

Kubernetes Workshop

ISA (ITDM) Web Apps Context



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Hamburg, 29.04.2025

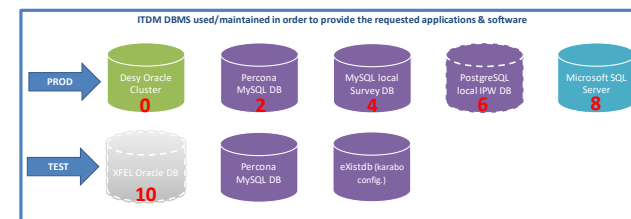
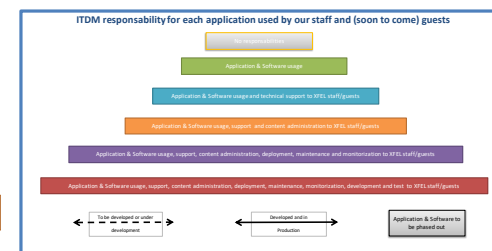
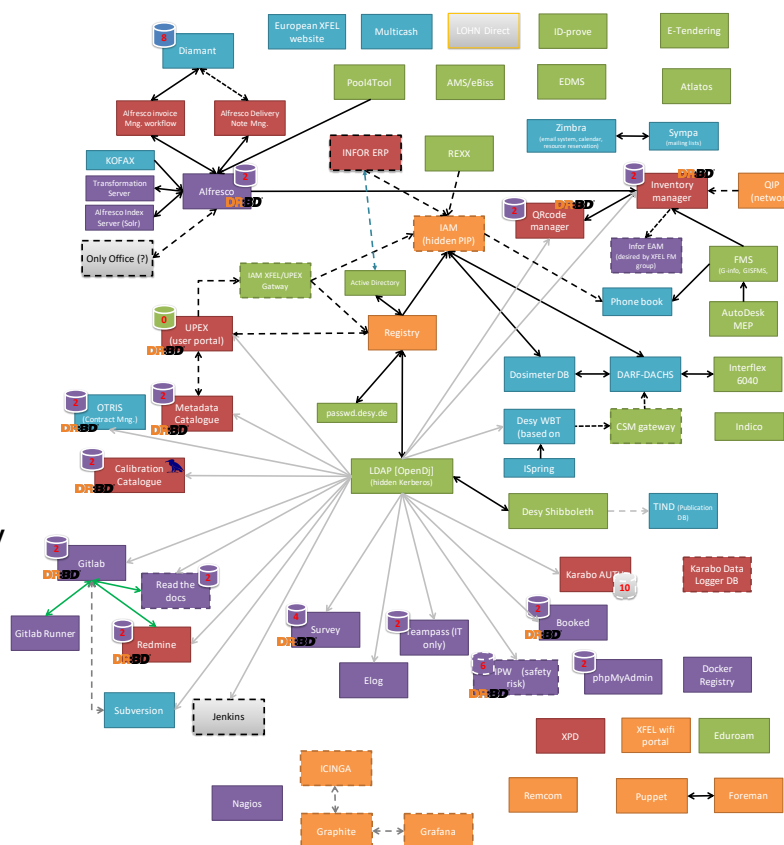
Landscape

Landscape deeply integrated with DESY services and architecture

Apps context

- In-house developed
 - ▶ Deep App. technical knowledge required
- Open Source
 - ▶ Deployed as is
- Open Source by external company
 - ▶ Deployed from externals code/images
- Non-open source deployed on-premises
- Cloud hosted services
 - ▶ E.g. Desy services

■ ■ ■ European XFEL



VMs Overview

- ~80 VMs
- 3 Operating Systems
- Applications Environments
 - Dev, Test, Stage Prod
 - Dev, Test, Prod
 - Test, Prod

