



Feature Scope Description for SAP HANA

SAP HANA SPS11, January 2016

About this document

This feature scope description describes which features and documentation are available for the following editions and options (full use license):

- SAP HANA, base edition
- SAP HANA, platform edition
- SAP HANA, enterprise edition
- SAP HANA dynamic tiering
- SAP HANA smart data streaming
- SAP HANA, information management option
- SAP HANA, real-time replication option
- SAP Operational Process Intelligence powered by SAP HANA
- SAP HANA accelerator for SAP ASE option

Note that the editions, options, and additional capabilities mentioned in this document are subject to change without prior notice, and that additional license bundles and price list items might be available. The documentation of editions, options, and additional capabilities mentioned below might contain information about features that are not contained in the respective SAP HANA editions and options. To use SAP HANA editions, options and additional capabilities in a production system, you must purchase the appropriate software license from SAP. For more information, refer to your SAP contact.

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1 SAP HANA, BASE EDITION

SAP HANA is a full transactional, ACID compliant relational in-memory database with standard SQL support, designed to run transactions and analytics on a single copy of data, with maximum performance. SAP HANA, base edition provides the basic capabilities of the SAP HANA platform, such as the SQL, calculation, aggregation engines, and smart data access.

The following features are available with SAP HANA, base edition:

1.1 Database Services

Feature	Description
Store and access data in-memory and column-based	<ul style="list-style-type: none"> • Store data in-memory, thus optimizing data access • Store data in column-based tables or row-based tables • Allow online transaction processing (OLTP) and online analytical processing (OLAP) on one system, without the need for redundant data storage or aggregates • Decrease data footprint through data compression methods • Provide security of data at rest through encryption • Access data via SQL and provide procedural capabilities through SQLScript
Provision database	<ul style="list-style-type: none"> • Install an SAP HANA system including all additional components • Configure network communication in the SAP HANA system landscape • Update and configure components of an SAP HANA system landscape • Store data in multitenant database containers to separate tenant data areas within one SAP HANA system • Ensure secure system and data access through encryption of data communication in the network, user authentication and authorization, and auditing of critical system activity
Scale system load	<ul style="list-style-type: none"> • Use multicore technology for performance optimization and parallelized computations • Partition tables over several SAP HANA hosts to distribute the system load and scale applications • Distribute schemas and tables to different servers to scale data
Ensure high availability and disaster recovery	<ul style="list-style-type: none"> • Start and stop an SAP HANA system • Ensure high availability and disaster recovery through backup and recovery mechanisms, and storage and system replication • Ensure fault recovery through service auto-restart and host auto-failover mechanisms
Monitor database and troubleshoot	<ul style="list-style-type: none"> • Receive alerts about potentially critical situations • Monitor system status, performance, and resource consumption using information collected by the internal monitoring infrastructure • Perform troubleshooting, error diagnosis and problem analysis using tracing and diagnosis tools
Model data	<ul style="list-style-type: none"> • Create database tables and data models • Create SAP HANA artefacts for complex data modeling

1.2 Integration Services

Feature	Description
Load data	<ul style="list-style-type: none"> • Upload or replicate data from various sources (csv, xls, xlsx)
Use data virtualization	<ul style="list-style-type: none"> • Create virtual tables in SAP HANA that point to tables in remote sources without replicating the data into SAP HANA, for example, directly accessing data from other databases or Hadoop clusters in the Hadoop Distributed File System (HDFS) and caching data there • Run queries on combined data sources in real time, including DML queries, with updates being written back to the remote source

1.3 Application Services

Feature	Description
Develop applications	<ul style="list-style-type: none"> • Create models and applications using tools provided with SAP HANA • Develop application using XS JavaScript • Expose data in the SAP HANA database using XMLA and OData • Create procedures and stored procedures using SQL and SQLScript
Run applications	<ul style="list-style-type: none"> • Run SAP applications delivered with SAP HANA • Run your custom applications built on SAP HANA
Manage lifecycle of applications	<ul style="list-style-type: none"> • Prepare applications, by creating repository packages and deliver units and setting up transports • Assemble and install applications and install add-on packages • Activate change recording • Automate configuration of applications

1.4 Documentation

The following documentation is available for SAP HANA, base edition:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal at http://help.sap.com/hana_platform/
- Information for developers on SAP Help Portal at http://help.sap.com/hana_platform/

2 SAP HANA, PLATFORM EDITION

SAP HANA, platform edition provides all capabilities of the SAP HANA, base edition. In addition, SAP HANA, platform edition provides additional capabilities for data warehousing, libraries for predictive algorithms and R integration, search and text mining, and use of spatial data.

