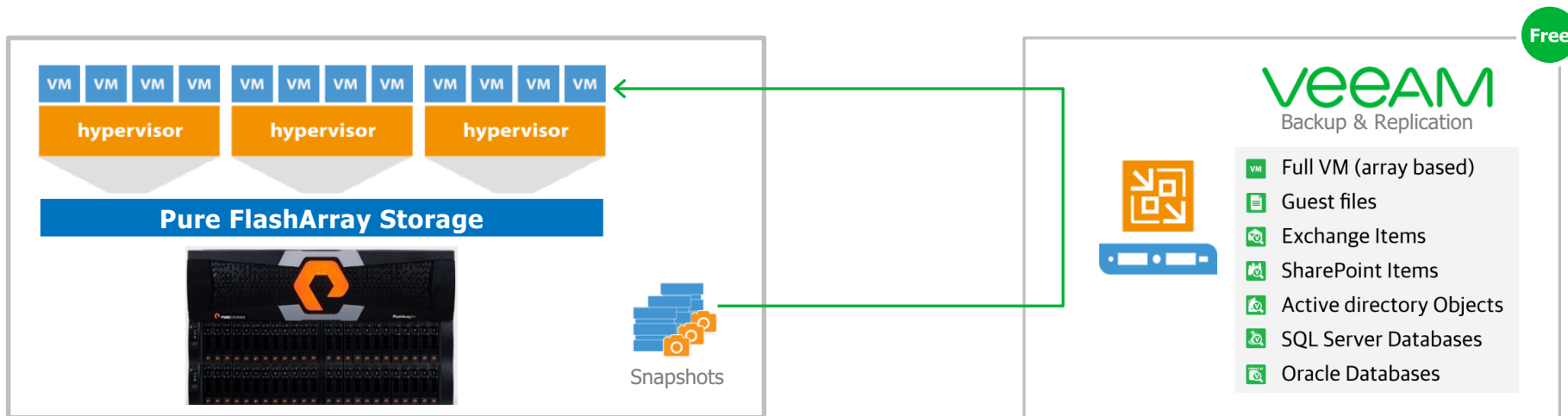


Veeam Explorer for Storage Snapshots

for Pure FlashArray



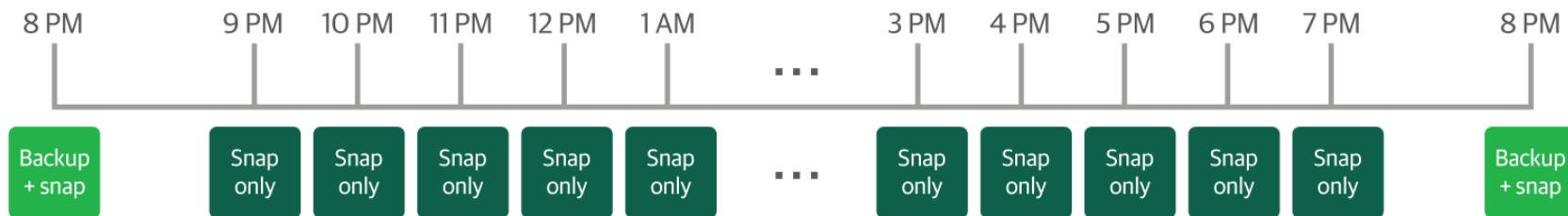
Veeam restores VMs (Instant VM Recovery), guest files, application items and databases directly from **Pure snapshots**

- Works with a storage snapshot created by Veeam, Pure or any 3rd Party software. VMs need to be on the VMDK base.
- Easy-to-use interface. New snapshots are automatically detected and restores can be started.
- Veeam Backup Free Edition only provides VM and guest file restore. Application items and DBs can be exported.
- Veeam Backup & Replication Enterprise Edition provide additional application items and DB restore to original place.

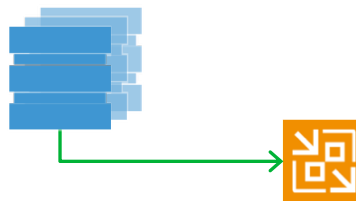
Use of Storage Snapshots for better RPO

During backup, data transport and consistency processing reduce performance of applications resulting in Veeam backup processing only 1-4x a day.

Solution: Leverage storage snapshots between the backup for better Recovery Point Objectives (RPO) of once per hour, or more frequently.



