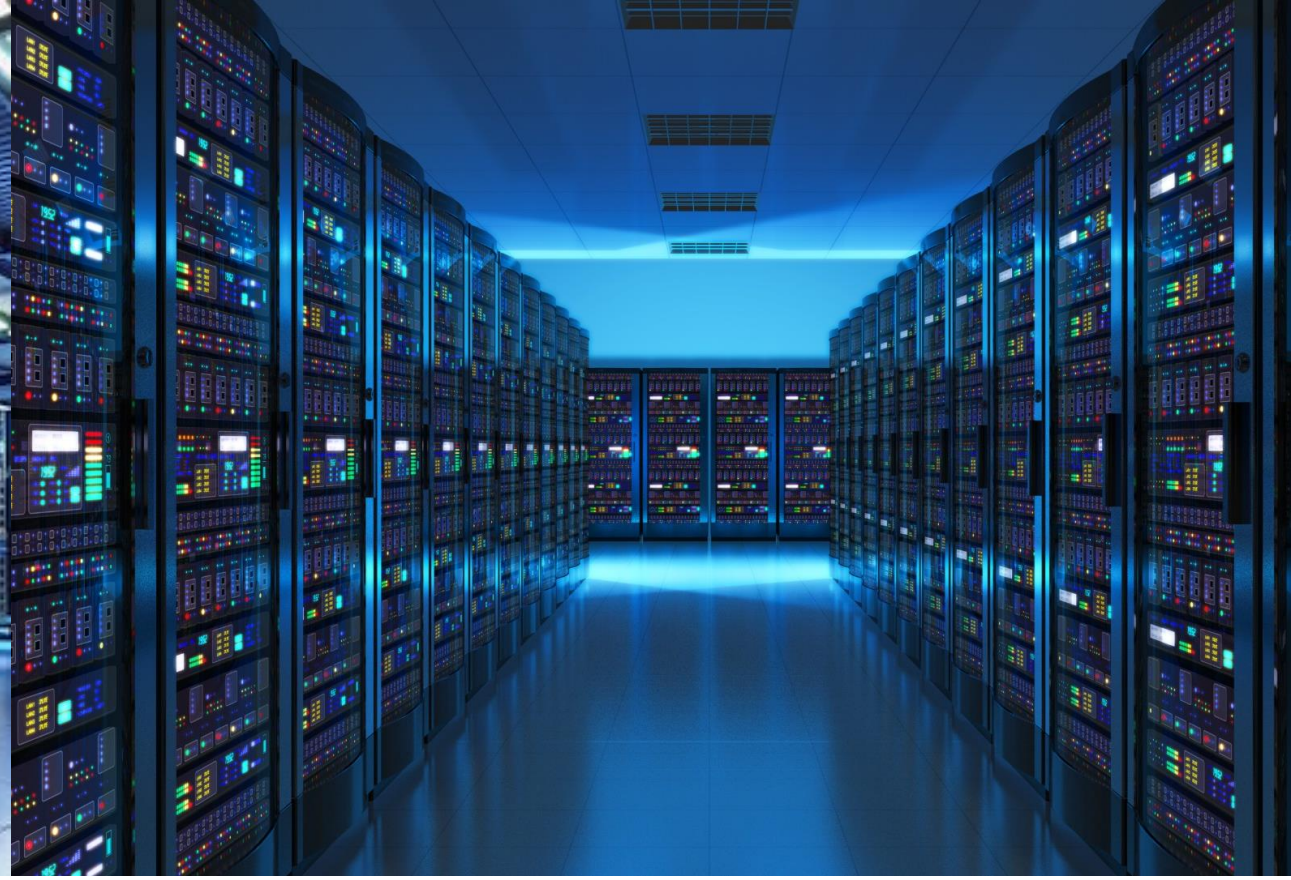
