vinchin

VINCHIN BACKUP & RECOVERY V5.0

User Guide

2019/10







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Summary

Product Overview

Vinchin Backup & Recovery is an easy-to-use, secured and reliable virtual machine data protection software designed to support multiple hypervisors including VMware vSphere, Microsoft Hyper-v, Citrix XenServer, RedHat Virtualization and open-sourced KVM under different virtual environments. It is an image-based agentless backup product which can be seamlessly integrated with your existing virtualization environments.

Vinchin Backup & Recovery supports Web UI management which allows users to manage & monitor any of their backup/restore tasks on either PC, mobile or tablet device. Flexible backup schedules set by daily, weekly, monthly let the backup jobs run as scheduled without system manager. All you need to do is to pre-set the job schedule when first running the software. Meanwhile, the Retention Policy helps users "save the valid" and "delete the expired" backed up data, so as to ensure the continuous operation of the backup tasks and same time save data repository space. When a disaster occurs cause the damage of the virtual machines, you only need to choose the latest restore point and specify a target host to restore to, the virtual machines will be recovered to the pre-disaster status. To help the administrators monitor and review their backup & restore jobs, Vinchin Backup & Recovery supports current jobs view, history jobs review, and system logs review & management etc.

Key Features

- High Compatibility: Supports VMware, Hyper-v, XenServer, RHV/oVirt, OpenStack, Sangfor HCI, Inspur and Huawei FusionCompute virtual platforms.
- Agentless Backup: No need to install any agent on guest OS, Vinchin Backup & Recovery system directly
 protects VMs on hypervisor-level, leads non-consumption of OS resources. Thus to reduce VM deployment
 and maintenance workload.
- Smart Backup Strategy: Flexible & smart backup strategies help to do backup & restore jobs as scheduled according to your actual demands in different scenarios.
 - Time granularity of full backup, incremental backup and differential backup can be set to minute-level. Which means your backup job can be automatically repeated every xxx hours/minutes/seconds.
 - Multiple VMs can be backed up and restored concurrently under virtual environments.
 - CBT and valid data comparison technology realizes valid data backup in VMs, and minimizes the backup time.
 - ➤ Use bank grade AES encryption to secure the transmission of VM backups. Also support data logic/physical isolation.
- Deduplication & Compression: In-built data deduplication and compression at backup destination can reduce backup size and save repository space.

- LAN-Free Data Transfer: Using LAN-Free to backup and restore VMs under SAN environment helps speed up backup and recovery time, lower the production system load.
- BitDetector: Detect and skip unnecessary data including swap files and un-partitioned disk space when doing backup. So that to reduce the total backup size, speed up data transfer as well as save backup storage space.
- Specify certain VM disk to backup and restore: If a VM has multiple disks, you can select certain disk to back up and restore, no need to backup/restore them all.
- Copy VM backups to offsite: The local backup data can be copied to offsite storage regularly. The backup data can be stored in multiple copies to increase the security of backup data.
- Granular file-level restore: Restore any single file from any restore point, no need to restore the entire VM, saves IT manager time and works.
- Instant VM Recovery: Instant VM Recovery helps to recover TB sized VMs in 15 secs, all business recovery in 1 min, minimized the break-off time of critical businesses.
- Quick-verify Recovery Availability: Recovering the VM backups to Data Verification Area (which is isolated with Business Area) by Instant VM Recovery helps to quick-verify the availability of backed up data.
- Full VM Recovery: When any damage or mistaken-delete happens to the backed up VM, you can fully restore it from any backup point in time rather than just "the latest backup point".
- Live Migration: After instantly recovering, the VM can be synchronously migrated to the production area via virtualization platform live-migration or Vinchin Backup & Recovery's live migration function without effecting the normal operation of your business.

Platform Support

Vinchin Backup & Recovery supports for the following virtualization platforms:

VMware vSphere: 4.0 4.1 5.0 5.1 5.5 6.0 6.5 6.7 vSAN 6.x

Microsoft Hyper-V: 2012 2016

Citrix XenServer: 5.6 6.x 7.x 8.0

RedHat RHV/oVirt: 4.0 4.1 4.2 4.3

OpenStack mitaka + Ceph

Sangfor HCI: 5.0 5.2 5.3 5.8.x

Inspur InCloud Sphere: 4.0 4.5

Huawei FusionCompute: 5.0 5.1 6.0 6.1

System Login

Install the Vinchin Backup & Recovery in your virtual environment by following "Quick Installation Guide". Then you are able to access the below Vinchin Backup & Recovery Web UI Login Portal by entering corresponding IP address (e.g. http://192.168.65.66) via web browser (**Google Chrome is recommended**).

Default username: admin
Default Password: Admin@3R

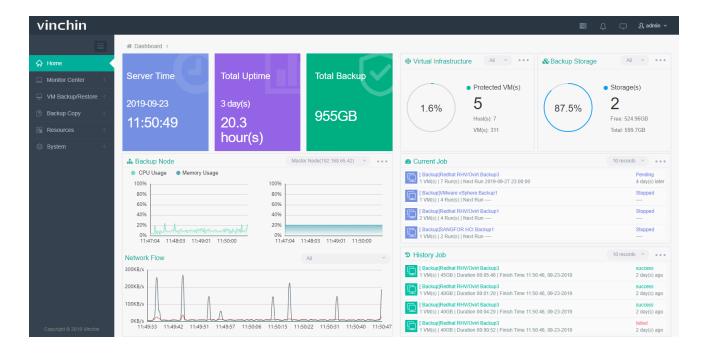


Note:

- If you forget your password:
 Operator/Auditor, please contact your administrator to reset your password.

 Administrator, please contact Vinchin Support Team to reset your password.
- 2. Only VMware requires no installation of backup plug-in. If you are using any other virtual platform, please download "Backup Plug-in" from here and install it on each host that you need to protect.

Home Page Overview



[&]quot;Server Time" is your Vinchin Backup server current time.

Getting Started

Only **VMware vSphere** and **Huawei FusionCompute** requires no installation of backup plug-in. If you are using any other virtual platform, please install the corresponding backup plug-in on each host before using Vinchin backup server, details please refer to **Install Backup Plug-in**.

Upload Vinchin Backup & Recovery licence.key, details please refer to System License.

[&]quot;Total Uptime" is the system running time from the initial start-up to present (now).

[&]quot;Total Backup" shows the accumulative backup size from the first backup to the latest backup.

[&]quot;Virtual Infrastructure" shows the number of protected VMs and hosts.

[&]quot;Backup Storage" shows the status of all storage devices you mounted to Vinchin backup server.

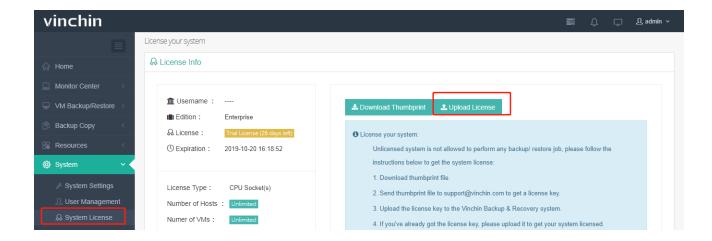
[&]quot;CPU Usage" shows the CPU usage of the Vinchin backup server.

[&]quot;Memory Usage" shows the memory usage of the Vinchin backup server.

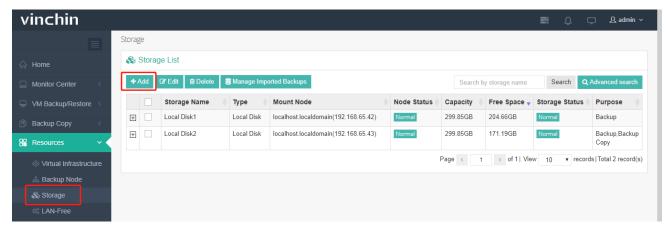
[&]quot;Network Flow" shows the real-time network traffic of the Vinchin backup server.

[&]quot;Current Job" shows the latest current job info, click "***"to review the current job details at "current Job" page.

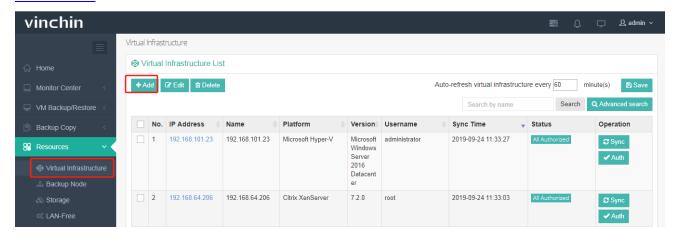
[&]quot;History Job" shows the latest history job info, click "•••"to review the history job details at "History Job" page.



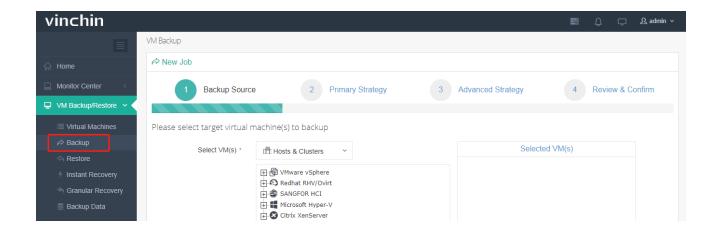
Add a storage location as backup and copy repository, details please refer to **Storage**.



Add a standalone host or a virtual machine cluster which need to be backed up, details please refer to <u>Virtual</u> <u>Infrastructure</u>.



