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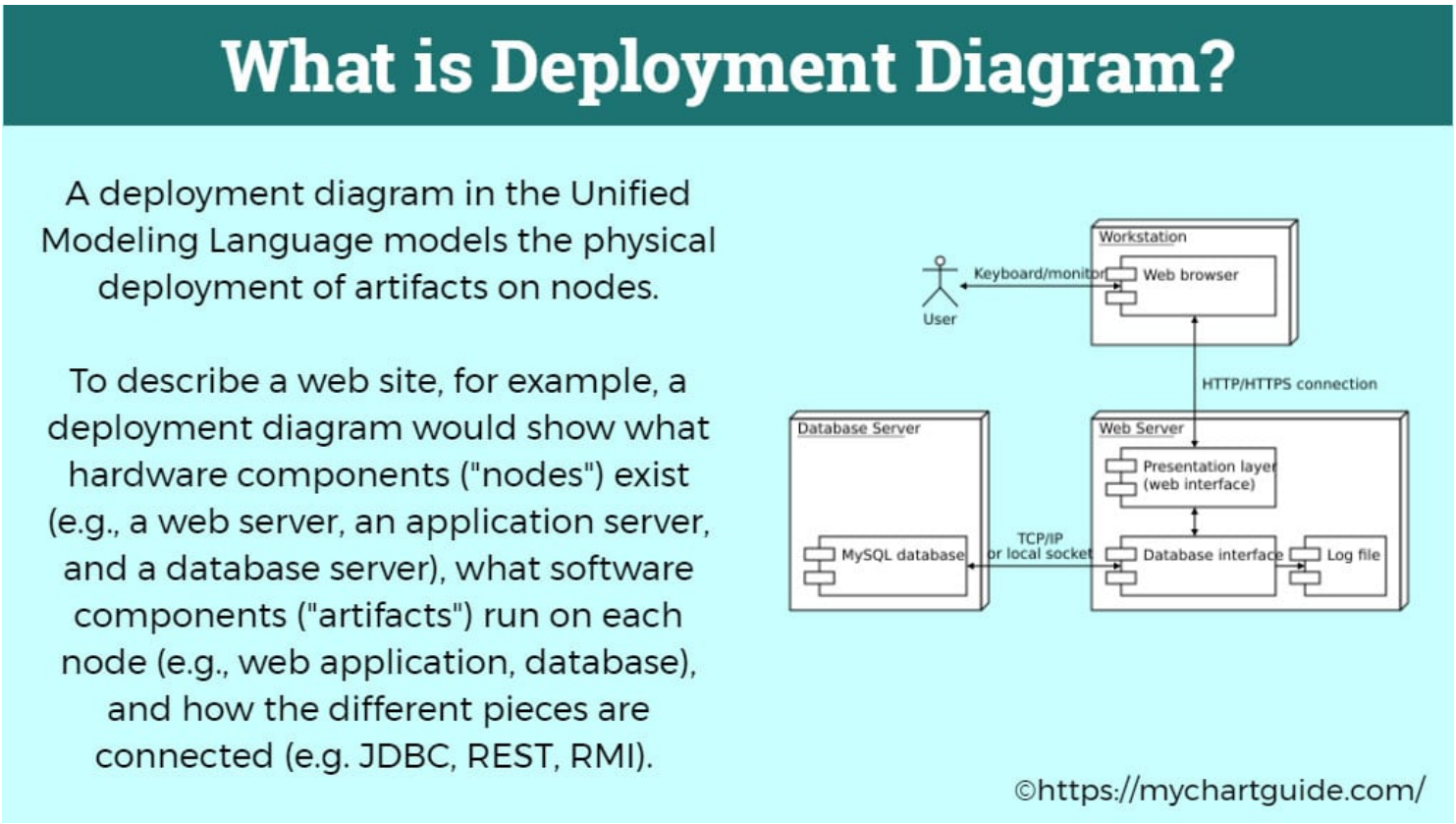
Deployment Diagram



Deployment Diagram for Employee Management System

Deployment diagrams are used to visualize the hardware processors/ nodes/ devices of a system, the links of communication between them and the placement of software files on that hardware.