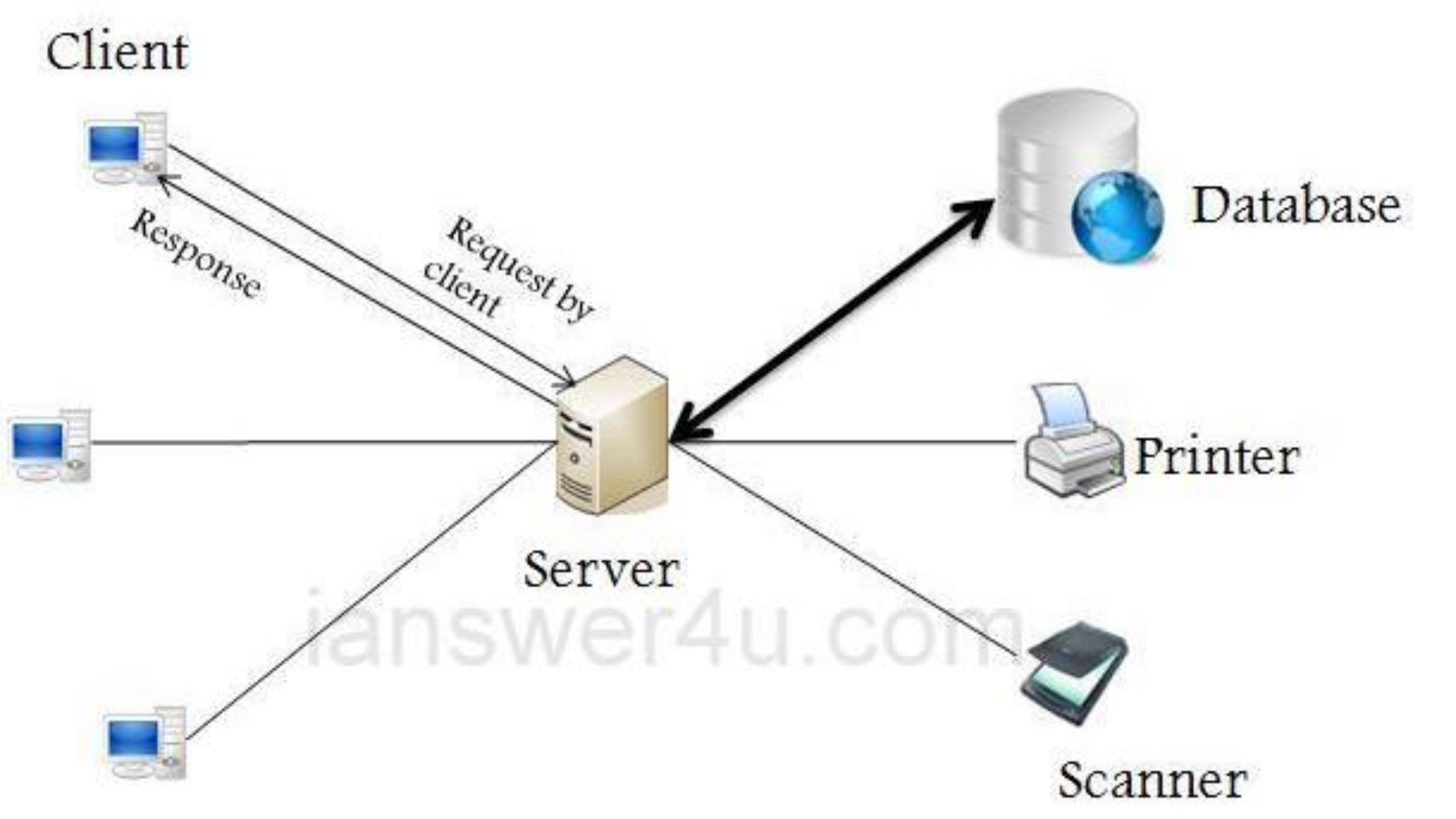