Create a new backup job to protect the target VMs, details please refer to VM Backup/Restore.

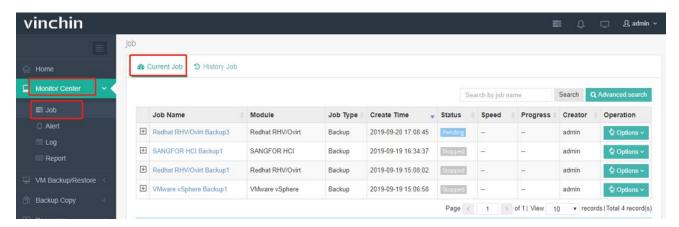


Monitor Center

Job

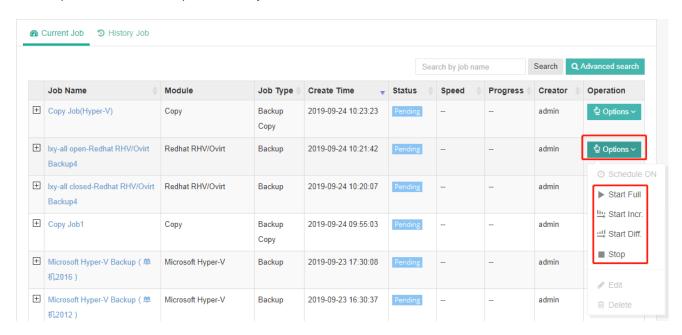
Current Job

After creating a new job (VM backup/restore), you can view and manage the new created job in the current job page. All the basic information and status of the job will be shown in the current job list. You can start, stop, edit or delete the job accordingly. Click "Monitor Center" \rightarrow "Job" \rightarrow "Current Job".



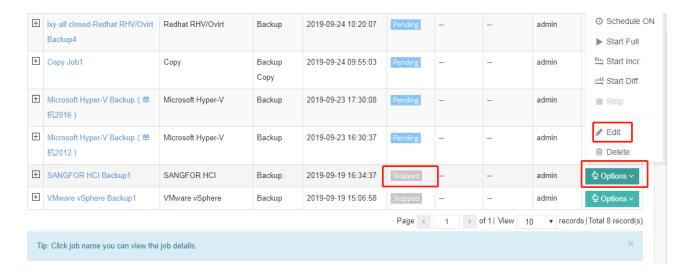
Note: You can search the certain job by entering job name in the right top search bar.

Click "Options" to start or stop the certain job.

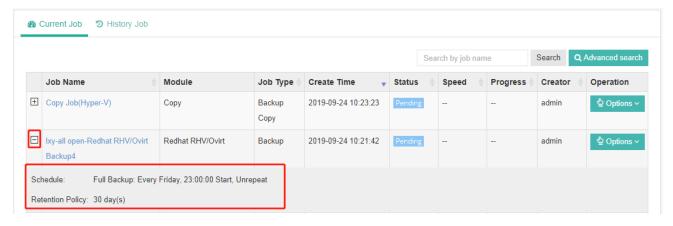


Note: If you want to modify the backup job, first please stop this job while it's "Pending" or "Running". Once its

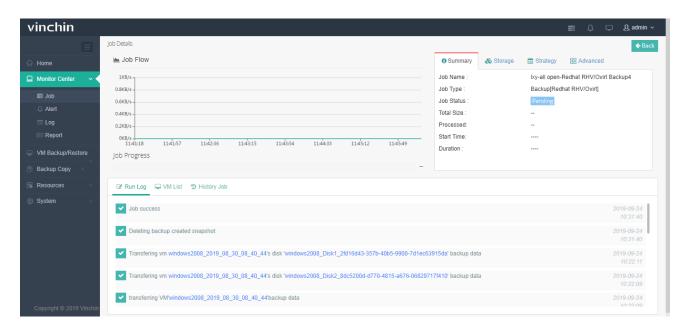
status changes to "Stopped", click "Options" – "Edit", you can change any part of this backup job.



Click " $\stackrel{\textstyle oxdot}{=}$ ", you can review the schedules of this job.



Click the job name, you will see the job running details page as below:



Click the top right "Back", you can go back to the current job list.

If you preset the job as run at once, it will disappear from the current job list and system will remind you the job has been finished. You can find it from the History Job page.

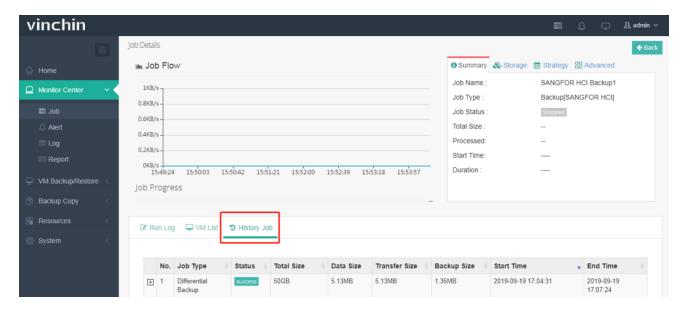
If you preset the job as run as scheduled, it will remain in the current job list as "Pending" after first time job finished, and waiting for next run automatically.

History Job

Click "Monitor Center" \rightarrow "Job" \rightarrow "History Job", all the performed jobs will be listed here for you to review the history job running details and status. You can also delete any of the history jobs when necessary.



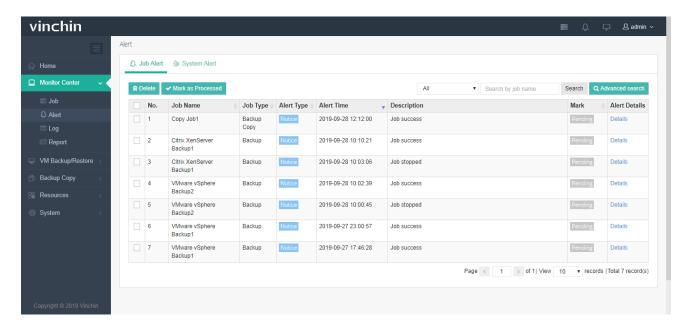
Note: If you delete any history job from the history job page, this job will also be deleted from corresponding current job details "History Job" list.



Alert

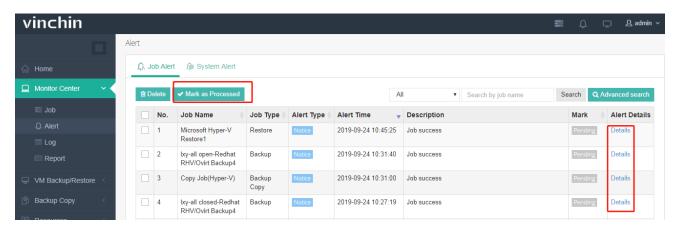
Job Alert

Click "Monitor Center" – "Alert", you are coming to the job alert page. In this page you will see each job running alert including "Notice" "Warning" "Error", you can also delete them as below:

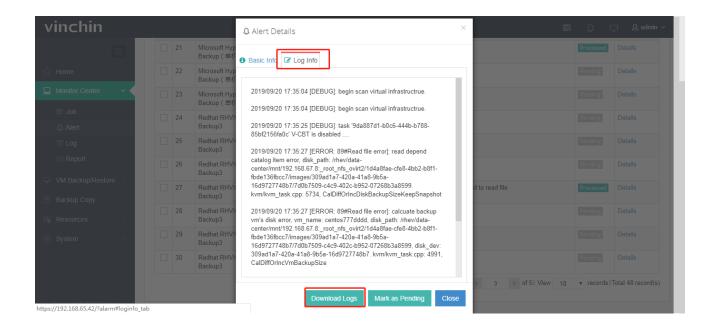


Note: Once deleted, the job alert is not recoverable.

New job alert is default marked as pending, if you have checked this alert and processed accordingly, you can mark it as processed by clicking "Mark as Processed". Click Details you can see the job alert details as below:

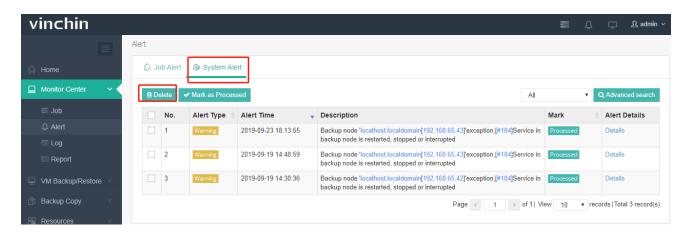


If it is an error alert, you can check the error info from "Log Info" as below, and download it by clicking "Download Log", send this log to support@vinchin.com to get a debug solution.