The following additional features are available with SAP HANA, platform edition:

2.1 Data Warehousing Foundation

Feature	Description
Achieve smart data distribution across complex landscapes	<ul style="list-style-type: none"> • Obtain an overview of the system landscape, including memory utilization of the nodes as well as the system catalog with table grouping and partitioning information • Apply algorithms for balanced redistribution of table partitions across the nodes of an SAP HANA scale-out system landscape • Create and adjust configurations for redistribution of table partitions across the nodes on different levels of granularity • Generate redistribution plans and compare the simulated landscape with the actual system landscape • Schedule and execute redistribution plans • Analyze redistribution plan steps and redistribution run logs
Optimize the memory footprint of data in SAP HANA	<ul style="list-style-type: none"> • Explore data of source persistence objects to identify candidates for data relocation • Create storage destinations to specify instances of the storage stack to which data can be relocated • Create, adjust, and manage lifecycle profiles, principally by defining and validating data relocation rules to move data between SAP HANA, extended, Hadoop or SAP IQ tables • Schedule and execute data relocation runs • Analyze logs of executed data relocation runs

2.2 Predictive Application Library and R

Feature	Description
Use predictive algorithms and R	<ul style="list-style-type: none"> • Execute Predictive Application Library (PAL) algorithms and call an R server in data models and stored procedures

2.3 Advanced Data Processing

Feature	Description
Search in database	<ul style="list-style-type: none">• Conduct full-text search with support for 32 languages and binary files as well as linguistic and fuzzy (error-tolerant) search• Use search models• Conduct search queries via SQL, built-in procedures, and OData• Load binary files into SAP HANA using file loader functionality
Gain insights from text analysis	<ul style="list-style-type: none">• Conduct linguistic analysis, stemming, part-of-speech tagging• Extract entities such as persons and organizations as well as facts such as sentiments, mergers, and acquisitions• Use custom dictionaries and rules for domain-specific entity and fact extraction, for example, dictionaries for chemical substances or acquisition events
Conduct text mining	<ul style="list-style-type: none">• Identify similar documents, key terms of a document, and related terms• Categorize new documents based on a training corpus• Build up a correlation matrix and conduct principal component analysis

2.4 Spatial

Feature	Description
Store and retrieve geospatial data	<ul style="list-style-type: none">• Store, change, and retrieve geospatial data using SQL data types for geospatial data and ESRI shapefile format
Process geospatial data	<ul style="list-style-type: none">• Calculate measurements for objects, for example, distance, surface, area, perimeter, volume• Determine relationships of objects, for example, intersects, contains, within, adjacent, touches• Construct new objects, for example, buffer, format transformation, envelope, aggregation• Determine attributes of objects, for example, number of points, X value, spatial reference system• Construct geospatial data from text information

2.5 Documentation

The following documentation is available for SAP HANA, platform edition:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal
 - SAP HANA Platform (Core): http://help.sap.com/hana_platform
 - SAP HANA Data Warehousing Foundation: http://help.sap.com/hana_options_dwf
 - SAP HANA Predictive Analysis Library (PAL): http://help.sap.com/hana_platform (see the SAP HANA Predictive Analysis Library (PAL) Reference and R Integration Guide)
 - SAP HANA Advanced Data Processing: http://help.sap.com/hana_options_adp
 - SAP HANA Spatial: http://help.sap.com/hana_options_spatial
- Information for developers on SAP Help Portal at http://help.sap.com/hana_platform

3 SAP HANA, ENTERPRISE EDITION

SAP HANA, enterprise edition provides all the capabilities of the SAP HANA, base edition and the SAP HANA, platform edition. SAP HANA, enterprise edition provides additional integration capabilities such as smart data integration and replication, and includes the data distribution rights for exporting data out of SAP HANA to be consumed in third-party applications without named user requirements.

