Use Azure to host and run SAP workload scenarios

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When you use Microsoft Azure, you can reliably run your mission-critical SAP workloads and scenarios on a scalable, compliant, and enterprise-proven platform. You get the scalability, flexibility, and cost savings of Azure. With the expanded partnership between Microsoft and SAP, you can run SAP applications across development and test and production scenarios in Azure and be fully supported. From SAP NetWeaver to SAP S/4HANA, SAP BI on Linux to Windows, and SAP HANA to SQL Server, Oracle, Db2, etc., we've got you covered.

Besides hosting SAP NetWeaver and S/4HANA scenarios with the different DBMS on Azure, you can host other SAP workload scenarios, like SAP BI on Azure. Our partnership with SAP resulted in a variety of integration scenarios with the overall Microsoft ecosystem. Check out the **dedicated Integration section** to learn more.

We just announced our new services of Azure Center for SAP solutions and Azure Monitor for SAP solutions 2.0 entering the public preview stage. These services will give you the possibility to deploy SAP workload on Azure in a highly automated manner in an optimal architecture and configuration. And monitor your Azure infrastructure, OS, DBMS, and ABAP stack deployments on one single pane of glass.

For customers and partners who are focused on deploying and operating their assets in public cloud through Terraform and Ansible, use our SAP on Azure Deployment Automation Framework to jump start your SAP deployments into Azure using our public Terraform and Ansible modules on github .

Hosting SAP workload scenarios in Azure also can create requirements of identity integration and single sign-on. This situation can occur when you use Azure Active Directory (Azure AD) to connect different SAP components and SAP software-as-a-service (SaaS) or platform-as-a-service (PaaS) offers. A list of such integration and single sign-on scenarios with Azure AD and SAP entities is described and documented in the section "Azure AD SAP identity integration and single sign-on."

Changes to the SAP workload section

Changes to documents in the SAP on Azure workload section are listed at the end of this article. The entries in the change log are kept for around 180 days.

You want to know

If you have specific questions, we're going to point you to specific documents or flows in this section of the start page. You want to know:

- Is Azure accepting new customers for HANA Large Instances? HANA Large Instance service is in sunset mode and doesn't accept new customers anymore. Providing units for existing HANA Large Instance customers is still possible. For alternatives, check the offers of HANA certified Azure VMs in the HANA Hardware Directory .
- Can Azure Active Directory accounts be used to run the SAP ABAP stack in Windows guest OS. No, due to shortcomings in feature set of AAD, it can't be used for running the ABAP stack within the Windows guest OS
- What Azure Services, Azure VM types and Azure storage services are available in the different Azure regions, check the site Products available by region
- Are third-party HA frameworks, besides Windows and Pacemaker supported? Check bottom part of SAP support note #1928533
- What Azure storage is best for my scenario? Read Azure Storage types for SAP workload
- Is the Red Hat kernel in Oracle Enterprise Linux supported by SAP? Read SAP SAP support note #1565179
- Why are the Azure Da(s)v4/Ea(s) VM families not certified for SAP HANA? The Azure Das/Eas VM families are based on AMD processor-driven hardware. SAP HANA doesn't support AMD processors, not even in virtualized scenarios
- Why am I still getting the message: 'The cpu flags for the RDTSCP instruction or the cpu flags for constant_tsc or nonstop_tsc aren't set or current_clocksource and available_clocksource aren't correctly configured' with SAP HANA, despite the fact that I'm running the most recent Linux kernels. For the answer, check SAP support note #2791572
- Where can I find architectures for deploying SAP Fiori on Azure? Check out the blog SAP on Azure: Application Gateway Web Application Firewall (WAF) v2 Setup for Internet facing SAP Fiori Apps

Documentation space

In the SAP workload documentation space, you can find the following areas:

