

Tomcat Clsutering

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TCP StaticMembership

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StaticMembershipService ()

StaticMembershipInterceptor (9.0.17 -)

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6

9

Tomcat Clsutering

— 2024/12/11 13:51



Tomcat 9.x

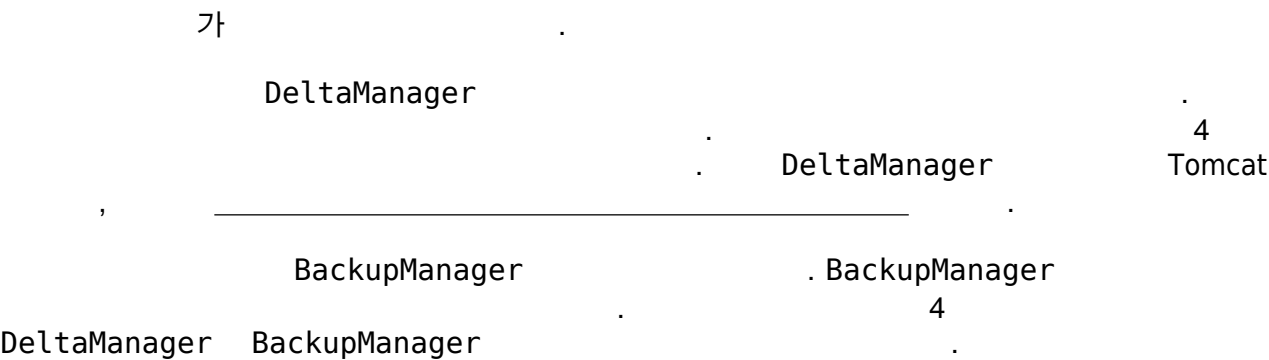
Tomcat 7.x

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.ClusterSessionListener가
- DeltaManager 4 BackupManager
-

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



- 가
- 228.0.0.4

- 45564 ()
- IP java.net.InetAddress.getLocalHost().getHostAddress() (127.0.0.1)
- TCP 4000-4100 가
- ClusterSessionListener
- TcpFailureDetector MessageDispatchInterceptor 가

TCP StaticMembership

Multicast가
IGMP가
Static Cluster Membership
Multicast TCP



Tomcat 9.0.17 Membership
StaticMembershipService 가
StaticMember 2가

StaticMembershipService	StaticMembershipInterceptor
<Membership>	<Interceptor>
org.apache.catalina.tribes.membership.StaticMembershipService	org.apache.catalina.tribes.group.interceptors.StaticMembershipInterceptor
().	().
<Member> <LocalMember>	<Member>

StaticMembershipService ()

1. McastService Membership StaticMembershipService
2. TCPPingInterceptor - StaticMember

```
<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	.

```
<!-- 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
        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://tomcat.apache.org/tomcat-9.0-doc/config/cluster-membership.html>
 - tomcatcluster_0.pdf

From:

<https://atl.kr/dokuwiki/> - **AllThatLinux!**

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