

# SAP Event Management on SAP S/4HANA

## Operations Guide

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## 1 GETTING STARTED

### Recommendation

This guide does not replace the daily operations handbook that we recommend customers create for their specific production operations.

### 1.1 About This Guide

Designing, implementing, and running your SAP applications at peak performance 24 hours a day has never been more vital for your business success than now.

This guide provides a starting point for managing SAP Event Management on SAP S/4HANA and maintaining and running it optimally. It contains specific information for various tasks and lists the tools that you can use to implement it.

### Recommendation

Before you start the implementation, make sure you have the latest version of this document. You can find the latest version at the following location: <https://help.sap.com/ems4>.

### 1.2 ABAP Platform

Each version of SAP S/4HANA is built upon a corresponding version of ABAP platform. For example, SAP S/4HANA 2020 SP02 is built upon ABAP platform 2020 SP02.

SAP Event Management on SAP S/4HANA uses functions of the underlying ABAP platform that are described in the document *Administering the ABAP Platform*. To access it, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Administering the ABAP Platform* into the search bar, press Enter, and open the search result with that title.

### Important Note

Throughout this document links point to the latest version of the SAP S/4HANA 2020 documentation: [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020).

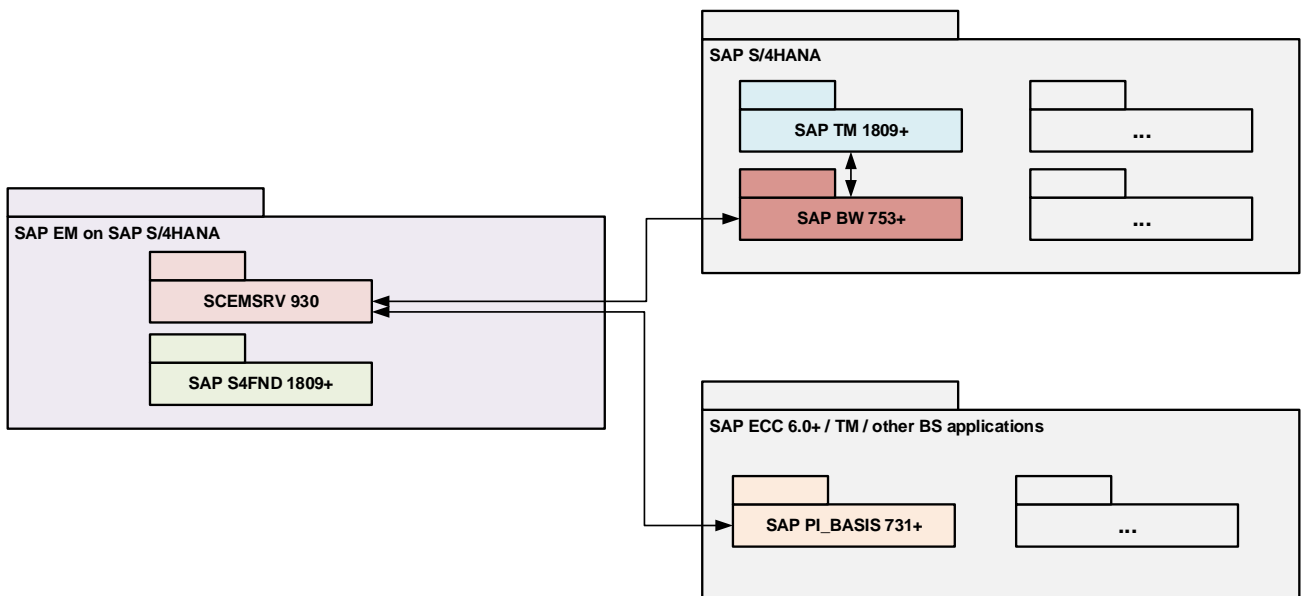
If you are running SAP Event Management on S/4HANA on a different version of SAP S/4HANA, on the Help page choose the version you are using in the Versions drop-down box.