- **Integration with Microsoft Services** and **References** contain different links to integration scenarios between SAP and other Microsoft services. The list may not be complete.
- **SAP on Azure Large Instances**: This documentation section is covering a bare-metal service that originally was named HANA Large Instances. Different topics around this technology are covered in this section
- **Plan and Deploy (Azure VMs)**: Deploying SAP workload into Azure Infrastructure as a Service, you should go through the documents in this section first to learn more about the principle Azure components used and guidelines
- **Storage (Azure VMs)**: This section includes documents that give recommendations how to use the different Azure storage types when deploying SAP workload on Azure
- **DBMS Guides (Azure VMs)**: The section DBMS Guides covers specifics around deploying different DBMS that are supported for SAP workload in Azure IaaS
- **High Availability (Azure VMs)**: In this section, many of the high availability configurations around SAP workload on Azure are covered. This section includes detailed documentation around deploying Windows clustering and Pacemaker cluster configuration for the different SAP components and different database systems
- **Automation Framework (Azure VMs)**: Automation Framework documentation is covering a Terraform and Ansible based automation framework that allows automation of Azure infrastructure and SAP software
- **Azure Monitor for SAP solutions**: Microsoft developed monitoring solutions specifically for SAP supported OS and DBMS, as well as S/4HANA and NetWeaver. This section documents the deployment and usage of the service

Change Log

- April 25, 2023: Adjust mount options in HA for HANA Scale-up with ANF on SLES, HANA scale-out with standby node with ANF on SLES, HA for HANA Scale-out HA on SLES, HA for HANA scale-up with ANF on RHEL, HANA scale-out with standby node on Azure VMs with ANF on RHEL, HA for HANA scale-out on RHEL, HA for SAP NW on SLES with ANF , HA for SAP NW on RHEL with ANF and HA for SAP NW on SLES with simple mount and NFS
- April 6, 2023: Updates for RHEL 9 in Setting up Pacemaker on RHEL in Azure
- March 26, 2023: Adding recommended sector size in SAP HANA Azure virtual machine Premium SSD v2 storage configurations

- March 1, 2023: Change in HA for SAP HANA on Azure VMs on RHEL to add configuration for cluster default properties
- February 21, 2023: Correct link to HANA hardware directory in SAP HANA infrastructure configurations and operations on Azure and fixed a bug in SAP HANA Azure virtual machine Premium SSD v2 storage configurations
- February 17, 2023: Add support and Sentinel sections, few other minor updates in RISE with SAP integration
- February 02, 2023: Add new HA provider susChkSrv for SAP HANA Scale-out HA on SUSE and change from SAPHanaSR to SAPHanaSrMultiTarget provider, enabling HANA multi-target replication
- January 27, 2023: Mark Azure Active Directory Domain Services as supported AD solution in SAP workload on Azure virtual machine supported scenarios after successful testing
- December 28, 2022: Update documents Azure Storage types for SAP workload and NFS v4.1 volumes on Azure NetApp Files for SAP HANA to provide more details on ANF deployment processes to achieve proximity and low latency. Introduction of zonal deployment process of NFS shares on ANF
- December 28, 2022: Updated the guide SQL Server Azure Virtual Machines DBMS deployment for SAP NetWeaver across all topics. Also added VM configuration examples for different sizes of databases
- December 27, 2022: Introducing new configuration for SAP ASE on E96(d)s_v5 in SAP ASE Azure Virtual Machines DBMS deployment for SAP workload
- December 23, 2022: Updating Considerations for Azure Virtual Machines DBMS deployment for SAP workload by cutting references to Azure standard HDD and SSD. Introducing premium storage v2 and updating a few other sections to more recent functionalities
- December 20, 2022: Update article SAP workload on Azure virtual machine supported scenarios with table around AD and AAD support. Deleting a few references to HANA Large Instances.
- December 19, 2022: Update article SAP workload configurations with Azure Availability Zones related to new functionalities like zonal replication of Azure Premium Files
- December 18, 2022: Add short description and link to intent option of PPG creation in Azure proximity placement groups for optimal network latency with SAP applications
- December 14, 2022: Fixes in recommendations of capacity for a few VM types in SAP HANA Azure virtual machine Premium SSD v2 storage configurations
- November 30, 2022: Added storage recommendations for Premium SSD v2 into SAP ASE Azure Virtual Machines DBMS deployment for SAP workload

