



# **Scheduling database backups**

## **SnapManager for SAP**

NetApp  
February 20, 2023

# Table of Contents

- Scheduling database backups ..... 1
  - Create backup schedules ..... 1
  - Update a backup schedule ..... 4
  - View a list of scheduled operations ..... 5
  - Suspend backup schedules ..... 5
  - Resume backup schedules ..... 5
  - Delete backup schedules ..... 6

# Scheduling database backups

SnapManager (3.2 or later) for SAP enables you to schedule database backups to occur on a regular basis during off-peak hours to maintain high performance. To schedule a backup, you can create a profile, which includes the database information and retention policy, and then set schedules for the backup.



You must schedule the backups as an administrator. If you try to schedule the backups as a non-existing user, SnapManager displays an error message: Invalid user: username: Cannot create schedule backup for a given user

The following are some of the schedule-related tasks:

- Schedule a database backup to occur on an hourly, daily, weekly, monthly, or one-time basis.
- View a list of scheduled backups associated with a profile.
- Update a scheduled backup.
- Suspend a schedule temporarily.
- Resume the suspended schedule.
- Delete a schedule.



The **Run Now Menu Operation** check box is disabled when a scheduled backup is running for that schedule.

## Create backup schedules

You can schedule a backup to occur at the time and frequency that are suited for your data and environment.

### About this task

From SnapManager 3.2 for SAP, you can schedule the backups of the archive log files separately. However, you must use the profile that you created to separate the archive log files.

If you have scheduled the backups of the data files and archive log files at the same time, then SnapManager creates the data files backup first.

If you select the schedule interval as `-onetimeonly`, then all the pruning options are available. If you select a schedule interval other than `-onetimeonly`, then the pruning options `-until-SCN` and `-until-date` are not supported and the following error message is displayed: The archive log pruning option you have specified, `-until-scnn` or `-until-date` for the schedule interval hourly is invalid. Specify either the `-onetimeonly` option for the schedule interval, or prune the archive logs using any one of the option `all`, or `-before {-months | -days | -weeks| -hours}`.

When a failover happens in Microsoft Windows Server Failover Cluster (WSFC) and Microsoft Cluster Server (MSCS) environments, you must restart the SnapManager for SAP server so that the service (virtual) address is mapped to the active host and the SnapManager schedules are adjusted to the active SnapManager host.



If the same profile and schedule name exists in another repository, the backup scheduling operation is not initiated in that repository. The operation will exit with the following message: operation is already running.


## Step

1. Enter the following command:

```
smsap schedule create -profile profile_name {[-full {-online | -offline |
-auto}{-retain [-hourly | -daily | -weekly | -monthly | -unlimited] [-verify]]
| [-data [-files files [files]] | [-tablespaces -tablespaces [-tablespaces]]
{-online | -offline | -auto}{-retain [-hourly | -daily | -weekly | -monthly |
-unlimited] [-verify]] | [-archivelogs]} [-comment comment][-backup-dest path1
[,path2]] [-exclude-dest path1 [,path2]] [-prunelogs{-all | -untilSCN
untilSCN | -until-date yyyy-MM-dd HH:mm:ss | -before {-months | -weeks | -days
| -hours}} -prune-dest prune_dest1,prune_dest2] -schedule-name schedule_name
[-schedule-comment schedule_comment] -interval {-hourly | -daily | -weekly |
-monthly | -onetimeonly} -cronstring cronstring -start-time {start-time
start_time <yyyy-MM-dd HH:mm>} -runasuser -runasuser [-force] [-taskspec
-taskspec] [-quiet | -verbose]
```

If you want to...	Then...
<b>Schedule a backup of an online or offline database</b>	Specify <code>-offline</code> or <code>-online</code> to schedule a backup of the offline or online database. If you specify these, you cannot use <code>-auto</code> .
<b>Let SnapManager handle scheduling of a database regardless of whether it is online or offline</b>	Specify <code>-auto</code> . If you specify <code>-auto</code> , you cannot use <code>--offline</code> or <code>-online</code> .
<b>Schedule a backup of data files</b>	Specify <code>-data -files</code> to list the files separated by commas. For example, use file names <code>f1,f2,f3</code> .
<b>Schedule a partial backup of specific tablespaces</b>	Specify <code>-tablespaces</code> to list the tablespaces separated by commas. For example, use <code>ts1,ts2,ts3</code> .
<b>Schedule backup of archive log files</b>	Specify the following: <ul style="list-style-type: none"> <li>• <code>-archivelogs</code> to schedule backup of the archive log files</li> <li>• <code>-backup-dest</code> to schedule archive log file destinations to be included in the backup</li> <li>• <code>-exclude-dest</code> to schedule the archive log destinations to be excluded from the backup</li> </ul>