## 2 SYSTEM LANDSCAPE

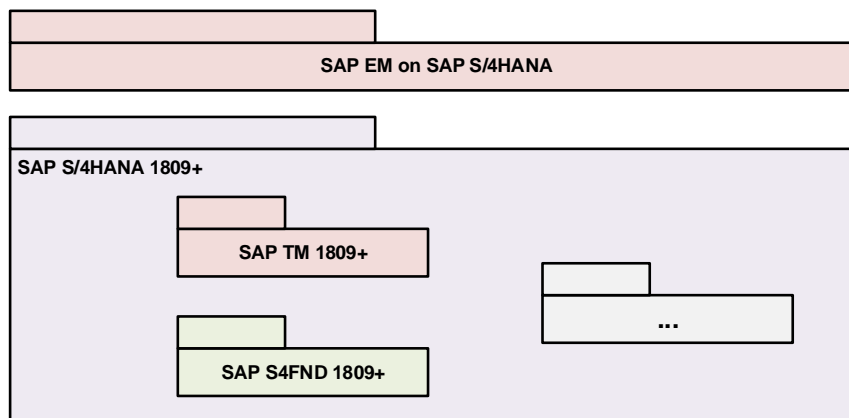
SAP Event Management on SAP S/4HANA supports 2 deployment options:

1. Stand-alone (On-premise and private cloud)
2. An add-on on SAP S/4HANA (On-premise and private cloud)

For a stand-alone deployment you install SAP Event Management for SAP S/4HANA on a dedicated server. The download includes the software component version SCEMSRV 930 and one of the required product versions of S/4 Foundation. The minimum supported version of S/4 Foundation is 1809. But we recommend to use the latest available release of S/4 Foundation that is supported by SAP Event Management for SAP S/4HANA. In a typical system landscape SAP Event Management for SAP S/4HANA can be connected to one or several instances of SAP ECC and SAP S/4HANA. If SAP Transportation Management on SAP S/4HANA shall be connected, you must use release 1809 or higher.



The alternative deployment option is to have SAP Event Management on SAP S/4HANA On-Premise or in the Private cloud. In that case, SAP S/4HANA release 1809 or higher is required.



For more information about installing SAP Event Management for SAP S/4HANA 1.0, refer to the installation note, SAP Note 3051311.

### 3 MONITORING

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively monitor your system landscape.

For more information about monitoring topics, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Solution Monitoring* into the search bar, press Enter, and open the search result with that title.

For more information about monitoring with SAP Solution Manager, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Connecting a Technical System to SAP Solution Manager* into the search bar, press Enter, and open the search result with that title.

#### 3.1 Alert Monitoring with CCMS

The SAP Event Management on SAP S/4HANA monitor is an Event Management-specific collection of functions, which displays all the Event Management messages on an overview screen, for example. You may include the SAP Event Management on SAP S/4HANA monitor in the central monitoring by Computing Center Management system (CCMS) that is part of the ABAP platform monitoring tools.

##### Note

We recommend that you connect SAP Event Management on SAP S/4HANA to the Computing Center Management System (CCMS) only if you have appropriate knowledge of Computing Center Management.

To do so, you must fulfill the following prerequisites:

- You have executed reports /SAPTRX/SLG1\_LINK and /SAPTRX/SCHEDULE\_EM\_JOBS\_NODE once before calling the SAP Event Management on SAP S/4HANA monitor. This is to ensure that the functions for evaluating the application log and scheduling background jobs relevant to Supply Chain Event Management (SCEM) appear in the choice of functions for the SAP Event Management on SAP S/4HANA monitor.

##### Note

If you restart the system, you must run these two reports again.

You have scheduled the respective background jobs for each client in which you want to set the monitoring functions specific to SAP Event Management on SAP S/4HANA in the CCMS. The system displays the background jobs in the dialog structure of the SAP Event Management on SAP S/4HANA monitor.

Background Job	Description
/SAPTRX/COLLECT_LOCKED_EH	Number of locked event handlers in the desired client
/SAPTRX/COLLECT_LOCKED_EHSETS	Number of locked event handler sets in the desired client
/SAPTRX/COLLECT_UNPROC_EVMSG	Number of unprocessed event messages in the desired client

##### Note

If you restart the system, you must run these two reports again.

