



oVirt

Open Virtualization Infrastructure for large Telco: How Turkcell adopted oVirt for its test and development environments

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- Turkcell is a digital operator headquartered in Turkey
- Turkcell Group companies operate in 5 countries – Turkey, Ukraine, Belarus, Northern Cyprus, Germany
- Turkcell is the only NYSE-listed company in Turkey.
- www.turkcell.com.tr



- Alternative solutions compatible with Turkcell operational and security standards
- Dissemination of open source infrastructure technologies within the company
- Competitive infrastructure with cost advantage



The journey of oVirt

The Journey of oVirt





1. Research & Development

- **Motivation Factors**
 - Cost
 - Participation
 - Regulation
 - Independence
 - Expertise
- **Risk Factors**
 - Security
 - Quality
 - Compliance
 - Support
 - Worst Practices



1. Research & Development

- **Why oVirt?**
 - Open Source licensing
 - Community contribution
 - The same roadmap with commercial product
 - Support via subscription if required
 - Adequate features for enterprise management
 - Rest API support



1. Research & Development

- **Difficulties for new infra solution**
 - Integration with current infrastructure
 - Centralized Management
 - Certified/Licensed Solutions
 - Integration Cost
 - Incident & Problem Management
 - 3rd Party Support
 - Support with SLA
 - Acquired Habits
 - Customer Expectations
 - Quality of IT Infrastructure Services



1. Research & Development

- **What we achieved**
 - Building of PoC environment
 - V2V Migration
 - Upgrade Tests starting with v.4.3.2
 - Functional Tests
 - Backup Alternative Solutions



2. Go-Live Phase-1

- **Phase-1 contains :**
 - Building of new oVirt platform with unused h/w
 - Selection of VMs for migration
 - Migration of VMs using v2v
 - Upgrade of oVirt platform v4.3.6 to v4.3.8
 - Go/No-Go decision
 - To continue to v2v VM migrations
 - To continue to backup solution selection



3. Go-Live Phase-2

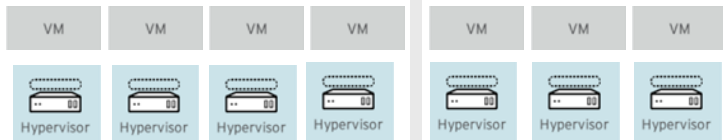
- **Phase-2 contains :**
 - Building of new oVirt platforms with new h/w
 - Upgrade of oVirt platform v.4.3.8 to v.4.3.10
 - Accepting new VM requests
 - To continue v2v VM migrations
 - To finalize backup solution selection

