

U-CENTER监视Tomcat7.0失败的原因排查

Ucenter APM 罗孝晨 2019-07-16 发表

组网及说明

U-CENTER7.3E0508H14
TOMCAT7.0

问题描述

U-CENTER中纳管TOMCAT7.0失败，提示“应用探测失败”

过程分析

一、确定Tomcat服务已正常运行，可以通过configure tomcat或者浏览器中访问tomcat确认。

The image shows two screenshots. The top screenshot is the 'Apache Tomcat 7.0 Tomcat7 Properties' dialog box. The 'General' tab is selected, showing the 'Service Name' as 'Tomcat7', 'Display name' as 'Apache Tomcat 7.0 Tomcat7', and 'Description' as 'Apache Tomcat 7.0.94 Server - https://tomcat.apache'. The 'Path to executable' is set to 'C:\Program Files\Apache Software Foundation\Tomcat 7.0\bin\Tomcat7.0\startup.bat'. The 'Startup type' is 'Manual'. The 'Service Status' is 'Started', which is highlighted with a red box. Below the status are buttons for 'Start', 'Stop', 'Pause', and 'Restart'. The bottom screenshot is the Apache Tomcat 7.0.94 web page. It shows a green banner with the text 'If you're seeing this, you've successfully installed Tomcat. Congratulations!'. Below this are links for 'Recommended Reading' (Security Considerations HOW-TO, Manager Application HOW-TO, Clustering/Session Replication HOW-TO) and 'Developer Quick Start' (Tomcat Setup, First Web Application, Realms & AAA, JDBC Data Sources, Examples, Servlet Specifications, Tomcat Versions). There are also sections for 'Managing Tomcat', 'Documentation', and 'Getting Help'.

二、收集apmserver的debug级别日志，日志中有如下提示：

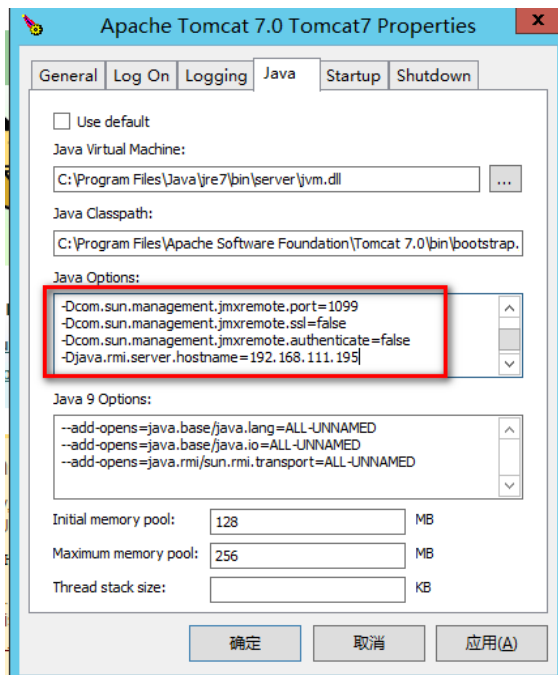
```

2019-07-16 04:58:22,260 [pool-2-thread-5] INFO com.ingr.am.application.tomcat.TomcatServiceMgrImpl.connect() - connect exception,
connection refused to host: 192.168.111.195, nested exception is:
java.net.ConnectException: 拒绝连接
java.net.ConnectException: Connection refused to host: 192.168.111.195, nested exception is:
java.net.ConnectException: 拒绝连接
at sun.ra1.transport.tcp.TCPChannel.newSocket(TCPChannel.java:619)
at sun.ra1.transport.tcp.TCPChannel.createConnection(TCPChannel.java:216)
at sun.ra1.transport.tcp.TCPChannel.newConnection(TCPChannel.java:202)
at sun.ra1.server.UnicastRef.invoke(UnicastRef.java:129)
at java.x.management.remote.ra1.RMIConnectorImpl.Sub.newClient(Unknown Source)
at java.x.management.remote.ra1.RMIConnector.getConnection(RMIConnector.java:2404)
at java.x.management.remote.ra1.RMIConnector.connect(RMIConnector.java:308)
at java.x.management.remote.ra1.RMIConnectorFactory.connect(RMIConnectorFactory.java:268)
at com.ingr.am.application.tomcat.TomcatServiceMgrImpl.connect(TomcatServiceMgrImpl.java:254)
at com.ingr.am.application.tomcat.TomcatServiceMgrImpl.lockforApplicationInit(TomcatServiceMgrImpl.java:556)
at com.ingr.am.message.AppMessageHandlerMgrImpl.handleRequestReceiver(AppMessageHandlerMgrImpl.java:691)
at com.ingr.am.message.AppMessageHandlerMgrImpl.preHandleMessage(AppMessageHandlerMgrImpl.java:494)
at com.ingr.am.message.AppMessageHandlerMgrImpl.run(AppMessageHandlerMgrImpl.java:1142)
at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1145)
at java.util.concurrent.ThreadPoolExecutor.run(ThreadPoolExecutor.java:615)
at java.lang.Thread.run(Thread.java:745)
Caused by: java.net.ConnectException: 拒绝连接
at java.net.PlainSocketImpl.socketConnect(Native Method)
at java.net.AbstractPlainSocketImpl.doConnect(AbstractPlainSocketImpl.java:339)
at java.net.AbstractPlainSocketImpl.connectToAddress(AbstractPlainSocketImpl.java:200)
at java.net.AbstractPlainSocketImpl.connect(AbstractPlainSocketImpl.java:182)
at java.net.SocksSocketImpl.connect(SocksSocketImpl.java:392)
at java.net.Socket.connect(Socket.java:672)
at java.net.Socket.connect(Socket.java:528)
at java.net.Socket.<init>(Socket.java:425)
at java.net.Socket.<init>(Socket.java:208)
at sun.ra1.transport.proxy.RMIDirectSocketFactory.createSocket(RMIDirectSocketFactory.java:40)
at sun.ra1.transport.proxy.RMIConnectorImpl.newSocket(RMIConnectorImpl.java:147)
at sun.ra1.transport.tcp.TCPChannel.newSocket(TCPChannel.java:613)
... 15 more