Veeam Explorer for Storage Snapshots



- Instant VM Recovery
- File Recovery (Win/Linux/Unix)
- Object/DB Restore

- Can be out of consistent or crash consistent storage snapshots and Backups
- Use storage snapshots created by Veeam, Pure or 3rd Party
- For VMDK based VMs

Veeam Backup & Replication



Instant VM Recovery



Universal Application Recovery



AD



Win Files



Domino Single 'Mail' by U-AIR



Sharepoint



Linux Files
(19 FS, btrfs, XFS, LVM1/2 friendly names)



Exchange



MS SQL



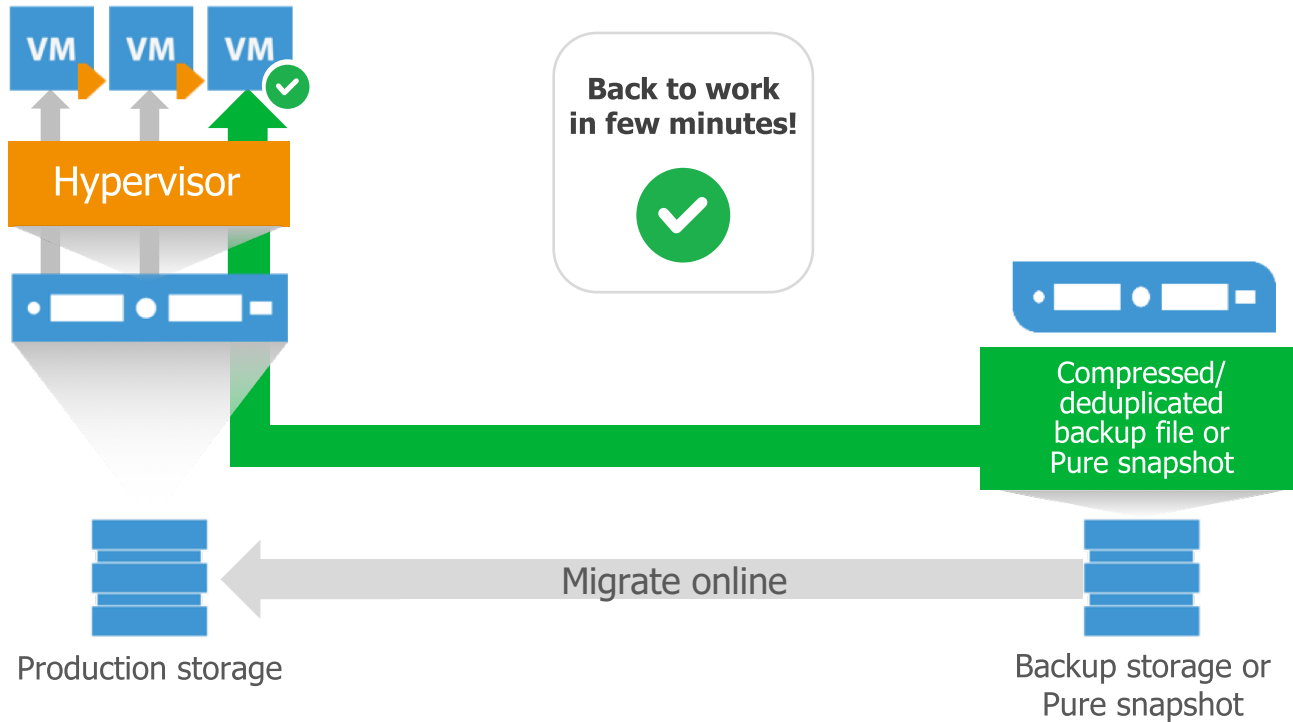
VLAB



Oracle 11/12

and more

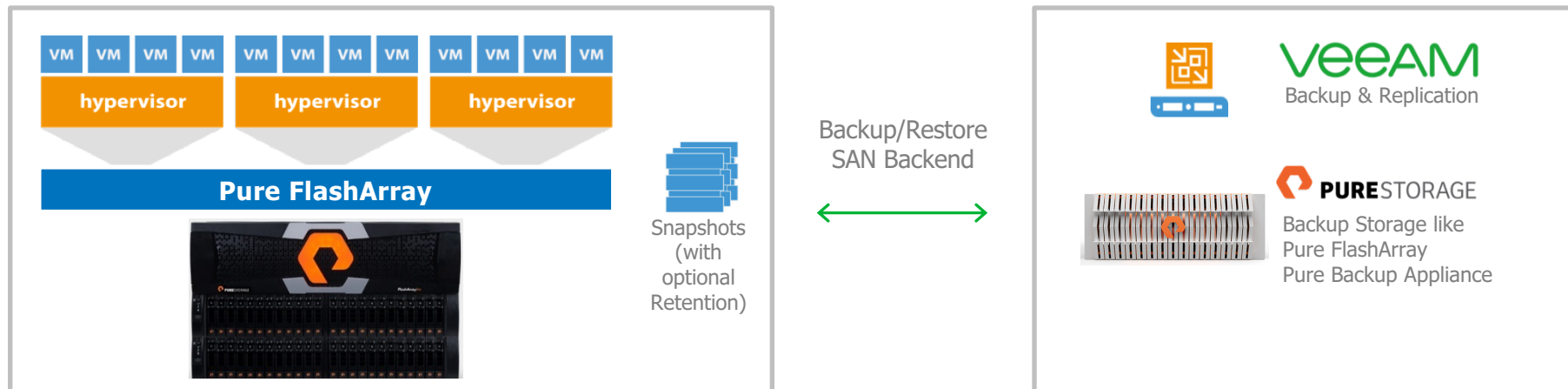
Instant VM Recovery – How it works



Veeam Backup from Storage Snapshot

Veeam Backup from Storage Snapshot

for Pure FlashArray

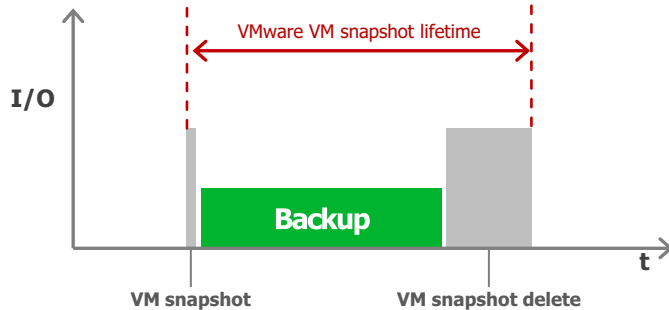


Veeam leverages **Pure snapshots** for backups for:

- Agentless application aware backups – Active Directory, Exchange, SharePoint, MS SQL Server and Oracle...
- Minimizes VMware backup API performance impact on production VMs during backup
- Improves RTO and RPO times with technologies like Instant VM Recovery and Application Restore out of storage snapshots or Backups