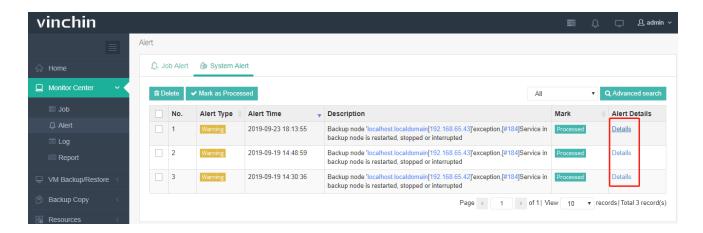
System Alert

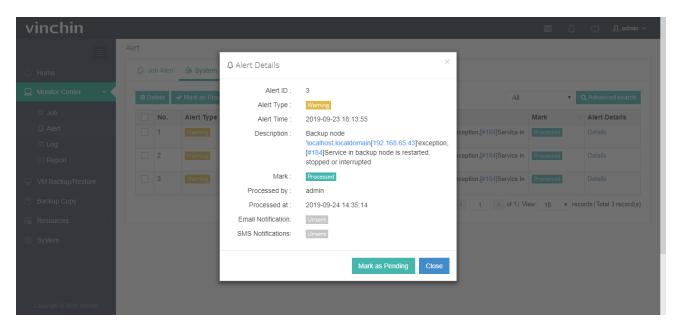
Click "System Alert", you are coming to the system alert page. In this page you will see system running alert including "Notice" "Warning" "Error", you can also delete them as below:



Note: Once deleted, the system alert is not recoverable.

New system alert is default marked as pending, if you have checked this alert and processed accordingly, you can mark it as processed by clicking "Mark as Processed". Click Details you can see the system alert details as below:

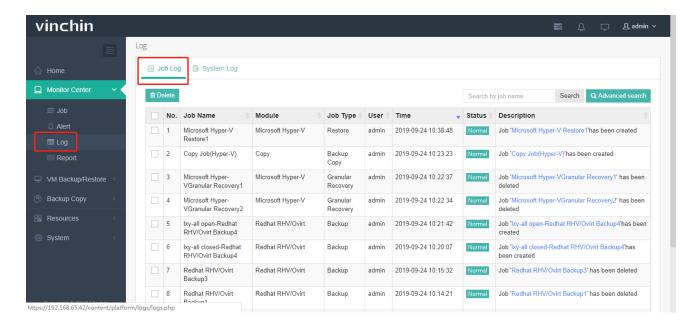




Log

Job Log

Click "Monitor Center" \rightarrow "Log", you are coming to the job log page, here has listed all the job logs details including job running status, time and description etc. You can choose target job logs to delete.

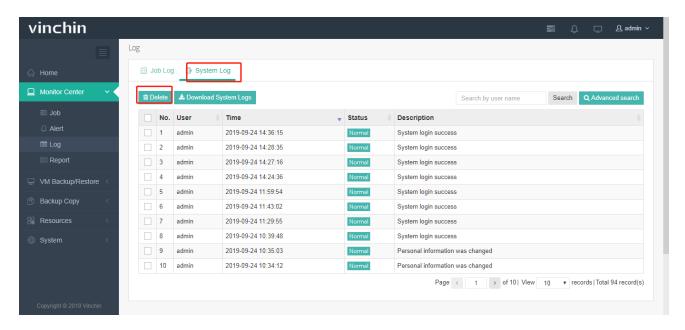


Note:

- 1. You can search a certain job to delete by entering the job name via the top right search bar.
- 2. Once deleted, the job log is not recoverable.

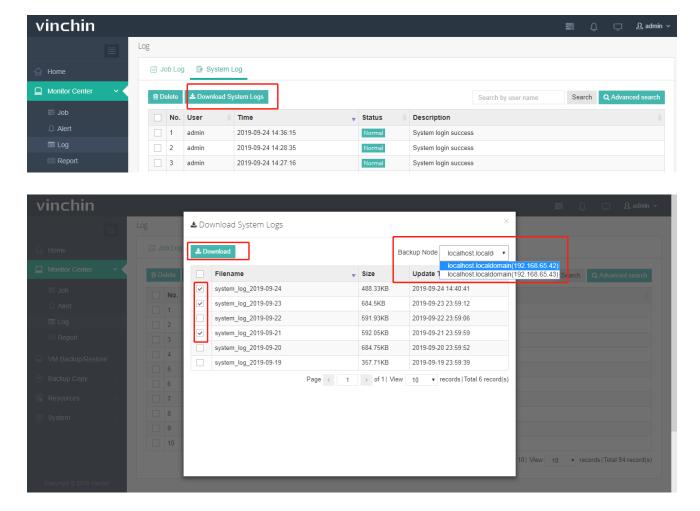
System Log

Click "System Log", you are coming to the system log page, here has listed all the system logs details including status, time and description etc. You can choose target system logs to delete.



Note: Once deleted, the system log is not recoverable.

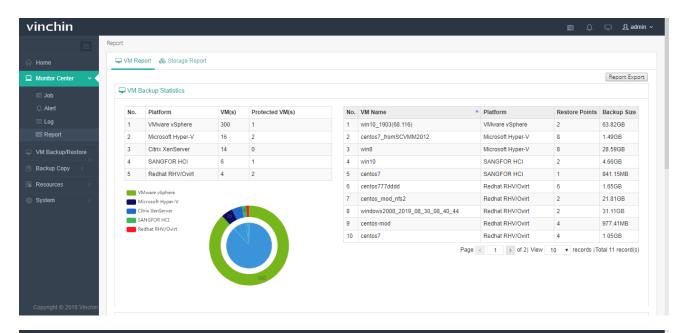
If you want to download the system logs, you can click "Download System Logs", then select backup node and choose a system log file in a certain day to download.

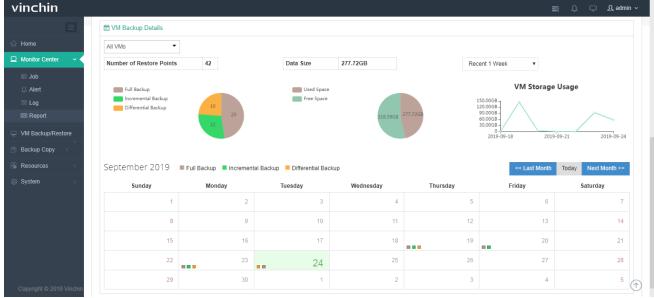


Report

VM Report

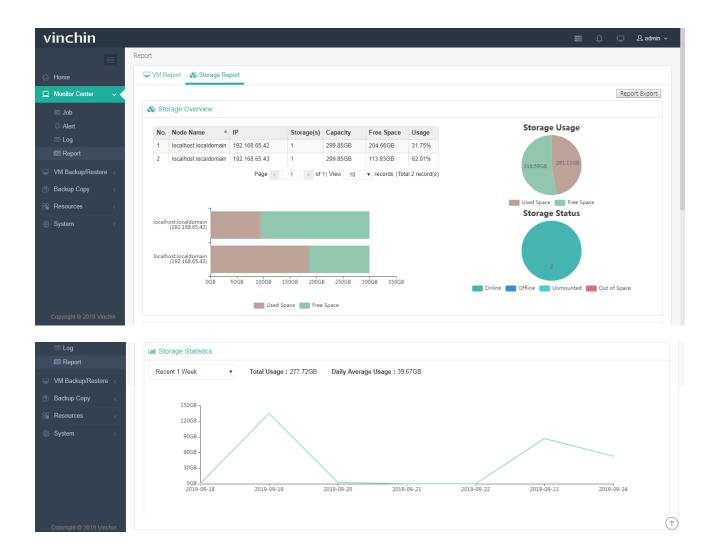
Click "Monitor Center"-"Report", you are coming to the VM report page, where you can review the VM backup statistics, backup schedule and restore points details as well as storage spaces.





Storage Report

Click "Storage Report", you will see the detailed info of backup storage usage.



VM Backup/Restore

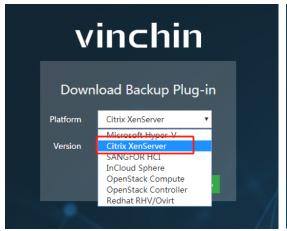
Install Backup Plug-in

Only VMware vSphere and Huawei FusionCompute requires no installation of backup plug-in. If you are using any other virtual platform, please install the corresponding backup plug-in on each host before creating any backup or restore job.

Go to Vinchin web UI login page, click "Download Backup Plug-in"



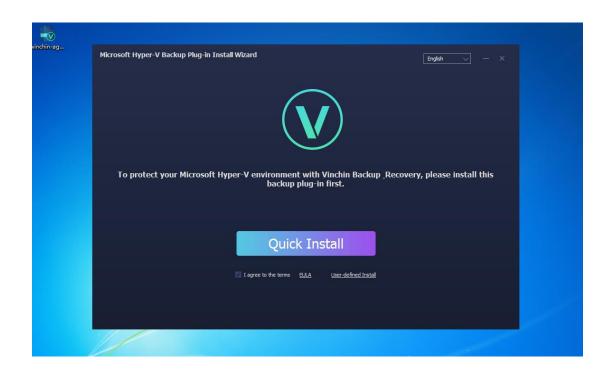
Choose your virtual platform type together with corresponding version number and click "Download"



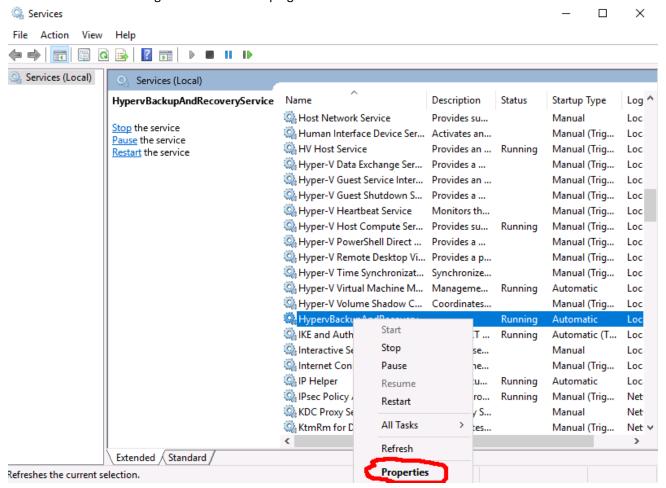


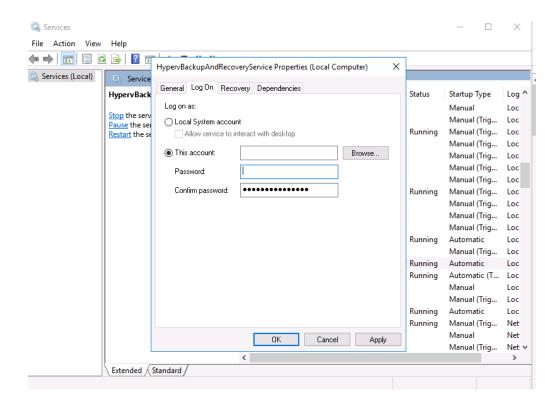
Install/Uninstall Hyper-v backup plug-in:

Upload backup plug-in to Hyper-v host or SCVMM server, install it with administrator privileges (In SCVMM environment, please use SCVMM domain user to install backup plug-in on both hyper-v host and SCVMM server)



In the case of a failover cluster environment, you also need to modify the service's login name as a domain user with local administrator rights and restart the plug-in service.