```

通过日志可以看到是tomcat将APM发送的JMX连接请求拒绝导致应用监视失败。

三、登录tomcat configuration配置台，选择“java”选项，查看是否已添加相应JMX所需配置，现场配置如下：



其中添加的JMX相关配置注释如下

#启用JMX远程访问

-Dcom.sun.management.jmxremote

#设置JMX远程访问的本地监听端口为1099

-Dcom.sun.management.jmxremote.port=1099

#与JMX建立远程连接时不使用SSL

-Dcom.sun.management.jmxremote.ssl=false

#与JMX建立远程连接时需要进行身份认证，也可以设置为false

-Dcom.sun.management.jmxremote.authenticate=true

#与JMX建立远程连接时的身份认证文件，不进行身份认证时不用配置

-Dcom.sun.management.jmxremote.password.file=C:\Program Files\Apache Software Foundation\Tomcat 7.0\conf\jmxremote.password

#与JMX建立远程连接时的权限控制文件，不进行身份认证时不用配置

-Dcom.sun.management.jmxremote.access.file=C:\Program Files\Apache Software Foundation\Tomcat 7.0\conf\jmxremote.access

#JMX响应APM请求时使用的IP地址

-Djava.rmi.server.hostname=192.168.111.195

其中192.168.111.195明确表示是Tomcat服务器用于与APM服务器通信的IP地址，而现场tomcat服务器地址并不是192.168.111.195，而APM服务器地址是192.168.111.195，因此问题定位，是由于Djava.rmi.server.hostname中的地址填写错误导致

解决方法

将Djava.rmi.server.hostname地址填写为tomcat服务器实际IP地址后重新添加应用恢复正常

Tomcat_192.168.111.149

系统基础信息

名称Tomcat_192.168.111.149

健康状态健康

IP地址192.168.111.149

应用描述

应用类型Tomcat服务器

Tomcat版本Apache Tomcat/7.0.94

最后轮询时间2019-07-16 05:29:29

依赖拓扑

今日可用性

正常运行

不可用

无法访问

未管理

当前可用性可用

正常运行时长9分42秒23毫秒

性能

应管时间

采集时间: 2019-7-16 05:29:29

属性	值
连接时间	0 ms
流量	0 B

内存使用

总内存 已用内存

采集时间: 2019-7-16 05:29:29

属性	值
总内存	179.94 MB
已用内存	44.13 MB
可用内存	135.79 MB

线程

采集时间: 2019-7-16 05:29:29

Web应用

采集时间: 2019-7-16 05:29:29