

## Title: Tomcat Server Installation.

1) What is Tomcat?

- • Apache Tomcat, often referred to as Tomcat Server is an open source Java Servlet container developed by Apache s/w foundation (ASF).
- Tomcat implements several JAVA EE specifications including Java Servlet, Java Servlet Server pages (JSP), Java EL & web socket and provides a 'pure java' HTTP web server environment in which Java code can run.

2) What is Tomcat default port?

- A default HTTP connector on port 8080 is provided by Apache Tomcat.
- Hence, Tomcat can work as HTTP Server.

3) What is the Servlet container life cycle?

- The life cycle of Servlet is considered as a series of steps during which a servlet comes across through its life span, beginning from loading process till last step of destroying.

• Life Cycle of Servlet.

1. Load servlet?

When a service of web servlet like Apache Tomcat is started, the servlet is deployed and loaded by Servlet container. Before invoking a servlet, a servlet container should load its class definition first.



load Servlet



Create Instance of Servlet



Call init() method



call service method



call destroy()

1. Load Servlet

→ When a service of web server like Apache Tomcat is started, the servlet is deployed and loaded by servlet container.

2. Creating Instance of Servlet

→ After Servlet class loaded, an instance of servlet class is created by Servlet container.

3. Call service() method

→ Whenever the web server receives a client request for Servlet. It initiates a new thread which invokes service() method.

4. call init() method → This method is considered as beginning of Servlet's life cycle. As soon as class is initiated, this method is called & helps to initialize the server.



5) call `destroy()` method → This method indicates the end of servlet life cycle. When servlet container shuts down which is generally happens when web server is stopped, it unloads all the running servlets from the memory & call `destroy()` method for all servlets.

Q4] What services are provided by Tomcat?

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- 1) Reliable automatic startup on boot essential in an environment where you may want remotely reboot a system after whether your server will come back online
  - 2) Server startup without active user login - in a data center, it is not reasonable to expect on active login from system just to run tomcat.
  - 3) In fact, Tomcat is often run on blade servers that may not even have an active monitor connect to them.
  - 4) Security → If you run Tomcat as an administrator, a vulnerability in one of your ~~web~~ web application can open up your whole server to attack.

Q5) Explain Directory Structure of Tomcat.

→ Directory Structure of Tomcat are :

- 1) Bin → It contains startup, shutdown & other scripts and some other jar files are also here
- 2) conf → Server config files of related DTDs  
The most important file in here is server.xml  
It is the main configuration file for container.
- 3) lib → contains JARs, those are used by container & servlet & JSP application programming interfaces.
- 4) logs → log & output files
- 5) webapps → deployed web applications reside in it.
- 6) work → Temporary working directories for web applications & mostly used during in JSP compilation where JSP is converted to a Java Servlet.
- 7) temp → Directory used by the JVM for temporary files.

Conclusion: Successfully installed Tomcat Server & configured it with Eclipse.