Install/Uninstall XenServer backup plug-in:

Upload the backup plug-in to the root directory of the virtualized host

Install command: rpm -ivh vxe-backup-agent-xxxx.rpm

Uninstall command: rpm -e vxe-backup-agent

```
[root@xenserver-zksijrpu ~]# rpm -e vxe-backup-agent
Stopping vxe_backup_agent (via systemctl): [ OK ]
```

Note: For pool environment, please install the backup plugin in every XenServer host under this pool environment.

Install/Uninstall RHV/oVirt, Sangfor HCI, OpenStack, InCloud Sphere backup plug-in:

Upload the backup plug-in to the root directory of the virtualized host

Unzip the plugin file command: tar -zxvf vinchin-kvm-backup-xxxx.tar

Unzip directory enter command: cd vinchin-kvm-backup-xxxx

Install command: ./kvm backup patch install

Uninstall command: ./kvm_backup_patch_uninstall

```
root@cvknode:~#
 root@cvknode:~# ls
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86 64.tar.gz vmdata
root@cvknode:~# tar -zxvf vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64.tar
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_virt_server.service
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_backup_service.service.de
bian
 vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_virt_server.service.old
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/bin/
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_virt_server
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/conf/
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/conf/certificate.pem
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/conf/kvm_backup_service.conf.
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/conf/private_key.pem
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/conf/kvm_virt_server.conf.xml
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_backup_watch_dog.sh
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_backup_watch_dog.service.
debian
 vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_backup_service
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm backup-service.service
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm backup patch uninstall
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_backup_service.service.ol
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/kvm_virt_server.service.debia
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86 64/kvm backup patch install
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libcurl.so.4.4.0
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libvirt.so
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libjsoncpp.so.1.6.2
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libaudit.so.0
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/1ib/libauait.so.u

vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libjsoncpp.so

vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libjsoncpp.so.1

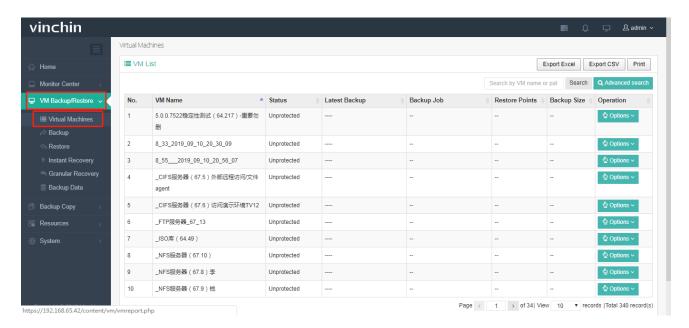
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libjsoncpp.so.1

vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libvirt.so.0.2004.0
vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/lib/libvirt.so.0
root@cvknode:~# cd vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64/
root@cvknode:~/vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64# IS
         kvw_backup_patch_install
                                                                                             kvm_backup_service.service.debian kvm_backup_watch_dog.s
conf kvm_backup_patch_uninstall kvm_backup_service.service kvm_backup_service.service.old
root@cvknode:~/vinchin-kvm-backup-patch-4.0.3968-Ubuntu.12-x86_64# ./kvm_backup_patch_install
                                                                                                                                                 kvm backup watch dog.s
```

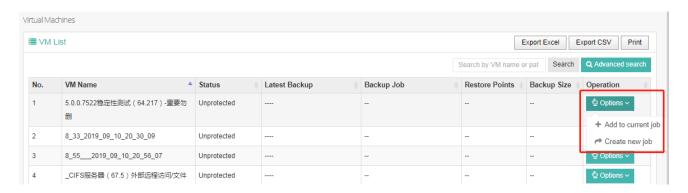
VM Backup

Virtual Machines

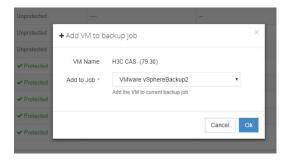
In the "Virtual Machines" page, you can view all the VMs which you've added into Vinchin backup server from "Virtual Infrastructure". Click "VM Backup/Restore" \rightarrow "Virtual Machines".



You can manage the unprotected VMs, click "Options" under Operation, you can choose to add the VM to a current running backup job, or choose to create a new backup job for this VM.



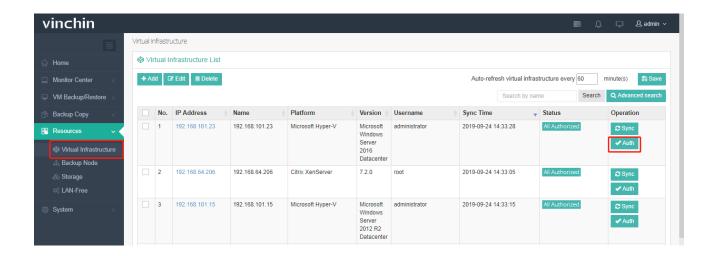
Click "Add to current job", you can choose a current backup job to add the target VM in as below:



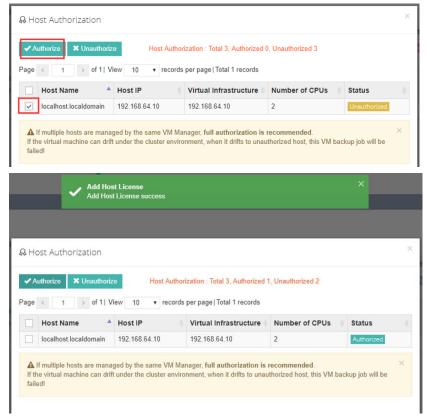
Click "Create new job" you can create a new backup job for the target VM.

Authorize Host

Before creating a VM backup job, you need to authorize the target hosts which you need to back up. Click "Resources" — "Virtual Infrastructure", choose the target virtual infrastructure you want to back up and click "Auth".



Tick the hosts under this virtual infrastructure you want to backup and click "Authorize".



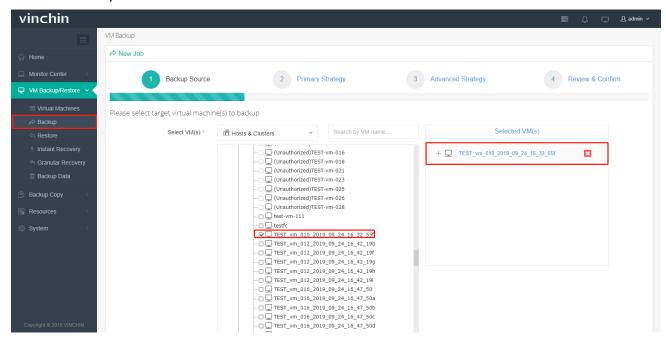
Note: If there's no server in the virtual infrastructure list, please add a host or virtual cluster first.

Create Backup Job

Step 1: Backup Source

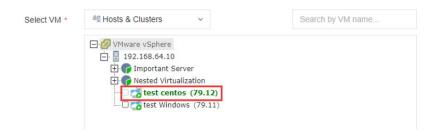
Select the virtual machines you want to back up.

Click "VM Backup/Restore" - "VM Backup", then you will see the virtualization infrastructure tree, expand the infrastructure until you see the virtual machines. Tick any virtual machines you need to back up, they will be showing in the "Selected VM" column. If you want to delete a selected VM, you can click "x" button in the right column or directly un-tick this VM as below:



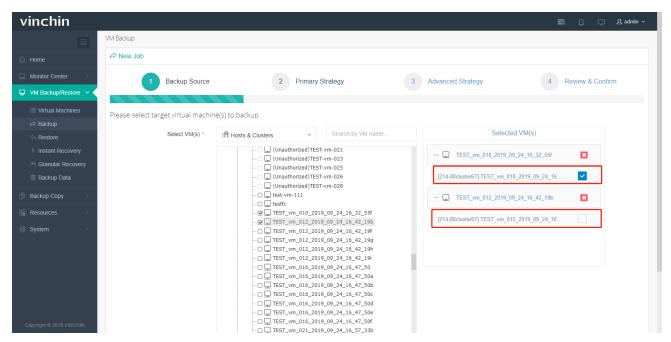
Note:

- 1. If you know the target VM name, or you know any related key words, you can directly search the VM in the search bar.
- 2. If the VM is already in an existing backup job, it will be highlighted in Green color. And it is un-selectable.