FOREMAN

EXPANDED

DESY

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Monitor

Hosts

All hosts

Administrator

Hosts

Q: hostgroup,hostname ~ esf/web

Change Environment

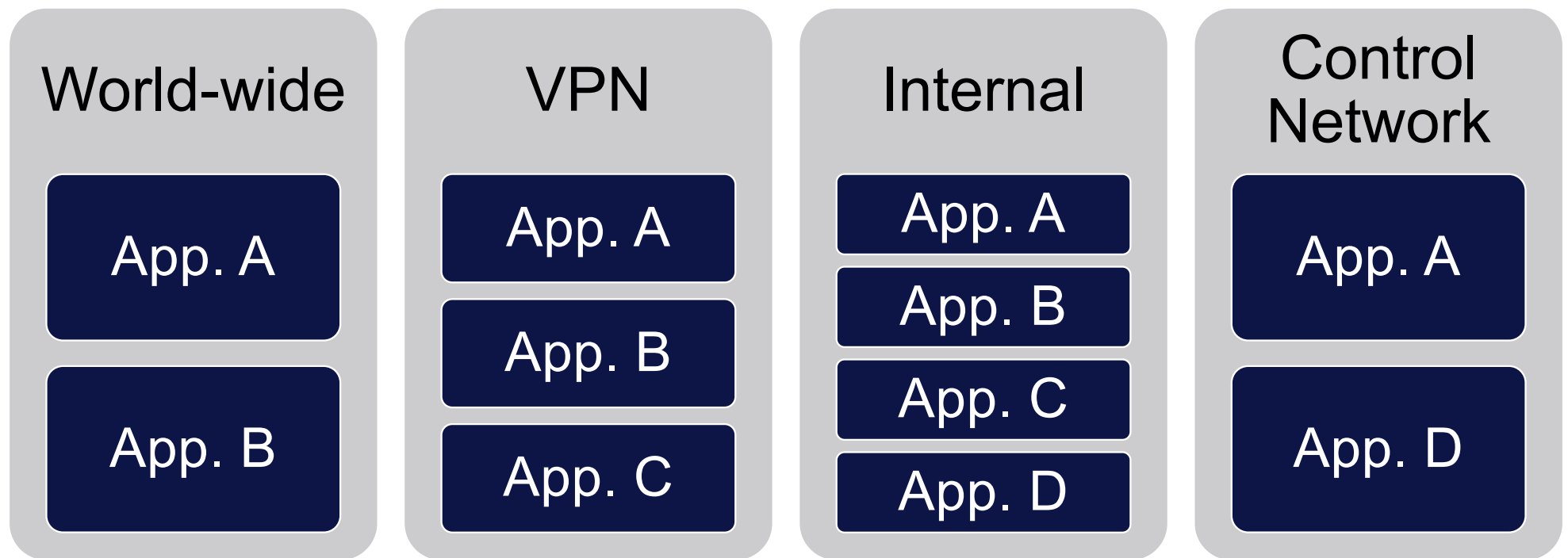
Export

0 of 72 selected

	Power	Name	OS	Owner	Host group	Boot time	Last rep.	Com.	Proper env	Actions
<input type="checkbox"/>		esfweb01.desy.de	CentOS Linux 7...	web...	esf/web	2 years ago	10 minutes...		production	
<input type="checkbox"/>		esfweb02.desy.de	CentOS Linux 7...	web...	esf/web	1 year ago	3 minutes...		production	
<input type="checkbox"/>		esfweb03.desy.de	CentOS Linux 7...	web...	esf/web	1 month a...	3 minutes...		production	
<input type="checkbox"/>		esfweb04.desy.de	CentOS Linux 7...	web...	esf/web	1 month a...	10 minutes...		production	
<input type="checkbox"/>		esfweb05.desy.de	CentOS Linux 7...	web...	esf/web	1 month a...	14 minutes...		production	
<input type="checkbox"/>		esfweb06.desy.de	CentOS Linux 7...	web...	esf/web	1 month a...	2 minutes...		production	
<input type="checkbox"/>		esfweb07.desy.de	CentOS Linux 7...	web...	esf/web	3 years ago	26 minutes...		production	
<input type="checkbox"/>		esfweb08.desy.de	CentOS Linux 7...	web...	esf/web	1 month a...	18 minutes...		production	
<input type="checkbox"/>		esfweb09.desy.de	CentOS Linux 7...	web...	esf/web	26 days a...	7 minutes...		production	
<input type="checkbox"/>		esfweb10.desy.de	CentOS Linux 7...	web...	esf/web	1 month a...	10 minutes...		production	
<input type="checkbox"/>		esfweb11.desy.de	CentOS Linux 7...	web...	esf/web	10 month...	15 minutes...		production	
<input type="checkbox"/>		esfweb12.desy.de	CentOS Linux 7...	web...	esf/web	1 year ago	2 minutes...		production	
<input type="checkbox"/>		esfweb13.desy.de	CentOS Linux 7...	web...	esf/web	10 month...	14 minutes...		production	
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<input type="checkbox"/>		esfweb20.desy.de	CentOS Linux 7...	web...	esf/web	3 month...	26 minutes...		production	
<input type="checkbox"/>		esfweb21.desy.de	CentOS Linux 7...	web...	esf/web	3 month...	9 minutes...		production	
<input type="checkbox"/>		esfweb22.desy.de	CentOS Linux 7...	web...	esf/web	9 month...	7 minutes...		production	
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<input type="checkbox"/>		esfweb28.desy.de	CentOS Linux 7...	web...	esf/web	29 days a...	26 minutes...		production	
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<input type="checkbox"/>		esfweb30.desy.de	CentOS Linux 7...	web...	esf/web	10 month...	27 minutes...		production	
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<input type="checkbox"/>		esfweb66.desy.de	CentOS Linux 7...	web...	esf/web	1 year ago	24 minutes...		production	
<input type="checkbox"/>		esfweb67.desy.de	CentOS Linux 7...	web...	esf/web	9 month...	20 minutes...		production	
<input type="checkbox"/>		esfweb68.desy.de	CentOS Linux 7...	web...	esf/web	3 month...	28 minutes...		production	

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Applications Accessibility by Networks



Architecture

- We wish to keep current architecture with
 - External Central DBs (e.g. Oracle, MariaDB, PostgreSQL, etc.)
 - ▶ Including internal backup and recovery strategies
 - External central file storage system (e.g. NetApp, S3, etc.)
 - ▶ Including internal backup and recovery strategies
 - Domain registration (and domain alias)
 - Certificate generation
 - Load Balancing (e.g. F5Switch)