If you want to...	Then...
<p><b>Specify the retention class values</b></p>	<p>Specify <code>-retain</code> and indicate whether the backup should be retained according to one of the following retention classes:</p> <ul style="list-style-type: none"> <li>• <code>-hourly</code></li> <li>• <code>-daily</code></li> <li>• <code>-weekly</code></li> <li>• <code>-monthly</code></li> <li>• <code>-unlimited</code> SnapManager defaults to hourly.</li> </ul>
<p><b>Schedule pruning of archive log files</b></p>	<p>Specify the following: <b><code>-prune_logs</code> to prune the archive log files while scheduling a backup</b>  <code>-prune_dest</code> to specify the archive log destination from which the archive log files are pruned</p>
<p><b>Include a name for the schedule</b></p>	<p>Specify <code>-schedule-name</code>.</p>
<p><b>Schedule backup of the database at a specific time interval</b></p>	<p>Specify the <code>interval</code> option and select the time interval from the following, by which the backups should be created:</p> <ul style="list-style-type: none"> <li>• <code>-hourly</code></li> <li>• <code>-daily</code></li> <li>• <code>-weekly</code></li> <li>• <code>-monthly</code></li> <li>• <code>-onetimeonly</code></li> </ul>

If you want to...	Then...
<p><b>Configure a schedule</b></p>	<p>Specify <code>-cronstring</code> and include the following seven subexpressions that describe the individual option:</p> <ul style="list-style-type: none"> <li>• 1 refers to seconds.</li> <li>• 2 refers to minutes.</li> <li>• 3 refers to hours.</li> <li>• 4 refers to a day in a month.</li> <li>• 5 refers to the month.</li> <li>• 6 refers to a day in a week.</li> <li>• (Optional) 7 refers to the year.</li> </ul> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> If you scheduled your backup with different times in <code>-cronstring</code> and <code>-start-time</code>, then the schedule of the backup is overwritten and triggered by the <code>-start-time</code>.</p> </div>
<p><b>Add a comment about the backup schedule</b></p>	<p>Specify <code>-schedule-comment</code> followed by the description string.</p>
<p><b>Specify the start time of the schedule operation</b></p>	<p>Specify <code>-start-time</code> in the <code>yyyy-mm-dd hh:mm</code> format.</p>
<p><b>Change the user of the scheduled backup operation while scheduling the backup</b></p>	<p>Specify <code>-runasuser</code>. The operation runs as the user (root user or Oracle user) who created the schedule. However, you can use your own user ID, if you have valid credentials for both the database profile and host.</p>
<p><b>Enable a pretask or post-task activity of the backup schedule operation by using the pretask and post-task specification XML file</b></p>	<p>Specify the <code>-taskspec</code> option and provide the absolute path of the task specification XML file for performing a preprocessing or a post-processing activity to occur before or after the backup schedule operation.</p>

## Update a backup schedule

You can view a list of scheduled operations and update them if necessary. You can update the scheduling frequency, the start time of the schedule, cronstring expression, and the user who scheduled the backup.

### Step

1. To update the schedule for a backup, enter this command:

```
smsap schedule update -profile profile_name -schedule-name schedulename [-  
schedule-comment schedule comment] -interval {-hourly | -daily | -weekly |  
-monthly | -onetimeonly} -start-time starttime -cronstring cronstring  
-runasuser runasuser [-quiet | -verbose]
```

## View a list of scheduled operations

You can view a list of scheduled operations for a profile.

### Step

1. To display information about scheduled operation, enter this command:

```
smsap schedule list -profile profile_name [-quiet | -verbose]
```

## Suspend backup schedules

SnapManager enables you to suspend a backup schedule until the backup schedule is resumed.

### About this task

You can suspend the active schedules. If you try to suspend the backup schedule that is already suspended, you might encounter error message "Cannot suspend: schedule <schedulename> already in suspend state".

### Step

1. To suspend the backup schedule temporarily, enter this command:

```
smsap schedule suspend -profile profile_name -schedule-name schedulename [-  
quiet | -verbose]
```

## Resume backup schedules

Administrators have the option to resume the suspended backup schedule.

### About this task

If you try to resume the active schedules, you might encounter the error message: "Cannot resume: schedule <schedulename> already in resume state".

### Step

1. To resume the suspended backup schedule, enter this command:

```
smsap schedule resume -profile profile_name -schedule-name schedulename [-  
quiet | -verbose]
```

# Delete backup schedules

You can delete backup schedules when they are no longer necessary.

## Step

1. To delete the backup schedule, enter this command:

```
smsap schedule delete -profile profile_name -schedule-name schedulename [-  
quiet | -verbose]
```



## Copyright information

Copyright © 2023 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP "AS IS" AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

## Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.