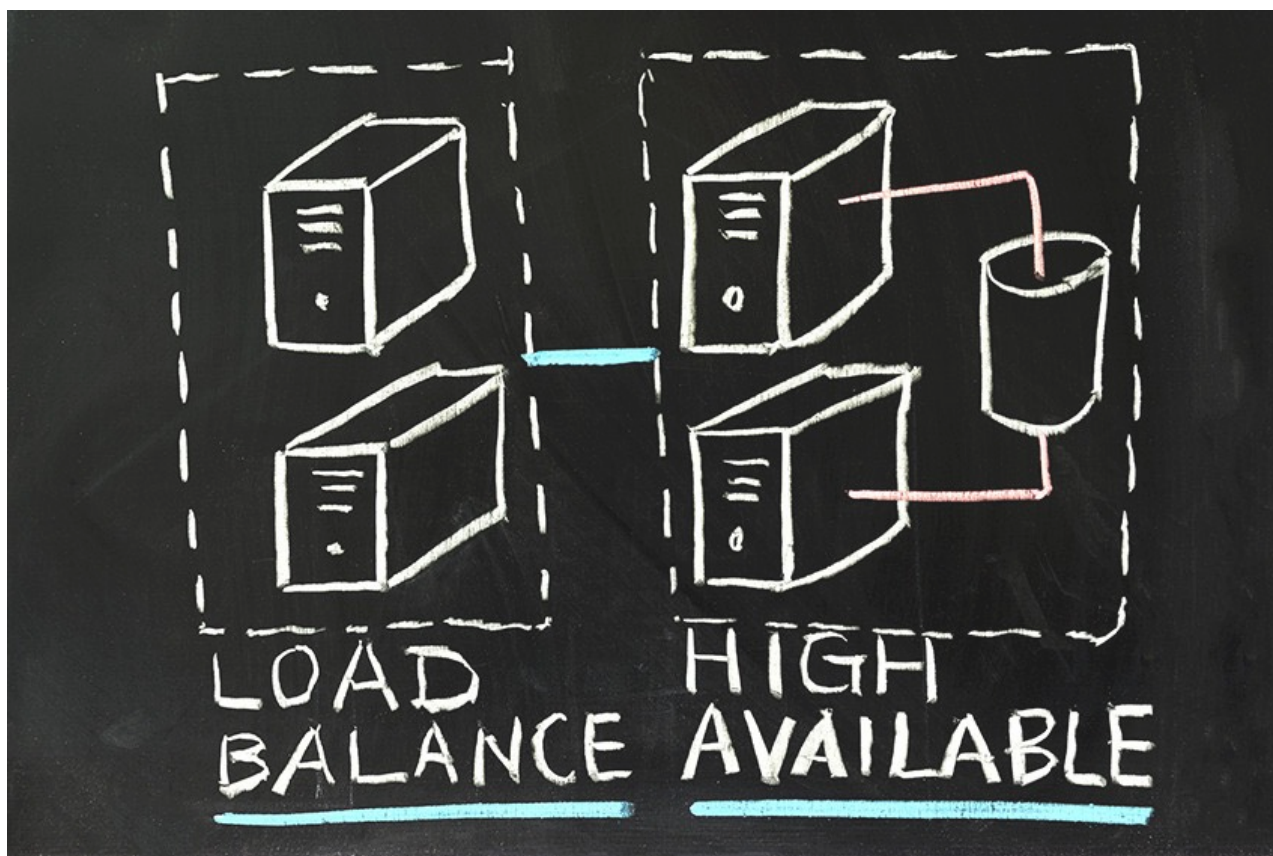

High Availability Solutions for SAP infrastructure

Complex «Clustered Solutions» with a flexible approach

SBAS Consulting. We build reliable solutions with high efficiency



What is High Availability for SAP

HA for SAP installations (Clusters) help you to decrease the system unavailability caused by planned or unplanned downtime. Cluster is an entity which controls, monitors and manages the entire SAP installation, helping you to achieve the best possible availability figures. In order to successfully implement the Cluster, SPOFs (single point of failures) should be identified and addressed properly.

SAP comprise the following components that are the SPOFs:

- * Message Server
- * Enqueue table
- * Database
- * Storage/File systems
- * Network connectivity

There are a lot of variations of clustered solutions on the market. SBAS Consulting is here to help you to chose the proper one and implement it with minimal efforts and downtime. We know how it works.

