



Availability made easy for your Virtual infrastructure: **Tips & tricks from Veeam**

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Veeam Sizing and Best Practices



Veeam Server Sizing Best Practices

- 1 CPU core (physical or virtual) and 4 GB RAM per 10 concurrently running jobs.
- If Virtual 4vCPU Cores and 8GB RAM good for 300-400 VMs, and backup/BCJ/Replication/Surebackup/Surereplica jobs included!!!
- Simple, just keep an eye on resources, ESX and Storage resources...VeeamOne helps to let us know.
- Consideration
 - Default Log, Surebackup jobs disk Locations for larger environments
 -
- SQL DB Express 300-400 VMs Max



Veeam SQL database sizing

- SQL Express 2014
 - Each instance uses only up to 1 GB of RAM
 - Each instance uses only up to 4 cores of the first CPU
 - Database size cannot exceed 10 GB
- Up to 300-400 VMs is all good for backups/replication/BCJ etc.
- What about Staging servers?
 - Explores SQL, Exchange, Oracle, SPS, AD, 10GB DBs?
 - File to tape jobs
 - SQL Versioning
 - Dedicated SQL Server?

SQL Server Sizing cont.

Number of concurrently running jobs	CPU	RAM
Up to 25	2	4 GB
Up to 50	4	8 GB
Up to 100	8	16 GB

If possible follow these guidelines

Proxy Sizing Best Practices.

- **Calculating Overall “Task” Count Examples**

- Sample infrastructure has the following configuration:

- 480 VMs

- 48 TB used data

- Backup window: 8 hours

- Change rate: 5%

- For that, the following calculation can be used as a starting point.

- Using the "30 VMs per CPU core" rule, we get following result:

- +

- 480 VMs / 30 VMs per core = 16 CPU cores

- Each CPU core must have 2 GB RAM:

- 16 CPU cores x 2 GB RAM = 32 GB RAM.

- Result: **16 CPU cores and 32 GB RAM.**

Watch your Storage and Network

Repository Sizing and Flavors

- **Server-Based Repository: DAS or SAN**
- **Windows or Linux?**
- **Physical or Virtual?**
- **Dedup Appliances ?**

- **Per Job = 1 CPU/Core + 4GB**
 - **Allow at least 1 Core for the OS**
 - **Recoveries, FLR, IVM, Explores, Virtual Labs etc**

- **The more disks the better for safety and performance.**
 - **Raid 10, 5,6**

Repository Sizing cont.

- **How much storage do we need?**
 - Be conservative
 - Assume 2:1 Compression + 25% Free Sapce
 - 10TB + 25% = 12.5TB
 - VeeamOne has the numbers
 - Sizing Tools <http://rps.dewin.me/>
- **Per VM Backups**
 - **Sweet spot at around 300 VMs per backup job**
 - More available storage required, better synthetics performance
 - Careful with BCJ, Health checks with large jobs
- **SOBR Scale Out Backup Repository**
 - Less admin, Logical name, Per VM backups is a good option

Best Practices Resources

- Documentation
 - <https://bp.veeam.expert/>
- Sizing Tools
 - Repository <http://rps.dewin.me/>
 - VeeamOne Sizing <http://one.mrferik.com/par.html>

FREE STUFF

for Existing Customers

FREE Products

Veeam Agent *for Linux*:

FREE for 6 months

Veeam Agent *for Microsoft*

Windows: **FREE** for 6 months

(when available)

Veeam Backup *for Microsoft*

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The screenshot shows a web browser window with the URL <https://go.veeam.com/promo-hybrid-cloud>. The page features the Veeam logo and the tagline "AVAILABILITY for the Always-On Enterprise". A central banner highlights a "LIMITED TIME OFFER FOR EXISTING VEEAM CUSTOMERS" for "NEW & FREE Veeam for Physical and Cloud Backup Your Windows and Linux Workloads". On the right, a "GET FREE LICENSES" form includes input fields for "First name", "Last name", and "Business email", along with checkboxes for "Veeam Agents for Microsoft Windows", "Veeam Agents for Linux", "Veeam Backup for Microsoft Office 365", and "Interested in 24/7 Product Support?". A prominent red "REGISTER NOW" button is at the bottom of the form. Below the banner, the text reads "Protect physical, AWS and Azure Workloads, plus Microsoft Office 365!". Further down, it states "As an existing customer, get significantly more protection from Veeam® — for FREE — with our:" followed by a list of products: "NEW Veeam Agent for Microsoft Windows* and NEW Veeam Agent for Linux to protect:" (Physical servers, Endpoints, VMs) and "NEW Veeam Backup for Microsoft Office 365 to protect:" (Microsoft Office 365 mailboxes).

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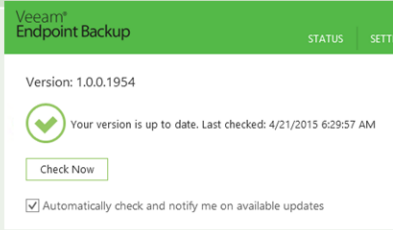
The screenshot shows a web browser window with the URL <https://go.veeam.com/promo-free-cloud-services>. The Veeam logo is in the top left, and the tagline "AVAILABILITY for the Always-On Enterprise™" is in the top right. The main content area features a light blue background with a grid pattern. The text reads: "Cloud Backup and DRaaS Activate in Minutes – It's Built In!" followed by "\$1,000 in FREE Cloud Services". Below this is the text "Powered by Veeam Cloud & Service Provider (VCSP) Partners". On the right side, there is a white box titled "GET FREE SERVICES" containing four input fields: "First name", "Last name", "Business email", and "Company". A red button labeled "GET FREE SERVICES" is at the bottom of this box. At the bottom of the page, a grey banner states: "Veeam and its Partners are giving away **\$200 MILLION** in Cloud services".

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Over 200,000 businesses rely on Veeam® for comprehensive, on-premises data protection. With this new program Veeam and its Veeam Cloud & Service Provider (VCSP) partners provide a simple and cost effective way for customers to try backup and disaster recovery in the Cloud.



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Over 13 key features	Unlimited hosts	Used in this presentation!	Great for your PCs/laptops

<https://bp.veeam.expert> for the full Veeam best practices

Q&A and Thank you
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