For more information, see SAP Library for SAP Event Management on SAP S/4HANA on SAP Help Portal at <https://help.sap.com/ems4>. In SAP Library, choose SAP Event Management on SAP S/4HANA Infrastructure -> Monitoring and Evaluation Processes -> Connection to the Computing Center Management System.

For more information about CCMS, the Alert Monitor, and monitoring of data archiving, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Monitoring in the CCMS* into the search bar, press Enter, and open the search result with that title.

For more information about how to enable the auto-alert function of CCMS, see SAP Note 617547.

### 3.2 Detailed Monitoring and Tools for Problem Analysis

#### 3.2.1 Analysis Tools

Specifically for analyzing SAP Event Management on SAP S/4HANA the following monitors are available:

Monitor	Detailed Description	Menu Path
/SAPTRX/EH_LIST	The event handler list provides details about an event handler. The status of events, event and error messages, and status details are all contained in the event handler list.	On the SAP Easy Access screen, choose Event Management ->Monitoring and Lists-> Event Handler List.
/SAPTRX/EVM_STATUS	The event message processing status list shows system-generated messages and points out if objects are processed correctly in SAP Event Management on SAP S/4HANA. The list reflects only data errors, not business process issues.	On the SAP Easy Access screen, choose Event Management ->Monitoring and Lists -> Event Message Processing Status List.
/SAPTRX/EE_MON	The expected event monitor is a report that the system starts as a background process. It checks if expected events that should be reported within a specific period of time have become overdue. If the monitor discovers an overdue event, SAP Event Management on SAP S/4HANA reacts according to the defined rules, for example, by sending an e-mail in response to the overdue events. SAP delivers activities for the expected event monitor, for example, comparing two fields or activating an event handler set.	On the SAP Easy Access screen, choose Event Management -> Administration -> Processing Control -> Expected Event Monitor.
/SAPTRX/LOCKED_PROC	This report triggers the subsequent processing of event messages that arrive for an event handler at a time when SAP Event Management on SAP S/4HANA is locking it.	On the SAP Easy Access screen, choose Event Management -> Administration -> Processing Control -> Process Message for Locked Event Handler.
/SAPTRX/LOCKED_PSET	This report reassigns an event handler to an event handler set that SAP Event Management on SAP S/4HANA is locking.	On the SAP Easy Access screen, choose Event Management -> Administration -> Processing Control -> Process Locked Event Handler Sets.
/SAPTRX/EMJOBS	This report resends application object data for event handlers. When you update event handler data by sending application objects to SAP Event Management on SAP S/4HANA, it can be the case that the event handler is locked by other processing activities (for example, momentary processing of an event message). To ensure that the event handler is updated with the data when the locks are released, the system temporarily stores the data in a database table (buffer). This background job checks at regular intervals if the database table contains data. When the table contains data, it tries to process it. If necessary, it updates the event handler that was previously locked with this data.	On the SAP Easy Access screen, choose Event Management -> Administration -> Processing Control -> Schedule Background Jobs for Event Management.

### 3.2.2 Trace and Log Files

Trace and log files are essential for analyzing problems. SAP Event Management on SAP S/4HANA uses the standard ABAP Platform tools for tracing and logging.

Trace files and log files are essential for analyzing problems.

An application log is available for both the application systems using the Event Management API and SAP Event Management on SAP S/4HANA.

The application log documents messages, exceptions, and errors on both the application side and the SAP Event Management on SAP S/4HANA side. This provides information about communication operations and problems that occur when event handlers are created, event messages are processed, or information is queried.

You can analyze the logs or the corresponding messages according to different thematic areas and gain more detailed information on the messages.

The application log in the application system provides you with an overview of all the activities relevant to an application object as well as the appropriate event messages. You can reduce the memory space for the application log by deactivating it per business object.

The SAP Event Management on SAP S/4HANA application log provides you with an overview of all activities for an event handler, and for its corresponding event messages, that are issued during event handler processing.