- November 22, 2022: Release of Disaster Recovery guidelines for SAP workload on Azure - Disaster Recovery overview and infrastructure guidelines for SAP workload and Disaster Recovery recommendation for SAP workload.
- November 22, 2022: Update of SAP workloads on Azure: planning and deployment checklist to add latest recommendations
- November 18, 2022: Add a recommendation to use Pacemaker simple mount configuration for new implementations on SLES 15 in Azure VMs HA for SAP NW on SLES with simple mount and NFS, Azure VMs HA for SAP NW on SLES with NFS on Azure File, Azure VMs HA for SAP NW on SLES with Azure NetApp Files and Azure VMs HA for SAP NW on SLES
- November 15, 2022: Change in HA for SAP HANA Scale-up with ANF on SLES, SAP HANA scale-out with standby node on Azure VMs with ANF on SLES, HA for SAP HANA scale-up with ANF on RHEL and SAP HANA scale-out with standby node on Azure VMs with ANF on RHEL to add recommendation to use mount option `nconnect` for workloads with higher throughput requirements
- November 15, 2022: Add a recommendation for minimum required version of package resource-agents in High availability of IBM Db2 LUW on Azure VMs on Red Hat Enterprise Linux Server
- November 14, 2022: Provided more details about nconnect mount option in NFS v4.1 volumes on Azure NetApp Files for SAP HANA
- November 14, 2022: Change in HA for SAP HANA scale-up with ANF on RHEL and SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL to update suggested timeouts for `FileSystem` Pacemaker cluster resources
- November 07, 2022: Added HANA hook susChkSrv for scale-up pacemaker cluster in High availability of SAP HANA on Azure VMs on SLES, High availability of SAP HANA Scale-up with ANF on SLES
- November 07, 2022: Added monitor operation for azure-lb resource in High availability of SAP HANA on Azure VMs on SLES, SAP HANA scale-out with HSR and Pacemaker on SLES, Set up IBM Db2 HADR on Azure virtual machines (VMs), Azure VMs high availability for SAP NetWeaver on SLES for SAP Applications with simple mount and NFS, Azure VMs high availability for SAP NW on SLES with NFS on Azure File, Azure VMs high availability for SAP NW on SLES with Azure NetApp Files, Azure VMs high availability for SAP NetWeaver on SLES, High availability for NFS on Azure VMs on SLES, Azure VMs high availability for SAP NetWeaver on SLES multi-SID guide
- October 31, 2022: Change in HA for NFS on Azure VMs on SLES to fix script location for DRBD 9.0
- October 31, 2022: Change in SAP HANA scale-out with standby node on Azure VMs with ANF on SLES to update the guideline for sizing `/hana/shared`

- October 27, 2022: Adding Ev4 and Ev5 VM families and updated OS releases to table in SAP ASE Azure Virtual Machines DBMS deployment for SAP workload
- October 20, 2022: Change in HA for NFS on Azure VMs on SLES and HA for SAP NW on Azure VMs on SLES for SAP applications to indicate that we're de-emphasizing SAP reference architectures, utilizing NFS clusters
- October 18, 2022: Clarify some considerations around using Azure Availability Zones in SAP workload configurations with Azure Availability Zones
- October 17, 2022: Change in HA for SAP HANA on Azure VMs on SLES and HA for SAP HANA on Azure VMs on RHEL to add guidance for setting up parameter `AUTOMATED_REGISTER`
- September 29, 2022: Announcing HANA Large Instances being in sunset mode in SAP workload on Azure virtual machine supported scenarios and What is SAP HANA on Azure (Large Instances)?. Adding some statements around Azure VMware and Azure Active Directory support status in SAP workload on Azure virtual machine supported scenarios
- September 27, 2022: Minor changes in HA for SAP ASCS/ERS with NFS simple mount on SLES 15 for SAP Applications to adjust mount instructions
- September 14, 2022 Release of updated SAP on Oracle guide with new and updated content Azure Virtual Machines Oracle DBMS deployment for SAP workload
- September 8, 2022: Change in SAP HANA scale-out HSR with Pacemaker on Azure VMs on SLES to add instructions for deploying /hana/shared (only) on NFS on Azure Files
- September 6, 2022: Add managed identity for pacemaker fence agent Set up Pacemaker on SUSE Linux Enterprise Server (SLES) in Azure on SLES and Setting up Pacemaker on RHEL in Azure RHEL
- August 22, 2022: Release of cost optimization scenario Deploy PAS and AAS with SAP NetWeaver HA cluster on RHEL
- August 09, 2022: Release of scenario HA for SAP ASCS/ERS with NFS simple mount on SLES 15 for SAP Applications
- July 18, 2022: Clarify statement around Pacemaker support on Oracle Linux in Azure Virtual Machines Oracle DBMS deployment for SAP workload
- June 29, 2022: Add recommendation and links to Pacemaker usage for Db2 versions 11.5.6 and higher in the documents IBM Db2 Azure Virtual Machines DBMS deployment for SAP workload, High availability of IBM Db2 LUW on Azure VMs on SUSE Linux Enterprise Server with Pacemaker, and High availability of IBM Db2 LUW on Azure VMs on Red Hat Enterprise Linux Server
- June 08, 2022: Change in HA for SAP NW on Azure VMs on SLES with ANF and HA for SAP NW on Azure VMs on RHEL with ANF to adjust timeouts when using NFSv4.1

