

Urika-XC Training Agenda

KAUST November 4,5

Cray Urika-XC is a high performance big data software stack, which is optimized for multiple work-flows and runs on Cray XC-40 systems like Shaheen II. It features a comprehensive analytics software stack for capturing and organizing a wide variety of data types from different sources and for executing a variety of analytic jobs on them. In addition, the Urika-XC software stack features components for performing machine and deep learning tasks. There is also a high-performance Semantic Graph database, the Cray Graph Engine, based on SPARQL and RDF.

This two-day tutorial will cover all the packages in Urika-XC. The format will be primarily lecture, with live demonstrations and the opportunity for hands-on exercises.

Day One November 4 (Location)

- **Session I**
 - Introduction to Urika-XC
 - Python, Anaconda, and Dask
 - Deep Learning with TensorFlow
- **Session II**
 - More Deep Learning with Keras and Pytorch
 - Scaling Deep Learning
 - Cray PE Machine Learning Plugin
 - Horovod
 - PyTorch using torch.distributed
 - HPC, AI, and Analytics with R and pbdR

Day Two November 5 (Location)

- **Session III**
 - Spark and Alchemist
 - BigDL
- **Session IV**
 - Cray Graph Engine
 - AI and Analytics Examples
 - Wrap-up and questions
- **Session V**
 - Hands-on Training- Computer Lab