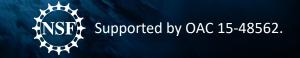
Docker MATLAB Runtime Container

PEARC 20 July/26/2020 Stephen Bird Indiana University, XCRI Engineer





What is XCRI? (XSEDE Cyberinfrastructure Resource Integration)

- Campus Bridging, but new branding.
- XCRI provides software toolkits to ease use of local resources and facilitate easy transitions between local and XSEDE resources.
- We also do site visits and remote consultation for HPC and cloud.
- We are always looking for feedback from XSEDE users, Campus Champions, and service providers to keep our offerings up-to-date with current needs.

MATLAB Runtime Container

• Simple container to run MATLAB compiled application.

• No need for a license on MATLAB runtime.

• Mobility to take your MATLAB applications to any Container-friendly HPC or VM.



MATLAB Runtime Container Caveats

- You cannot compile MATLAB code with the MATLAB Runtime.
- Note that code compiled and brought to MATLAB runtime is versionspecific.
- Since it's MATLAB runtime, there is no GUI and paths are fixed.
- Also, MCR is large, so you need ~10 GBs of available disk space and at least 8 GB of available memory.

Pieces of the project:

Singularity – Runs containers on HPC

• Docker – platform for building containers

• MATLAB Runtime – Software for running high-level mathematics.



The complete container can be found here:

<u>https://github.com/XSEDE/Container_Tutorial/blob/</u> <u>master/MCR-Dockerfile</u>



Questions before we view the container?

Questions after the tutorial can be sent via email to help@xsede.org and include XCRI in the title.