(related to NFSv4.1 lease renewal) for more resilient Pacemaker configuration

- June 02, 2022: Change in the SAP Deployment Guide to add a link to RHEL in-place upgrade documentation
- June 02, 2022: Change in HA for SAP NetWeaver on Azure VMs on Windows with Azure NetApp Files(SMB), HA for SAP NW on Azure VMs on SLES with ANF and HA for SAP NW on Azure VMs on RHEL with ANF to add sizing considerations
- May 11, 2022: Change in Cluster an SAP ASCS/SCS instance on a Windows failover cluster by using a cluster shared disk in Azure, Prepare the Azure infrastructure for SAP HA by using a Windows failover cluster and shared disk for SAP ASCS/SCS and SAP ASCS/SCS instance multi-SID high availability with Windows server failover clustering and Azure shared disk to update instruction about the usage of Azure shared disk for SAP deployment with PPG.
- May 10, 2022: Change in HA for SAP HANA scale-up with ANF on RHEL, SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL, HA for SAP HANA Scale-up with Azure NetApp Files on SLES, SAP HANA scale-out with standby node on Azure VMs with ANF on SLES, SAP HANA scale-out HSR with Pacemaker on Azure VMs on SLES and SAP HANA scale-out with standby node on Azure VMs with ANF on RHEL to adjust parameters per SAP note 3024346
- April 26, 2022: Changes in Setting up Pacemaker on SUSE Linux Enterprise Server in Azure to add Azure Identity Python module to installation instructions for Azure Fence Agent
- March 30, 2022: Adding information that Red Hat Gluster Storage is being phased out GlusterFS on Azure VMs on RHEL
- March 30, 2022: Correcting DNN support for older releases of SQL Server in SQL Server Azure Virtual Machines DBMS deployment for SAP NetWeaver
- March 28, 2022: Formatting changes and reorganizing ILB configuration instructions in: HA for SAP HANA on Azure VMs on SLES, HA for SAP HANA Scale-up with Azure NetApp Files on SLES, HA for SAP HANA on Azure VMs on RHEL, HA for SAP HANA scale-up with ANF on RHEL, HA for SAP NW on SLES with NFS on Azure Files, HA for SAP NW on Azure VMs on SLES with ANF, HA for SAP NW on Azure VMs on SLES for SAP applications, HA for NFS on Azure VMs on SLES, HA for SAP NNW on Azure VMs on SLES multi-SID guide, HA for SAP NW on RHEL with NFS on Azure Files, HA for SAP NW on Azure VMs on RHEL with ANF, HA for SAP NW on Azure VMs on RHEL for SAP applications and HA for SAP NW on Azure VMs on RHEL multi-SID guide
- March 15, 2022: Corrected rsize and wsize mount option settings for ANF in IBM Db2 Azure Virtual Machines DBMS deployment for SAP workload
- March 1, 2022: Corrected note about database snapshots with multiple database containers in SAP HANA Large Instances high availability and disaster recovery on

