How To: Fix VEEAM Backups and Replication Repository Free Space Calculation

Scale-Out Backup Repository is a powerful feature of Veeam Backup & Replication that allows users to combine multiple backup repositories into a single logical unit. This feature helps optimize storage utilization, load balancing, and more. However, some users may encounter an issue where jobs running to a Scale-Out Backup Repository report "No scale-out repository extents have sufficient disk space to store the backup file," even though some of the extents have adequate free space. This article will provide you with a step-by-step guide on how to resolve this issue.

Option 1: Understand Expected Behavior
The estimated free space system is intended as a safeguard to prevent concurrently running jobs from filling the Scale-Out Backup Repository extents. When a job starts, Veeam Backup & Replication retrieves the actual free space of the assigned Scale-Out Backup Repository extent. It then estimates the size of the restore point to be created and subtracts that from the actual free space to generate an estimated free space value. All subsequent concurrently running jobs for that extent use that estimated free space to keep a running Estimated Free space. This system prevents jobs from running that may fill the extent.

If you encounter the "No scale-out repository extents have sufficient disk space to store the backup file" error, it means that the estimated free space has been used up, even though some of the extents have adequate free space. In such cases, it is recommended to understand the expected behavior of the estimated free space system.

Option 2: Alternate Estimated Free Space Calculation
If the actual free space is only retrieved when no active tasks are assigned to an extent, in environments where tasks are always running, the estimated free space may begin to deviate from the actual free space over a long enough time. This deviation is due to the slight differences between the estimated size and the actual size of restore points.

The software can be configured to recalculate the extent's estimated free space when a task starts and is assigned to that extent. (The recalculation can only occur if it has been more than 15 minutes since the last estimated free space recalculation.) The recalculated 'estimated free space' will be based on the actual free space minus the estimated restore point size of all active tasks for the extent.

To enable this alternate method of estimating free space, follow these steps:

1. Open the Registry Editor
   To open the Registry Editor, click on the Start menu and type "regedit" in the search box. Click on the "Registry Editor" option that appears.

2. Navigate to the Veeam Backup Server Registry Key
   In the Registry Editor, navigate to the following key: HKLM\SOFTWARE\Veeam\Veeam Backup and Replication\

3. Create a New DWORD Value
   Right-click on the "Veeam Backup and Replication" key and select "New" > "DWORD (32-bit) Value." Name the new value "SobrForceExtentSpaceUpdate" (without the quotes).

4. Set the Value Data
   Double-click on the "SobrForceExtentSpaceUpdate" value to edit its properties. In the "Value data" field, enter "1" (without the quotes) to enable the alternate method of estimating free space.

5. Restart the Veeam Backup Service
   To apply the changes, you will need to restart the Veeam Backup Service. To do this, open the Services app by clicking on the Start menu and typing "services.msc" in the search box. Click on the "Services" option that appears.