If you have appropriate authorizations, you can define the following when creating an event handler:

- The objects that are logged:
  - Event handler creation
  - Event message processing
  - Updating data from an external source
- The level of detail the system should use when creating logs from high-level processes only, to individual processes.

You can call the application log from both the event handler overview and the event handler detail overview.

- For the application log in the SAP system, call transaction /SAPTRX/ASAPLOG.
- For the SAP Event Management on SAP S/4HANA application log, on the SAP Easy Access screen, choose Event Management -> Administration -> Logging -> Application Log: Display Logs (SLG1).

Use the following log object and subobjects for SAP Event Management on SAP S/4HANA in SLG1:

Log Object	Log Subobject	Description
SAPTRX	APPSYS	Application system
	CONSCHECK	Customizing consistency check
	EVTMSG	Event message processing
	SUBSCRIPT	Logs for EPCIS subscriptions
	TRKOBJ	Event handler creation/update/deletion

To deactivate the application log in the application system, in Customizing for the SAP Basis Plug-In, choose Integration with Other SAP Components -> Event Management Interface -> Define Application Interface -> Define Used Business Process Types, Application Object Types, and Event Types.

For more information about application logs in the ABAP platform, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Application Log (BC-SRV-BAL)* into the search bar, press Enter, and open the search result with that title.

### 3.2.3 Overview of Regularly-Used Jobs, Transactions and Monitoring Tasks

Monitoring Object	Monitoring Transaction/Tool	Monitor Frequency	Monitoring Activity or Error Handling Procedure	Responsible	Escalation Procedure
Set up of monitoring	/SAPTRX/SLG1_LIN K	Once, before working with SAP Event Management on SAP S/4HANA (not with CCMS) for the first time	Schedule background job for each client to be monitored in the CCMS	Program scheduling management	Contact application support
Set up of monitoring	/SAPTRX/SCHEDULE_EM_JOBS_NODE	Once, before working with SAP Event Management on SAP S/4HANA (not with CCMS) for the first time	Schedule background job for each client to be monitored in the CCMS	Program scheduling management	Contact application support
Display application log in SAP Event Management on SAP S/4HANA	/SAPTRX/ASAPLOG	Daily	Display the application log in SAP Event Management on SAP S/4HANA	Program scheduling management	Contact application support
Evaluation of application log	Transaction SLG1	Daily	Evaluate the application log in SAP Event Management on SAP S/4HANA	Program scheduling management	Contact application support
Status of events and error messages shown	/SAPTRX/EH_LIST	n.a.	Display functionality	Application management	Contact application support
List to see if objects are processed correctly. The list reflects data errors only, not business process issues.	/SAPTRY/EVM_STATUS	n.a.	Display functionality	Program scheduling management	Contact application support
Inbound and outbound queue monitoring	Transaction SMQ1 / SMQ2	Daily	Status of the inbound and outbound queues	Program scheduling management	Contact software monitoring team

### 3.2.4 Data-Archiving Monitors

For the latest documentation about archiving and deleting objects in SAP Event Management on SAP S/4HANA, see SAP Library for SAP Event Management on SAP S/4HANA on SAP Help Portal at <https://help.sap.com/ems4>. In SAP Library, choose Administration -> Archiving and Deleting.

If you no longer need event handlers, event messages, or event handler sets, you can either archive and delete them, or delete them without previously archiving them. When you delete event handlers, event messages, or event handler sets, SAP Event Management on SAP S/4HANA also deletes any existing change documents.



### 3.2.5 *Fast-Growing Tables*

The fastest growing tables depend on the number of parameters, rules, and expected events you have.

For event handlers, pay special attention to all tables beginning with prefix /SAPTRX/EH\_\*, for example:

- /SAPTRX/EH\_INFO
- /SAPTRX/EH\_EXPEV
- /SAPTRX/EH\_EVMSG

If you use customer-specific extension tables, pay special attention to these tables.

For event messages it also depends on how the customer uses SAP Event Management on SAP S/4HANA.

