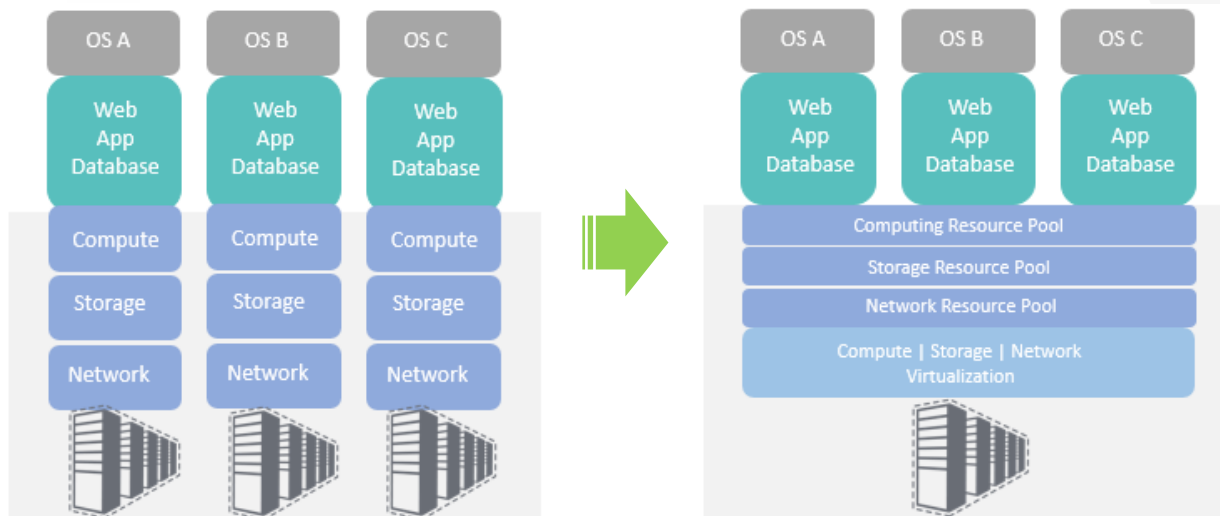


# Next-Gen Backup & DR Solution for oVirt

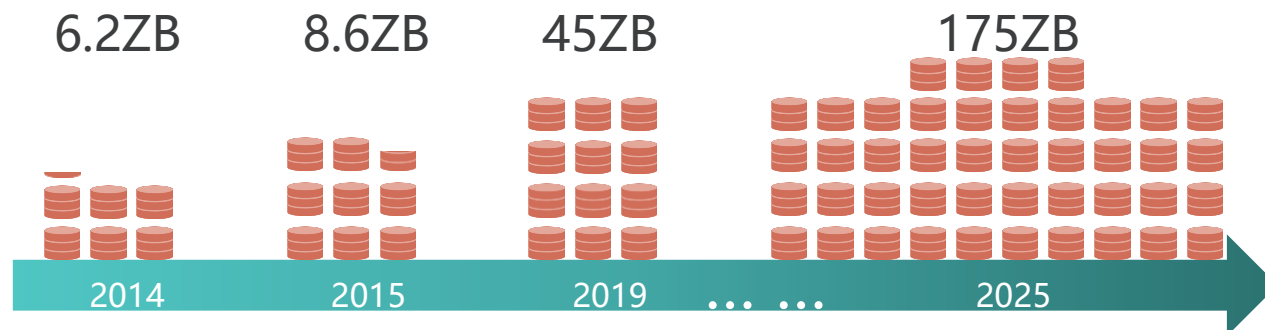
## Vinchin Backup & Recovery

Shall Ao | Director of Sales, Vinchin





IT Infrastructure is changing from Legacy to Digitalized



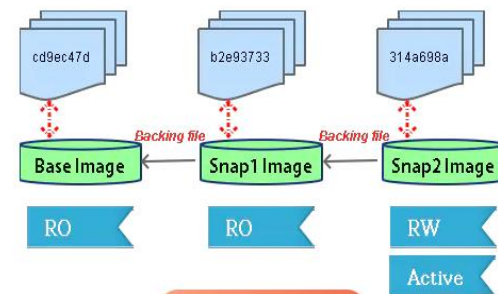
Global data is growing at tens times continually

We already  
have these  
security  
mechanism

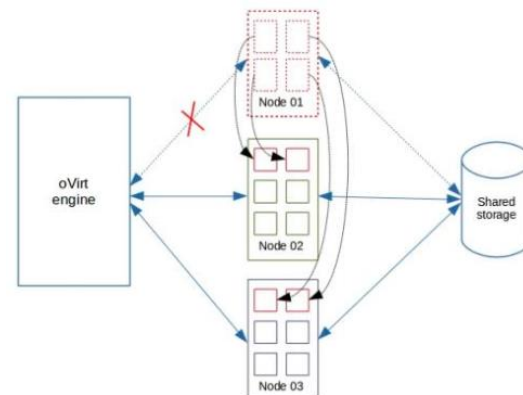


**Is BACKUP  
necessary?**

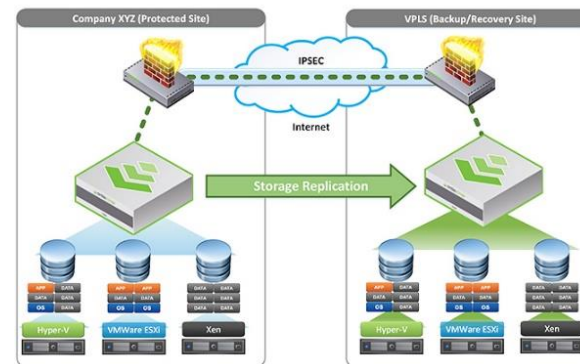
Snapshot



HA



Storage  
Replication





### **Hardware Failures**

Hard disk, RAM, CPU, motherboard damage...

### **Improper operation**

Human error, unauthorized operation...

### **Malicious failure**

Computer viruses, ransomware...

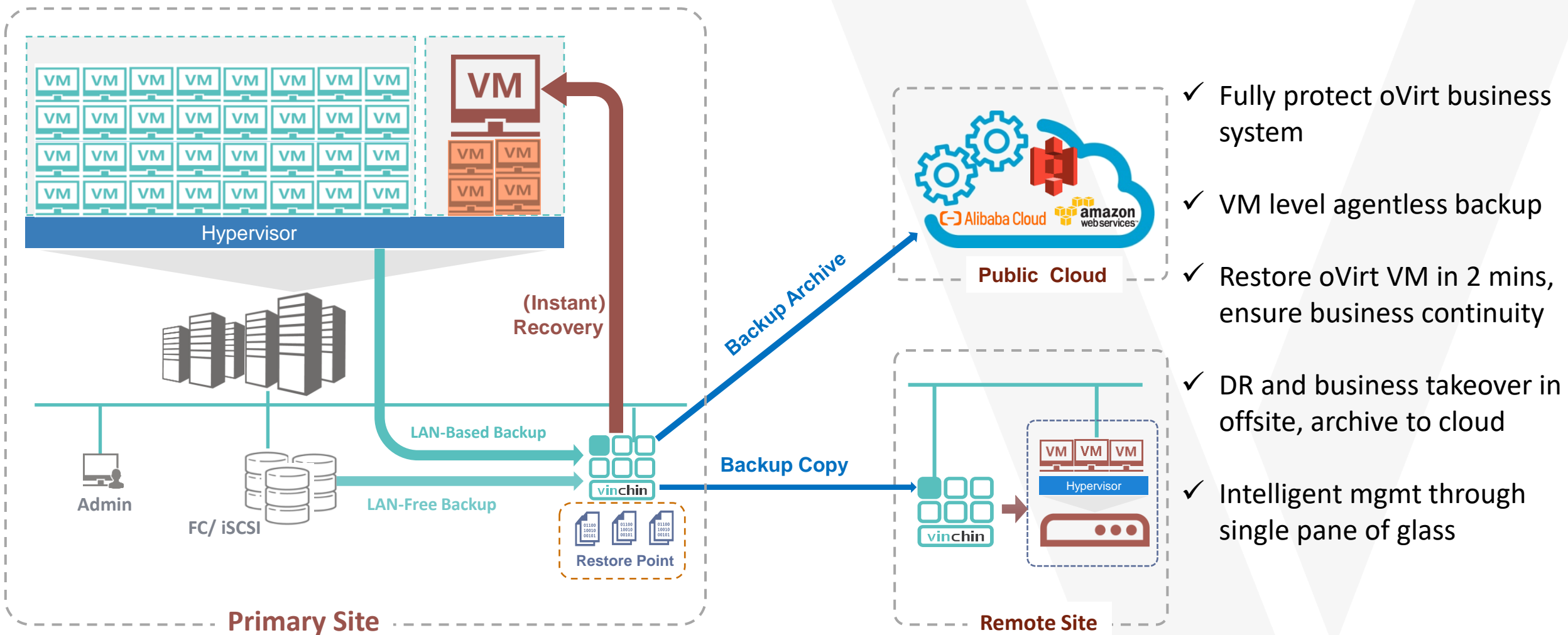
### **Software crashes**

Bugs in app sys, file sys breakdown...