The following additional features are available with SAP HANA, enterprise edition:

3.1 SAP HANA Rules Framework

Feature	Description
Build solutions with automated decision services	<ul style="list-style-type: none">• Identify and map data elements for making decisions in the SAP HANA database, and create the application vocabulary• Transform and add computed attributes and functions to the vocabulary• Expose the vocabulary in a business-oriented manner to business experts• Write rules as textual expressions or decision tables• Define rules and rule services with output and actions• Define the rule consumption interfaces as rule services• Embed UI controls for rule-determination artifacts in consuming applications
Manage and automate business decisions	<ul style="list-style-type: none">• Use natural language notation for authoring rules• Save and manage rules and rule services directly in the SAP HANA repository• View rules and rule services in the system• Create and edit rule instances and rule services directly in the system• Simulate saved rules and rule services, and test results and output on the fly
Deploy and execute rules inside SAP HANA	<ul style="list-style-type: none">• Use compilers to translate rules into SAP HANA SQL statements that are grouped as services and deployed as stored procedures in SAP HANA with the relevant consumption interfaces for calling them

3.2 Smart Data Integration

Feature	Description
Replicate and transform data	<ul style="list-style-type: none">• Extract and replicate data from a variety of external systems in batch or real time, in the cloud or on premise, into SAP HANA target tables; sources include databases from SAP and other vendors as well as Hadoop clusters• Connect to sources and enable replication and transformation using standard or custom data provisioning adapters• Transform data using flowgraphs that can handle source data changes natively, in real time• Monitor data provisioning agents, remote subscriptions, and tasks

3.3 Landscape Transformation

Feature	Description
Initial load	<ul style="list-style-type: none">• Start the initial data load from the target SAP HANA system while the source system is active, adjusting the system load as necessary• Detect all updates done after the initial data load started and replicate these updates to the target system at the end of the initial upload automatically based on database-specific triggers
Delta Load	<ul style="list-style-type: none">• Replicate delta updates continuously in near real time

3.4 Documentation

The following documentation is available for SAP HANA, enterprise edition:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal and SAP Service Marketplace
 - SAP HANA Platform (Core): http://help.sap.com/hana_platform
 - SAP HANA Data Warehousing Foundation: http://help.sap.com/hana_options_dwf
 - SAP HANA Predictive Analysis Library (PAL): http://help.sap.com/hana_platform (see the SAP HANA Predictive Analysis Library (PAL) Reference and R Integration Guide)
 - SAP HANA Advanced Data Processing: http://help.sap.com/hana_options_adp
 - SAP HANA Spatial: http://help.sap.com/hana_options_spatial
 - Data Integrator Software: http://help.sap.com/hana_options_eim/ (see the sections on Smart Data Integration)
 - Landscape Transformation: http://help.sap.com/hana_options_replication (see the section “SAP HANA Trigger-Based Data Replication Using SAP LT Replication Server”)
 - SAP HANA Rules Framework:
https://service.sap.com/~form/sapnet?_SHORTKEY=00200797470000103845
- Information for developers on SAP Help Portal at http://help.sap.com/hana_platform

4 SAP HANA DYNAMIC TIERING

SAP HANA dynamic tiering is a native big data solution for SAP HANA. Dynamic tiering that adds smart, disk-based extended storage to your SAP HANA database. Dynamic tiering enhances SAP HANA with large volume, warm data management capability.

By using dynamic tiering to place hot data in SAP HANA in-memory tables, and warm data in extended tables, the highest value data remains in-memory, and cooler less-valuable data is saved in the extended store. This can reduce the size of your in-memory database.

The following features are available with SAP HANA dynamic tiering:

4.1 Dynamic Tiering Option Database Services

Feature	Description
Store and access data	<ul style="list-style-type: none"> • Store warm data on disk, in column-based extended tables • Provides state-of-the-art compression techniques, reducing the overall data footprint and particularly memory requirements, for disk-based storage for warm data • Convert HANA tables to extended tables • Move data between extended tables and HANA tables; move data into extended tables from an external source • Manage extended tables using SQL, the SAP HANA studio, or the SAP HANA cockpit • Monitor extended tables using SAP HANA studio or the SAP HANA cockpit • Load data using all data provisioning technologies supported by SAP HANA including (but not limited to) Smart Data Integration, the SAP Landscape Transformation replication server, and the SAP HANA, information management option
Provision database	<ul style="list-style-type: none"> • Install the dynamic tiering portion of an SAP HANA system • Configure the dynamic tiering connections as part of an overall SAP HANA system landscape • Update the SAP HANA dynamic tiering component of an SAP HANA system landscape • Provide user authorizations for different levels of data access
Ensure high availability and disaster recovery	<ul style="list-style-type: none"> • Provide backup and recovery mechanisms to ensure disaster recovery, including point-in-time recovery • Provide automatic and manual failover in both single container and multitenant database container SAP HANA systems
Monitor database and troubleshoot	<ul style="list-style-type: none"> • Monitor relevant system activities, such as CPU, disk, and memory usage, to address problems before they become critical • Receive alerts to identify critical system situations • Avoid unplanned system downtimes and address system problems by use of troubleshooting information

