

# GALAXY REDUNDANT SERVER SOLUTION

## System Overview



# INTRODUCTION OF REDUNDANT SERVER SOLUTION

Galaxy Control Systems offers a turnkey redundant server solution using two prebuilt servers. One server will host the System Galaxy virtual environment while the second server is standing by. If a hardware failure occurs, the System Galaxy virtual environment can automatically be moved to the second server to ensure maximum up-time.

## TERMS & DEFINITIONS USED IN THIS GUIDE

<b>Host (Source Server )</b>	Server that is actively running the System Galaxy virtual machine
<b>Host (Target Server)</b>	Server that takes the role of the backup server, standing by to host the System Galaxy virtual machine from the source server
<b>Virtual Machine (VM)</b>	Virtual environment where System Galaxy runs

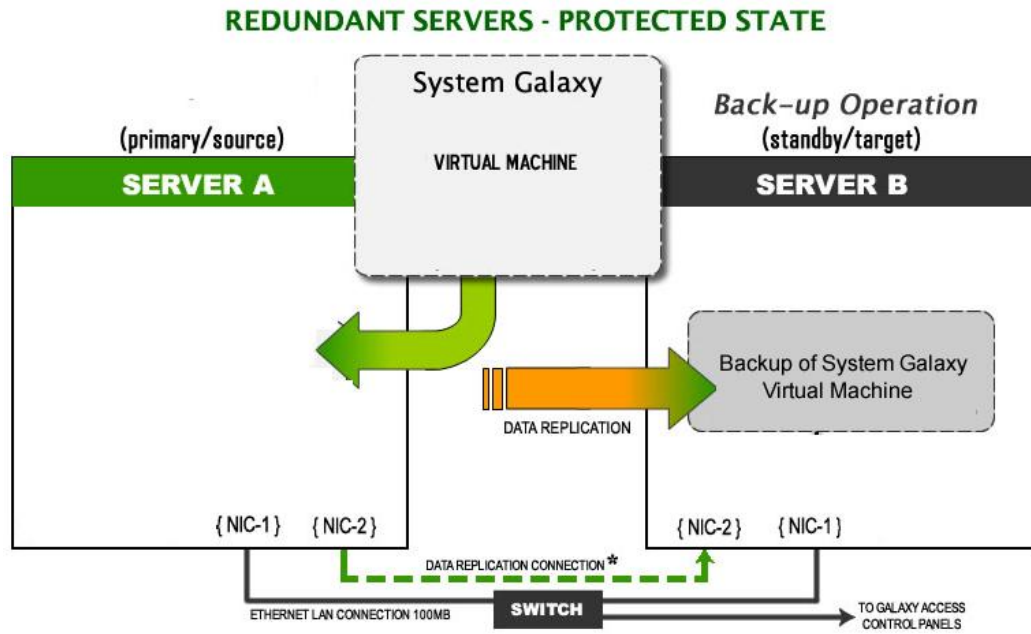
## SOFTWARE

- Windows Server 2008r2 STD or higher
- Double-take Availability for Hyper-v
- Hyper-V rolled enabled on each Host server

## HARDWARE/NETWORK

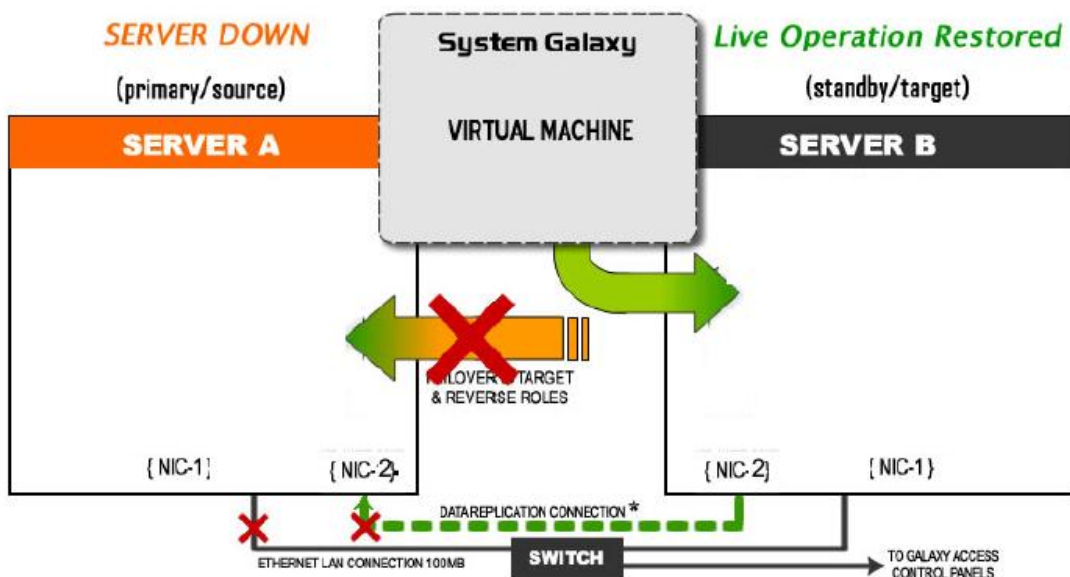
- HD - 1 TB (RAID 1)
- Memory - 16GB RAM
- Processor - 4 core processor
- IP Addresses - 3 static IP Addresses are required, one for each host server and one for the Virtual Machine. A dedicated network is recommended for redundancy to ensure network bandwidth. Typically, the second NIC card on the servers can be used for replication and redundancy.