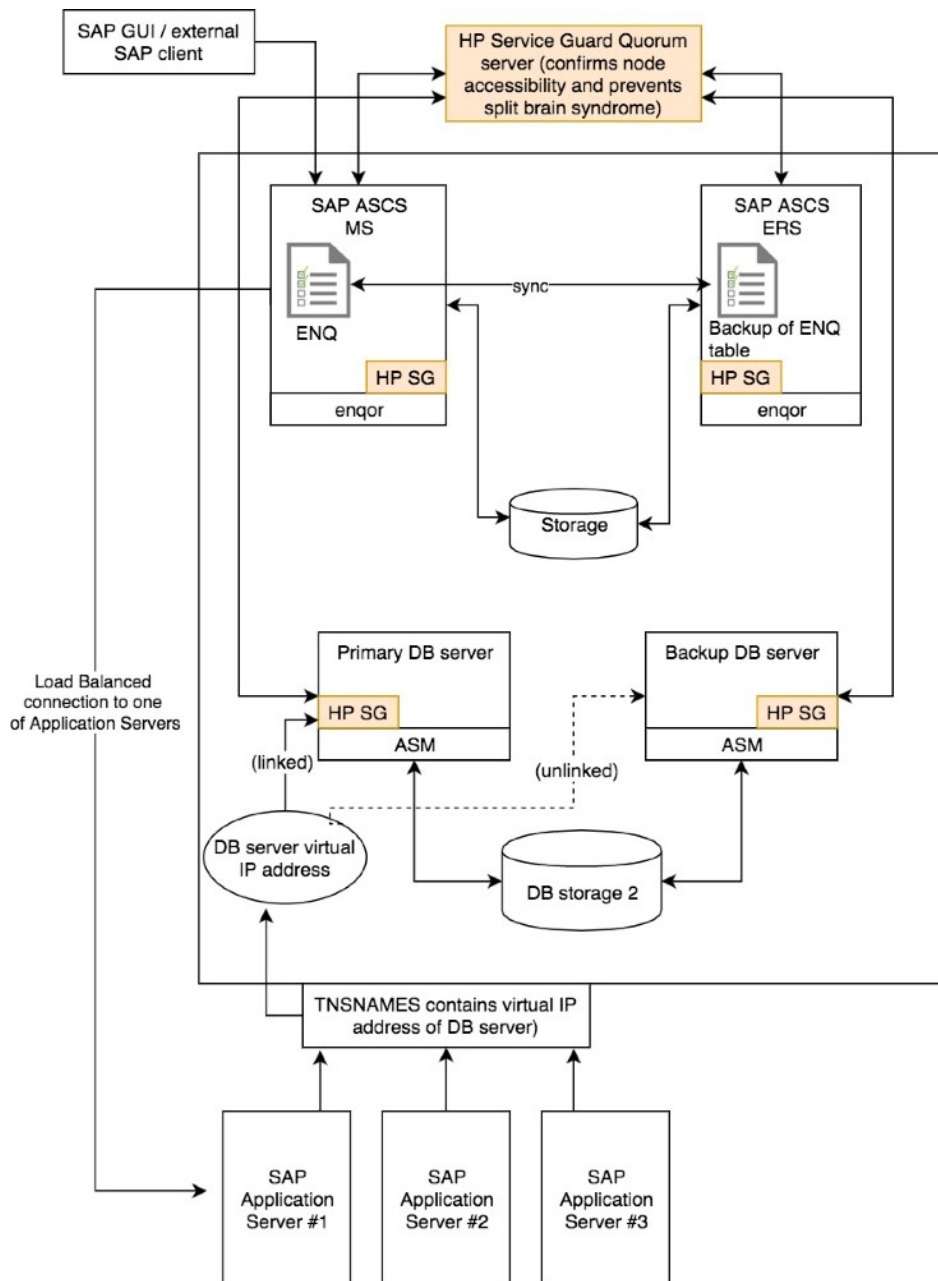


We can build flexible HA architecture in accordance to your needs and budget. Go through the next two pages to see examples of what we have already done for our clients or contact us to get the consultation on your case if you have any concerns.

HP ServiceGuard cluster

HP SG protects SAP ENQ table and Message Server availability. Restarts Database on Backup node (in case of failure on primary DB host). Optionally can manage Application Servers. ASCS will be restarted immediately without service interruption.