oVirt Topology



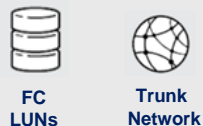
Turkcell DC #1

oVirt engine



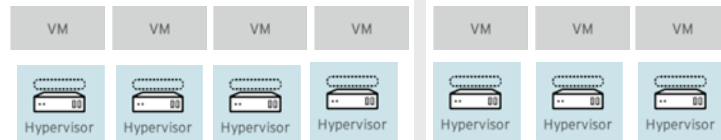
LAN CLUSTER

DMZ CLUSTER



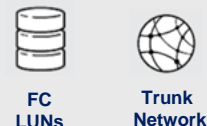
Turkcell DC #2

oVirt engine

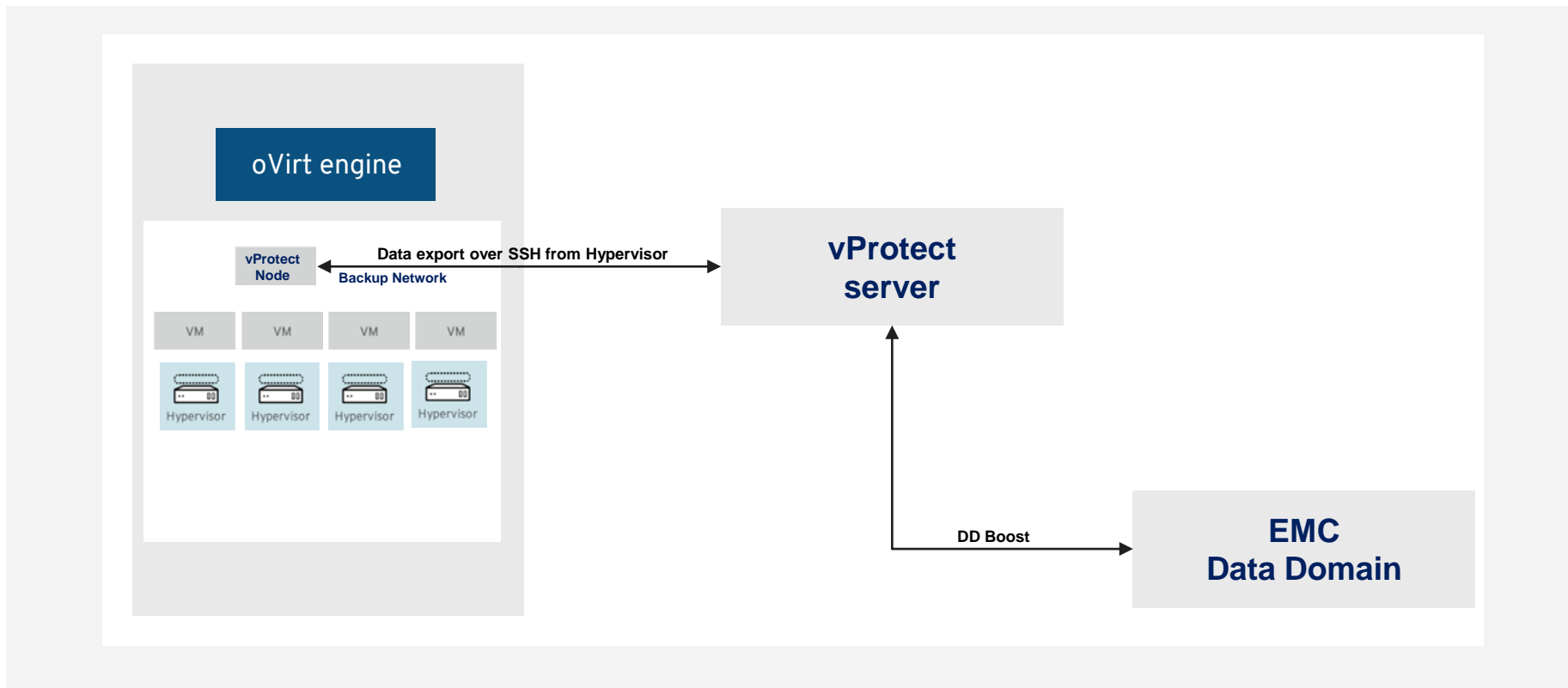


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oVirt Backup Topology





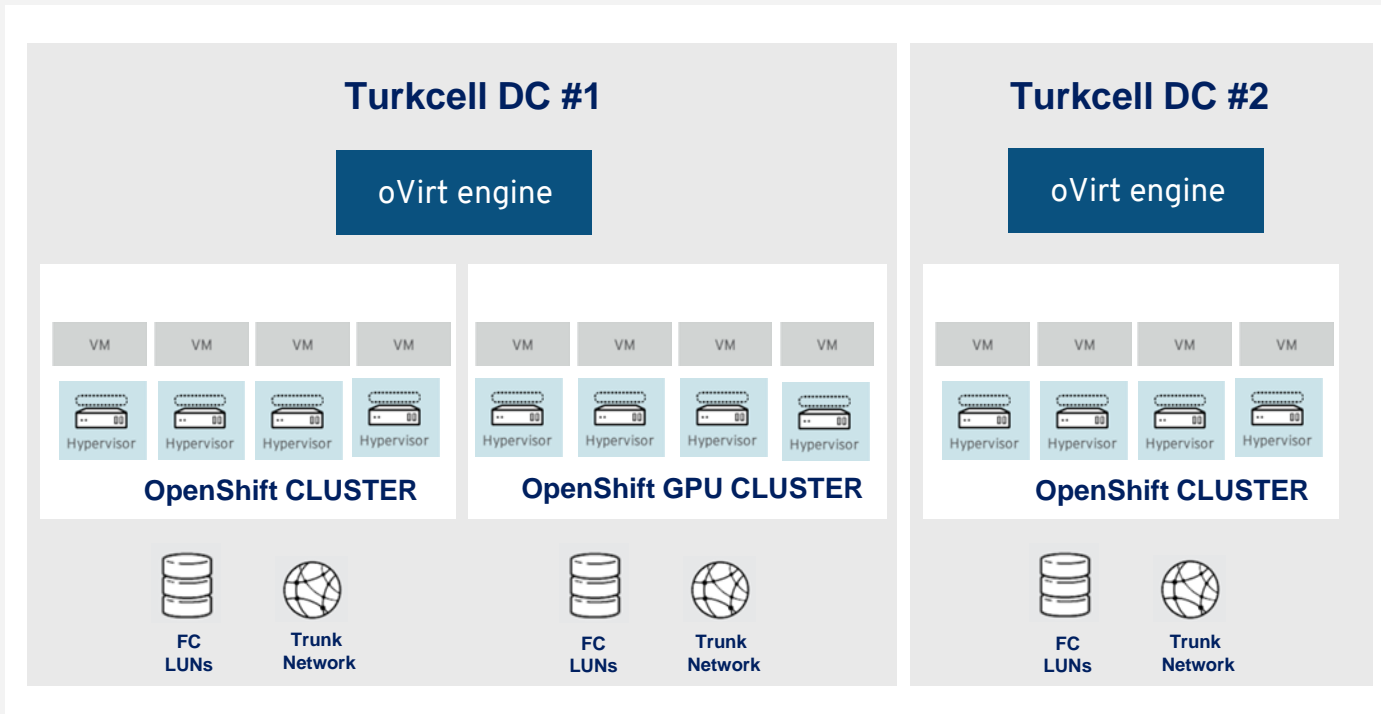
4. Private Cloud Automation

- oVirt virtualization end-to-end integration over REST API
- Turkcell has its own orchestration development to support Private Cloud Infrastructure.
- Private Cloud solution has integration with Corporate Service Portal and Infra Platforms.



5. Go-Live RHV

- The success of oVirt migration is the key for RHV.
- RHV is used for OpenShift Platforms.
- This is an another story 😊





It would be
better, if

- **Migration**
 - oVirt supports v2v online migration
 - oVirt supports v2v RHEL 8 migration with v.4.3
- **Upgrade**
 - oVirt supports simple upgrade scenario from v.4.3 to v.4.4
- **Automation**
 - oVirt Guest Tools supports to run external commands or provide outputs for external



oVirt

Thank you!

<https://ovirt.org/>

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