Software Platforms

LM in Computer Engineering

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Linux: Apache Tomcat download and install

- Download Tomcat 9 through wget

  wget http://it.apache.contactlab.it/tomcat/tomcat-9/v9.0.29/bin/apache-tomcat-9.0.29.tar.gz
- Extract Tomcat 9 and configure Environment Variables

  tar xvf apache-tomcat-9.<X>.tar.gz

  CATALINA_HOME=<Tomcat home directory>

  CATALINA_BASE=<Tomcat home directory>
- Configure manager access: Add the following two lines to $CATALINA_BASE/conf/tomcat-users.xml

  <role rolename="role1"/>

  <user username="<your name>" password="<your password>" roles="manager-gui"/>

  Remember to comment lines:

  <Valve className="org.apache.catalina.valves.RemoteAddrValve"

  allow="127\.\d+\.\d+\.\d+|::1|0:0:0:0:0:0:0:1" />

  in file context.xml in Manager webapp META-INF
- Access from host browser

  URL: localhost:<8080 mapped on host>/

Web Traffic analysis

- Configure Axis 2
  - load axis2.war to guest Tomcat servlet repository through shared directory
  - copy AdderService to Axis2 service repository on guest Axis2 through shared directory
- Develop Web Services
  - Edit Web Service SOAP client to access guest Tomcat instead of localhost
  - Edit Web Service REST client to access guest Tomcat instead of localhost
  - Develop a REST Test service/client pair as indicated in the next slide
- Open the shared traffic file from host using Wireshark
  - Find and analyze SOAP WS dialogue
  - Find and analyze REST WS dialogue

Servlet Container Test

- Activate a VM using the Command Line Interface
- Run Tomcat on server
- Create a Servlet on the Laptop client
- Deploy the Servlet on the Linux VM
- Access the Servlet from the Laptop Browser
- Capture the traffic on Client (using Wireshark) and on Server (using tcpdump)
- Bring the tcpdump file to the Client
- Inspect the traffic captured by the Client and the traffic captured by the Server