In this article, we will learn about the important list of ports that are crucial for DevOps engineers. Understanding these ports is fundamental for managing and securing network communications effectively. We'll cover the key ports used for web traffic, database connections, SSH, and more, providing a comprehensive guide for any DevOps professional.

As a ***DevOps engineer***, it is important to understand ports and their importance to manage and deploy applications efficiently. Below is a list of important ports associated with DevOps functions.

ESSENTIAL PORTS FOR DEVOPS ENGINEERS

1. SSH (Secure Shell) — Port 22: -
SSH is used for secure remote access to the server. It is required to manage servers, deploy code, and perform various administrative tasks.

2. HTTP — Port 80: -

HTTP is the primary protocol used to transfer data over the Web. Port 80 is the default port for HTTP traffic.

3. HTTPS — Port 443: -
HTTPS encrypts HTTP traffic for secure communications over the Internet. Port 443 is the default port for HTTPS.

4. FTP (File Transfer Protocol) — Port 21: -
FTP is used to transfer files between a client and a server over a network. Port 21 is the default port for FTP control.

5. SMTP (Simple Mail Transfer Protocol) — Port 25: -
SMTP is used to send email messages between servers. Port 25 is the default port for SMTP.

6. DNS (Domain Name System) — Port 53: -
DNS is responsible for translating domain names into IP addresses. Port 53 is used for DNS queries.

7. MySQL — Port 3306: -
MySQL is a popular relational database management system. Port 3306 is the default port for MySQL connections.

8. PostgreSQL — Port 5432: -
PostgreSQL is an advanced open-source relational database system. Port 5432 is the default port for PostgreSQL connections.

9. Docker — Port 2375 (unencrypted) / Port 2376 (encrypted): -
Docker uses these ports for communication between the Docker client and the Docker daemon.

10. Kubernetes API Server — Port 6443: -
Kubernetes API Server exposes the Kubernetes API. port 6443

11.React.js Development Server — Port 3000: -

When running a React.js application in development mode using a tool like Create React App, the development server typically runs on port 3000.

12.Node.js Default HTTP Server — Port 3000 (often customizable): -

Node.js applications often use port 3000 for HTTP servers. However, it can be customized depending on the application requirements.

13.Express.js Default HTTP Server — Port 3000 (often customizable): -

Express.js, being a popular Node.js web application framework, often uses port 3000 for its HTTP servers by default, although this is customizable.

14.Nginx — Port 80/443: -

Nginx, a high-performance web server, uses ports 80 and 443 for HTTP and HTTPS traffic, respectively.

15.Apache HTTP Server — Port 80/443: -

The Apache HTTP Server, another widely used web server, typically uses ports 80 and 443 for HTTP and HTTPS traffic.

16. Python Default HTTP Server — Port 8000 (often customizable): -
Python’s built-in HTTP server, used for development or lightweight

applications, typically runs on port 8000. However, this port can be customized as needed.

17.Next.js Development Server — Port 3000: -
Next.js, a popular React framework, often uses port 3000 for its development server, similar to React.js.

18. Angular.js Development Server — Port 4200: -
Angular.js applications, when served using the Angular CLI, typically run on port 4200 in development mode.

19. Node.js Default HTTP Server — Port 3000 (often customizable): -
Node.js applications, including those built with frameworks like Express.js, typically use port 3000 for HTTP servers. However, this port can be customized depending on the application requirements.

20. Java Default HTTP Server (e.g., Spring Boot) — Port 8080 (often customizable): -
Java-based web applications, such as those built with Spring Boot, typically use port 8080 for HTTP servers. This port is widely used for Java web development but can be customized as needed.

21. Ruby on Rails Default HTTP Server — Port 3000 (often customizable): -
Ruby on Rails applications typically use port 3000 for their development servers. However, like other frameworks, this port can be customized.

22.PHP Default HTTP Server — Port 8000 (often customizable):
PHP applications, when served using PHP's built-in server or other development servers, often use port 8000. This port can also be customized.

23. Golang Default HTTP Server — Port 8080 (often customizable): -

Go applications, including web servers built with packages such as net/http, typically use port 8080 for HTTP servers. This port is often used for Go web development but can be customized.
Perl default HTTP server — port 5000 (often customizable):

24.Perl applications, when served using built-in servers or frameworks like Dancer or Mojolicious, can use **port 5000.** This port is commonly used but

can be customized.
Rust default HTTP server — **port 8080** (often customizable):

Rust applications, when serving HTTP traffic using libraries like Hyper, can use port 8080. This port is a common option but can be customized depending on application requirements.

25. SonarQube — Port 9000 (Web Interface) / Port 9001 (Compute Engine): -
SonarQube, a code quality and security analysis tool, typically exposes its web interface on port 9000. The compute engine, responsible for processing analysis tasks, often communicates on port 9001.

26. Jenkins — Port 8080 (Web Interface) / Port 50000 (Jenkins Agent): -
Jenkins, a popular continuous integration and continuous deployment (CI/CD) tool, exposes its web interface on port 8080 by default. Port 50000 is commonly used for communication between the Jenkins controller and its agents.

27. Grafana — Port 3000: -
Grafana, an open-source analytics and monitoring platform, typically runs its web interface on port 3000 by default. Users access the dashboard and configure Grafana through this port.

Conclusion

Understanding these essential ports is crucial for DevOps engineers to manage network communications efficiently and securely. By familiarizing yourself with these ports, you can better troubleshoot issues, optimize performance, and ensure the security of your infrastructure.

Thanks for watching ##### %%%% Sri Hari %%%%

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