### **natural disasters**

Earthquakes, hurricanes, floods, and fires...

**Threat of data loss is everywhere**



## How it works:

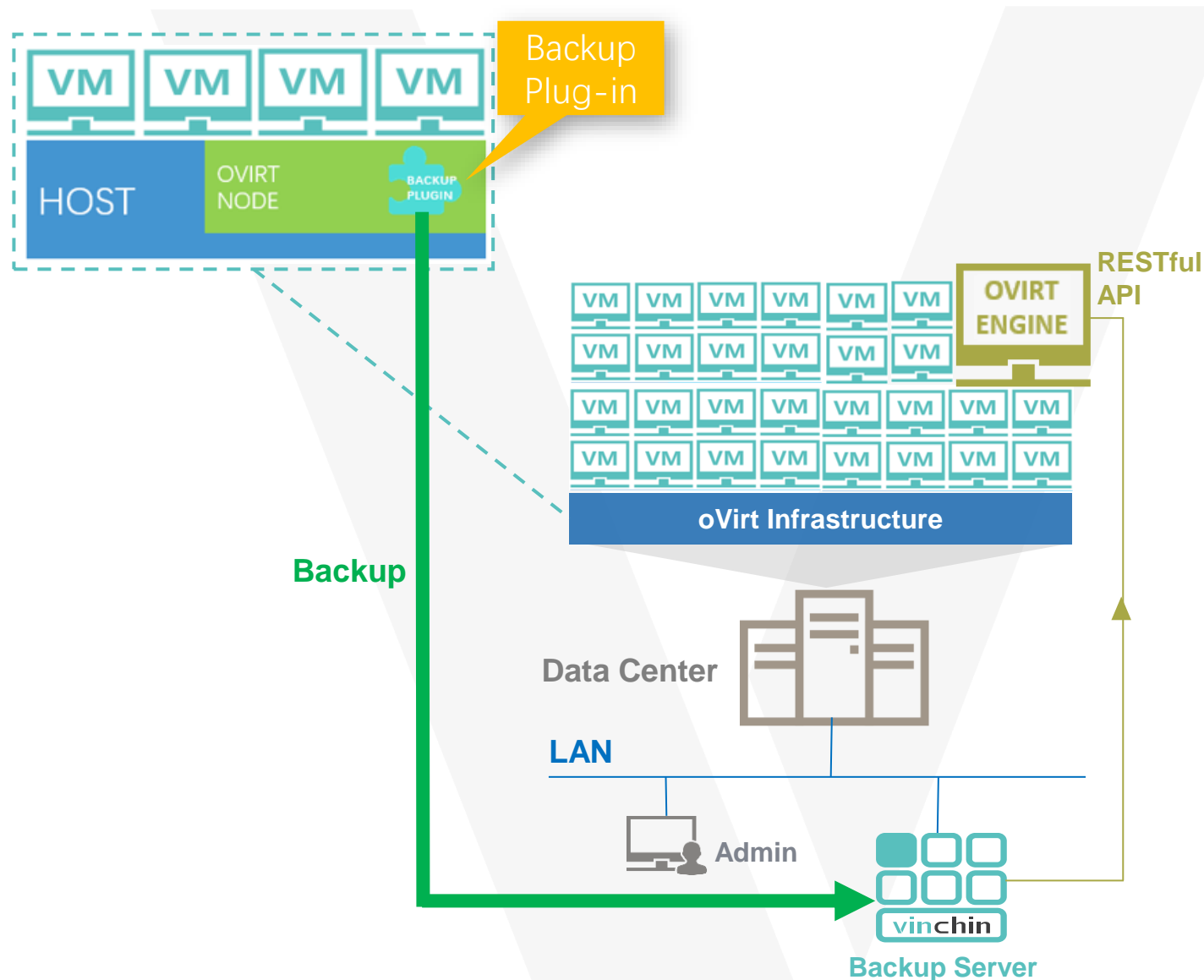
- Obtain VM info through oVirt RESTful API
- Notify oVirt engine to create snapshot for VM
- Locate VM host IP & connect it to backup plug-in
- Extract VM data & transfer to backup server via backup plug-in
- Notify oVirt engine to delete snapshot

## Requirement:

A backup plug-in is required to install on oVirt node

## Pros

No version limitation, support up to oVirt 4.4



## How it works:

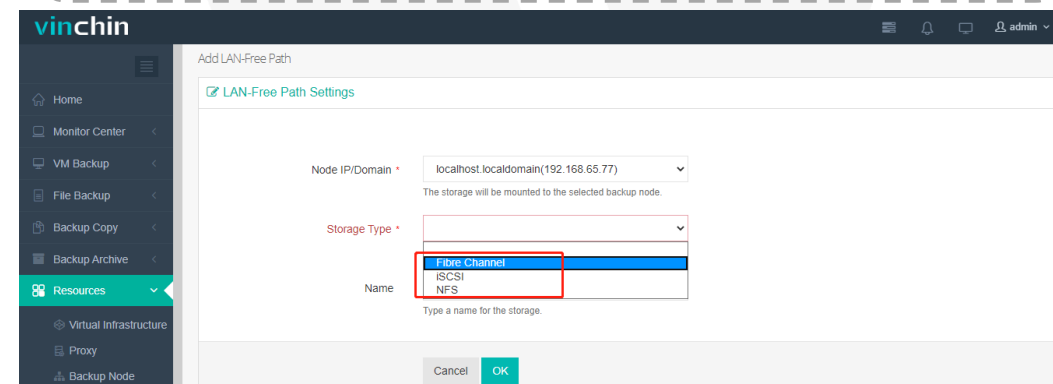
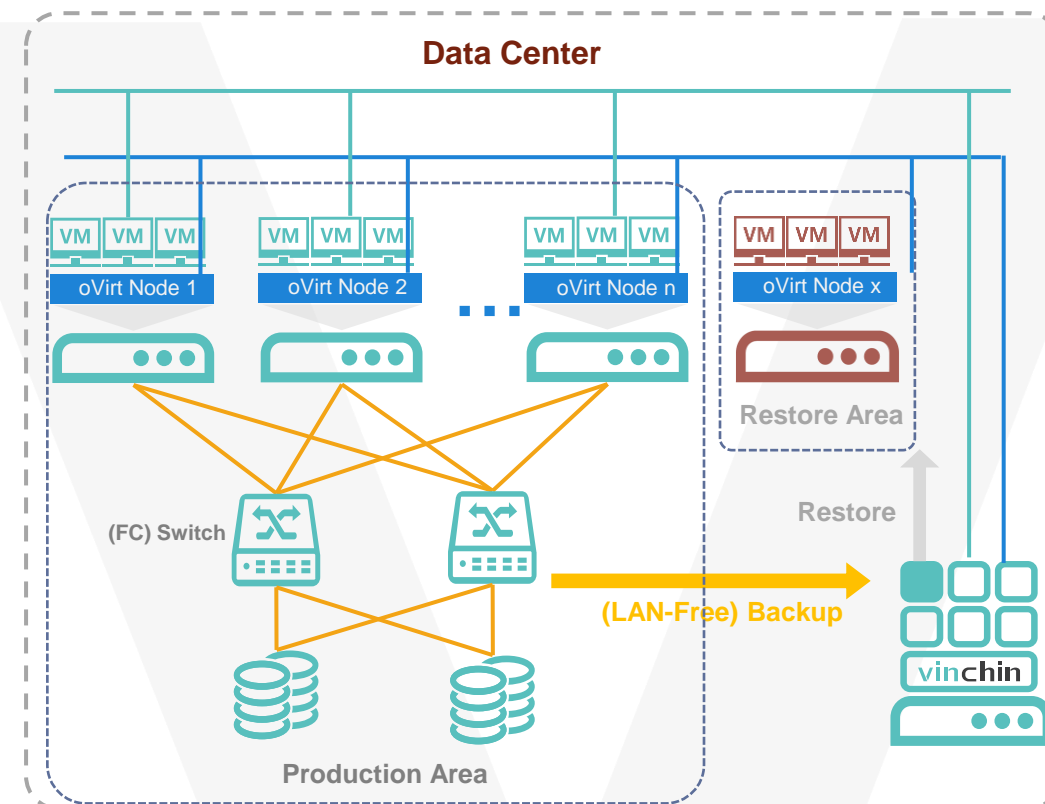
- Obtain VM info through oVirt RESTful API
- Notify oVirt engine to create snapshot for VM
- Map FC/iSCSI storage domain LUN to backup server
- Extract VM data & transfer to backup storage via SAN
- Notify oVirt engine to delete snapshot

