

# RA01-1/2: High Availability within Data Center

## Architectural Points

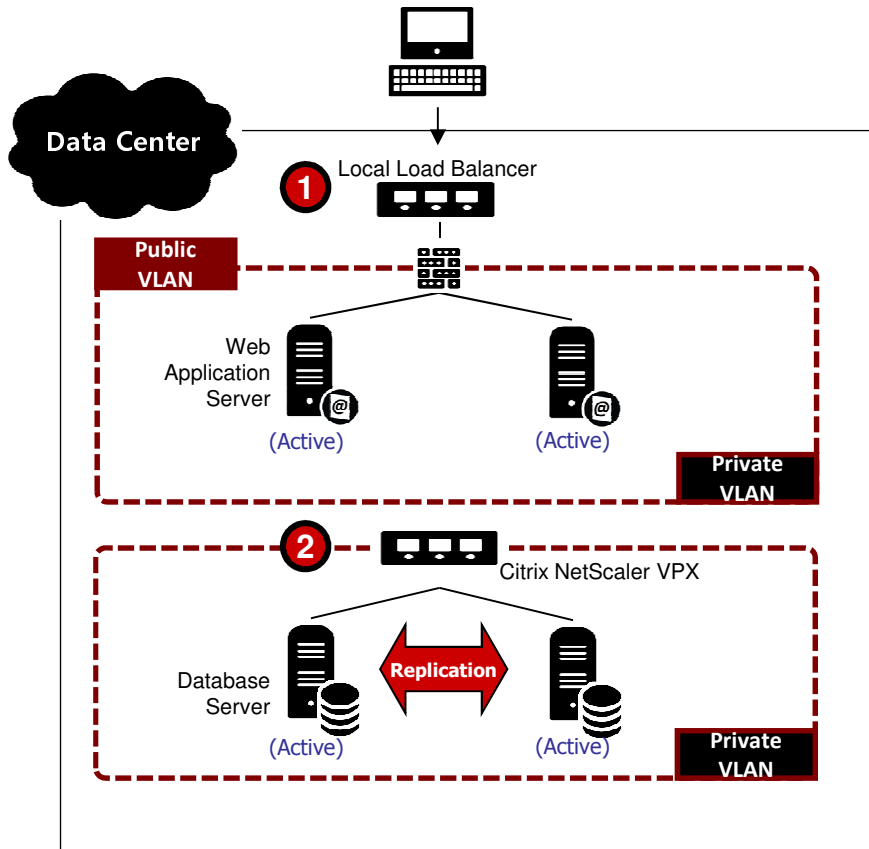
- High Availability and Fault Tolerance within Single Data Center
- Active-Active, Active-Standby Configuration

## Required Resources

Local Load Balancer  
Citrix NetScaler VPX

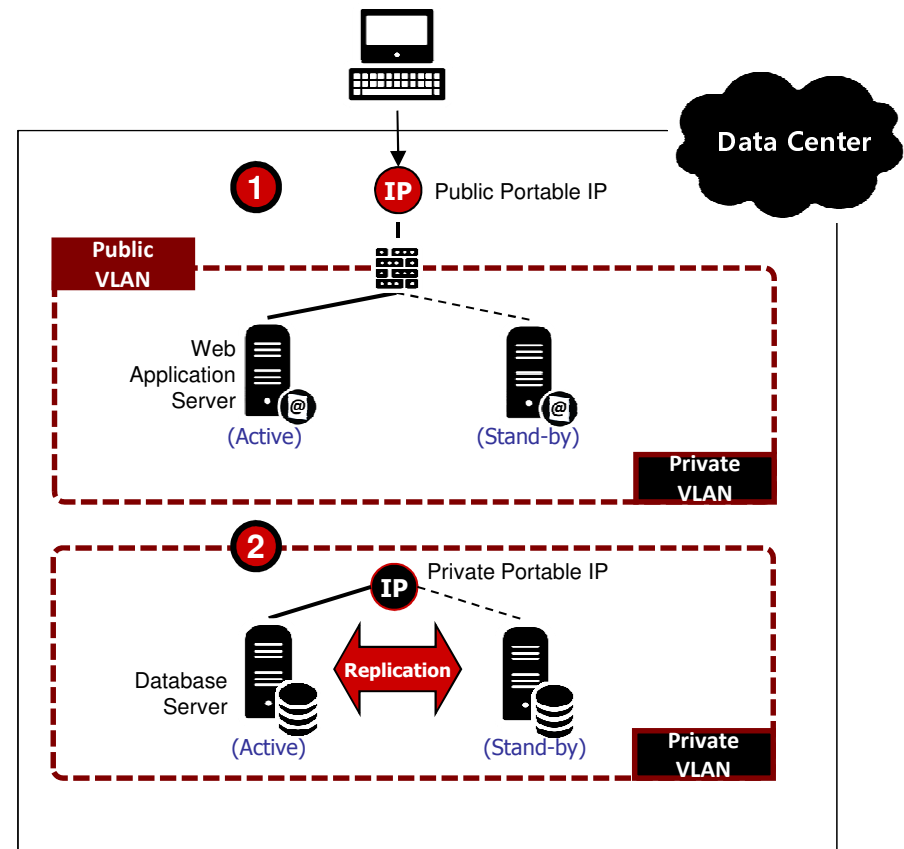
Public VLAN  
Private VLAN

Firewall  
Portable (Public/Private) IP



### Active-Active

1. **Local Load Balancer (LB)** routes the traffics to the Web Application Servers following the routing policy. **Local LB** monitors the health of Web Application Servers and automatically routes the traffic to other server when there's a failure.
2. DB servers can be provisioned in private only VLAN for additional security. **Citrix NetScaler VPX** can be used as a Private LB. **Private Portable IP** is required as a VIP. **Citrix NetScaler** routes the traffic to DB servers.



### Active-Stand By

1. Leveraging the Linux HA solution, HA cluster can be configured and **Public Portable IP** serves as an cluster VIP. HA Solution checks the heartbeat with either public & private IP and when there's failure standby server automatically takes over the portable Public IP.
2. DB servers can be provisioned in private only VLAN for additional security. Same configuration can be applied with additional replication features to the DB clusters and **Private Portable IP** serves as an cluster VIP.