

Highly Available Services with Docker

Using SUSE[®] Linux Enterprise Server in Microsoft's
Azure Cloud

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Session Objectives

- Highlight core support for SUSE[®] workloads on Azure
- Discuss native high availability features of Azure IaaS
- Understand the various ways for deploying Docker on Azure
- Demonstrate container clustering techniques on Azure



SUSE[®] Linux Enterprise Server and Azure

Bringing SLES to Azure

- SUSE® Linux Enterprise Server supportability (11 SP3 and greater, current versions of SLE 12)
 - Basic -> patches from SUSE at no additional charge
 - Premium -> patching and telephone support from SUSE at per compute hour cost
- SUSE Linux Enterprise Server for HPC
- Portability
- Bring-your-own-subscription (BYOS) model or per-compute hour provisioning

Provisioning

- Deploy images from
 - Azure marketplace
 - SUSE Studio
 - Bring Your Own Subscription
- SUSE[®] Linux Enterprise Server is supported on all compute tiers
- Bear in mind Azure IaaS dependencies
 - Compute
 - Storage
 - Networking

DEMO: Deploying SUSE[®] Linux
Enterprise Server VMs on Azure via the
Portal and Command Line Interface

Docker and Microsoft

- Microsoft maintains a strong relationship with Docker
- One of the largest contributors to Docker
- Unified tooling ecosystem to support Linux and Windows containers
- Bring your own subscription (BYOS) model for Docker subscriptions
 - Various support options
 - Docker trusted registry

Docker on Microsoft Azure

- Azure-endorsed distributions (including SUSE[®] Linux Enterprise Server)
- Non-endorsed distributions must meet kernel and configuration requirements
- Docker deployment methods
 - Manual via package repositories or source
 - Azure “Virtual Machine Extension” for Docker (support for SUSE[®] Linux Enterprise Server coming soon)
 - docker-machine
- Transport Layer Security (TLS) support for remote API/Swarm cluster

High availability for SUSE[®] Linux Enterprise Server on Azure

- Redundancy for OS disks is native to Azure Storage
- Underlying network infrastructure redundancy
- Azure “Fault Domains” and “Upgrade Domains”
- Azure virtual machine “Availability Sets”
- SUSE[®] Linux Enterprise Server high-performance clusters
- Application layer

Native Docker Clustering with Swarm

- Access to Docker with full tooling support
- Swarm manager
- Swarm nodes
- Discovery services for dynamic node and service configuration
- Scheduling
- Highly available Swarm manager via primary and replica instances
- Transport Layer Security (TLS) support

DEMO: Provisioning Docker and Docker Swarm on Azure

DEMO: Deploy LAMP containers to Swarm Cluster

Learn more about SUSE on
Microsoft Azure

[www.suse.com/promo/suse-
linux-enterprise-server-on-
azure.html](http://www.suse.com/promo/suse-linux-enterprise-server-on-azure.html)

Thank you.



