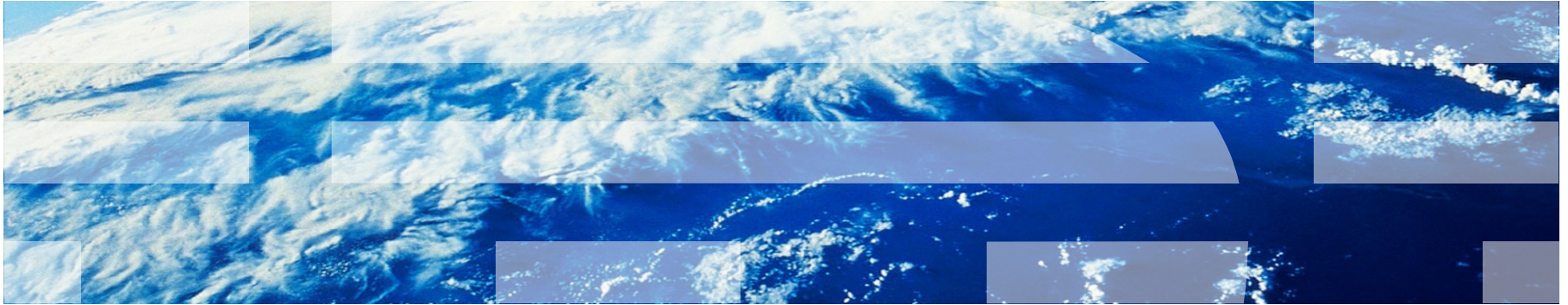


WebSphere Application Server



WebSphere Troubleshooting and Performance Lab



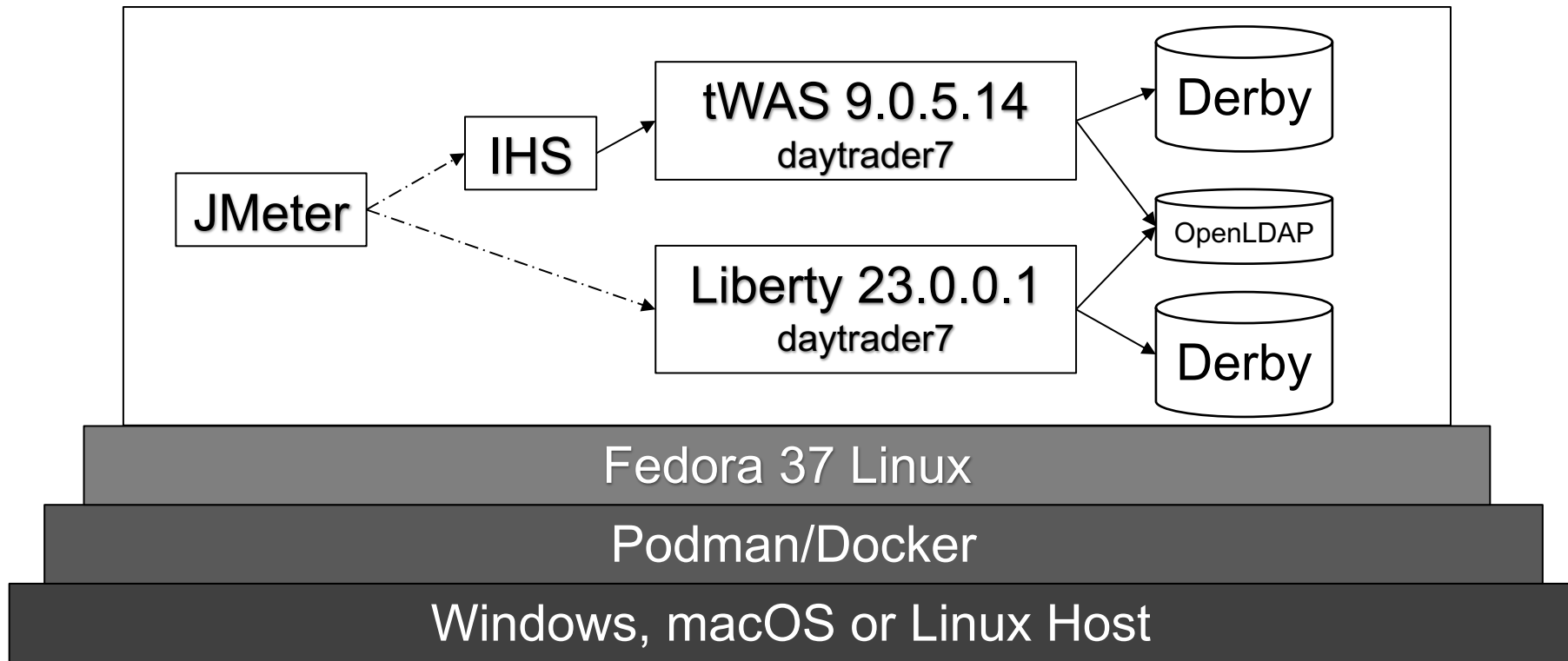
Agenda

- What is it?
- What's in it?
- How to run it?
- Major Recommended Tools
- Demo
- References
- Tips
- Q&A

