

ACIT 3855 – Service Oriented Architectures – Winter 2024

Lesson 10 Pre-Reading

For Lesson 10, we will be implementing three important patterns in a Microservices Architecture: Externalized Configuration, Centralized Logging and Persistent File Data.

Currently, our configuration files are built-in to our Docker images, requiring a re-build of the Docker image to apply a configuration change. For Lab 10, we will be applying the externalized configuration pattern:

- <https://microservices.io/patterns/externalized-configuration.html>

In addition, our logs are being written to the console and to a log file within the Docker container of each service. While this does allow us to see the logs using the docker logs command on each service, it is preferable to write some of the key log output to a centralized location. For Lab 10, we will be applying the log aggregation pattern:

- <https://microservices.io/patterns/observability/application-logging.html>

Finally, the Processing Service stores its statistics data in the SQLite file within the container. If that container is removed then the data is lost. It is preferable to store any persistent file data to a Docker volume. For Lab 10, we will be using a Docker volume to store the SQLite file of the Processing Service and a Bind Mount for the centralized logging (above):

- <https://docs.docker.com/storage/volumes/>