If you use file attachments, pay special attention to all tables beginning with prefix /SAPTRX/EVM\_\*, for example:

- /SAPTRX/EVM\_AFB
- /SAPTRX/EVM\_AFC

On the application system side, pay special attention to the table /SAPTRX/AOTREF.

## 4 MANAGEMENT OF EVENT MANAGEMENT TECHNOLOGY

SAP provides you with an infrastructure to help your technical support consultants and system administrators effectively manage all SAP components and complete all tasks related to technical administration and operation.

For more information about operational topics, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Adminstrating the ABAP Platform* into the search bar, press Enter, and open the search result with that title.

### 4.1 Backup, Restore and Recovery

You need to back up your system landscape regularly to ensure that you can restore and recover it in case of failure.

To use an appropriate back up and restore method is one of the most important tasks of the system and database administrator. However, there is no general recommendation for such a method, since it depends on several factors, such as:

- Disaster recovery concept
- Maximum permissible downtime during restore
- Amount of data loss that can be tolerated
- Available budget

For more information about backup and recovery, see:

- Go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Adminstrating the ABAP Platform* into the search bar, press Enter, open the search result with that title, and navigate to Administration Concepts and Tools -> Solution Life Cycle Management -> Backup and Recovery.
- SAP HANA Technical Operations Manual at the SAP Help Portal under [https://help.sap.com/hana\\_platform](https://help.sap.com/hana_platform) -> Solution Administration.

## 4.2 Scheduled Periodic Tasks

To operate SAP Event Management for SAP S/4HANA you should schedule the following background jobs:

### Standard Housekeeping Jobs

Program Name/Task	Recommended Frequency	Detailed Description
Report /SAPTRX/EE_MONITOR	Every 2–5 minutes	<p>Expected Events Monitor is a scheduled background job that continuously identifies expected events that are overdue. If an event has exceeded the expected date, the system</p> <p>Updates the event status to Overdue .</p> <p>Creates an expected event monitor procedure, for example, alert notification is executed.</p> <p>To schedule the background job, use transaction /SAPTRX/EMJOBS, or on the SAP Easy Access screen for SAP Event Management on SAP S/4HANA, choose Event Management Administration Processing Control Schedule Background Jobs for Event Management .</p> <p>For more information, see SAP Library for SAP Event Management on SAP S/4HANA on SAP Help Portal at <a href="https://help.sap.com/ems4">https://help.sap.com/ems4</a>. In SAP Library, choose SAP Event Management Infrastructure Event Expected Event Monitor.</p>
Report /SAPTRX/PROCESS_LOCKED_EHS	6 times a day	<p>Processor of locked event handlers is a scheduled regular job in transaction /saptrx/emjobs</p> <p>For more information, see SAP Note 656990.</p>
Report /SAPTRX/PROCESS_LOCKED_SETS	6 times a day (optional, only when working with EH sets)	<p>Processor of locked event handler sets is a scheduled regular job in transaction /saptrx/emjobs</p> <p>For more information, see SAP Note 656990.</p>
Report /SAPTRX/R_REPORT_AI_LOGS	6 times a day	<p>Resend Application Object Data for Event Handlers is a scheduled regular job in transaction /saptrx/emjobs</p> <p>For more information, see SAP Note 656990.</p>
Report /SAPTRX/COLLECT_LOCKED_EH	6 times a day	<p>A scheduled regular job in transaction /saptrx/emjobs</p> <p>For more information, see SAP Note 656990.</p>
Report /SAPTRX/COLLECT_LOCKED_EHS ETS	6 times a day (optional, only when working with EH sets)	<p>Number of locked event handler sets in the desired client is a scheduled regular job in transaction /saptrx/emjobs</p> <p>For more information, see SAP Note 656990.</p>

## 4.3 Data Archiving

We recommend archiving data from SAP Event Management on SAP S/4HANA as soon as they no longer needed.

We strongly recommend establishing and implement an archiving strategy prior to go live with your installation. This is especially important in use cases where SAP Event Management on SAP S/4HANA is used to manage a high volume of data and / or a high throughput of data.