In this UML deployment diagram tutorial, we will cover what is a deployment diagram, deployment diagram notations and how to draw one. You can use one of the editable deployment diagram examples to start right away.

A deployment diagram is a UML diagram type that shows the execution architecture of a system, including nodes such as hardware or software execution environments, and the middleware connecting them.

Deployment diagrams are typically used to visualize the physical hardware and software of a system. Using it you can understand how the system will be physically deployed on the hardware.

Deployment diagrams help model the hardware topology of a system compared to other UML diagram types which mostly outline the logical components of a system.

How to Draw a Deployment Diagram

Follow the simple steps below to draw a deployment diagram. You can either use the deployment diagram examples below to get a head start or use our UML diagram tool to start from the beginning.

Step 1: Identify the purpose of your deployment diagram. And to do so, you need to identify the nodes and devices within the system you'll be visualizing with the diagram.

Step 2: Figure out the relationships between the nodes and devices. Once you know how they are connected, proceed to add the communication associations to the diagram.

Step 3: Identify what other elements like components, active objects you need to add to complete the diagram.

Step 4: Add dependencies between components and objects as required.

Employee Management System

- There are several Components and features of the deployment diagram in case of the employee management system.
- It starts with the Client tier which contains the web browser from where the user has to open the application and login using his credentials. This would be further connected to the web server which has a user interface for basic web files such as html/css etc. All the actors of the applications such as Employee, Super admin, manager and system user would connect to the web interface.
- The web server would be connected to the application tier. The application tier has two parts i.e. business layer logic and data access layer.
- The data access layer would be linked to the data layer which contains the sql structure and stored procedures. All the sql queries would be present in the given component which would be useful for fetching the data from the database.
- This data tier would be connected to the database tier. Now the database tier has all the tables and schema for relationships among the tables. The tables present are leave data, attendance data, group data, task data, communication data etc.

- Now this database server is connected to the application server. The application server is the actual part of the application. It contains all the design and implementation of the core features of the application such as attendance, leave, group, tasks, meetings etc. Security credential and access control is also implemented and maintained.

Components of the Deployment diagram

Web server A web server is a computer that runs websites. It's a computer program that distributes web pages as they are requisitioned. The basic objective of the web server is to store, process and deliver web pages to the users. This intercommunication is done using Hypertext Transfer Protocol (HTTP).

Client tier The client tier consists of the client programs and consoles that are used for development, administration, and other tasks, and the computers where those programs and consoles are installed.