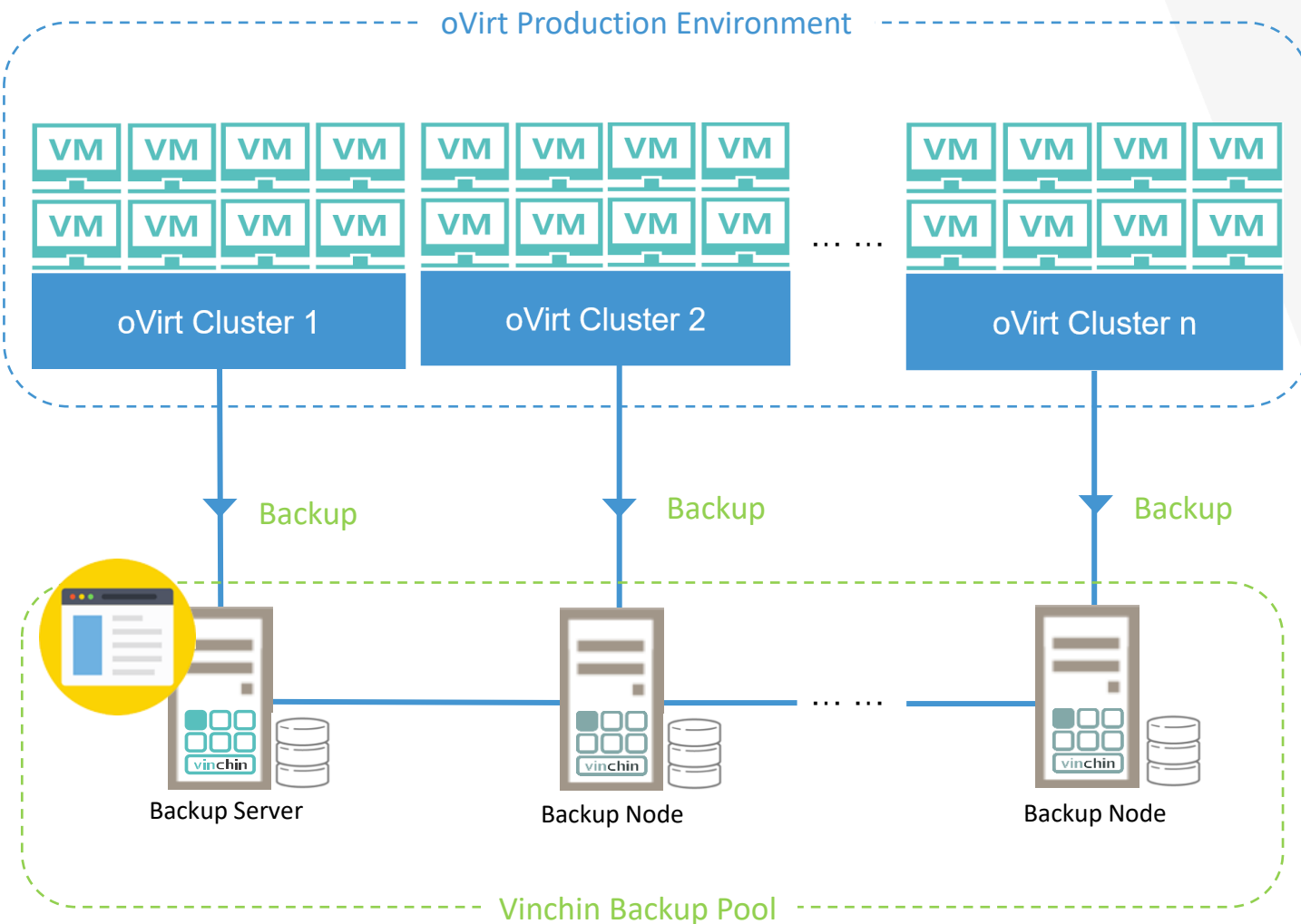
## Requirement:

- Backup software is required to install on physical server
- FC SAN, IP-SAN(iSCSI) or NFS is required

## Pros:

- No version limitation, support up to oVirt 4.4
- Faster data transfer speed than LAN-based backup





## How it works:

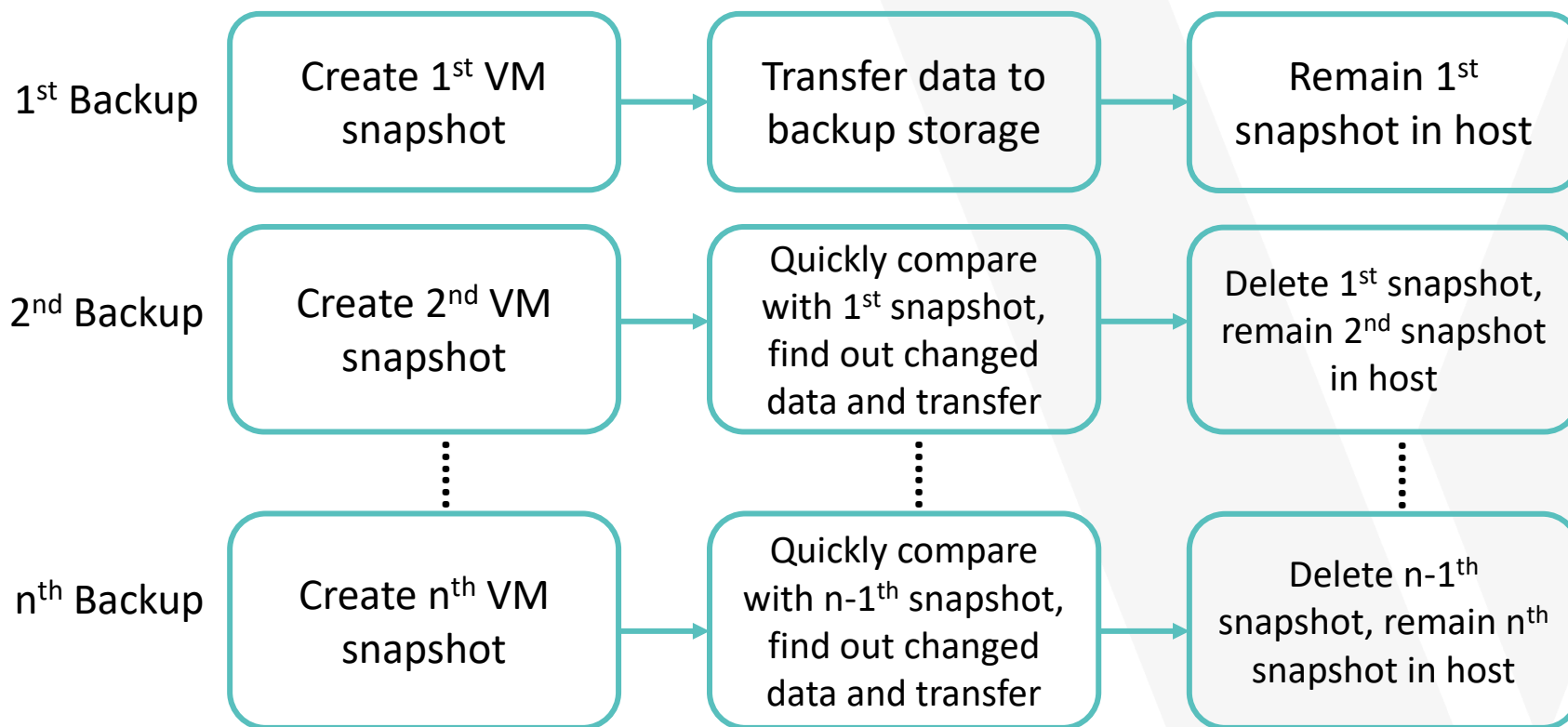
- Install Backup Node in physical or oVirt VM
- Set Backup Node/Server IP and oVirt mgmt IP in the same network segment
- Backup node will act as a backup server to process and store backup data through oVirt RESTful API
- All Backup Node will be centrally managed by Backup Server web console