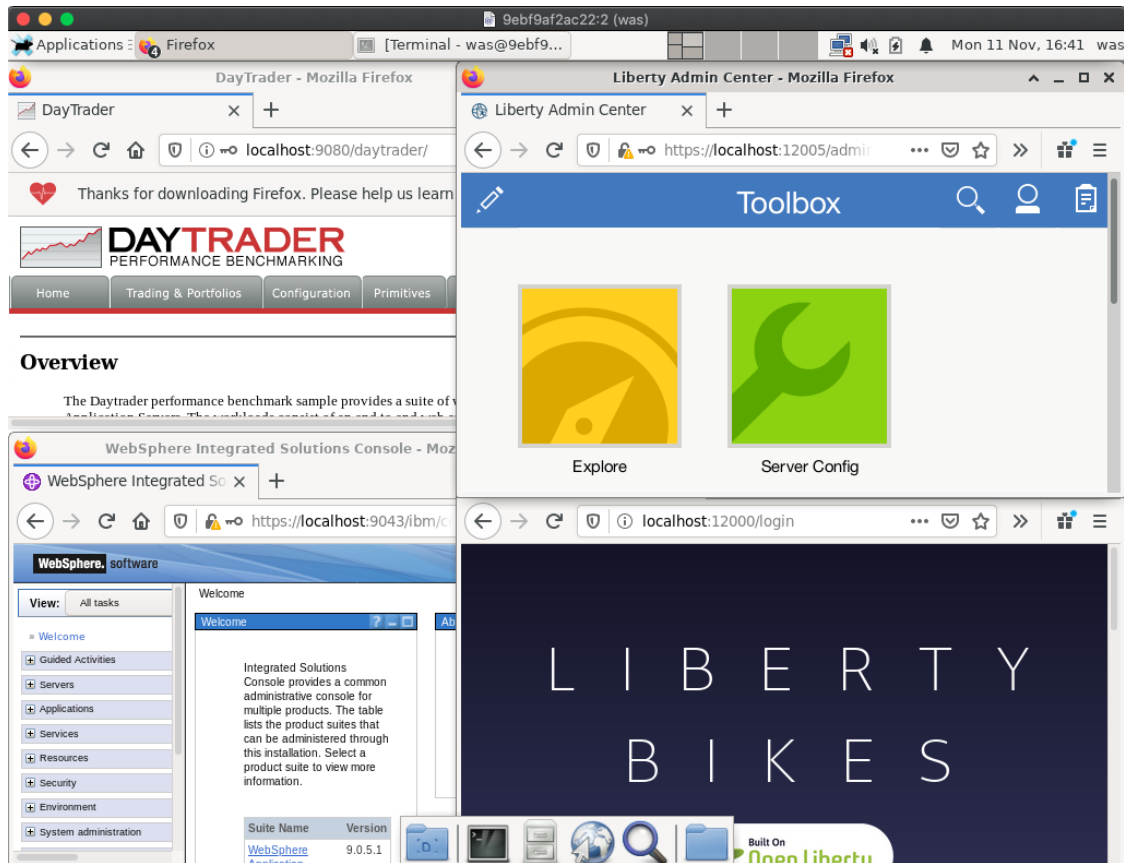
What is it?

- Self-paced, free, publicly downloadable WebSphere Liberty and WAS traditional troubleshooting and performance lab
- Learn: CPU analysis, Hang determination, Performance tuning, Memory analysis, etc.
- Over 100 pages of exercises which can be done in sequence or a la carte
- Hosted on Quay.io
 1. Install podman or Docker Desktop for Windows and macOS
 2. podman/docker run ... quay.io/ibm/webspherelab (see instructions for details)
 3. VNC/Remote Desktop into the lab

What's in it?



Screenshot



Major Recommended Tools

Tool	Analyze	Purpose
top -H or equivalent	CPU by Thread	Performance/Hang
monitor-1.0 / AdminCenter	Various statistics	Performance/Hang
requestTiming-1.0 & Access Log	Response times	Performance/Hang
Thread and Monitor Dump Analyzer (TMDA)	Thread dumps	Performance/Hang
Garbage Collection and Memory Visualizer (GCMV)	Verbose garbage collection	Performance/Hang
Eclipse Memory Analyzer Tool (MAT)	Heapdumps	OutOfMemoryError
Java Health Center	IBM Java	CPU Deep Dive

How to run it?

1. Windows/macOS: Configure Docker Desktop or podman:

- Memory \geq 4GB
- Disk \geq 30GB

2. Run the container from Command Prompt or Terminal:

- `podman run --cap-add sys_chroot --rm -p 5901:5901 -p 5902:5902 -p 3390:3389 -p 9080:9080 -p 9443:9443 -it quay.io/ibm/webspherelab`
- `docker run --rm -p 5901:5901 -p 5902:5902 -p 3390:3389 -p 9080:9080 -p 9443:9443 -it quay.io/ibm/webspherelab`

3. Wait 5 minutes until you see:

```
=====
= READY =
=====
```

How to run it?

4. Remote into the container:
 1. VNC to localhost:5902
 1. From the Terminal in macOS: open `vnc://localhost:5902`
 2. Linux Terminal: `vncviewer localhost:5902`
 3. Windows 3rd party VNC viewers
 2. Windows Remote Desktop: Requires configuration; see lab appendix
5. Perform the step-by-step lab:
https://github.com/IBM/webspherelab/blob/main/Liberty_Perf_Lab.md
Also available on the desktop inside the lab

Demo

***Thank you.
Questions?***