3. If you want to add multiple VMs in one backup job, you can only select multiple VMs from the same one virtual platform.

Click the target VM, all the virtual disks under this VM will show up, you can choose to backup or not backup any of the disks without having to back up all of them.



Note: Selecting VM disk to backup does not supported on OpenStack platform.

If your virtual infrastructure has been updated recently, click "Refresh" to update and sync the servers to Vinchin backup server.

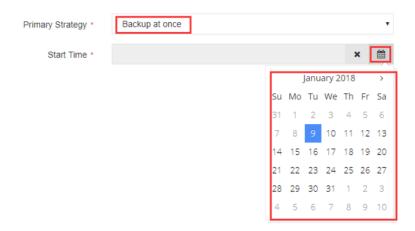


Step 2: Primary Strategy

In the Primary Strategy page, there are two backup options available, "Backup at once" and "Backup as scheduled".

Backup at Once

The backup job only perform one time. Choose "Backup at once", then click " to choose YY/MM/DD and HH:MM:SS, then click "Next", the backup job will be performed at the exact time for only once.

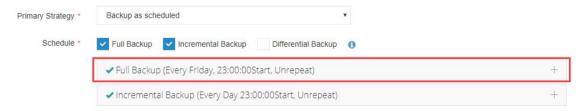


Backup as Scheduled

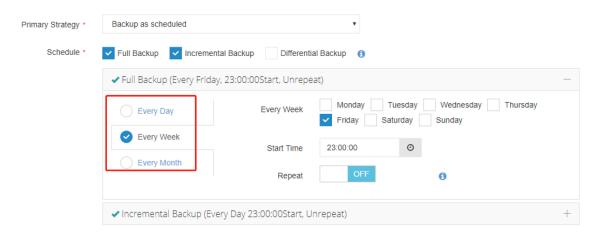
The backup job repeats as scheduled.

Choose "Backup as scheduled", then choose a Backup Strategy (Full Backup/Incremental Backup/Differential Backup).

Click the selected strategy bar as below:

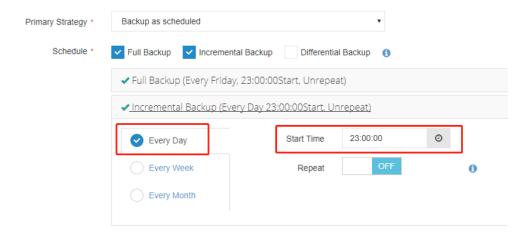


You will see there are some schedule options, you can choose to repeat the backup job at any time in any day.

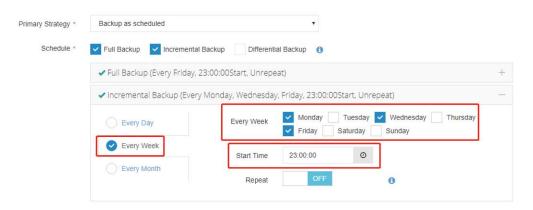


The time schedule of backup job includes 3 types: Every day, Every Week and Every Month.

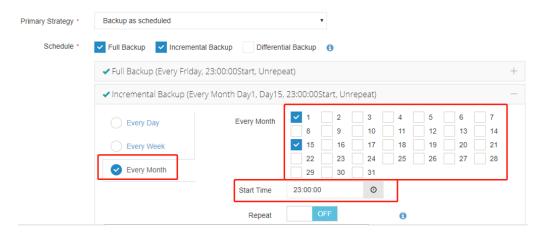
• Every Day schedule only needs to set Start Time as below:



• Every Week schedule needs to choose which days to perform the backup job as below:



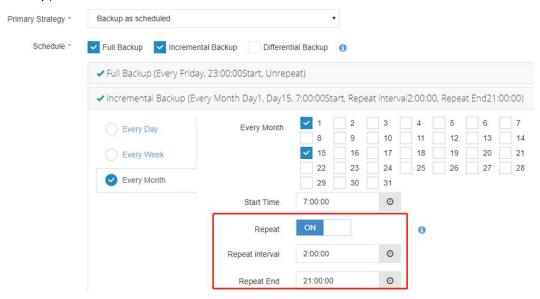
• Every Month schedule is similar with Every Week schedule, needs to choose which days to perform the backup job, details as below:



Set the backup "Start Time" and choose whether to enable the "Repeat".

"Repeat" means repeatedly perform the backup job every xx hours/minutes/seconds. Once enable the "Repeat" option, you need to set the time of "Repeat Interval" and "Repeat End" accordingly.

(Example: Choose Every Month schedule, and tick day 1 and day 15, set the Start Time as 7:00:00, and enable the "Repeat", Repeat Interval Time 2:00:00 and Repeat End Time 21:00:00. This schedule means on 1st and 15th of each month, this backup job will start running from 7:00am, and it will repeat once every 2 hours until 9:00pm of the day.)



"Incremental backup" is backup the changes made since the last incremental backup.

"Differential backup" is backup the changes made since the last full backup, every new differential backup relies on the same full backup.

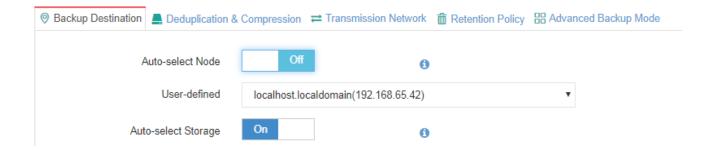
Note:

- 1. Full backup can be combined with either incremental backup or differencial backup, but incremental and differential cannot be chosen at the same time. If you only select incremental backup or differencial backup without selecting full backup, when first time starting this job, system will automatically execute a full backup.
- 2. For VMware, you can set incremental backup without full backup, after first time running this job with full backup mode, it will turn into a forever incremental backup mode. For other virtual platforms, must have a full backup mode.
- 3. It is recommended to do a full backup each week/month and do an incremental backup every day.
- 4. It is recommended to set the backup schedule to run at night or in the wee hours of the morning.

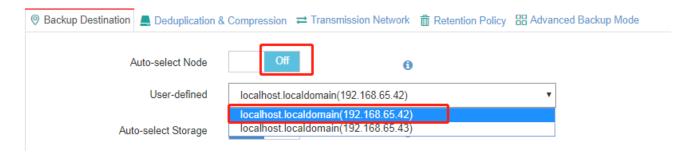
Step 3: Advanced Strategy

Backup Destination

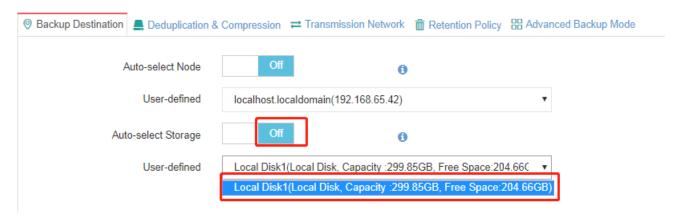
Select a storage to store the backed up data. You can enable the "auto-select", then the backup data will be automatically stored to a prior storage. You can disable the "auto-select" to specify a storage for the backup data.



If you have added multiple backup nodes as alternative backup storage, you need to select one node first. Click the blue button to disable the "Auto-Select Node", select one available node as below:

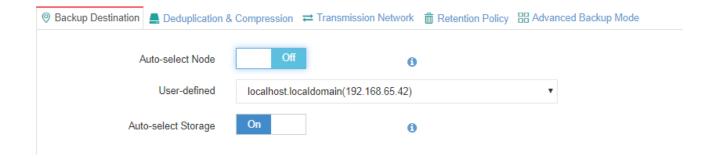


If you prefer to specify a backup storage under this node, disable the "Auto-Select Storage" and specify a selectable storage for this backup job.



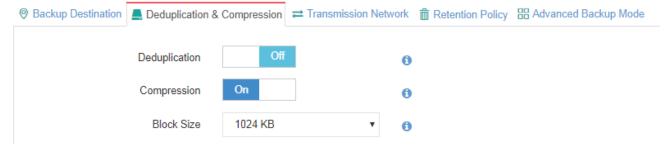
If you prefer to let the system select the prior storage, keep the "Auto-Select Node" or/and "Auto-Select Storage" enabled.





Deduplication & Compression

Choose to enable/disable deduplication, compression and block size.



Deduplication: Enable it to delete the duplicated data, can reduce the total backup size.

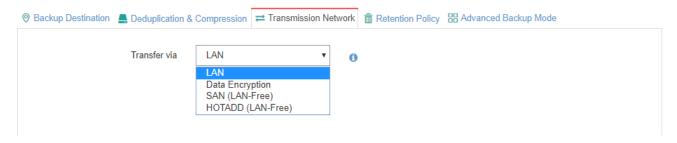
Compression: Enable it to compress the backup data size, can reduce the total backup size.

Block Size (Only available for VMware): Choose a block size from 64KB to 2048KB, Backup data will be reorganized as specified size. When enabling Deduplication, the duplicated data will be deleted as specified size. 1024KB is default selected.

