

Tungsten Cluster Master Class

Intermediate: Multi Cluster Topologies – Composite Active-Passive

Chris Parker

VP of Customer Success, EMEA

Topics

In this short course, we will

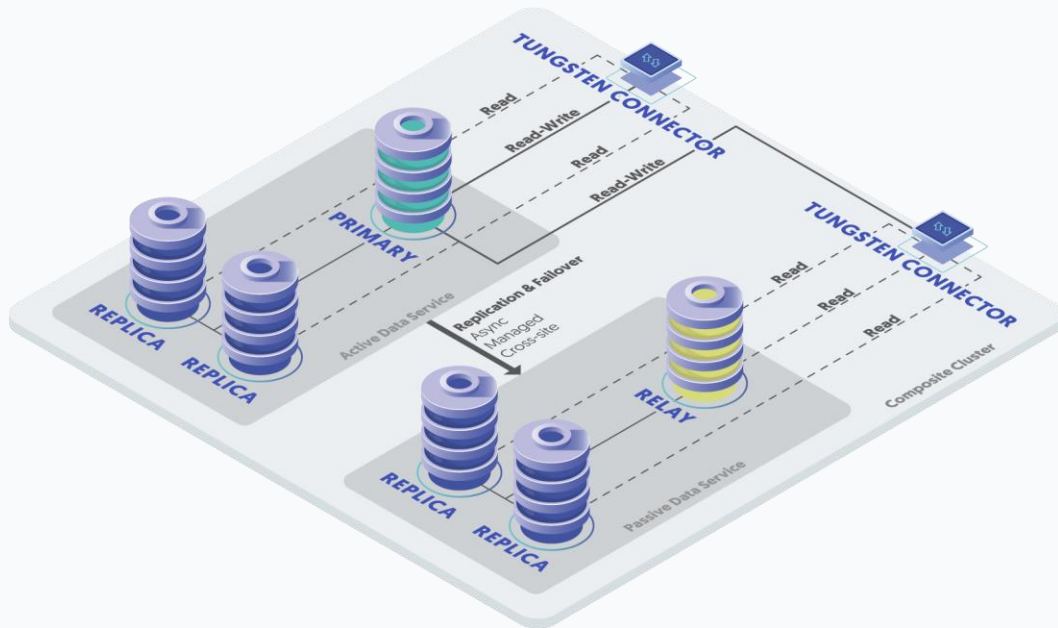
- Review Composite Active-Passive Topology
- Explore additional considerations
- Study the Configuration
- See an installation in practice

Topologies

Tungsten Cluster

Composite Active-Passive Topology

- Minimum 2 clusters
 - Min 3 nodes per cluster
- 1 Cluster for read/write (Active)
- All other clusters read-only (Passive)
- Can be Cross-Region
- Simple to use and implement
- Single, write-able Primary
- Managed cross-site replication
- Often used for Disaster Recovery



Configuration Considerations

Installation Considerations

- All usual Pre-Reqs need to be in place
- Network Connectivity
- Network Latency between clusters
- Connector Behaviour

Sample Configs

Composite Active/Passive

- One Cluster identified as the Active cluster
- All other clusters are Passive clusters
- Passive clusters can service reads to Connectors
- All writes, from any Connector, will go to Primary host in Active Cluster
- The Relay node in Passive Clusters becomes the Primary during Switch
- Moving the Primary role to any Passive Cluster is a single ``switch`` command in `cctrl`
- FAILOVER between clusters is NOT Automatic
 - This avoids potential flapping if network between remote clusters unstable.
 - Avoids Split-Brain
 - Handled with one or two simple commands in `cctrl`

```
[defaults]
user=tungsten
install-directory=/opt/continuent
profile-script=~/.bash_profile
connector-bridge-mode=false
application-user=app_user
application-password=secret
application-port=3306
application-readonly-port=3307
replication-user=tungsten
replication-password=secret
replication-port=13306
disable-security-controls=true
rest-apis=true
rest-api-authentication=true
rest-api-ssl=true
rest-api-address=0.0.0.0
rest-api-admin-pass=secret
rest-api-admin-user=tungsten
```

```
[alpha]
topology=clustered
master=db1
members=db1,db2,db3
connectors=db1,db2,db3
```

```
[beta]
topology=clustered
relay=db4
members=db4,db5,db6
connectors=db4,db5,db6
relay-source=alpha
```

```
[global]
composite-datasources=alpha,beta
```

Summary

What we have learnt today

- Reviewed Multi Cluster Use Topologies
- Understood Multi Cluster Architecture
- Explored Configuration Differences

Thank you for listening

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