Server Roles

An understanding of the existing server roles is key to design the OutSystems platform infrastructure. A server can have more than a role, or you can use a single server/single role approach, but each environment needs the following roles.

**Front-end Role**
Front-end role handles both application logic and delivery to end-user. It can be installed as a standalone server or sharing a server with one of the following roles:
- Deployment Controller
- Scheduler

The Front-end resource usage is distributed through the CPU, Memory and Network as follow:
- Application logic runs on CPU resources.
- Application objects need to be held in memory to ensure fast content delivery.
- Network delivers content according to communication throughput demand.

**Deploy Controller Role**
The Deployment Controller handles the application compilation for deployment in Front-ends and license validation. Each of the following environments must have one server with this role:
- Development
- Quality Assurance
- Pre-Production
- Production

The Deployment Controller can be installed as a standalone or sharing a server with a Front-end Role. When compiling application code, its resource usage depends on:
- CPU for each application compilation process that consumes resources on one core.
- Memory for each compilation process.
- Network to deliver compiled applications to Front-ends.

**Scheduler Role**
The Scheduler role provides asynchronous execution of background tasks called timers, BPT processes and outbound email to an SMTP server.

It is activated by default in all Front-ends but can be deactivated in the Service Center administration console.

It is possible to select which Front-ends also have this role in the Service Center administration console on the Front-end servers menu in the Administration top menu.

The resource consumption of the Scheduler role happens at CPU level only and depends on the timer and BPT logic.