

There are 5 systems:

S1: running a Linux based standalone application with MySQL in local network, share data to S2.

S2: running a PHP/MySQL Web application in local/public network, receive data from S1.

S3: running a PHP/PostgreSQL Web application in local network, share data to S5

S4: running a Python/Django/SQLite3 Web application in local network, share data to S5

S5: running a Java Web application in local/public network, receive data from S3/S4

Requirements:

The systems need to run 24x7.

End users need to be able to visit all systems from public network.

Backup all systems weekly.

Questions:

1. If there are two physical servers available and one public network connection, please:
 - a. Provide a physical servers plan for all systems.
 - b. Provide a systems architecture.
 - c. Provide a network design for all systems.
2. If there are no limited in physical servers and two public network connections available, please:
 - a. Provide your best practice designs and architectures to manage and handle all servers and systems.

You can use:

Any opensource tools you need in your solution.

Any quantity of routers you want to use in your network design.

Any UML diagram to explain your ideas and architecture.