**Apache Tomcat 5.x / 6.x**

**1. What is Apache Tomcat?**

**Answer:** Tomcat is an open-source implementation of Java Servlet, JavaServer Pages, and Java Expression Language technologies. It acts as a web container that runs Java web applications.

**2. How does Tomcat handle requests?**

**Answer:** When a request comes in, Tomcat uses its Connector component to pass the request to a ServletContainer, which then maps the request to a servlet or JSP for processing.

**3. What are the main configuration files in Tomcat?**

**Answer:**

* server.xml – Core server configuration
* web.xml – Default web application deployment descriptor
* context.xml – Per-application context configuration

**4. What is the difference between Tomcat 5.x and 6.x?**

**Answer:**

* Tomcat 6.x supports Servlet 2.5 and JSP 2.1.
* Tomcat 5.x supports Servlet 2.4 and JSP 2.0.
* Tomcat 6.x introduced improvements in performance and class loading.

**Nginx 1.18**

**1. What is Nginx used for?**

**Answer:** Nginx is a high-performance HTTP server, reverse proxy, and load balancer. It is also used to serve static content efficiently.

**2. How is Nginx different from Apache HTTP Server?**

**Answer:**

* Nginx uses an event-driven, asynchronous architecture, making it more scalable under load.
* Apache uses a process/thread-based model.
* Nginx is better suited for static content and reverse proxy scenarios.

**3. How do you configure reverse proxy in Nginx?**

**Answer:**

nginx

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server {

listen 80;

location / {

proxy\_pass http://localhost:8080;

}

}

**4. How does Nginx handle high concurrency?**

**Answer:** Nginx uses an event loop model (epoll/kqueue) where a single thread can handle thousands of connections asynchronously.

**IBM Liberty Profile**

**1. What is IBM Liberty?**

**Answer:** Liberty is a lightweight, fast, and modular Java EE application server provided by IBM. It is part of WebSphere family.

**2. What are Liberty server features?**

**Answer:** Liberty uses a feature-based model. You enable only what your application needs (e.g., servlet-4.0, jpa-2.2, jaxrs-2.0).

**3. How is Liberty different from traditional WAS?**

**Answer:**

* Liberty is lightweight and modular.
* Faster startup time.
* Easier to configure (XML/YAML).
* Ideal for microservices and container environments.

**4. Where is the server configuration stored?**

**Answer:** In server.xml located in the Liberty server directory under wlp/usr/servers/<server\_name>/.

**WebSphere Application Server 9 (WAS9)**

**1. What is WAS9 used for?**

**Answer:** WAS9 is an enterprise-level application server for deploying and managing Java EE applications. It provides scalability, reliability, and robust integration with IBM tools.

**2. What is the difference between Base, ND, and Liberty in WAS?**

**Answer:**

* **Base:** Standalone server profile
* **ND (Network Deployment):** Supports clustering, load balancing, and distributed deployment
* **Liberty:** Lightweight, cloud-friendly version

**3. What are cells, nodes, and servers in WAS?**

**Answer:**

* **Cell:** Logical grouping of nodes and servers
* **Node:** Logical grouping of application servers managed by a node agent
* **Server:** Runtime instance of an application

**4. What is Deployment Manager (DMGR)?**

**Answer:** DMGR is a central administration tool in WAS ND for managing multiple nodes and servers in a cell.

**5. How is clustering handled in WAS9?**

**Answer:** WAS9 supports workload management using clusters. Applications deployed to a cluster can run on multiple JVMs, providing high availability.