## Redundant Servers in their Initial Roles



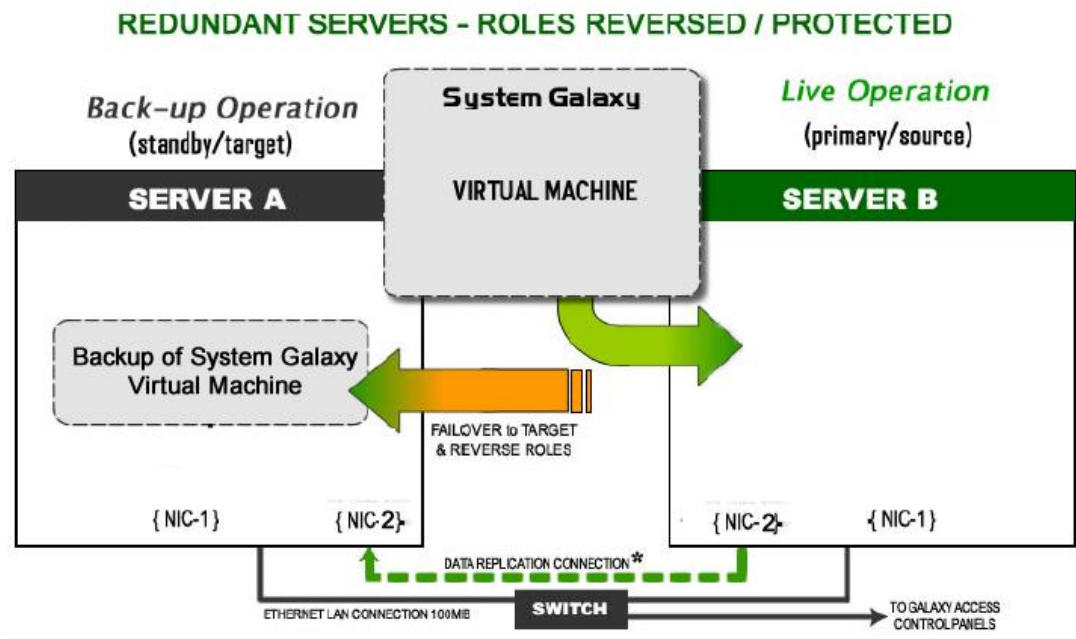
- Server A, operating as the *source*, will run the System Galaxy virtual environment
- Server B, operating in the *standby role (target)*, will monitor and maintain replication of the System Galaxy Virtual environment
- Server B will perform a failover in the event of a catastrophic failure of Server A

## CONCEPT OF DATA REPLICATION IN FAILED-OVER STATE



- Server-A is no longer operating as the live/source
- Server-B is still the *standby/target server* but System Galaxy virtual environment is now operating live on the standby server
- There is no longer redundancy at this point. If Server B should fail, System Galaxy would no longer be available

## CONCEPT OF ROLES REVERSED & RESUME PROTECTED STATE



- Once the failure is resolved and Server-A is restored, the server roles can be reversed.
- Server-B becomes the live/source; and System Galaxy continues running normally on the guest OS of Server-B
- Server-A becomes the standby/target

For more detailed information please use the **Galaxy Redundant Server Solution User's Guide**.