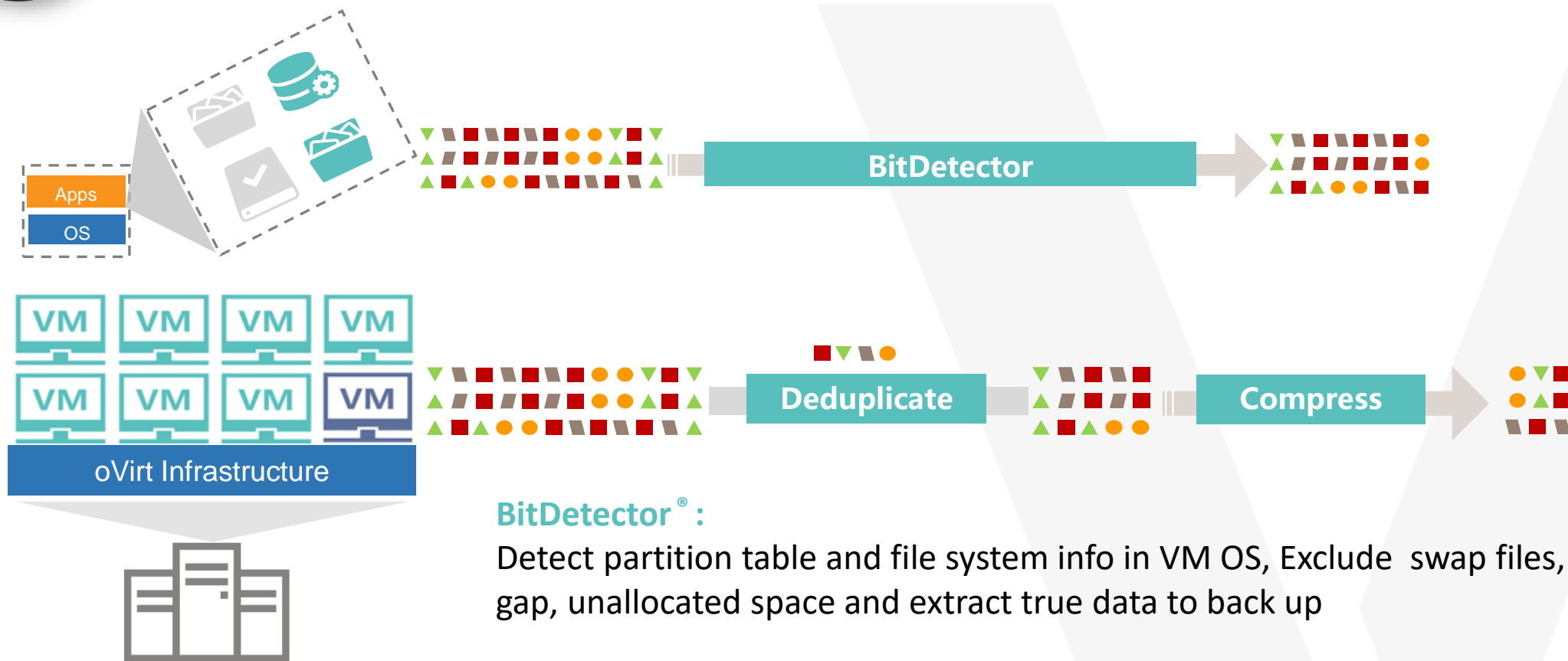
## Pros:

- Improve backup efficiency for large oVirt environment
- Backup Node can be extended horizontally without limitation
- Apply to both LAN-based and LAN-Free backup extension

## SpeedKit®

- Quickly track changed block
- Improve incremental backup speed
- Alternative to oVirt CBT, no version limitation, support up to oVirt 4.4





## BitDetector®:

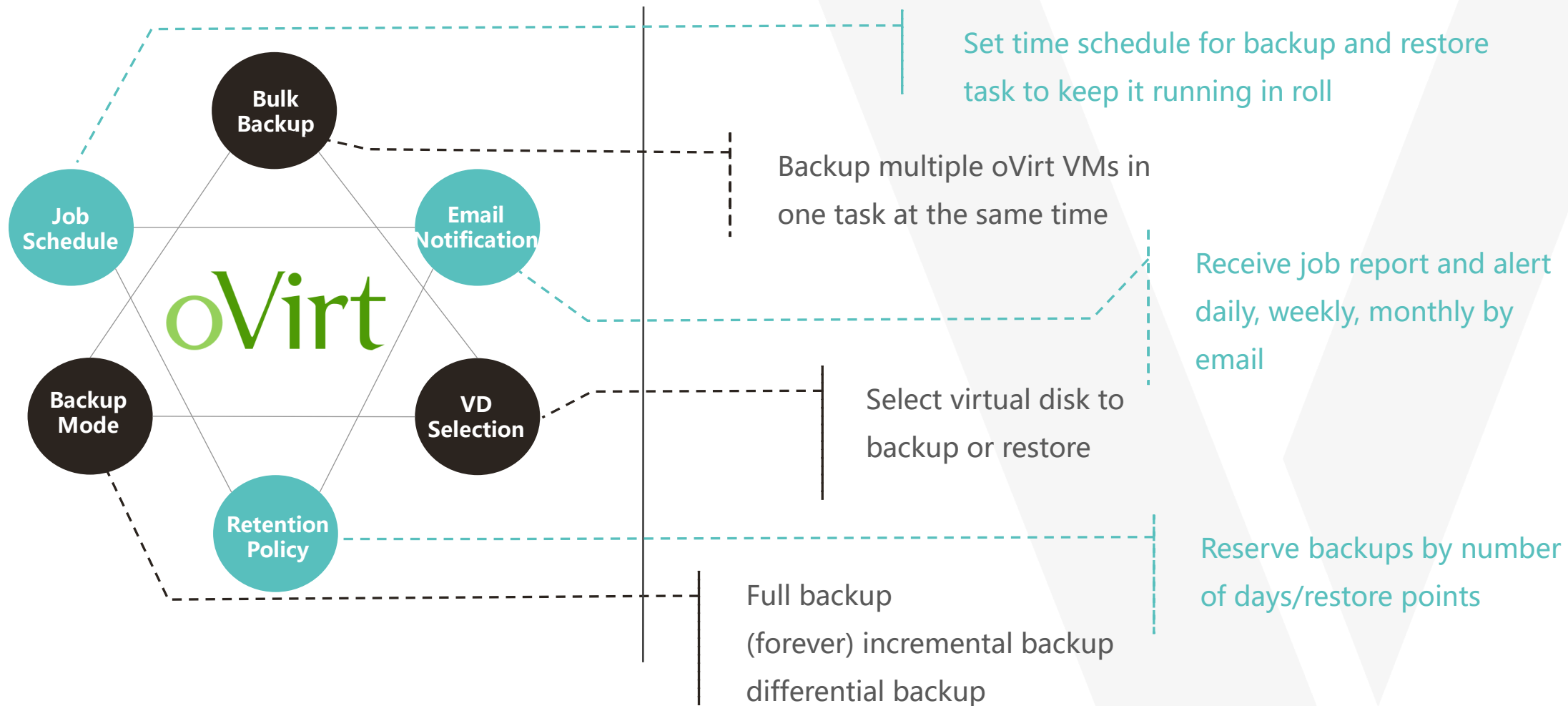
Detect partition table and file system info in VM OS, Exclude swap files, partition gap, unallocated space and extract true data to back up