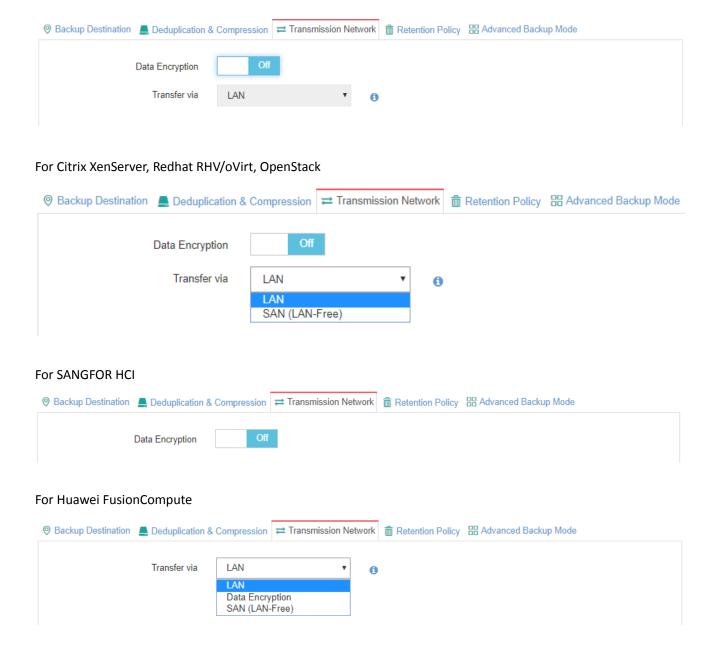
Transmission Network

Data transmission mode and data encryption can be set in the transmission network option.

For VMware vSphere



For Microsoft Hyper-v



LAN: Data to be transferred from production working area to backup area via LAN.

SAN (LAN-Free): Backup data to be transferred from production storage to backup storage via SAN. If you have preset up LAN-Free, you can choose transfer via SAN to speed up the backup/restore. If you haven't set up any LAN-Free, you can refer to LAN-Free settings to set up the LAN-Free path first. If you have no SAN environment, please choose LAN as transfer mode. If SAN transmission is not available, system will automatically switch to LAN.

HOTADD (LAN-Free): Use the VMware disk hot add feature to attach the target VM disk to Vinchin backup server for data reading and writing.

Data Encryption: When data is transmitted over LAN, SSL is used to encrypt the transmitted data. Transmission encryption adopts AES 256 encryption algorithm. When transmission encryption is turned on, the data transmitted from backup source to backup storage will be encrypted, and ciphertext transmission will be adopted to guarantee

the data security. The encryption transfer switch is off by default.

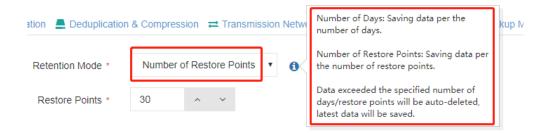
Retention Policy

Backup retention policy is a policy to reserve backup data on disk according to number of days/restore points. Old restore points out of date/over range will be auto-deleted.

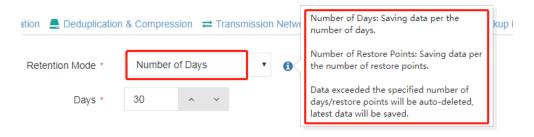
For VMware vSphere, the retention policy is based on every single restore point no matter its full backup, incremental backup or differential backup time point. It will lead a deletion of the furthest restore point when a new restore point is generated. Retention Policy includes "Number of Restore Points" and "Number of Days".

For other virtual platforms, the retention policy is based on full backup restore points. It will lead a deletion of the furthest full backup point together with its corresponding incremental or differential backup points when a new full backup point is generated.

Number of Restore Points: Restore points will be reserved according to number limitation.



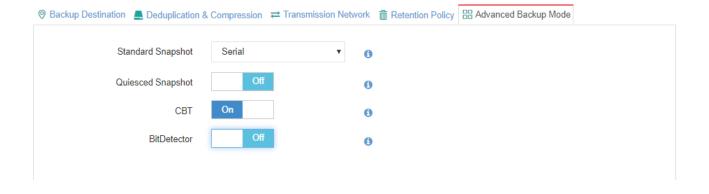
Number of Days: Restore points will be reserved according to days limitation.



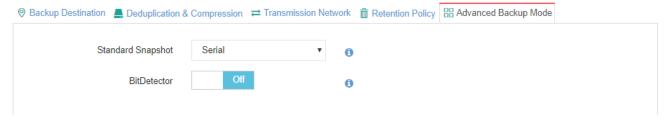
Advanced Backup Mode

Different virtual platforms have different options available in advanced backup mode.

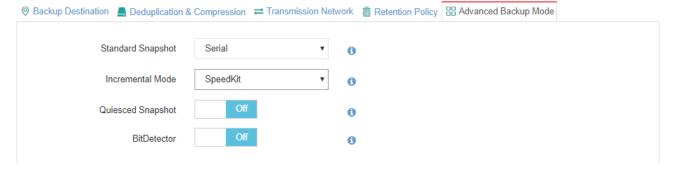
For VMware vSphere



For Microsoft Hyper-v



For Citrix XenServer



For Redhat RHV/oVirt, SANGFOR HCI, OpenStack

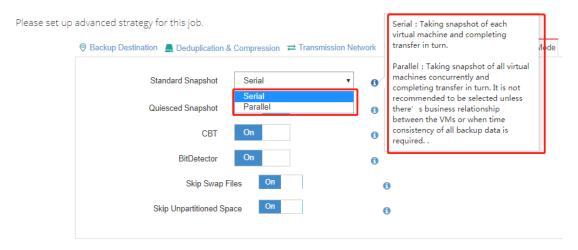


For Huawei FusionCompute



Standard Snapshot

- ✓ **Serial snapshot**: taking snapshot of each VM in turn and complete transfer in turn.
- ✓ **Parallel snapshot**: taking snapshot of all VMs concurrently and complete transfer in turn. It is necessarily to be chosen when there's business relationship between the VMs or backup time consistency is required of all the VMs.



Incremental Mode

- ✓ **SpeedKit**: SpeedKit is a Vinchin technology to improve the computing speed of changed blocks when doing incremental backups. It is recommended to be selected if you want a faster backup.
 - Note: Once turn on SpeedKit, there will be always a snapshot remains in your production storage when doing backup. But it won't affect your production environment. If you mind it, please turn off "SpeedKit". Please also note once turn off SpeedKit, your incremental backup speed will be much slower than turning on it.
- ✓ Ordinary: When choose "Ordinary", your incremental backup speed will be much slower.

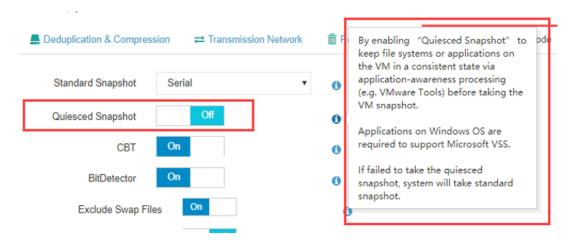
Please set up advanced strategy for this job.



Quiesced Snapshot

"Quiesced Snapshot" is a technology to keep file systems or applications on the VM in a consistent state via application-awareness processing (e.g. VMware tools) before the VM snapshot is created. Applications on Windows OS are required to support Microsoft VSS. If failed to take quiesced snapshot, system will take standard snapshot.

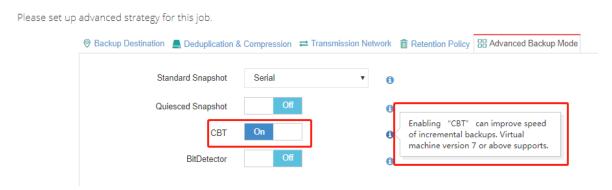
Note: Please install tools before enabling the "Quiesced Snapshot".



CBT

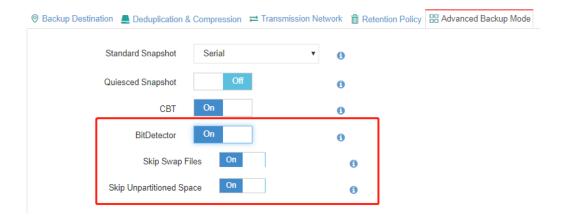
CBT (Changed Block Tracking), it is the underlying support technology for VMware to implement "incremental backup". Enable "CBT" can help to improve the incremental backup speed.

Note: virtual machine version 7 and above shall support.



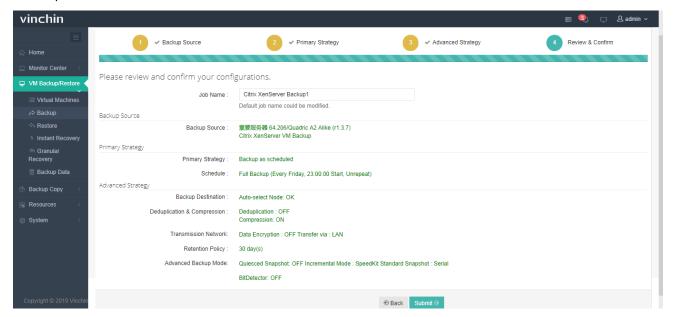
BitDetector

BitDetector is a Vinchin technology to improve backup efficiency and save backup storage space. Enabling "BitDetector" you can choose not to backup swap files and unpartitioned space which might be useless or unnecessary data for you.