For more information, see the SAP Library for SAP Event Management on SAP S/4HANA on SAP Help Portal at <https://help.sap.com/ems4>. In SAP Library, choose SAP Event Management on SAP S/4HANA Infrastructure -> Administration -> Archiving in SAP Event Management.

Archiving in Event Management on SAP S/4HANA re-uses the common archiving tools of the ABAP platform. For more information about archiving functions in the ABAP platform go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Administrating the ABAP Platform* into the search bar, press **Enter**, open the search result with that title, and navigate to -> *Administration Concepts and Tools* -> *Solution Life Cycle Management*.

#### **4.4 Load Balancing**

SAP Event Management on SAP S/4HANA uses the standard ABAP Platform functions for load balancing.

For more information about this topic, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter Administrating the ABAP Platform into the search bar, press Enter, and open the search result with that title.

## 5 HIGH AVAILABILITY

SAP Event Management on SAP S/4HANA uses the standard ABAP Platform functions for high availability and business continuity.

For more information about these topics, see:

- Go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Administrating the ABAP Platform* into the search bar, press `Enter`, and open the search result with that title.
- *SAP HANA Technical Operations Manual* at the SAP Help Portal under [https://help.sap.com/hana\\_platform](https://help.sap.com/hana_platform) at *System Administration*.

## 6 SOFTWARE LOGISTICS AND CHANGE MANAGEMENT

The tools and processes in *Software Logistics* help you to manage the system landscape in all life cycle phases. Besides initial implementation of an application, the tools also support on-going system optimization and adaptation to evolving demands, as well as implementing additional functions.

### Note

Some software logistics tools are delivered and regularly updated with the Software Logistics Toolset. For more information about these tools, see the documentation on the SAP Help Portal under <https://help.sap.com/sltoolset>.

*Software Change Management* standardizes and automates the distribution of software in system landscapes.

For more information, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Administering the ABAP Platform* into the search bar, press `Enter`, open the search result with that title, and navigate to *Administration Concepts and Tools -> Solution Life Cycle Management -> Software Logistics*.

### 6.1 Change and Transport Management (CTS)

SAP Event Management on SAP S/4HANA uses the ABAP Platform tool Change and Transport System (CTS) to organize development projects in ABAP Workbench and customizing, and to then transport the changes between the SAP systems in your system landscape.

For more information about the CTS tool, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Administering the ABAP Platform* into the search bar, press `Enter`, and open the search result with that title.

### 6.2 Support Packages and Patch Implementation

We recommend that you regularly update your SAP Event Management for SAPS/HANA system to the latest support package level. To check for available support packages go to the Product Availability Matrix in SAP Support Portal:

Open [support.sap.com/pam](https://support.sap.com/pam), press the button Product availability matrix, search for *SAP Event Management on SAP S/4HANA*, and choose your product version.

## 7 TROUBLESHOOTING

SAP Event Management on SAP S/4HANA has no solution-specific troubleshooting tools. You may use the troubleshooting tools of the ABAP platform.

For more information about troubleshooting of the ABAP Platform, go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Adminstrating the ABAP Platform* into the search bar, press `Enter`, open the search result with that title, and navigate to *Administration Concepts and Tools -> Solution Life Cycle Management*.

## 8 SERVICES FOR SAP EVENT MANAGEMENT ON SAP S/4HANA

You can use the functions of SAP Solution Manager to create support messages in case of issues. If you want to forward the message to SAP, please add the application component of the application where you observe the issue to your message.

For more information about using the Solution Manager, see the SAP Help Portal under <https://help.sap.com/solutionmanager/> Use -> *Application Help* -> *SAP Engagement and Service Delivery*.

If you want an SAP support consultant to work directly in your system to make a more precise issue diagnosis, you need to set up a remote service connection.

For more information about setting up remote service connections to SAP, see:

- SAP Support Portal under [support.sap.com/access-support](https://support.sap.com/access-support)
- Go to [https://help.sap.com/s4hana\\_op\\_2020](https://help.sap.com/s4hana_op_2020), enter *Setting Up Service Connections for SAP Remote Support* into the search bar, press `Enter`, and open the search result with that title.











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