Internet2/GÉANT Campus IdP Strategies & Synergies
TIER Packaging Overview

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TIER Background and Packaging Goals

• Provide a complete IAM suite that meets specialized needs of Higher Education
  – COmanage, Grouper, midPoint, Shibboleth, and other supporting elements

• Focus on
  – Ease of installation, configuration, operation, maintenance, upgrade – e.g., lifecycle
  – Components fit together as a piece of a bigger picture but are separately implementable
  – Effectively support cloud and local deployments
  – Fit into the future, using next generation techniques
  – Easy for small campuses and useful for schools with more resources

• Selected Docker a few years ago
  – Seems like the default answer now, was perhaps a bit of a stretch when we started
TIER Background and Packaging Goals

- Early decision to leverage Docker for TIER builds
  - Released containers along with VMs and scripting to configure, build, and run them
TIER Background and Packaging Goals

• Developed TIER container standards
  – Base operating system
  – **Instrumentation** and logging
  – Multi-process containers (supervisord)
  – TIER container release process (**PRP process**)
  – More: [https://spaces.at.internet2.edu/display/TPWG/TIER+Docker+Container+Specification](https://spaces.at.internet2.edu/display/TPWG/TIER+Docker+Container+Specification)

• Shibboleth IdP Configuration Work
  – An aborted attempt at Campus Metadata Management Tool
  – Shibboleth IdP GUI project
Reference Implementations: Scripting and container orchestration to replace TIER VMs

- COmanage Application
- Shibboleth SP
- Demo App MediaWiki
- Shib Plugin MariaDB
- MariaDB
- Federation IdP
- SATOSA Proxy
- OpenLDAP

Comanage Reference Implementation
Docker Swarm

- Network Encryption
- Secrets and Configs
- Auto scaling
- Eases geographic diversity
- Part of Docker
  - Everyone has it installed
TIER Container Orchestration

- Initial decision for Docker Swarm
- More recent questioning if Kubernetes is a more appropriate solution
- Recent survey to check orchestration direction

**Conclusion**
- Stay with Docker Swarm (at east for now)
- Provide docker-compose files for use with docker stack deploy
- Tools can do much of the translation from compose to Kubernetes

**Questions / Discussion**
- tier – packaging at internet2.edu