Step 4: Review & Confirm

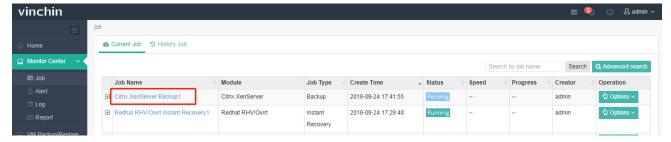
After finish, you are able to review and confirm the settings. Click "Submit" if confirm, the backup job creation will be completed.



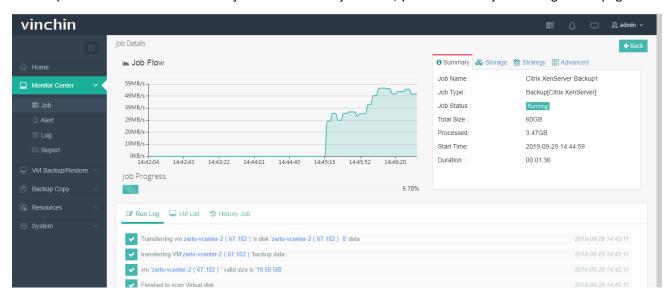
Note: You can change the Job name before submitting.

Perform Backup Job

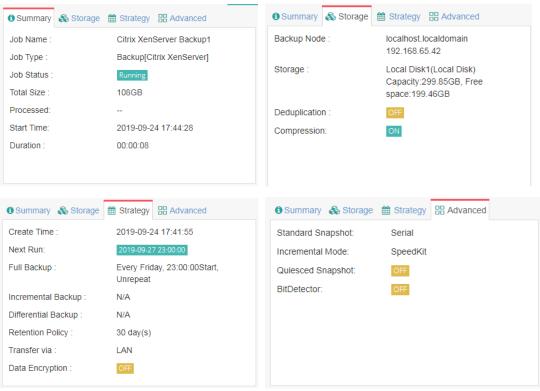
After creating a new backup job, you will see this job in the "Current Job List".



Click "Options"-"Start xxx" to start this job. Then click the job name, you will see the job running details page.



On the top right are 4 main columns showing the job configuration info as below:



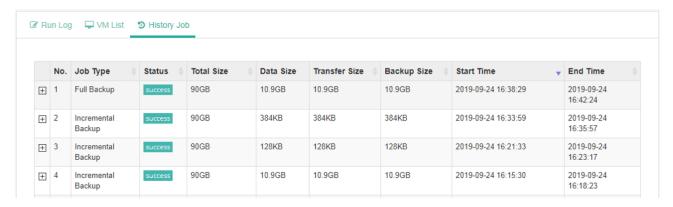
On the bottom left are another 3 main columns are Run Log, VM List and History Job. **Run Log**: Records the current backup job running logs.



VM List: Shows the VM info in the current job, including VM Name, Job Type (Full Backup/Incremental Backup/Differential Backup), VM Size, Data Size, Transfer Size, Backup Size (The real size that has been written to the backup storage), Speed, Progress, Status etc.



History Job: Reviews all the history operations of this backup job.



Note:

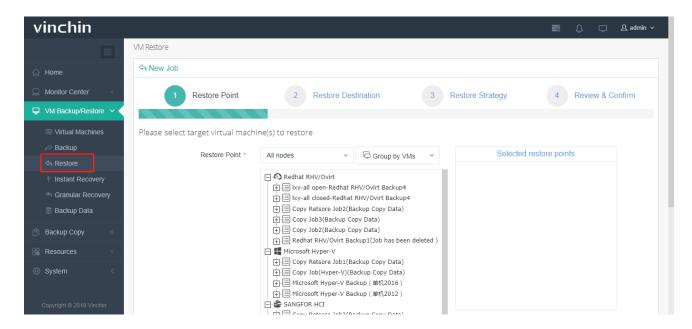
If the backup job has been set as "Backup at once", after job running finished, you can find it in the History Job list. If the backup job has been set as "Backup as scheduled", the job will remain in the Current Job list and continue backup job as scheduled. Once enable "Deduplication & Compression" when creating backup job, the Backup size will be reduced while the backup speed will be slower as well.

VM Restore

Create Restore Job

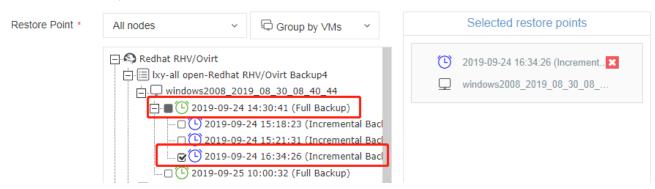
Step 1: Restore Point

Click "VM Backup/Restore" → "Restore". Select a target VM restore point under your virtual infrastructure which you want to restore. You can quickly find the target restore point by specifying backup node and selecting "Group by VMs" or "Group by Restore Points" accordingly.

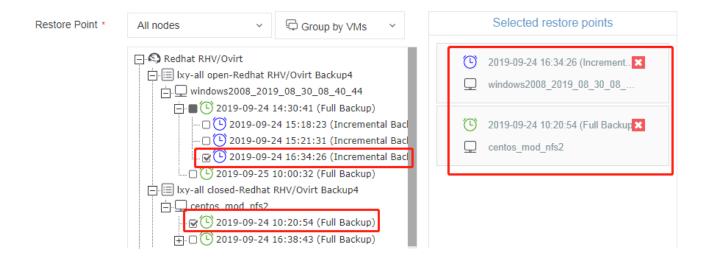


A Restore Point has been marked with the name of a backup job. Each backup job name has displayed the backup time point and backup type (full backup/incremental backup/differential backup) for users to recognize and select.

Choose one restore point under each virtual machine, click "Next":



Note: You can choose multiple virtual machines to restore at once. If one virtual machine has multiple restore points, you can only choose one point to restore at once.



Step 2: Restore Destination

Select Target Host: Select a target host where you want to run the restored VMs.

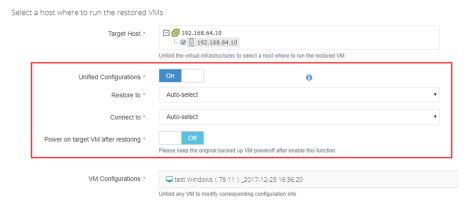


After restored, the VMs will run on the selected host.

Note:

- 1. For OpenStack virtual platform, please select target tenant instead.
- 2. If the host is offline, you can not select it as restore destination.
- 3. If the host is unauthorized, you still can select it as restore destination.

Unified Configurations: Enable this function you can set multiple VMs' storage, network information, and choose whether to power on the target VM(s) after restoring.



Single VM Configurations:

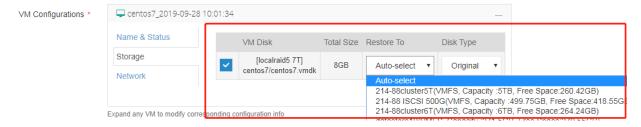
Name & Status: Select a target VM, you can rename it and pre-set its storage, network information details.



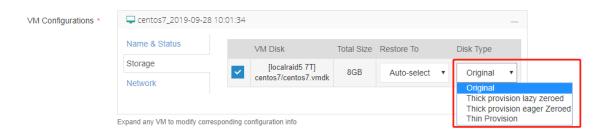
Note: When renaming the VM, make sure there's no special characters. Any combination of letters, numbers and underscore characters are recommended.

Storage: When a virtual machine has multiple disks, you can choose target disk to restore without having to restore all the disks on the virtual machine.

If choose Auto-select in the "Storage", the system will automatically choose the biggest storage space. If all the storages are out of free space, the restore job will fail, and system will remind insufficient space.



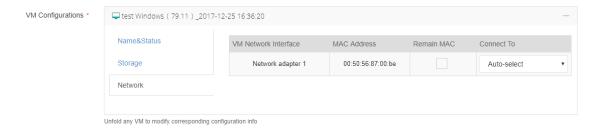
For VMware and Hyper-v, you can choose disk type: same as original, thick provision lazy zeroed, thick provision eager zeroed or thin provision.



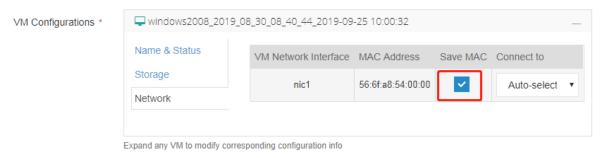
Note:

- 1. If you don't restore the OS disk, there will be no operating system in the restored VM, you need to re-install a new operating system or mount the data disk to another VM to use.
- 2. For OpenStack, select disk to restore is unsupported.

You can also choose where to connect the VM network interface to after restoring.

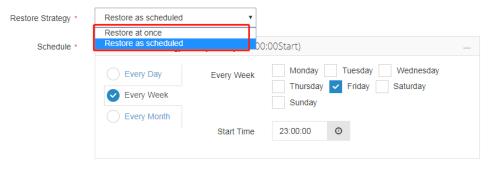


If there's already a VM with the same MAC address in the restored host or vCenter environment, tick "Save MAC" will be invalid, instead, a new MAC address will be generated. If you want to save the MAC, you need to delete the VM which has the same MAC, or modify the mac address.



Step 3: Restore Strategy

Choose "Restore at once" or "Restore as scheduled":

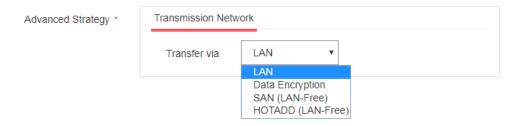


If choosing "Restore at once", the restore job will start running after created. If choosing" Restore as scheduled", you need to set restore schedules. After done, the job will run as scheduled.