4.2 Integration Services

Feature	Description
Perform backup and restore operations	<ul style="list-style-type: none">• Back up SAP HANA dynamic tiering data routinely to ensure data integrity• Restore SAP HANA dynamic tiering data to a given state using point-in-time recovery

4.3 Application Services

Feature	Description
Develop applications	<ul style="list-style-type: none">• Develop applications that query and write to extended tables as an integrated part of the overall SAP HANA landscape

4.4 Documentation

The following documentation is available for SAP HANA dynamic tiering:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal: http://help.sap.com/hana_options_dt

5 SAP HANA SMART DATA STREAMING

The SAP HANA smart data streaming option processes high-velocity, high-volume event streams in real time, allowing you to filter, aggregate, and enrich raw data before committing it to your database.

With SAP HANA smart data streaming, you can accept data input from a variety of sources including data feeds, business applications, sensors, IT monitoring infrastructure, and so on, apply business logic and analysis to the streaming data, and store your results directly in SAP HANA.

The following features are available with SAP HANA smart data streaming:

5.1 Streaming Capabilities

Feature	Description
Query high-volume, high-velocity data streams	<ul style="list-style-type: none">Query high-volume, high-velocity data streams to extract data and perform real-time analytics before committing the data to SAP HANA
Guaranteed delivery	<ul style="list-style-type: none">Ensures that all data messages are received and handled through each step of the streaming project from the input adapter to the output adapter without any data loss
Visual interface for creating projects	<ul style="list-style-type: none">Allows non-technical users to build and run streaming projects without programming experience or knowledge thereof
Clustering	<ul style="list-style-type: none">Provides resource leveling for consistent and optimal throughputProvides redundancy, high availability, and data recovery in the event of a server outage
Analytical Functions	<ul style="list-style-type: none">Advanced analytic functions transform raw data into meaningful and actionable results
Machine learning	<ul style="list-style-type: none">Combine smart data streaming and machine learning algorithms (both supervised and unsupervised) to learn from and make predictions based on incoming data in real time without the need to store massive amounts of previously seen data
Edge data collection and analysis	<ul style="list-style-type: none">Deploy projects on remote gateway devices to gather, filter, and aggregate data from the edge of the enterprise and send it to an SAP HANA smart data streaming project through the Streaming Web Service running on a center or the cloud

5.2 Integration Services

Feature	Description
Schema discovery	<ul style="list-style-type: none"> Discover and automatically create a schema, stream, or window based on the format of the data from the data source to which your adapter connects
Standard adapters	<ul style="list-style-type: none"> Use a variety of adapters to connect external data sources and destinations with SAP HANA smart data streaming Configure input adapters to bring external data into a streaming project and output adapters to push data to external destination sources
Adapter toolkit	<ul style="list-style-type: none"> Develop custom adapters for use with SAP HANA smart data streaming and any external source you want to connect with
Data services	<ul style="list-style-type: none"> Store data services to simplify connections between SAP HANA smart data streaming and the SAP HANA database Use direct connections to store, retrieve, and query data in an SAP HANA database easily
Web service provider	<ul style="list-style-type: none"> Grants REST, SOAP, or WebSocket client applications access to smart data streaming projects
Streaming Web service	<ul style="list-style-type: none"> Provides HTTP-based access to SAP HANA smart data streaming using a scalable gateway Supports REST requests and WebSocket connections that grant client applications access to smart data streaming projects

5.3 Custom Application Development

Feature	Description
Continuous Computational Language	<ul style="list-style-type: none"> Provides a proprietary SQL-like language for developing continuous queries, which are executed continuously on data as it arrives Allows for a full complement of real-time data analytics with robust functionality
SDK	<ul style="list-style-type: none"> Use the C, Java, or .NET SDK to develop robust custom applications that publish to or subscribe from data streams within a streaming project

