

## Port Configuration for System Operation

### Port Information:

Tk20 Campustools utilizes several ports for its operation. Each tier in the system may operate independently, on its own server, and utilizes its own set of ports. This section describes the ports necessary for functioning of the application. When you install the system behind your firewall(s), please ensure that the ports listed below are opened, for Tk20 Campustools to function normally.

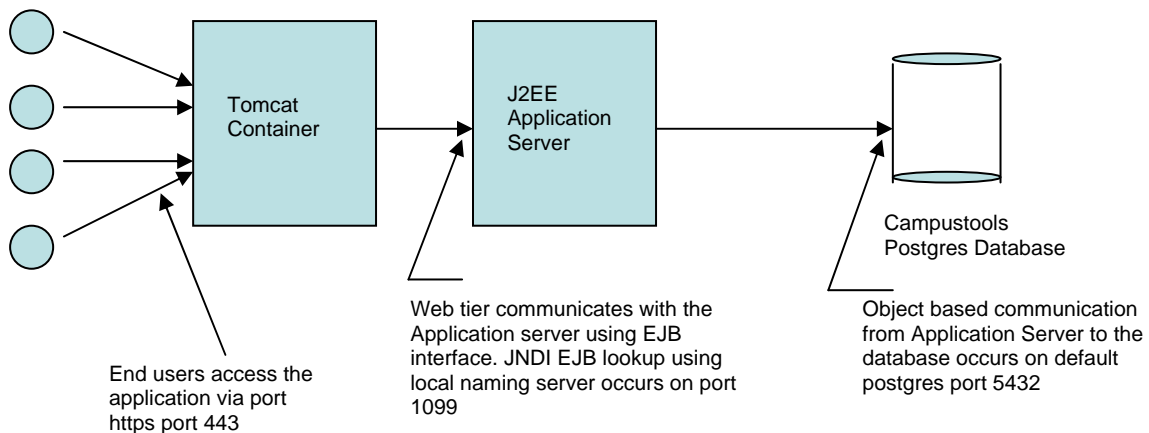
**Port 443:** This port is used for secure web browser communication. This port needs to be open on the web tier server for secure application access via https

**Port 80:** This is the primary port used by the World Wide Web (www) system. This port needs to be open on the web tier server for application access via http

**Port 1099:** JNDI EJB lookup using local naming server occurs on port 1099. This is the default port needed for accessing RMI registry.

**Port 5432:** This port is used by postgres database server.

The ports used for communication in different tiers are depicted in the diagram below



## **Port Configuration:**

Depending upon the deployment topology & the physical location of the servers that are deployed for your school, you will need to allow access to various ports mentioned above on different machines.

In case where different machines in the deployment topology are located across several subnets, simply allow all traffic from web tier machine to mid tier and database machine. Also allow all traffic from mid tier to database machine.

In case if the machines reside in the same subnets, access can be controlled through the following port configuration.

### **Single Tier Deployment**

Ports 443,80,1099 and 5432 need to open on the machine on which the application is deployed.

### **Two Tier Deployments**

Web tier machine needs ports 443, 80 open for access

Middle tier machine needs ports 1099 and 5432 open for access from web tier machine

### **Three Tier Deployments**

Web tier machine needs ports 443, 80 open for access

Middle tier machine needs ports 1099 (for access from web tier machine) open

Database tier machine needs ports 5432 (for access from middle tier machine) open