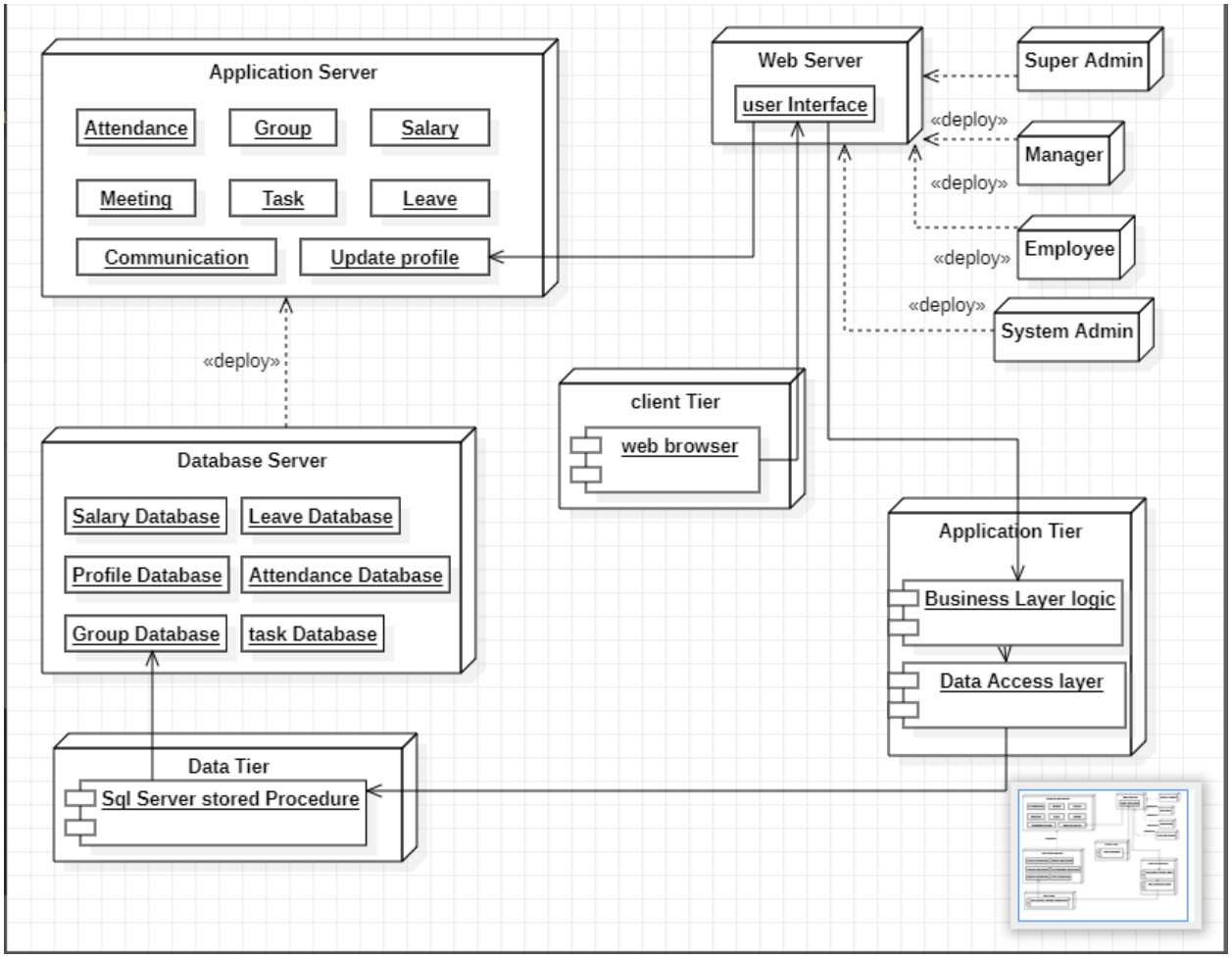
Application tier The application tier, also known as the logic tier or middle tier, is the heart of the application. In this tier, information collected in the presentation tier is processed - sometimes against other information in the data tier - using business logic, a specific set of business rules.

Database server A database server is any server that runs a network database application and maintains database files, such as Microsoft SQL Server or Oracle. SQL Server is a high-performance database management system.

Data server A data server (DS) is a software program/platform used to provide database services like storing, processing and securing data. These database services are consumed by other software programs or components. Sometimes the computer hardware, where the database is running, is also referred to as a database server

Application server The application tier, also known as the logic tier or middle tier, is the heart of the application. In this tier, information collected in the presentation tier is processed - sometimes against other information in the data tier - using business logic, a specific set of business rules.

Deployment Diagram


Application Server
Attendance
Group
Salary
Meeting
Task
Leave
Communication
Update profile
Web Server
user Interface
Super Admin
«deploy»
Manager
«deploy»
Employee
«deploy»
System Admin
«deploy»
client Tier
web browser
Database Server
Salary Database
Leave Database
Profile Database
Attendance Database
Group Database
task Database
Application Tier
Business Layer logic
Data Access layer
Data Tier
Sql Server stored Procedure

THE END!!