5.4 Administration Capabilities

Feature	Description
Manage and monitor projects, streams, adapters, and clusters	<ul style="list-style-type: none"> Monitor status of all running projects, streams, adapters, and clusters Start and stop projects, adapters, and streams Configure alerts to identify critical system situations Avoid unplanned system downtimes and address system problems by use of troubleshooting information
System replication	<ul style="list-style-type: none"> Set up a primary and secondary SAP HANA system with smart data streaming to ensure recovery for both streaming hosts and SAP HANA hosts in the event of a data center outage

5.5 Documentation

The following documentation is available for SAP HANA smart data streaming:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal at http://help.sap.com/hana_options_sds

6 SAP HANA, INFORMATION MANAGEMENT OPTION

The information management option for the SAP HANA platform offers data integration, data quality management, and information stewardship as native SAP HANA platform services, which simplifies the landscape and allows for better data management in both SAP HANA and non-SAP HANA applications while providing the basis for new data management applications from SAP and partners.

The following features are available with the SAP HANA information management option:

6.1 Information Management

Feature	Description
Smart data integration	<ul style="list-style-type: none">• Set up batch or real-time data replication scenarios in an easy-to-use web application (replication editor)• Perform real-time, high-speed data provisioning, bulk data movement, and federation• Perform smart data integration transformations using flowgraphs with new nodes in the flowgraph editors in SAP HANA studio and Web-based Development Workbench• Use a data provisioning agent that hosts data provisioning adapters, which enable data federation, replication, and transformation scenarios for on-premise or in-cloud deployments• Use built-in data provisioning adapters for connectivity to remote sources and create custom adapters with an SDK• Monitor data provisioning agents, remote subscriptions and data loads
Smart data quality	<ul style="list-style-type: none">• Perform real-time, high-speed data cleansing, address cleansing, and geospatial data enrichment• Perform data quality tasks, such as address cleansing, data cleansing, and geocoding using nodes in the SAP HANA studio application function modeler and Web-based Development Workbench

6.2 Documentation

The following documentation is available for the SAP HANA, information management option:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal at http://help.sap.com/hana_options_eim

7 SAP HANA, REAL-TIME REPLICATION OPTION

This option allows customers to use the runtime license of SAP Landscape Transformation replication server, SAP Replication Server, and SAP SQL Anywhere capabilities to replicate data from any supported source to the SAP HANA database in real time.

The following features are available with the SAP HANA real-time replication option:

7.1 Landscape Transformation

Feature	Description
Initial load	<ul style="list-style-type: none">• Start the initial data load from the target SAP HANA system while the source system is active, adjusting the system load as necessary• Detect all updates done after the initial data load started and replicate these updates to the target system at the end of the initial upload automatically based on database-specific triggers
Delta Load	<ul style="list-style-type: none">• Replicate delta updates continuously in near real time

7.2 Remote Data Synchronization

Feature	Description
Synchronize data	<ul style="list-style-type: none">• Synchronize data between SAP SQL Anywhere remote databases and SAP HANA with two-way, session-based, configurable data replication• Ensure scalability with load balancing and connection pooling with the consolidated database• Use tools to monitor synchronizations, logging and error handling• Ensure security with end-to-end encryption and built-in or custom authentication

7.3 Documentation

The following documentation is available for the SAP HANA, real-time replication option:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal at http://help.sap.com/hana_options_replication

8 SAP OPERATIONAL PROCESS INTELLIGENCE

SAP Operational Process Intelligence powered by SAP HANA is a platform that enables you to create smart process applications that comprises business scenarios, workflows, rules, and tasks. These smart process applications enable business users to ensure a smooth running of their business processes and take necessary action to resolve any bottlenecks.

