

Summary

Symptom

Support and special considerations for multiple applications on a single SAP HANA system.

Other terms

MCOD

Reason and Prerequisites

System landscape and deployment configuration planning in regards to SAP HANA, custom data marts in HANA, and various packaged applications designed to run on SAP HANA.

Solution

Support for multiple SAP HANA databases on a single SAP HANA appliance: see SAP note 1681092.

Support for multiple SAP HANA based applications running with a single SAP HANA system is described in the note you are currently reading. For definition of terms, please see "Appendix: Terminology".

This described scenario has also been called Multiple Components One Database (MCOD) in regards to other SAP applications.

Current Status: Multiple applications (or scenarios) running on one SAP HANA system

While there are some important exceptions (see "White List" below), in general, SAP generally **does not** currently support the deployment of multiple applications (or scenarios) within a single SAP HANA system in a production environment. Also note this means that SAP generally **does not** support a packaged application from SAP residing together in the same SAP HANA system as the scenario "Custom Data Marts".

Exceptions: Multiple application types in one production SAP HANA system. Please be advised that the following exceptions on the "White List" are valid with certain limitations; refer to the "further considerations" section below.

"White List": The following applications can run together with other applications on one production SAP HANA system ->

supported by SAP:

"Custom Data Marts"

SAP CO-PA Accelerator

ERP Operational Reporting with SAP HANA

SAP Finance and Controlling Accelerator: Material Ledger

SAP Finance and Controlling Accelerator: Production Cost Planning (aka
"CO-PC Accelerator")

"SAP NetWeaver BW powered by SAP HANA (BW on HANA). For more information,
refer to SAP note 1666670.

SAP Application Accelerator (aka "Suite Accelerator")

SAP Cash Forecasting

SAP Operational Process Intelligence

SAP Rapid Marts

Important: The aforementioned applications or scenarios can run together
in a production SAP HANA system, but customers must be aware of the
limitations and/or of running together in a single system, and these must
be taken into account(see "further considerations" below).

Also if running various combinations of applications or scenarios in a
non-production environment, the items in "further considerations" below are
also important and must be taken into account.

Further Considerations for:

- non-production environment use cases involving multiple applications on one SAP HANA system
- exceptional cases for production environments (where the applications that are supported to run together on one SAP HANA system are deployed - refer to "Exceptions" section above)

Upgrades and patches:

- Applying SAP HANA support packages and revisions will affect all applications residing within the SAP HANA database or utilizing other SAP HANA components.
- Applications deployed on a single SAP HANA may have to be patched and/or upgraded at the same time due to direct dependencies on SAP HANA patch levels.
- Packaged Applications releases, support packages or patches may have direct dependencies on SAP HANA revisions, patches and support packages.
- Packaged applications may have independent release cycles to SAP HANA and may have independent timeline for support of SAP HANA release levels and support packages.

Resource allocation and capacity planning:

If you are running multiple applications on one SAP HANA system, there is a risk that one application's processing operations could consume a significant amount of available CPU and memory resources, thereby reducing the amount of such resources available for the processing operations of the other applications at a given point in time. Such contention for system resources may negatively impact performance of any one application's processing operations. Therefore, you must consider one application's impact on another.

An additive sizing approach is required for all applications running on a single SAP HANA system. This means that when performing capacity planning, you must determine the resource allocation needs for each application, then add them together to estimate the required sizing for your SAP HANA system. It is important to avoid underestimating sizing, as this will help mitigate the risk of performance issues due to contention for system resources.

System Management, Workload Management and Monitoring:

SAP HANA monitoring, debugging and support tools are not individual application or schema-specific, they are supported at the SAP HANA database level.

SAP HANA scale out distribution options (including node fail over) is offered at the database level, not at an individual application or component level.

Stopping and starting the database is a database wide operation.

Backup & Recovery:

- Backup and Recovery is currently supported only at the SAP HANA database and component level (e.g. SLT, Data Services) and not at a specific application level in an MCOD scenario. This means that a point-in-time recovery for the SAP HANA system will impact all applications residing on that SAP HANA system.

Please note that various point-in-time recovery scenarios (recovering SAP HANA or recovering a connected SAP Business Suite system) will likely entail re-initializing and re-loading replicated data into SAP HANA. Depending on data volume, this could be a time-consuming process.

Lifecycle management:

- All applications should be isolated from each other in separate database schemas.
- System copies of applications are not available at an individual applications level.

High Availability & Disaster Recovery:

- HA and Disaster Recovery is currently supported only at the SAP HANA database and component level (e.g. SLT, Data Services) and not at a specific application level.

Security:

- Customers are responsible for implementing security models to protect and/or isolate application artifacts (e.g. users, data, metadata, database objects).

Production support systems ("Break fix systems") and Quality assurance system:

- It is recommended that "break fix" and QA systems have the same configuration as the production system so that customers can replicate issues and test corrections in systems that are representative of the production environment.

Appendix: Terminology:

Definition: "SAP HANA Appliance": A single node server or a scale-out cluster of multiple server nodes running one or more SAP HANA system(s). An "SAP HANA Appliance" consists of hardware (server node(s)) and software (A "SID" - which is a SAP HANA System, consisting of the database and its technology components).

Definition: "SAP HANA System": A distinct database and its supporting technology components, designated by a SID (System Identifier). While the terms "SAP HANA Database" and "SAP HANA System" are often used interchangeably, "SAP HANA System" refers to the database and the other technology components that run together with the database as a specific unit.

Types of SAP HANA Applications:

Definition: "Custom Data Marts":

When SAP HANA is deployed for custom data marts, SAP supports the deployment of multiple data marts in multiple schemas (or in the same schema) within a single SAP HANA database. Customers should be aware of the limitations that a single database system introduces and account for these (see "further considerations" below). Also note, from a conceptual standpoint, the scenario "Custom Data Marts" is treated in the same manner as the concept "single SAP packaged application running on SAP HANA".

Definition: "SAP Packaged Applications":

Various types of software components (independent software units) developed and delivered by SAP or SAP-certified ISV partners. This includes SAP HANA accelerator solutions such as the CO-PA accelerator, standalone applications such as Strategic Workforce Planning (SWP) etc, and any other applications built and delivered by SAP or certified ISVs.

Header Data

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SAP Note 1661202 - Support for multiple applications on SAP HANA

Category: Release planning information
Primary Component: BC-HAN-INS For HANA DB use BC-DB-HDB for HANA
Studio use BC-HAN-MOD

The Note is release-independent

Related Notes

Number	Short Text
1711177	Release restriction note for SAP Cash Forecasting 1.0
1681092	Multiple SAP HANA databases on one appliance
1666670	BW on SAP HANA - landscape deployment planning