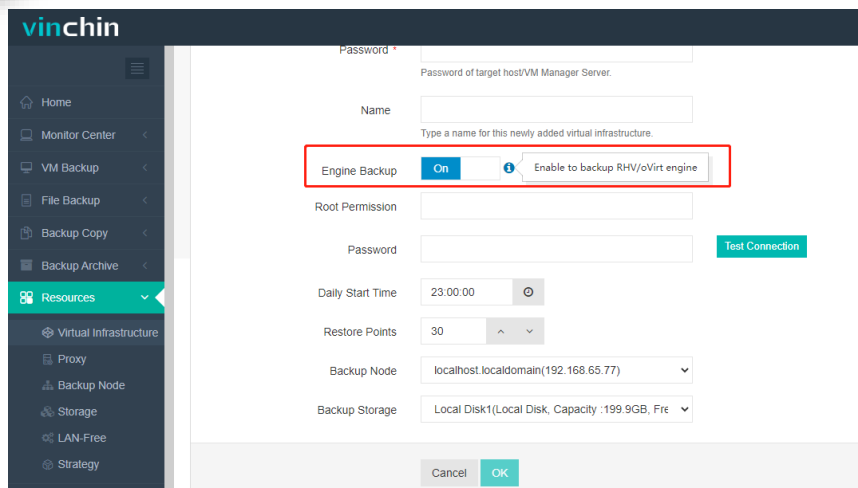
## Deduplication & Compression:

Deduplicate and compress backup data before written to backup storage

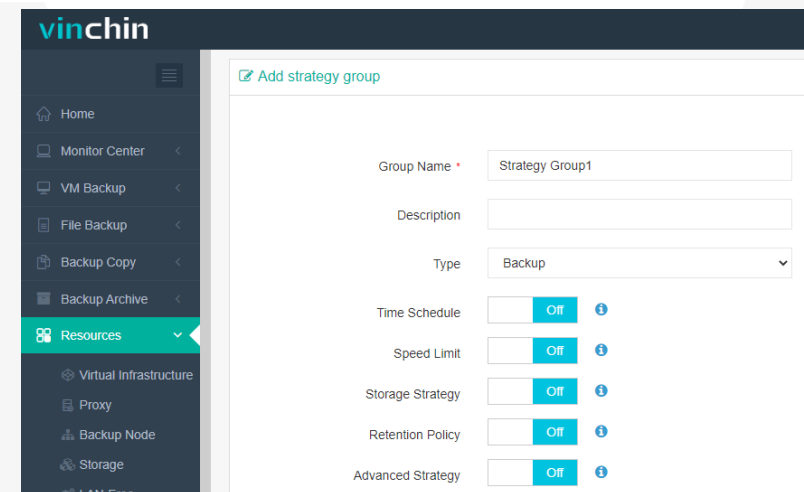
## Pros:

Backup data size can be reduced by more than 50%

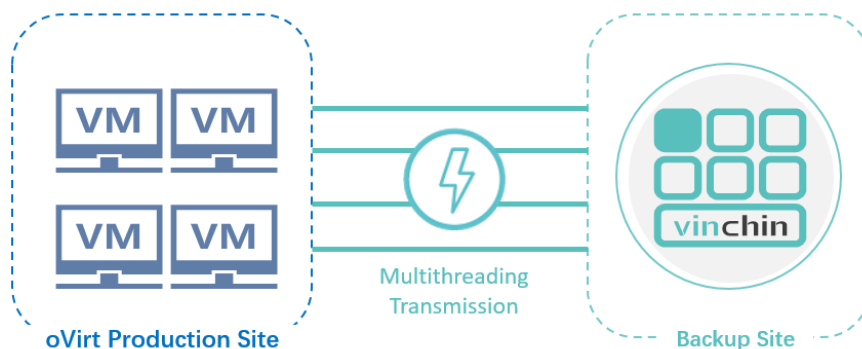




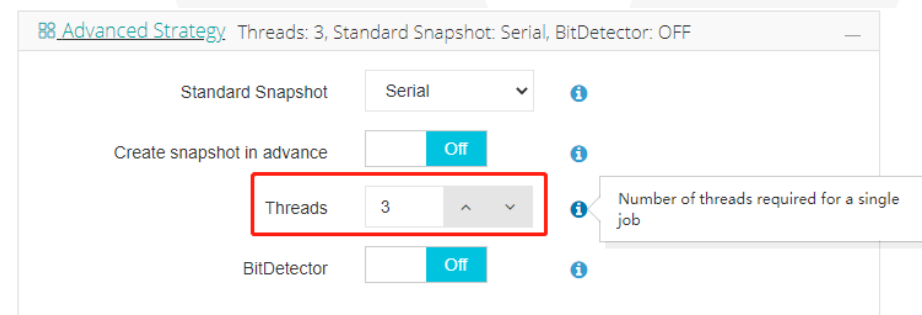
Daily back up oVirt engine metadata



Pre-configure strategy template



Multithreaded transmission for backup, restore and migration



## Full Recovery

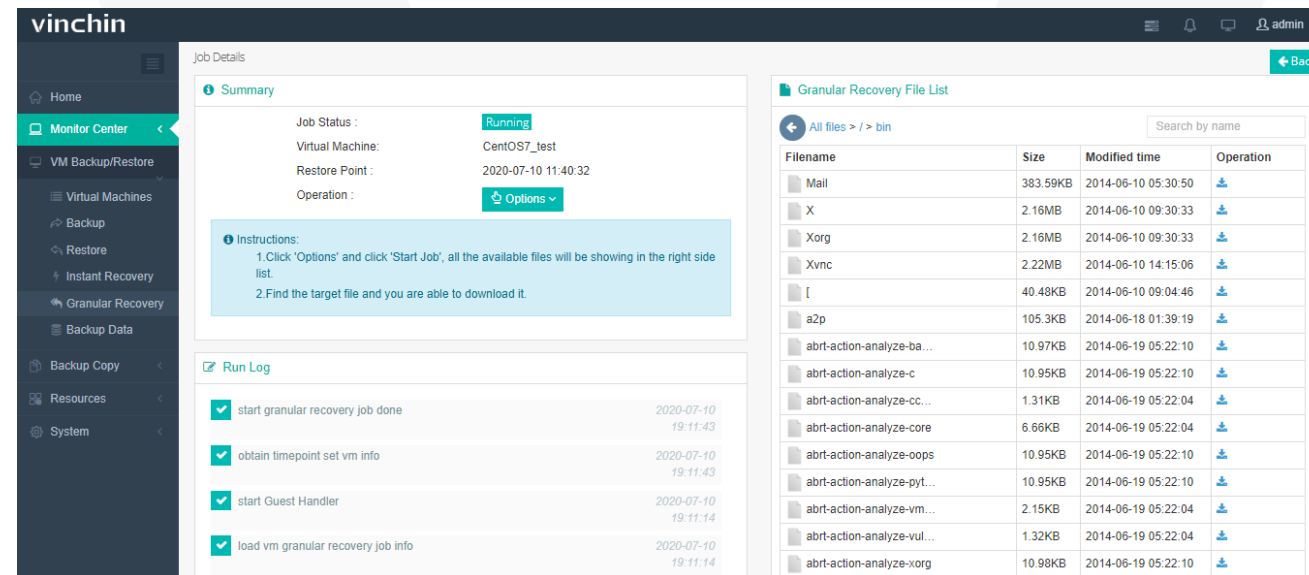
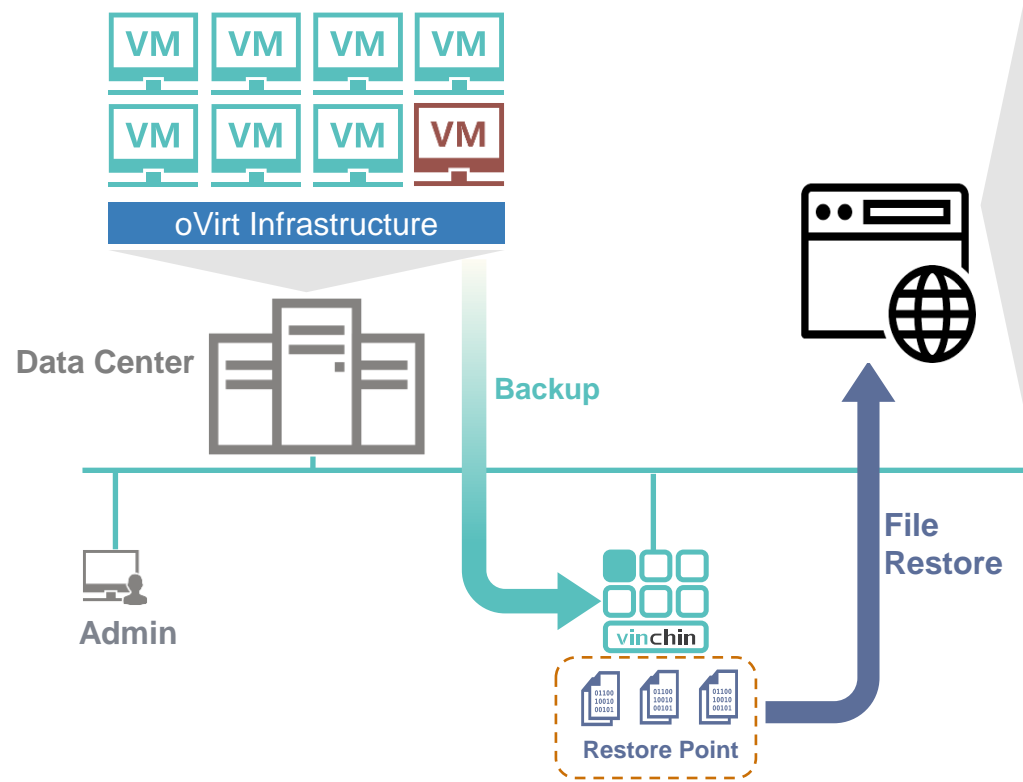
- Recover entire VM to oVirt production host

## File Level Recovery

- Recover file or folder from oVirt VM backups

## Instant Recovery

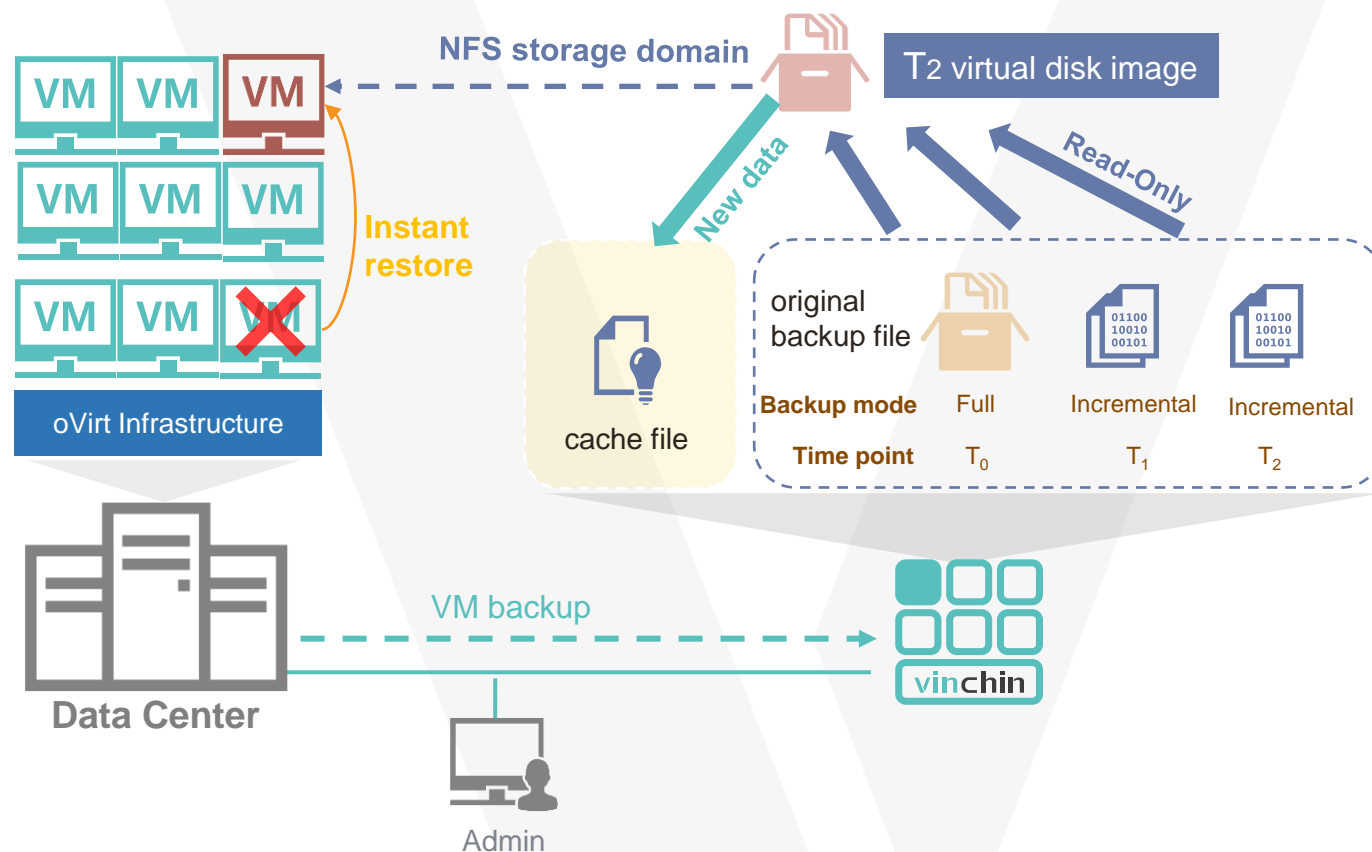
- Recover any size oVirt VM in a few minutes

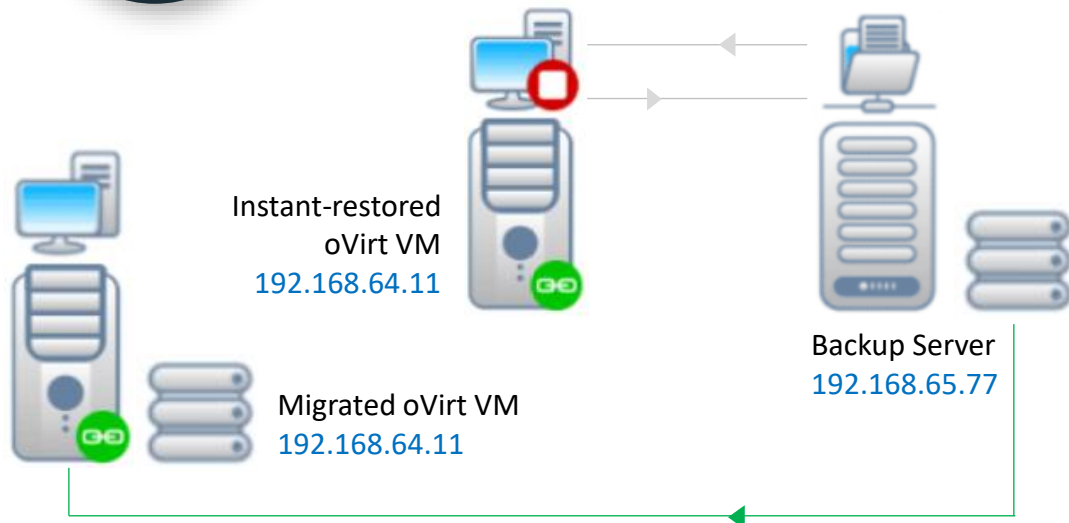


- File/folder/disk are recoverable
- Recoverable from any time point
- Recoverable without business interruption
- Recoverable from Windows, linux, centos, Ubuntu.etc.