Azure

- February 28, 2022: Added E(d)sv5 VM storage configurations to SAP HANA Azure virtual machine storage configurations
- February 13, 2022: Corrected broken links to HANA hardware directory in the following documents: SAP Business One on Azure Virtual Machines, Available SKUs for HANA Large Instances, Certification of SAP HANA on Azure (Large Instances), Installation of SAP HANA on Azure virtual machines, SAP workload planning and deployment checklist, SAP HANA infrastructure configurations and operations on Azure, SAP HANA on Azure Large Instance migration to Azure Virtual Machines, Install and configure SAP HANA (Large Instances) ,on Azure, High availability of SAP HANA scale-out system on Red Hat Enterprise Linux, High availability for SAP HANA scale-out system with HSR on SUSE Linux Enterprise Server, High availability of SAP HANA on Azure VMs on SUSE Linux Enterprise Server, Deploy a SAP HANA scale-out system with standby node on Azure VMs by using Azure NetApp Files on SUSE Linux Enterprise Server, SAP workload on Azure virtual machine supported scenarios, What SAP software is supported for Azure deployments
- February 13, 2022: Change in HA for SAP NetWeaver on Azure VMs on Windows with Azure NetApp Files(SMB) to add instructions about adding the SAP installation user as `Administrators Privilege user` to avoid SWPM permission errors
- February 09, 2022: Add more information around 4K sectors usage of Db2 11.5 in IBM Db2 Azure Virtual Machines DBMS deployment for SAP workload
- February 08, 2022: Style changes in SQL Server Azure Virtual Machines DBMS deployment for SAP NetWeaver
- February 07, 2022: Adding new functionality ANF application volume groups for HANA in documents NFS v4.1 volumes on Azure NetApp Files for SAP HANA and Azure proximity placement groups for optimal network latency with SAP applications
- January 30, 2022: Adding context about SQL Server proportional fill and expectations that SQL Server data files should be the same size and should have the same free space in SQL Server Azure Virtual Machines DBMS deployment for SAP NetWeaver
- January 24, 2022: Change in HA for SAP NW on SLES with NFS on Azure Files, HA for SAP NW on Azure VMs on SLES with ANF, HA for SAP NW on Azure VMs on SLES for SAP applications, HA for NFS on Azure VMs on SLES, HA for SAP NNW on Azure VMs on SLES multi-SID guide, HA for SAP NW on RHEL with NFS on Azure Files, HA for SAP NW on Azure VMs on RHEL for SAP applications and HA for SAP NW on Azure VMs on RHEL with ANF and HA for SAP NW on Azure VMs on RHEL multi-SID guide to remove cidr_netmask from Pacemaker configuration to allow the resource agent to determine the value automatically.

- January 12, 2022: Change in HA for SAP NetWeaver on Azure VMs on Windows with Azure NetApp Files(SMB) to remove obsolete information for the SAP kernel that supports the scenario.
- December 08, 2021: Change in SQL Server Azure Virtual Machines DBMS deployment for SAP NetWeaver to clarify Azure Load Balancer settings.
- December 08, 2021: Release of scenario HA of SAP HANA Scale-up with Azure NetApp Files on SLES
- December 07, 2021: Change in Setting up Pacemaker on RHEL in Azure to clarify that the instructions are applicable for both RHEL 7 and RHEL 8
- December 07, 2021: Change in HA for SAP NW on SLES with NFS on Azure Files, HA for SAP NW on Azure VMs on SLES with ANF and HA for SAP NW on Azure VMs on SLES for SAP applications to adjust the instructions for configuring SWAP file.
- December 02, 2021: Introduction of new fencing method in Setting up Pacemaker on SUSE Linux Enterprise Server in Azure using Azure shared disk SBD device
- December 01, 2021: Change in SAP ASCS/SCS instance with WSFC and file share, HA for SAP NetWeaver on Azure VMs on Windows with Azure NetApp Files(SMB) and HA for SAP NetWeaver on Azure VMs on Windows with Azure Files(SMB) to update the SAP kernel version, required to support clustering SAP on Windows with file share
- November 30, 2021: Added Using Windows DFS-N to support flexible SAPMNT share creation for SMB-based file share
- November 22, 2021: Change in HA for SAP NW on SLES with NFS on Azure Files and HA for SAP NW on RHEL with NFS on Azure Files to clarify the guidelines for J2EE SAP systems and share consolidations per storage account.
- November 16, 2021: Release of high availability guides for SAP ASCS/ERS with NFS on Azure files HA for SAP NW on SLES with NFS on Azure Files and HA for SAP NW on RHEL with NFS on Azure Files
- November 15, 2021: Introduction of new proximity placement architecture for zonal deployments in Azure proximity placement groups for optimal network latency with SAP applications
- November 02, 2021: Changed Azure Storage types for SAP workload and SAP ASE Azure Virtual Machines DBMS deployment for SAP workload to declare SAP ASE support for NFS on Azure NetApp Files.
- November 02, 2021: Changed SAP workload configurations with Azure Availability Zones to move Singapore SouthEast to regions for active/active configurations
- November 02, 2021: Change in High availability of SAP HANA on Azure VMs on Red Hat Enterprise Linux to update instructions for HANA scale-up Active/Active (Read Enabled) configuration.