The following features are available with the Operation Process Intelligence Option:

8.1 Operation Process Intelligence Capabilities

Feature	Description
Model Business Scenarios	<ul style="list-style-type: none"> Model business scenarios that illustrate end-to-end business processes Correlate one or more processes and observe whether or not performance is on track Acquire visibility on orchestrated business processes from various SAP back-end systems
Model HANA Workflows	<ul style="list-style-type: none"> Model workflows with a subset of BPMN (Business Process Model and Notation) artifacts Transform a workflow definition into appropriate SAP HANA artifacts, leveraging the existing set of available engines in SAP HANA
Rules framework to build solutions with automated decision services	<ul style="list-style-type: none"> Use organization's data to build applications with automated business rules and decisions Use vocabularies and an English-like expression language to define conditions and outcomes Transform business rules into SQL statements and stored procedures in SAP HANA

8.2 SAP HANA Rules Framework

Feature	Description
Build solutions with automated decision services	<ul style="list-style-type: none"> Identify and map data elements for making decisions in the SAP HANA database, and create the application vocabulary Transform and add computed attributes and functions to the vocabulary Expose the vocabulary in a business-oriented manner to business experts Author rules as textual expressions or decision tables Define rules and rule services with output and actions Define the rule consumption interfaces as rule services Embed UI controls for rule-determination artifacts in consuming applications
Manage and automate business decisions	<ul style="list-style-type: none"> Use natural language notation for authoring rules Save and manage rules and rule services directly in the SAP HANA repository View rules and rule services in the system Create and edit rule instances and rule services directly in the system Simulate saved rules and rule services and test results and output on the fly
Deploy and execute rules inside SAP HANA	<ul style="list-style-type: none"> Use compilers to translate rules into SAP HANA SQL statements that are grouped as services and deployed as stored procedures in SAP HANA with the relevant consumption interfaces for calling them

8.3 Documentation

The following documentation is available for SAP Operational Process Intelligence:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal at <https://help.sap.com/hana-opint> and on SAP Service Marketplace at https://service.sap.com/~form/sapnet?_SHORTKEY=00200797470000103845 (SAP HANA Rules Framework)

9 SAP HANA ACCELERATOR FOR SAP ASE OPTION

The accelerator for SAP ASE adds analytics acceleration to the SAP ASE database engine leveraging SAP HANA. SAP ASE users can run reports in SAP HANA using the data in SAP ASE for real-time analytics by either replicating the data from SAP ASE to SAP HANA, or by creating virtual tables in SAP HANA which access SAP ASE data.

You can also use the SAP HANA accelerator for SAP ASE to accelerate SAP ASE stored procedures (not OTLP applications) by pushing down the stored procedure execution to SAP HANA. Minimal or no code changes to the existing stored procedures are needed. The stored procedures continue to execute against the SAP ASE reporting server with the execution being pushed to SAP HANA. The results are brought back to SAP ASE and then sent to the client SAP ASE application.

The following features are available with the SAP HANA accelerator for SAP ASE:

9.1 Accelerator for SAP ASE

Feature	Description
Integrated analytics	<ul style="list-style-type: none"> Run reports and analyze data in SAP HANA using the data in SAP ASE by either replicating the data from SAP ASE to SAP HANA or by creating virtual tables in SAP HANA that point to SAP ASE
Accelerate existing SAP ASE reporting applications	<ul style="list-style-type: none"> Accelerate existing SAP ASE reporting applications such as stored procedures and queries using SAP HANA; while the client applications continue to run against SAP ASE, the reporting logic is pushed to HANA for execution
Backup database	<ul style="list-style-type: none"> Perform a full database dump, transaction log dump, or a cumulative dump
Restore database	<ul style="list-style-type: none"> Restore a full database dump, transaction log dump, a cumulative dump, or restore a database from a point in time
Monitor database	<ul style="list-style-type: none"> Monitor relevant system activities, such as CPU, disk, and memory usage, to address problems before they become critical Receive alerts to identify critical system situations
Manage devices	<ul style="list-style-type: none"> Add, modify, mirror, or remove database devices
Configuration of servers	<ul style="list-style-type: none"> Configure an SAP ASE server for a wide range of services, from basic to specific server operations, and for performance tuning
Manage SAP ASE users, roles, and logins	<ul style="list-style-type: none"> Add or remove users to or from a login account Grant or revoke roles to or from login accounts Provide user authorization for data access
High availability and disaster recovery	<ul style="list-style-type: none"> Provide backup and recovery mechanisms to ensure disaster recovery

9.2 Documentation

The following documentation is available for the SAP HANA accelerator for SAP ASE:

- Information for administrators about installation, configuration, operations, and security on SAP Help Portal: http://help.sap.com/hana_options_ets

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