

Tomcat Clsutering

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TCP StaticMembership

StaticMembershipService ()

StaticMembershipInterceptor (9.0.17 -)

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6

8

Tomcat Clustering

— 2020/12/08 17:19



Tomcat 8.x
Tomcat 7.x

Tomcat Clustering

<https://tomcat.apache.org/tomcat-9.0-doc/cluster-howto.html>

- web.xml `<distributable/>`
- Session attributes `java.io.Serializable`
`sessionAttributeFilter`
- DeltaManager
`org.apache.catalina.ha.session.ClusterSessionListener`가
- DeltaManager 4
BackupManager
-

```
<Cluster className="org.apache.catalina.ha.tcp.SimpleTcpCluster"/>
```

가

DeltaManager

DeltaManager

4
Tomcat

BackupManager

BackupManager
4

DeltaManager BackupManager

가

- 228.0.0.4

- ## TCP StaticMembership

```
Tomcat 9.0.17      Membership
StaticMembershipService 가      가      .
      StaticMember      2가
```

StaticMembershipService ()

- ```
<Cluster className="org.apache.catalina.ha.tcp.SimpleTcpCluster"
 channelSendOptions="6">

 <Manager className="org.apache.catalina.ha.session.DeltaManager"
 expireSessionsOnShutdown="false"
 notifyListenersOnReplication="true"/>

 <Channel className="org.apache.catalina.tribes.group.GroupChannel">
 <!-- multicast membership -->
 <!--
 <Membership
className="org.apache.catalina.tribes.membership.McastService"
 address="${tomcat.cluster.member.address}"
 port="${tomcat.cluster.member.port}"
 frequency="500"
 dropTime="3000"
 />
 -->
 <!-- static membership
9.0.17 가 StaticMembershipService
 Interceptor
```

```
-->
 <Membership
className="org.apache.catalina.tribes.membership.StaticMembershipService">
 <Member
className="org.apache.catalina.tribes.membership.StaticMember"
 port="5011"
 host="10.33.0.51"
 uniqueId="{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,1}"/>
 <Member
className="org.apache.catalina.tribes.membership.StaticMember"
 port="5011"
 host="10.33.0.52"
 uniqueId="{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,2}"/>
</Membership>

 <Receiver
className="org.apache.catalina.tribes.transport.nio.NioReceiver"
 address="${tomcat.cluster.receiver.address}"
 port="${tomcat.cluster.receiver.port}"
 autoBind="100"
 selectorTimeout="5000"
 maxThreads="6"
 />

 <Sender
className="org.apache.catalina.tribes.transport.ReplicationTransmitter">
 <Transport
className="org.apache.catalina.tribes.transport.nio.PooledParallelSender"/>
 </Sender>
 <!-- if use StaticMembership enable TcpPingInterceptor -->
 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.TcpPingInterceptor"
/>
 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.TcpFailureDetector"
/>
 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.MessageDispatchInte
rceptor"/>

</Channel>

 <Valve className="org.apache.catalina.ha.tcp.ReplicationValve"
 filter=""/>
 <Valve
className="org.apache.catalina.ha.session.JvmRouteBinderValve"/>
 <!--
 <Deployer className="org.apache.catalina.ha.deploy.FarmWarDeployer"
 tempDir="/tmp/war-temp/"
 deployDir="/tmp/war-deploy/"
 watchDir="/tmp/war-listen/"
```

```
 watchEnabled="false"/>
 -->

 <ClusterListener
className="org.apache.catalina.ha.session.ClusterSessionListener"/>
 </Cluster>
```

- StaticMembershipInterceptor (9.0.17 -
- )
1. McastService Membership

2. TCPPingInterceptor - StaticMember

3. StaticMembershipInterceptor

StaticMembershipInterceptor TCP StaticMember

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```

 <!-- channelSendOptions 6: 8:
8: Receiver selectorTimeout 5000(5)
channelStartOptions 가
 -->
 <Cluster className="org.apache.catalina.ha.tcp.SimpleTcpCluster"
channelSendOptions="6">

 <!-- Delta Manager -->
 <Manager className="org.apache.catalina.ha.session.DeltaManager"
expireSessionsOnShutdown="false"
notifyListenersOnReplication="true"/>

 <!-- Backup Manager
 <Manager className="org.apache.catalina.ha.session.BackupManager"
expireSessionsOnShutdown="false"
notifyListenersOnReplication="true"
mapSendOptions="6"/>
 -->

 <Channel
className="org.apache.catalina.tribes.group.GroupChannel">

 <!-- Multicast Member -->
 <!--
 <Membership
className="org.apache.catalina.tribes.membership.McastService"
address="${tomcat.cluster.member.address}"
port="${tomcat.cluster.member.port}"
frequency="500"
dropTime="3000"/>
```

```

-->

 <Receiver
className="org.apache.catalina.tribes.transport.nio.NioReceiver"
 address="${tomcat.cluster.receiver.address}"
 port="${tomcat.cluster.receiver.port}"
 selectorTimeout="100"
 maxThreads="6"/>

 <Sender
className="org.apache.catalina.tribes.transport.ReplicationTransmitter">
 <Transport
className="org.apache.catalina.tribes.transport.nio.PooledParallelSender"/>
 </Sender>

 <!--
 가
 ping
 가
 가
 TcpFailureDetector
 </Interceptor
className="org.apache.catalina.tribes.group.interceptors.TcpPingInterceptor"
/>
 <!--
 가
 ->

 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.TcpFailureDetector"
/>

 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.MessageDispatchInte
rceptor"/>

 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.ThroughputIntercept
or"/>

 <!-- StaticMember
 . -->

 <Interceptor
className="org.apache.catalina.tribes.group.interceptors.StaticMembershipInt
erceptor">
 <!--
 : Tomcat 9.0.17
 가
 <LocalMember>
 <Member>
 , Tomcat
 LocalMember
https://tomcat.apache.org/tomcat-9.0-doc/config/cluster-membership.html#Setting
 -->
 <!--
 <LocalMember

```

```

className="org.apache.catalina.tribes.membership.StaticMember"
 domain="staging-cluster"
uniqueId="{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,1}"/>
 -->

 <!-- -->
 <Member
className="org.apache.catalina.tribes.membership.StaticMember"
 port="4000"
 securePort="-1"
 host="tomcat2"
 domain="staging-cluster"
 uniqueId="{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,2}"/>
 </Interceptor>

</Channel>

<!-- -->
 <Valve className="org.apache.catalina.ha.tcp.ReplicationValve"
filter=".*\.gif|.*\js|.*\jpeg|.*\jpg|.*\png|.*\htm|.*\html|.*\css|.*\
.txt"/>

 <!-- route jvmRoute .
 route가 jvmRoute failback
-->
 <Valve
className="org.apache.catalina.ha.session.JvmRouteBinderValve"/>

 <!-- <Host

 <Deployer
className="org.apache.catalina.ha.deploy.FarmWarDeployer"
 tempDir="/tmp/war-temp/"
 deployDir="/tmp/war-deploy/"
 watchDir="/tmp/war-listen/"
 watchEnabled="false"/>
 -->

 <!-- DeltaManager -->
 <ClusterListener
className="org.apache.catalina.ha.session.ClusterSessionListener"/>
 </Cluster>

```

- <https://tomcat.apache.org/tomcat-9.0-doc/cluster-howto.html>
- <https://indienote.tistory.com/401>
- tomcatcluster\_0.pdf

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