- October 26, 2021: Change in SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL to update resource names in HANA scale-out Active/Active (Read Enabled) configuration
- October 19, 2021: Change in SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL to add instructions for HANA scale-out Active/Active (Read Enabled) configuration
- October 11, 2021: Change in Cluster an SAP ASCS/SCS instance on a Windows failover cluster by using a cluster shared disk in Azure, Prepare the Azure infrastructure for SAP HA by using a Windows failover cluster and shared disk for SAP ASCS/SCS and SAP ASCS/SCS instance multi-SID high availability with Windows server failover clustering and Azure shared disk to add instructions about zone redundant storage (ZRS) for Azure shared disk support
- October 08, 2021: Change in SAP HANA scale-out HSR with Pacemaker on Azure VMs on SLES, HA for SAP HANA scale-up with ANF on RHEL and SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL to add defaults in sudoers file and update for HANA scale-out(for HANA srHook)
- October 01, 2021: Added link to new Azure Backup architecture for SAP HANA backup document into table of content. Added link to Azure Backup service for Oracle DBMS into Azure Virtual Machines Oracle DBMS deployment for SAP workload
- September 24, 2021: Change in SAP HANA scale-out HSR with Pacemaker on Azure VMs on SLES, HA for SAP HANA scale-up with ANF on RHEL and SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL to adjust the instructions for creating sudoers file (for HANA srHook)
- September 16, 2021: Release of HA for SAP NetWeaver on Azure VMs on Windows with Azure Files(SMB)
- September 15, 2021: Introducing new HADR configuration for SAP ASE in SAP ASE Azure Virtual Machines DBMS deployment for SAP workload
- September 08, 2021: Adding manual QoS capacity pool into NFS v4.1 volumes on Azure NetApp Files for SAP HANA
- August 26, 2021: Change in Setting up Pacemaker on RHEL in Azure and Setting up Pacemaker on SLES in Azure to correct the role definition JSON for Azure Fence Agent
- August 17, 2021: Changes in IBM Db2 Azure Virtual Machines DBMS deployment for SAP workload, Azure Storage types for SAP workload, and SAP workload on Azure virtual machine supported scenarios to introduce support for IBM Db2 using NFS volumes hosted on ANF
- August 02, 2021: Change in HA for SAP NW on Azure VMs on SLES for SAP applications, HA for SAP NW on Azure VMs on SLES with ANF, HA for SAP NW on Azure VMs on RHEL for SAP applications and HA for SAP NW on Azure VMs on RHEL

with ANF to clarify the behavior (ENSA1/ENSA2) for a test scenario, simulating enqueue server failure

