

Business Continuity for SAP on IBM Z

Automation, high availability, and disaster recovery for SAP on IBM Z

Business Continuity of an SAP production system is a critical business factor. It requires the highest possible level of system availability and data consistency. Continuous availability combines the characteristics of high availability (the ability to avoid unplanned outages by eliminating single points of failure) and continuous operation (the ability to avoid planned outages, such as for administrative or maintenance work). The goal is to keep the SAP system running 24x365.

The IBM Business Continuity solution is a set of best practices to help ensure business continuity for your SAP on IBM Z environment. These best practices are continuously being extended and verified to exploit applicable new features and functions of SAP applications, and other software and hardware.

The objectives of the IBM Business Continuity solution for SAP are:

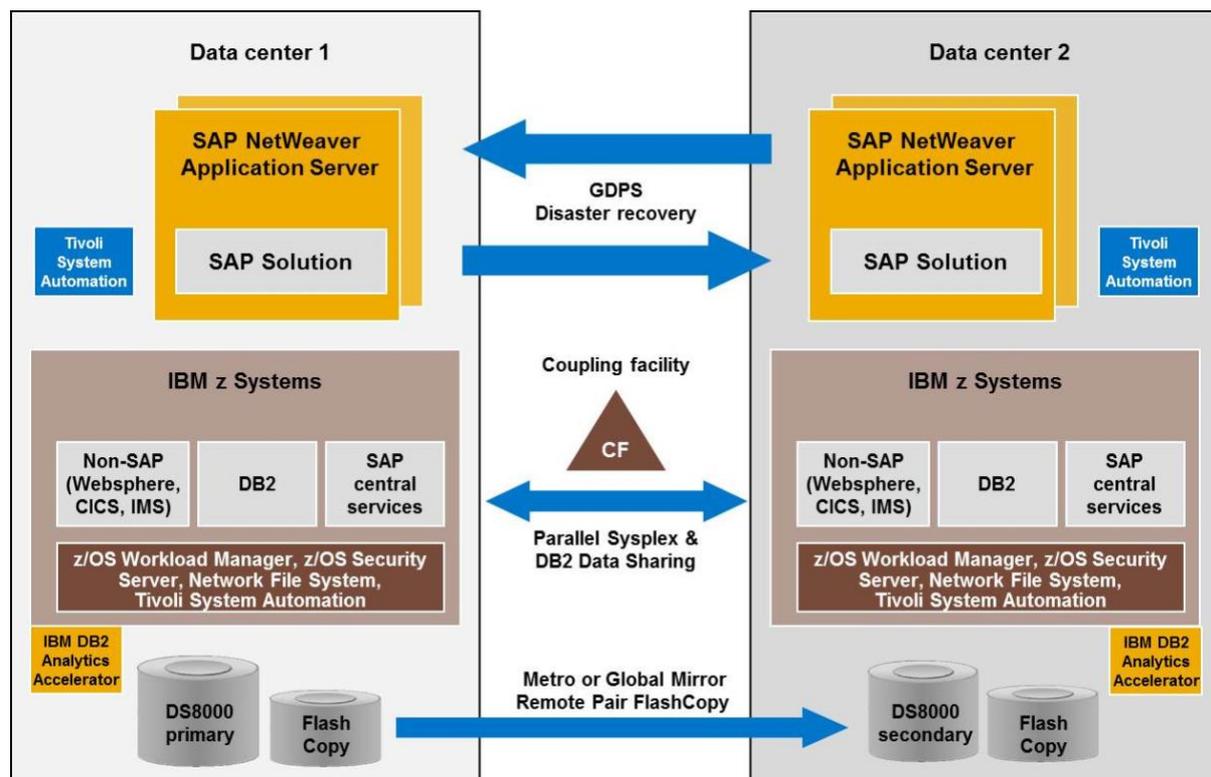
- Eliminating planned outages and providing continuous availability of the SAP system to end users
- Masking or minimizing the effects of unplanned outages
- Reducing operator errors
- Monitoring the status of SAP application components

The [Business Continuity for SAP on IBM Z, Edition 2022, SC33-8206-13](#) describes the IBM Business Continuity solution for SAP on Z. This solution is based on Geographically Dispersed Parallel Sysplex™ (GDPS®) which in turn is based on Db2 data sharing and [IBM System Automation for z/OS \(SA z/OS\)](#). SA z/OS provides the means for fully automating the management of all SAP components and related products running on z/OS, AIX, Windows, or Linux.

The integration with IBM System Automation is a major aspect of the SAP on Db2 Business Continuity solution. IBM System Automation for z/OS (SA z/OS) ensures high availability of systems and databases. System Automation automatically discovers system, application, and resource failures in a cluster. It uses sophisticated, policy-based knowledge about application components and their relationships, and availability goals to decide on corrective actions within the right context. SA z/OS manages availability of business applications, running in single systems and clusters under z/OS and can operate SAP Application Servers under Linux on IBM Z (SUSE and Red Hat), AIX, and others.

The following figure illustrates a reference configuration showing its redundant hardware setup and software stacks.

System setup for high availability and disaster recovery:



System Automation best practice policies for SAP on Z

These policies have been developed based on recommendations in the documentation 'Business Continuity for SAP on IBM Z'.

In order to control the SAP on IBM Z solution you need an automation policy and matching scripts, for example to start, stop, or monitor all SAP components. For SA z/OS the policy is shipped as the ***SAPSRV add-on policy** as part of the SA z/OS product. The automation scripts and procedures that are needed to operate this policy also come with the SA z/OS product.

Supplemental scripts that you may find useful depending on your environment, are available **on an "as is" basis** in the file [zSAP_BusinessContinuity.zip](#).

Verifying an SAP on IBM Z HA implementation with the SAP HA Test Tool

Find 'hands-on' assistance in testing and verifying the high availability of an SAP solution by using the SAP High Availability (HA) Test Tool in an [article](#) on the SAP Community Network (SCN).

The sample use cases described in this article can verify various aspects of high availability of an SAP on IBM Z Business Continuity environment. They can be used to initially check high availability, and after environment changes they can reassure high availability.

You can download specifically modified SAP HA Test Tool sample properties files and sample shell scripts that the article refers to here ([zSAP HA Test Tool Use Cases.zip](#)).