## How Instant Recovery works:

- Create NFS storage domain on oVirt host
  - Create VM on NFS storage domain
  - Obtain VM disk list through oVirt RESTfull API
  - Create cache file on backup server
  - Boot up Vinchin instant recovery engine
  - Power on instant recovered oVirt VM
- 
- original backup file is read-only
  - new data be written to cache file
- 
- Pros:**
- No limitation on VM size, any VM is recoverable in a matter of minutes
  - A fast way to verify backup data availability



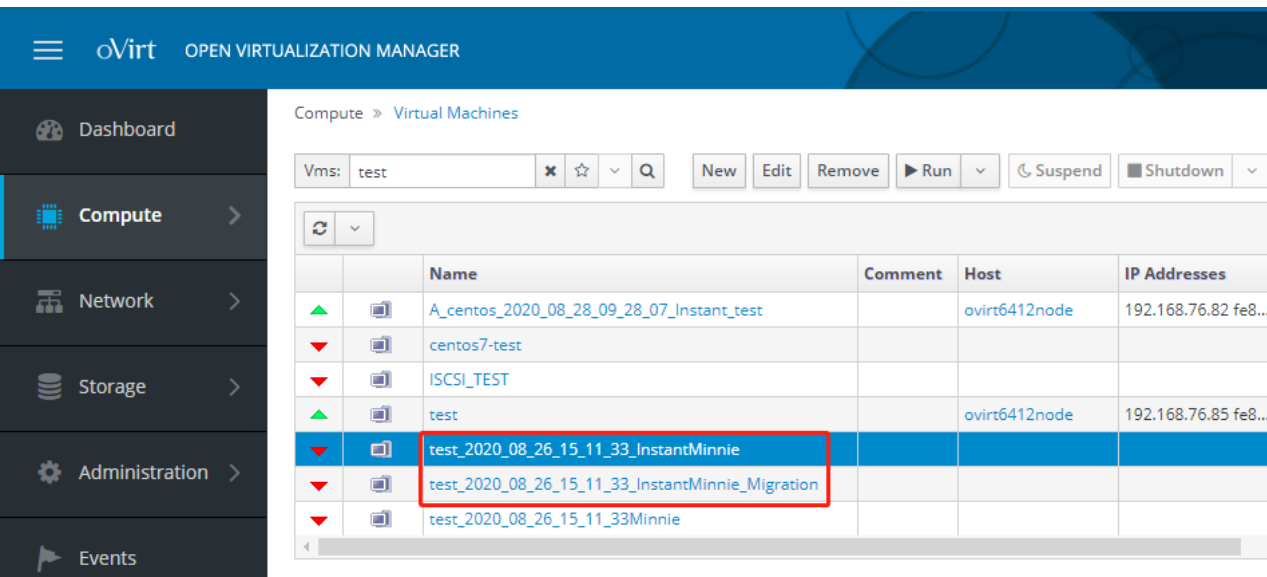


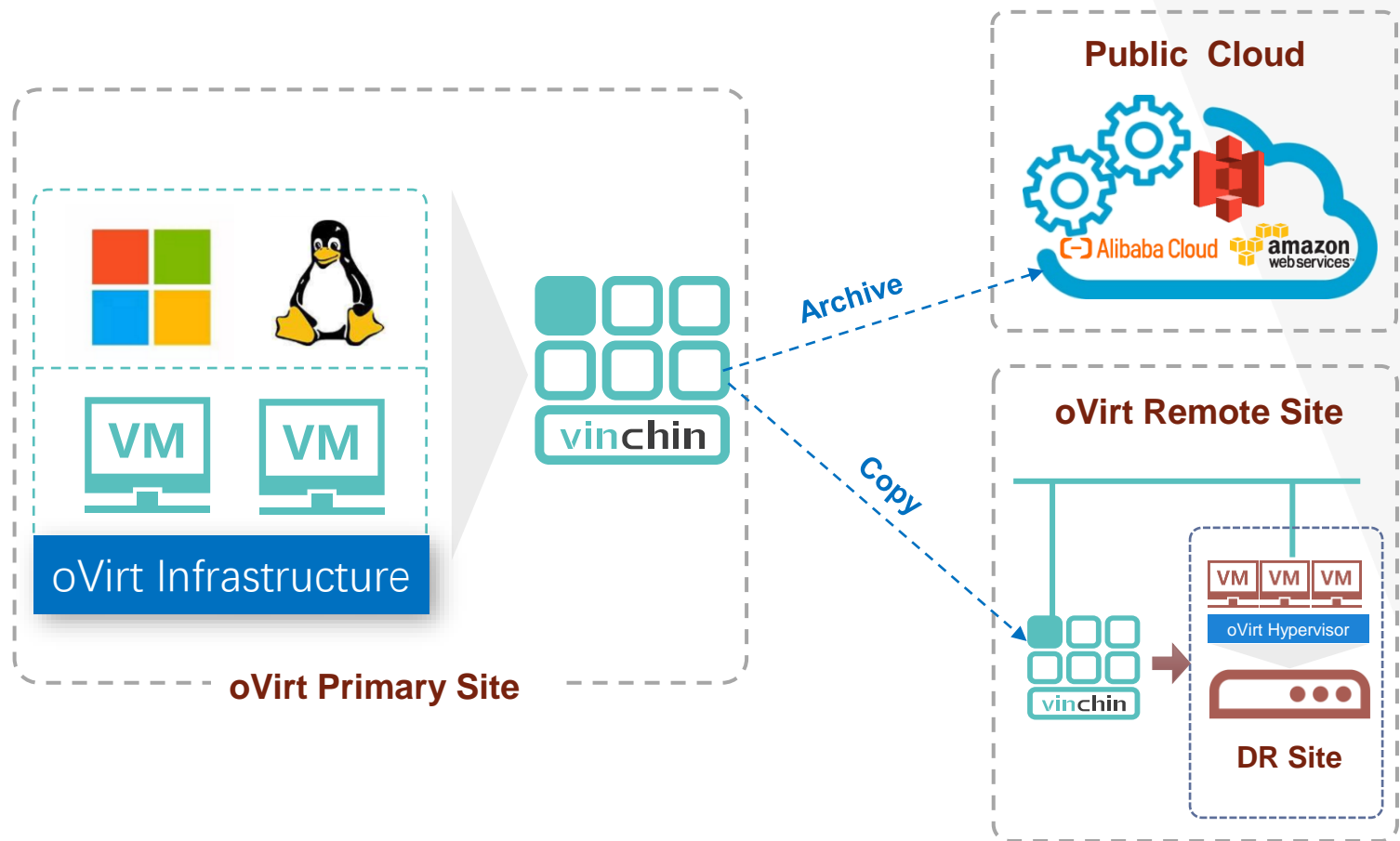
## How Migration works:

- Create another new VM on oVirt host
- Migrate data in original backup file and cache file to new VM
- Tell oVirt engine to power off the instant restored VM
- Compare data in cache file and extract changed/new data
- Migrate changed/new data to new VM once again
- Power on the new VM after migration done

## Requirement:

oVirt VM Migration is based on a running instant restore task





### Enhanced Backup Rule for DR:

- Keep one backup file in primary site
- Copy one backup file to remote site
- Archive one backup file to the cloud