- August 11, 2021: Change in HA for SAP NW on Azure VMs on RHEL for SAP applications, HA for SAP NW on Azure VMs on RHEL with ANF and HA for SAP NW on Azure VMs on RHEL multi-SID guide to adjust cluster resources stickiness, migration thresholds and order constraints
- August 11, 2021: Release of SAP BW-Near Line Storage (NLS) implementation guide with SAP IQ on Azure
- July 29, 2021: Introduce combined two-node Windows cluster for ASCS/SCS and DBMS in High availability for SAP NetWeaver on Azure VMs on Windows with Azure NetApp Files(SMB) for SAP applications and Cluster an SAP ASCS/SCS instance on a Windows failover cluster by using a cluster shared disk in Azure
- July 26, 2021: Change in Setting up Pacemaker on RHEL in Azure and Setting up Pacemaker on SLES in Azure to replace role assignment instructions with links to the RBAC documentation in the sections describing the setup for Azure Fence Agent
- July 22, 2021: Change in HA for SAP NW on Azure VMs on RHEL for SAP applications, HA for SAP NW on Azure VMs on RHEL with ANF and HA for SAP NW on Azure VMs on RHEL multi-SID guide to remove `failure-timeout` for the ASCS cluster resource (ENSA2 only)
- July 16, 2021: Restructuring of the SAP on Azure documentation Table of contents(TOC) for more streamlined navigation
- July 2, 2021: Change in Backup and restore of SAP HANA on HANA Large Instances to remove duplicate content for azacsnap tool and backup and restore of HANA Large Instances
- July 2, 2021: Change in Setting up Pacemaker on RHEL in Azure to add information how to avoid fence race in two node Pacemaker cluster and a link to KB, explaining how to reduce failover delays when using optional fencing configuration with `fence_kdump`
- July 1, 2021: Adding new certified HANA Large Instances SKUs in Available SKUs for HLI
- June 30, 2021: Change in HA guide for SAP ASCS/SCS with WSFC and Azure NetApp Files(SMB) to add a section for recommended SAP profile parameters
- June 29, 2021: Change in Setting up Pacemaker on RHEL in Azure to add optional fencing configuration with fence_kdump
- June 28, 2021: Change in HA guide for SAP ASCS/SCS with WSFC and Azure NetApp Files(SMB) to add a statement that the SMB Server (Computer Account) Prefix should be no longer than eight characters to avoid running into SAP hostname length limitation

- June 17, 2020: Change in High availability of SAP HANA on Azure VMs on RHEL to remove meta keyword from HANA resource creation command (RHEL 8.x)
- June 09, 2021: Correct VM SKU names for M192---_v2 in SAP HANA Azure virtual machine storage configurations
- May 26, 2021: Change in SAP HANA scale-out HSR with Pacemaker on Azure VMs on SLES, HA for SAP HANA scale-up with ANF on RHEL and SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL to add configuration to prepare the OS for running HANA on ANF
- May 13, 2021: Change in Setting up Pacemaker on SLES in Azure to clarify how resource agent azure-events operates
- April 30, 2021: Change in Setting up Pacemaker on SLES in Azure to include warning about incompatible change with Azure Fence Agent in a version of package python3-azure-mgmt-compute (SLES 15)
- April 27, 2021: Change in SAP ASCS/SCS instance with WSFC and file share to add links to important SAP notes in the prerequisites section
- April 27, 2021: Added new Msv2, Mdsv2 VMs into HANA storage configuration in SAP HANA Azure virtual machine storage configurations
- April 27, 2021: Added requirement for using same storage types in HANA System Replication across all VMs of HSR configuration in SAP HANA Azure virtual machine storage configurations
- April 27, 2021: Added requirement for using same storage types in DBMS replication scenarios across all VMs of DBMS high availability replication configurations in Azure Storage types for SAP workload
- April 23, 2021: Added section to configure private link for Azure database for MySQL and some minor changes in SAP BusinessObjects BI platform deployment guide for linux on Azure
- April 22, 2021: Release of SAP BusinessObjects BI Platform for Windows on Azure documentation, SAP BusinessObjects BI platform deployment guide for Windows on Azure
- April 21, 2021: Add explanation why HCMT/HWCCT storage tests on M32ts and M32ls might fall short of HANA KPIs when enabling read cache for the Premium storage disks in article SAP HANA Azure virtual machine storage configurations
- April 20, 2021: Clarify storage block sizes for IBM Db2 with different Azure block storage in article IBM Db2 Azure Virtual Machines DBMS deployment for SAP workload
- April 12, 2021: Change in HA for SAP HANA on Azure VMs on SLES, HA for SAP HANA on Azure VMs on RHEL and HA for SAP HANA scale-up with ANF on RHEL to add configuration instructions for SAP HANA system replication Python hook