- **2x** the backup speed vs. standard VMware API backups. **10x** the speed of other storage snapshots backup solutions through usage of VMware Change Block Tracking

VMware Snapshot challenges

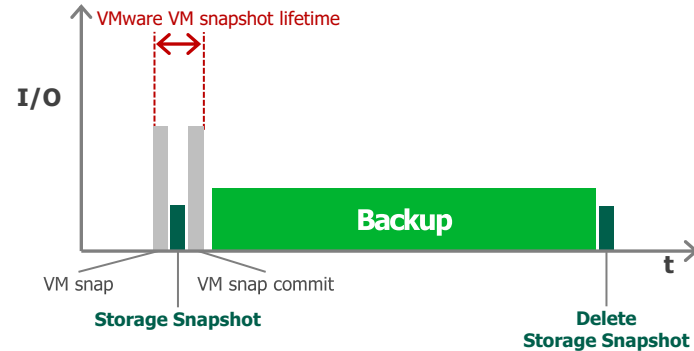
Standard VM Backup



To be able to use Incremental Forever Image Level Backups with Change-Block-Tracking over the VMware Storage API, a VM Snapshot is required. However, VM Snapshots come with drawbacks, as all changes during the backup were written to the Snapshot and they need to be committed to the main storage when the snapshot is deleted. This lead to:

- High Storage Load at Snapshot delete
- Potential VM stuns at Snapshot delete
- It will take a long time to delete the Snapshot

With Pure Snapshot Integration



Together with Veeam unique agentless Application Aware Backup engine Veeam creates storage snapshots directly after the VMware Snapshot to preserve the consistent state within it. After the storage snapshot was created, Veeam will release the VMware VM snapshot immediately.

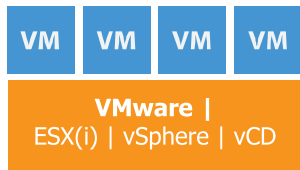
As the storage snapshot can be deleted without any overhead, there will be no negative effects to the VMs. Veeam can use VMware Change Block Tracking to read directly from the storage snapshots.

