw-----  1 pister  users   785664 Sep 24 09:53 edg-fabricFaultTolerance-1.1.24-1.i386.rpm
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# rpm -qa | grep 'edg-fab*'
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# id
uid=0(root) gid=0(root) groups=0(root),1(bin),14(uucp),15(shadow),16(dialout),17(audio),65534(nogroup),102(HLT)
,65534(nogroup)
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# rpm -i ./edg-fabricFaultTolerance-1.1.24-1.i386.rpm
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# rpm -qa | grep 'edg-fab*'
edg-fabricFaultTolerance-1.1.24-1
FT /tmp/tutorial#
FT /tmp/tutorial# █
```




Starting the WP4 Monitoring system



- The WP4 Monitoring system is needed as a data source.
- Make sure a monitoring server is running on a node.
- Use the control scripts provided by the Monitoring system to start the monitoring server and agents.
- For further information please consult the documentation of the Monitoring system



Controlling the FT daemon

```
FT /tmp/tutorial# /etc/rc.d/init.d/edg-fabric_ftd status
edg-ftd is stopped
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# /etc/rc.d/init.d/edg-fabric_ftd start
Starting EDG Fault Tolerance daemon : [ OK ]
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# /etc/rc.d/init.d/edg-fabric_ftd status
edg-ftd (pid 14881) is running...
FT /tmp/tutorial#
FT /tmp/tutorial# /etc/rc.d/init.d/edg-fabric_ftd status
edg-ftd (pid 14881) is running...
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# /etc/rc.d/init.d/edg-fabric_ftd stop
Shutting down EDG Fault Tolerance daemon: [ OK ]
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# /etc/rc.d/init.d/edg-fabric_ftd status
edg-ftd is stopped
FT /tmp/tutorial# █
```

is



```

FT /tmp/tutorial# ls -la /opt/edg/etc/rules/examples/testrules/
total 25
drwxr-xr-x  2 root  root    195 Sep 24 09:58 .
drwxr-xr-x  3 root  root    94 Sep 24 09:58 ..
-rw-r--r--  1 root  root   878 Sep 22 10:18 algebra.xml
-rw-r--r--  1 root  root   590 Sep 22 10:18 eq.xml
-rw-r--r--  1 root  root   714 Sep 22 10:18 multdiv.xml
-rw-r--r--  1 root  root   591 Sep 22 10:18 neq.xml
-rw-r--r--  1 root  root   596 Sep 22 10:18 stringcmp.xml
-rw-r--r--  1 root  root   597 Sep 22 10:18 stringnotcmp.xml
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# cat /opt/edg/etc/rules/examples/testrules/eq.xml
<?xml version="1.0"?>

<!DOCTYPE edg_ft_rule SYSTEM "http://grid.kip.uni-heidelberg.de/xmlwebgui/dtd/edg_ft/edg_ft.dtd">

<?xml-stylesheet type="text/xsl" href="http://grid.kip.uni-heidelberg.de/xmlwebgui/xslt/edg_ft_rules_html.xsl"?
>

<edg_ft_rule>
<event>
<actuator shell="noshell">
<actuatorname>ps</actuatorname>
<argument number="0"> </argument>
<actuatorpath>/bin/</actuatorpath>
</actuator>
<rule>
<lookup>
<node_id>lxshare0314.cern.ch</node_id>
<metric_id>9501</metric_id>
</lookup>

<mo>eq</mo>
<value value_type="const">1</value>
</rule>

<level> </level>
</event>
</edg_ft_rule>
FT /tmp/tutorial# █

```



```

Checking for service syslog:OK
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# tail -f /opt/edg/var/edg-ftd.log
2003-09-25 11:17.08
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:17.38
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:18.09
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:18.38
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:19.08
Rule "syslog": Virtual sensor returned: "0"

FT /tmp/tutorial# /etc/rc.d/syslog stop
Shutting down syslog services
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# /etc/rc.d/syslog status
Checking for service syslog:No process
FT /tmp/tutorial#
FT /tmp/tutorial#
FT /tmp/tutorial# tail -f /opt/edg/var/edg-ftd.log
2003-09-25 11:17.08
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:17.38
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:18.09
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:18.38
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:19.08
Rule "syslog": Virtual sensor returned: "0"
2003-09-25 11:19.38
Rule "syslog": Virtual sensor returned: "1"
Rule "syslog": Actuator returned exit status zero.
"Starting syslog services
"
2003-09-25 11:20.08
Rule "syslog": Virtual sensor returned: "0"

FT /tmp/tutorial# /etc/rc.d/syslog status
Checking for service syslog:OK
FT /tmp/tutorial# █

```

done

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