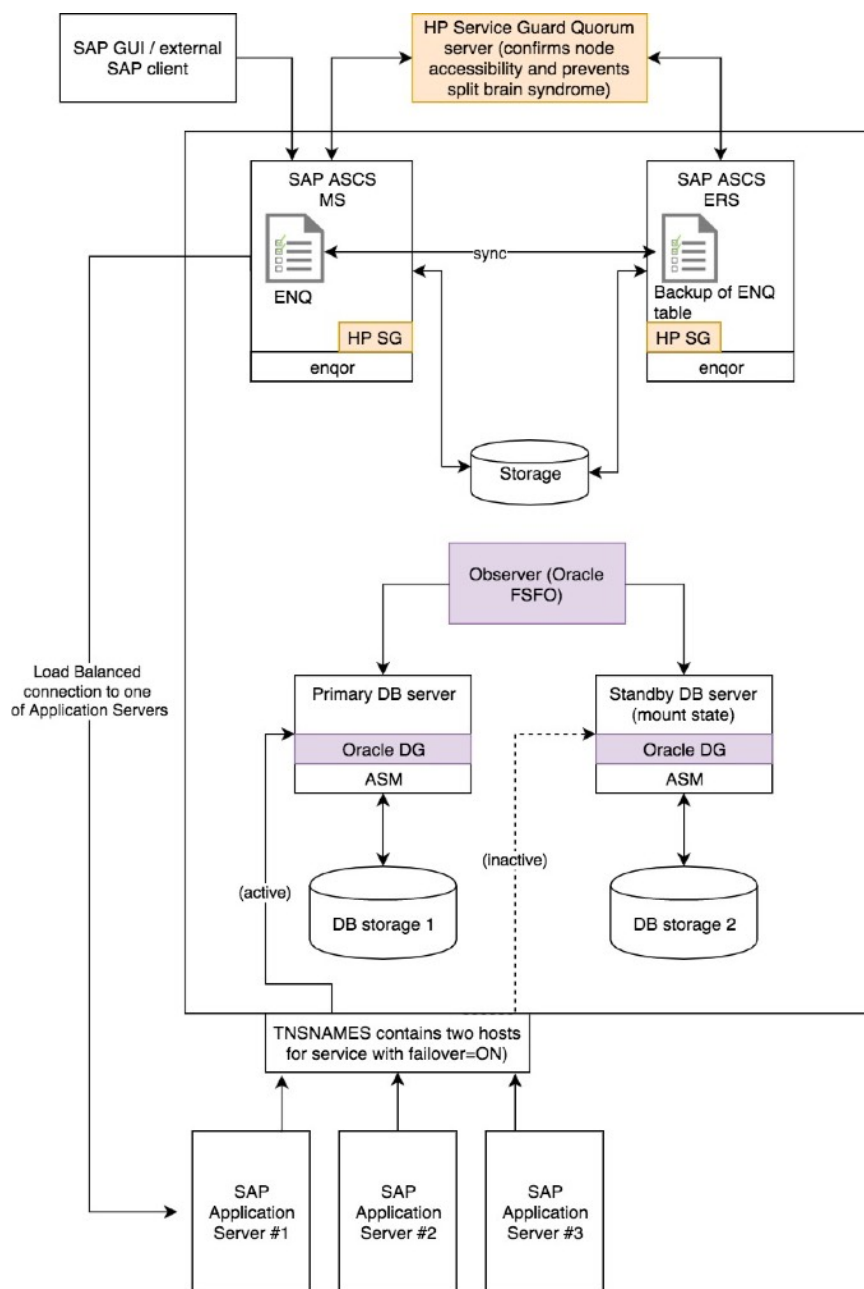
In case of hardware failure / program error on DB node, service should be restored automatically during ~2 minutes. All active transactions will be rolled back.



HP SG cluster + Oracle FSFO

HP ServiceGuard protects SAP ENQ table and Message Server availability and optionally can manage SAP Application Servers. ASCS will be restarted immediately without service interruption.

Database is managed by **Oracle Data Guard** and ready to open on Standby node. In case of hardware failure / program error on DB node, service should be restored much faster during ~7-15 seconds. All active transactions will be rolled back. User will be able to continue the activities and normally doesn't detect the service interruption in this configuration.



Trademarks used in the document:

Registered trademarks of SAP AG: SAP, Message Server (MS), Enqueue table, SAP ENQ, ASCS, ERS.

SAP logo is registered trademark of SAP AG.

Oracle® is the registered trademark of **Oracle Corp.**, California, USA.

Oracle DG (Data Guard), ASM, FSFO and logo are registered trademarks of **Oracle Corp.**, California, USA.

Linux is a registered trademark of **The Linux Foundation**

ServiceGuard, **HP SG**, **enqor** texts and logo are registered trademarks of HP Inc. (legal successor of Hewlett-Packard).

SBAS-Consulting does not own or produce any of above products, we just provide consulting services on SAP related products.