Pure Snapshot based Backups

Application-Aware-Consistency

- +VSS +Pre-/Post-Scripts
- + Application Restore switches
- + Logfile Truncation after Backup

No Agents on VMs
and VMware!!!



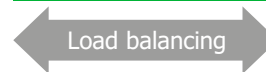
Veeam Backup
Server

VMware Change-Block-Tracking Info



Administration

Load balancing



Veeam Backup Proxy



VM Snapshot

Pure Storage



Storage
Snapshot

Block Level Incremental
Forever Backup Direct out of
Storage Snapshot with use of VMware
Change-Block-Tracking

Deduplication
+Compression
+Parallel Processing
+ Storage Latency Control
+ Encryption



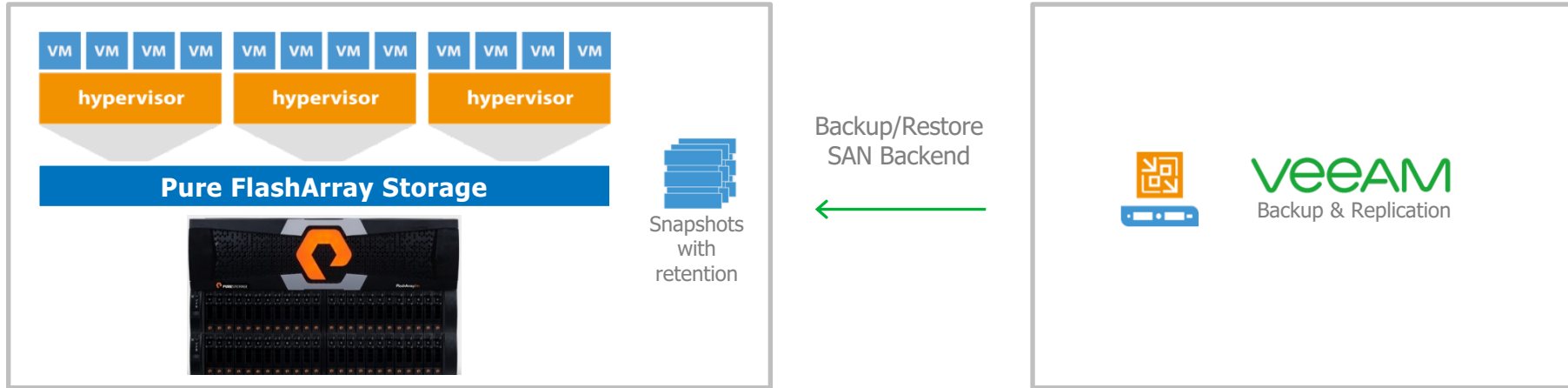
Veeam Backup
Repository Server



Snapshot only
Veeam Jobs

Snapshot only Veeam Jobs

for Pure FlashArray



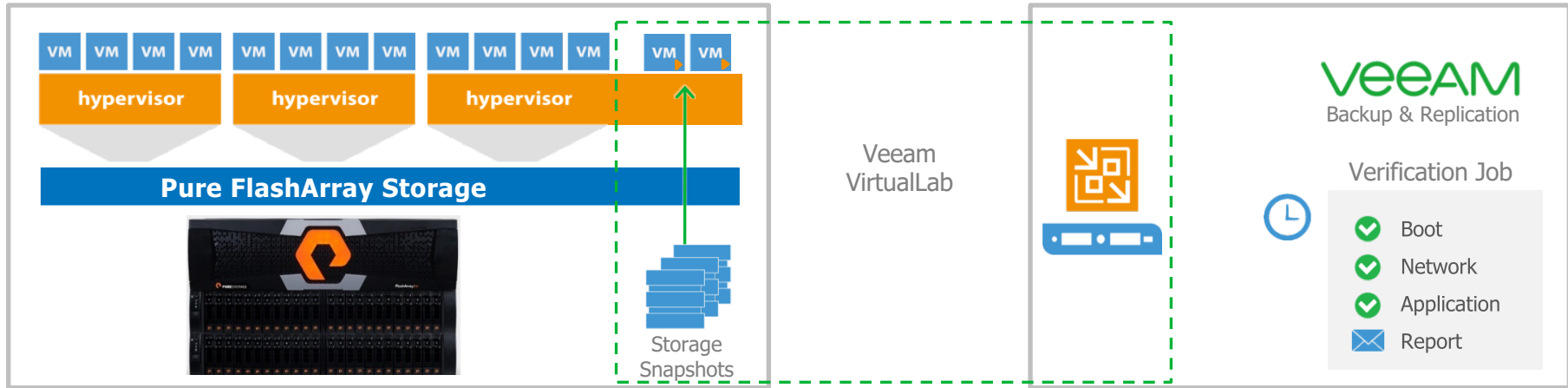
Veeam leverages **Pure snapshot** based processing for:

- Agentless application aware restore points – Active Directory, Exchange, SharePoint, MS SQL Server and Oracle...
- Improves RPO time – administrators can create additional snapshot-based restore points on top of traditional backups.
- High frequent Crash Consistent Snapshots, together with the ability to restore application from them, improves RPO times even further.

On-Demand Sandbox for Storage Snapshots

On-Demand Sandbox for Storage Snapshots

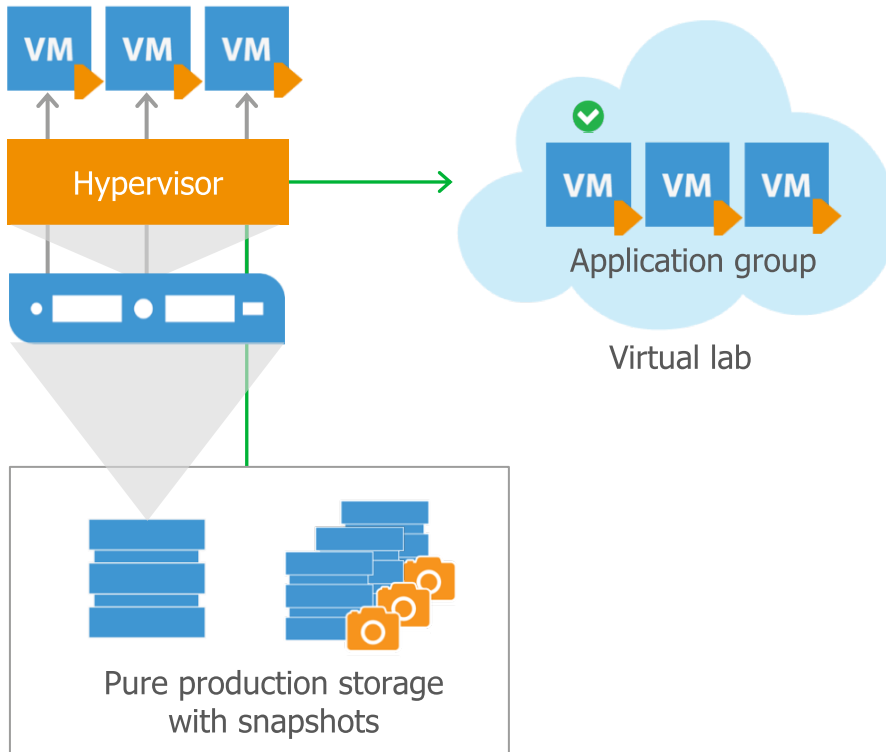
for Pure FlashArray



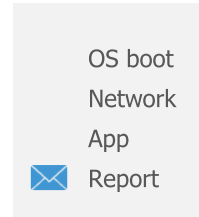
Veeam leverages Pure snapshots to provide automated restore verification and on-demand labs

- VMs can be started in an On-Demand Sandbox environment to test applications, scripts, upgrades, development,...
- Storage snapshots can be used to schedule automated restore tests of VM boot, network connection and application start.
- Works with storage snapshots created by Pure or any 3rd Party software. VMs need to be on VMDK base.
- Automated reporting of restore tests can be sent by mail. (Enhanced Report in Veeam Availability Suite).

SureBackup – How it works



SureBackup job



VEEAM

On-Demand Sandbox for Storage Snapshots

Instantly start a group of VMs in a Virtual Lab

High Performance as Pure snapshots can be used for it

Put your backups to work!

- Troubleshooting
- Testing workarounds and patches
- Rollout Tests (will an Update harm the production)
- Training
- Software Development
- SAP Sandbox Tests
- Migration Tests with actual production data
- Penetration Tests

“We’re building roughly 8 to 10 test environments at any given time.

With Veeam, it’s not only possible, but easy and automated.”

– **Theresa Brownfield**
Lead Principal IS Operations Engineer
John I. Haas, Inc.