SERVER

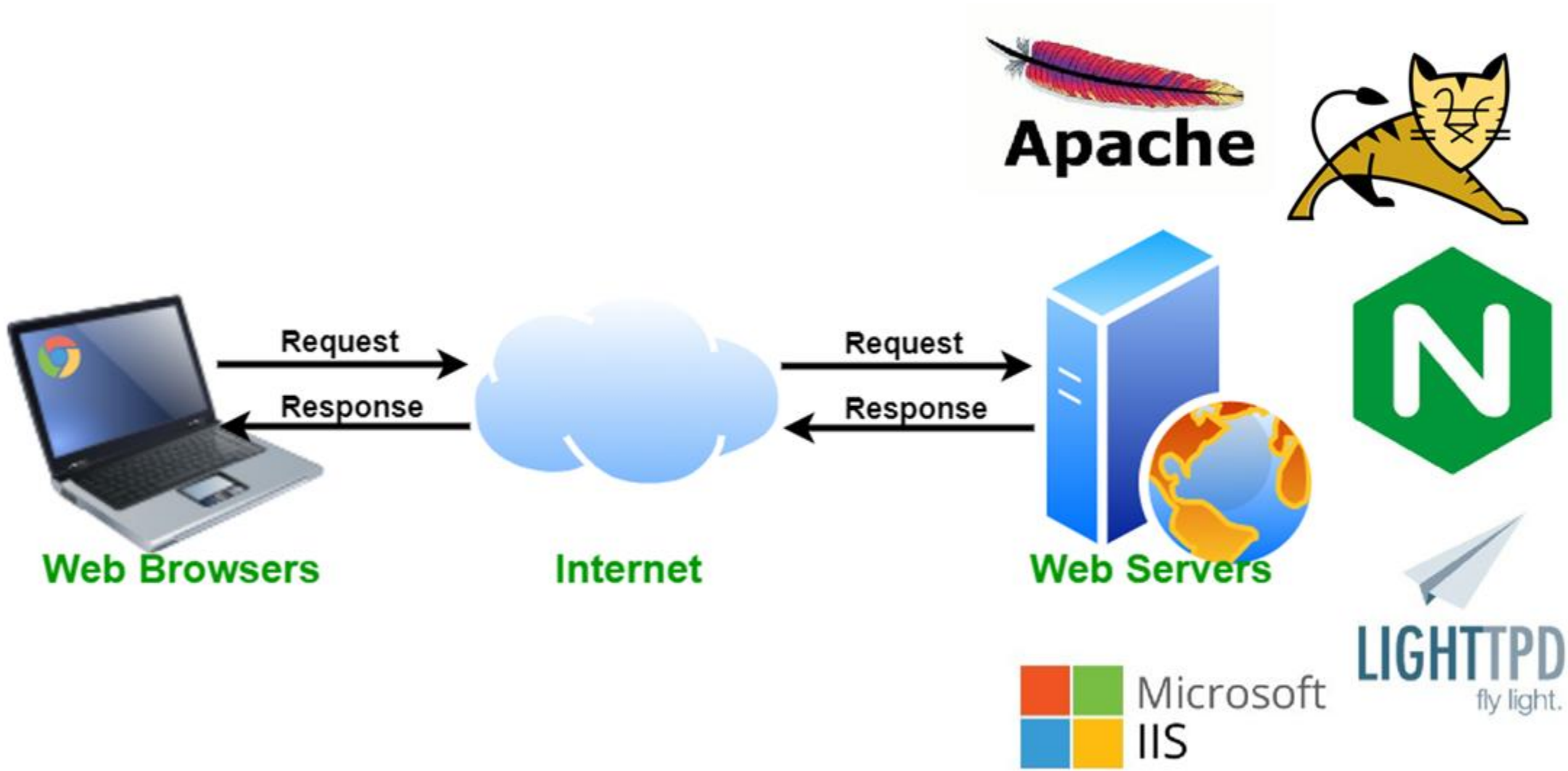
Server

- A server is a computer that provides resources or services to other computers over a network.
- The many different types of servers include:
- • Web server – Is used by web applications to serve Hypertext Markup Language (HTML) pages to a requesting client
- • Database server – Hosts database software that applications use to store and retrieve data
- • Mail server – Is used to send and receive email from and to clients



Client /Server web application

- 1. The user opens a browser on a client machine and enters the address of the web application's homepage. This address is called its home Uniform Resource Locator (URL), for example: https://anycompanywebapp.com.
- 2. The web server receives the client request and directs it to the appropriate web application.
- 3. The web application sends a request to the database server to access its application data.
- 4. The database server returns the requested data to the web application. 5. The web application builds the response webpage and passes it to the web


Apache
Request
Response
Request
Response
Web Browsers
Internet
Web Servers
Microsoft
IIS
LIGHTTPD
fly light.

Virtual Machine

A **virtual machine** is a special piece of software wich emulates the operation of a physical machine. Despite being located within a real physical host and making use of its resources, a virtual machine remains completely independent: it uses its own software-based components (the CPU, motherboard, video adapter, network interface, memory and hard disks), which may even differ from those of the host, and runs its own OS and applications.

The operating system the virtual machine is installed on is called the **host OS**, while the operating system of the virtual machine itself is referred to as the **guest OS**. Each guest OS starts up and runs in an individual window on a host OS, similar to an ordinary program.

All the virtual hardware which powers the guest OS is handled by a special engine called a hypervisor. The hypervisor is known as virtual machine manager: it allocates physical resources to each of the systems and ensures that they do not interrupt each other. As a rule, hypervisors are implemented on the software level, but there are also ones embedded into the system firmware.

Virtual Machine