### GFS Backup Scheme for long retention:

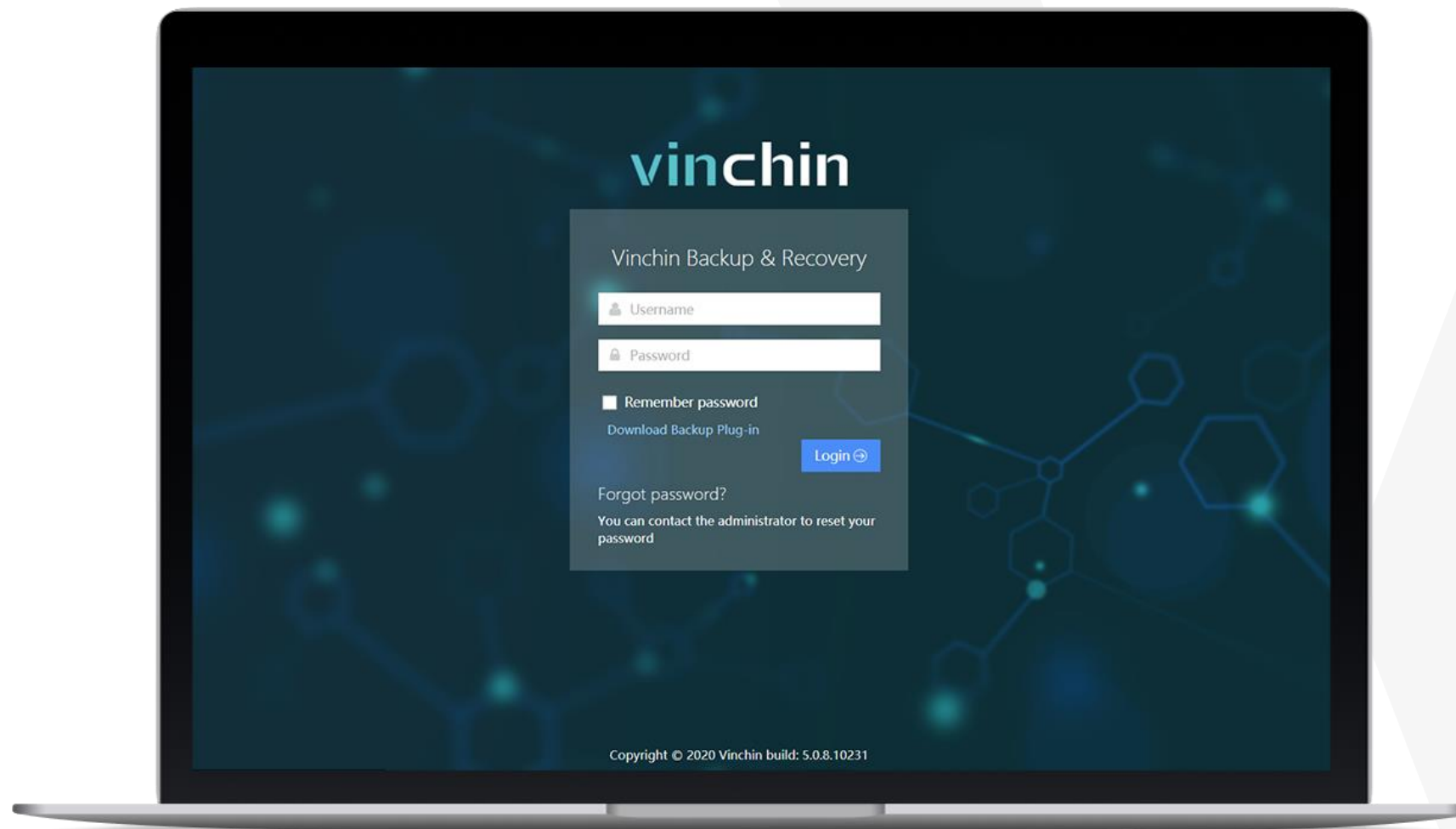
- A daily incremental backup as “Son”
- A weekly full backup as “Father”
- A monthly archive as “Grandfather”

### Pros:

- Long term reserve oVirt VM backups
- Multi-sites disaster recovery
- Multiple protection for oVirt VMs

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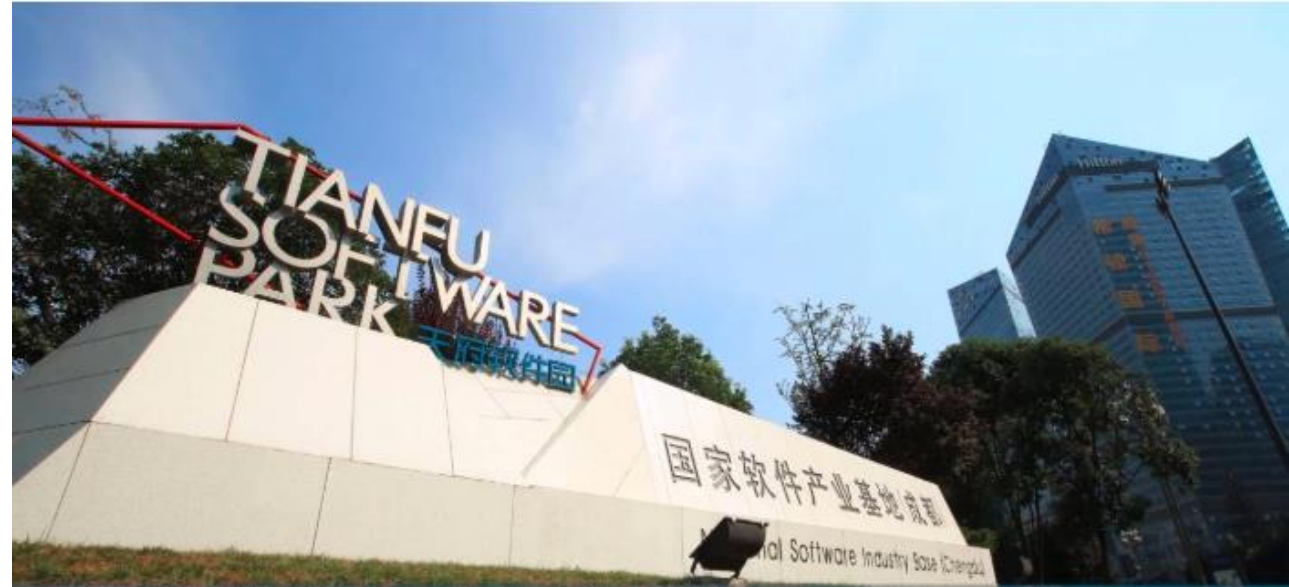
# Demo Time





成都,

不只是熊猫这么简单!  
ChengDu, Not Just Panda!



- Provide data protection solution since 2015, base in Chengdu
- The very first virtual machine backup vendor in China
- R&D team leaders have over 10 years experience
- Technical partner of the world's leading virtualization vendors
- Owns complete intellectual property rights
- Won the first patent for instant recovery technology in China







国家电网  
STATE GRID



中国移动  
China Mobile



中国电信  
CHINA TELECOM



山东省人民政府  
People's Government of Shandong Province



Novo Tempo





## Customer Overview

Hybrid Datacenter is a Brazilian company founded in 2013, it provides a series of professional IT services including VPS services, onsite/offsite backup solutions and cloud services to Brazilian clients.

## Requirements

A total of 220+ oVirt VMs run as a variety of critical servers such as webserver, file servers, OA systems, Mail server and most important VPS services. They urgently need a trustable backup solution for the backup and recovery of these 220 oVirt VMs.

## Environment

oVirt

## Solution

Abandon legacy backup mode, switch to oVirt + Vinchin agentless backup mode for all VMs by installing backup plugin in 12 oVirt hosts within 30 mins. Saves Hybrid Datacenter 100X of time on deployment comparing with legacy backup.



### Customer Overview

expleo Consulting GmbH is an Austrian IT service company providing high-value-added electronic data processing services and have long-standing experience in consulting, system administration and virtual server hosting.

### Requirements

The expleo has 3 datacenters located in Austria, Czech and Slovak. With the growth of business volume, the traditional database backup mode continuously increases manpower and time investment of expleo. They need an efficient backup solution for their oVirt.

### Environment

oVirt

### Solution

expleo's data center runs SAP hosting servers on oVirt virtual platform. expleo deployed Vinchin as a replacement to legacy database backup. With the quiesce function of Vinchin expleo has transactional consistent snapshots of HANA, MaxDB, DB2 and Oracle databases. Such consistent snapshots are fully supported by SAP and therefore very comfortable to use.

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# THANK YOU!

[www.vinchin.com](http://www.vinchin.com)

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