- April 12, 2021: Replaced backup documentation for SAP HANA by documents of SAP HANA backup/restore with Azure Backup service
- April 12, 2021: Release of SAP HANA scale-out HSR with Pacemaker on Azure VMs on SLES configuration guide
- April 07, 2021: Clarified support for SQL Server multi-instance and multi-database support in SQL Server Azure Virtual Machines DBMS deployment for SAP NetWeaver
- April 07, 2021: Added information related to secondary IP addresses in Azure Virtual Machines planning and implementation for SAP NetWeaver
- April 07, 2021: added support for Oracle DBMS support on ANF in Azure Storage types for SAP workload
- March 17, 2021: Change in HA for SAP HANA on Azure VMs on SLES, HA for SAP HANA on Azure VMs on RHEL and HA for SAP HANA scale-up with ANF on RHEL to add instructions for HANA Active/Read-enabled system replication in Pacemaker cluster
- March 15, 2021: Change in SAP ASCS/SCS instance with WSFC and file share,Install SAP ASCS/SCS instance with WSFC and file share and SAP ASCS/SCS multi-SID with WSFC and file share to clarify that the SAP ASCS/SCS instances and the SOFS share must be deployed in separate clusters
- March 03, 2021: Change in HA guide for SAP ASCS/SCS with WSFC and Azure NetApp Files(SMB) to add a cautionary statement that elevated privileges are required for the user running SWPM, during the installation of the SAP system
- February 11, 2021: Changes in High availability of IBM Db2 LUW on Azure VMs on Red Hat Enterprise Linux Server to amend pacemaker cluster commands for RHEL 8.x
- February 03, 2021: Change in Setting up Pacemaker on RHEL in Azure to update pcmk_host_map in the `stonith create` command
- February 03, 2021: Change in Setting up Pacemaker on SLES in Azure to add pcmk_host_map in the `stonith create` command
- February 03, 2021: More details on I/O scheduler settings for SUSE in article SAP HANA Azure virtual machine storage configurations
- February 01, 2021: Change in HA for SAP HANA scale-up with ANF on RHEL, SAP HANA scale-out HSR with Pacemaker on Azure VMs on RHEL, SAP HANA scale-out with standby node on Azure VMs with ANF on SLES and SAP HANA scale-out with standby node on Azure VMs with ANF on RHEL to add a link to NFS v4.1 volumes on Azure NetApp Files for SAP HANA
- January 23, 2021: Introduce the functionality of HANA data volume partitioning as functionality to stripe I/O operations against HANA data files across different Azure disks or NFS shares without using a disk volume manager in articles SAP HANA Azure

virtual machine storage configurations and NFS v4.1 volumes on Azure NetApp Files for SAP HANA

- January18, 2021: Added support of Azure net Apps Files based NFS for Oracle in Azure Virtual Machines Oracle DBMS deployment for SAP workload and adjusting decimals in table in document NFS v4.1 volumes on Azure NetApp Files for SAP HANA
- January 11, 2021: Minor changes in HA for SAP NW on Azure VMs on RHEL for SAP applications, HA for SAP NW on Azure VMs on RHEL with ANF and HA for SAP NW on Azure VMs on RHEL multi-SID guide to adjust commands to work for both RHEL8 and RHEL7, and ENSA1 and ENSA2
- January 05, 2021: Changes in SAP HANA scale-out with standby node on Azure VMs with ANF on SLES and SAP HANA scale-out with standby node on Azure VMs with ANF on RHEL, revising the recommended configuration to allow SAP Host Agent to manage the local port range
- January 04,2021: Add new Azure regions supported by HLI into What is SAP HANA on Azure (Large Instances)