Note: Restore as schedule is not recommended if no special circumstances, restoring too many VMs will occupy production resources.

Choose transmission network in the "Advanced Strategy":

For VMware vSphere



For Microsoft Hyper-v



For Citrix XenServer, Redhat RHV/oVirt, Inspur InCloud Sphere



For Huawei FusionCompute

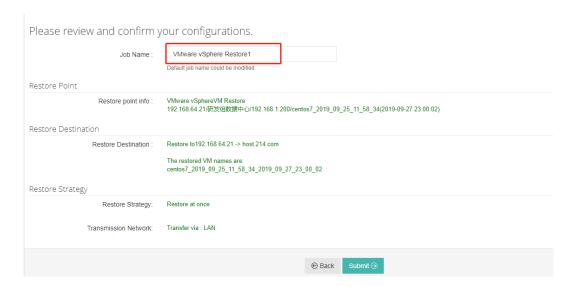


For Sangfor HCI, there's no "Advanced Strategy", data is transferred via LAN by default.

For a detailed description of each transmission mode, please refer to "Transmission Network" in Chapter "WM Backup Job".

Step 4: Review & Confirm

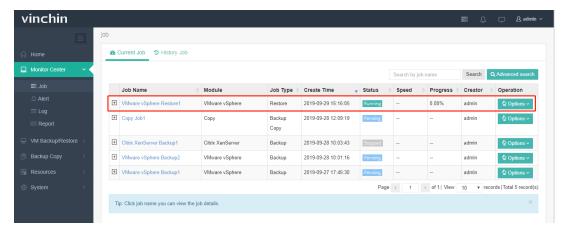
After finish, you are able to review and confirm the settings. Click "Submit" if confirm, the restore job creation will be completed.



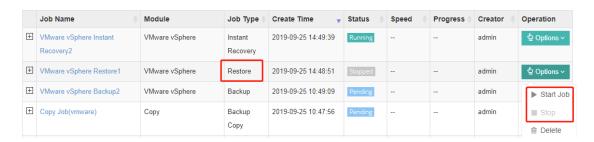
Note: You can rename the restore job. Make sure all the settings are correct before submitting. If you have chosen" Restore at once", the restore job will start running once you submit the job.

Perform Restore Job

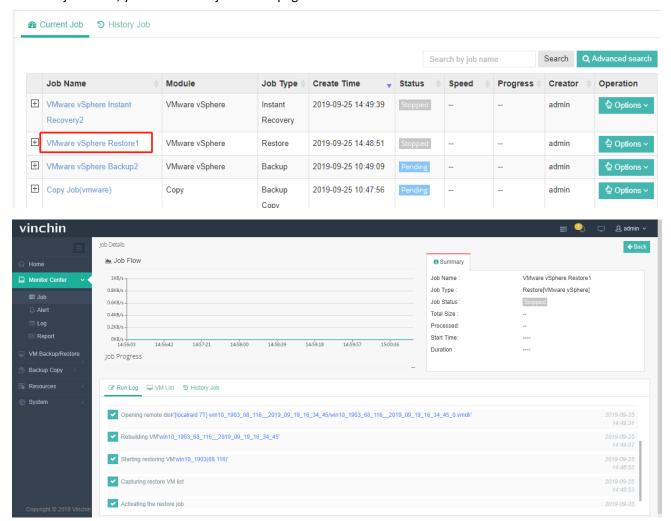
After creating a new restore job, you will see this job in the "Current Job List".



Click "Options" to start or stop the restore job. If you want to stop this restore job, click "Stop". Click "Options" again, you can start or delete this job as you want.



Click the job name, you will see the job details page



Run Log: Records the current restore job running progress.

VM List: Shows the current job details including VM Name, Job Type (Restore), VM Size, Data Size, Transfer Size, Written Size (The real size that has been restored), Speed(Data transfer speed), Progress(Job running progress), Status etc.

History Job: If you've set "Restore at once" for this restore job, this job will be auto-deleted after completing restoring and shows no data. If you've set "Restore as scheduled", you can review all the history operations of this restore job.

Warning: During a restore process, do not power on the VM before the restore job is completed, otherwise the VM data will be damaged or lost.

VM Instant Recovery

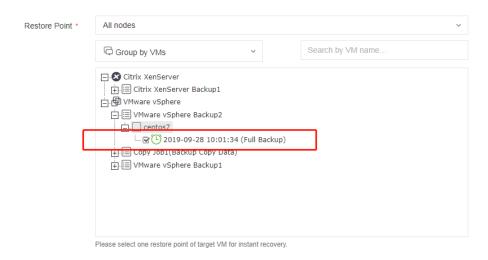
VM Instant Recovery helps to recover TB sized VMs in 15 secs, all business recover in 1 min, minimizes the breakoff time of critical businesses.

When creating a VM Instant Recovery job, make sure there's available restore point. If no, please backup target VM(s) with Vinchin backup server first.

Note: Instant recovery is not supported on Microsoft Hyper-v in Vinchin Backup & Recovery 5.0.0.

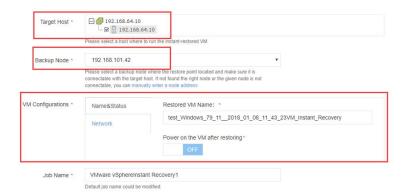
Create Instant Recovery Job

Click "VM Backup/Restore" - "VM Instant Recovery", select a target VM restore point under your virtual infrastructure which you want to instantly recover. You can quickly find the target restore point by specifying backup node and selecting "Group by VMs" or "Group by Restore Points" accordingly.



Note: You can only select one restore point for each instant recovery job.

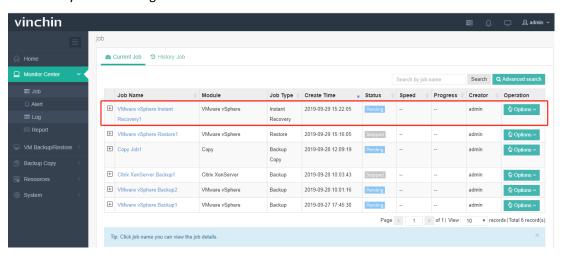
Select a host as the recovery destination where you want to run the instantly recovered VMs, and select the backup node IP/domain where the backup storage was mounted. You can also set the VMs' name, network info and whether to power on the VM after restoring.



Note: For OpenStack platform, please manually enter a controller node IP address which can communicate.

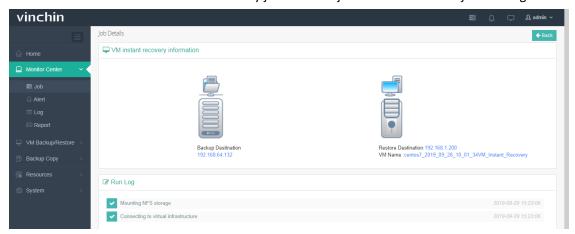


Click "OK" you are coming to the Current Job List.



Perform Instant Recovery Job

Click "Start" to activate the Instant Recovery job and click job name to view the job running details.

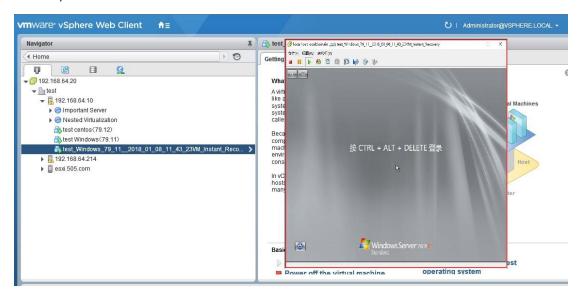


The logs will display the instant recovery job progress. After the job is completed successfully, you can power on the recovered VMs. If you have preset "power on the VM after restoring", the VM will be powered on automatically once you start the job in 15 seconds.

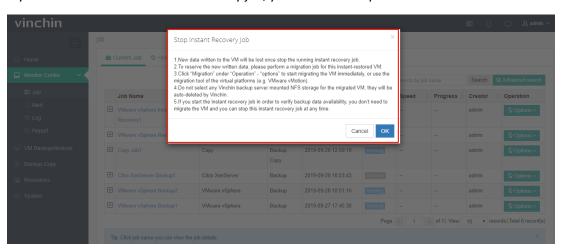
Warning: Do not create snapshot on the instantly recovered VM, or change any disk information. Otherwise error will occur to the VM or it will crash.

Log in to your virtual platform (e.g. VMware vSphere), you can see the instantly recovered VM is created in a few

seconds, and is workable:



If you want to delete the instant recovery job, you can click "Stop".



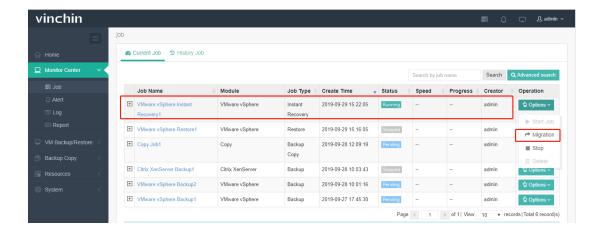
Please read the stop reminder carefully before confirming.

Warning: If you stop the instant recovery job, all the recovered VM information will be deleted (Including newly written data during the instant recovery). If you need to reserve the recovered VM and its newly written data, do not stop the job until you have migrated them to a safe place.

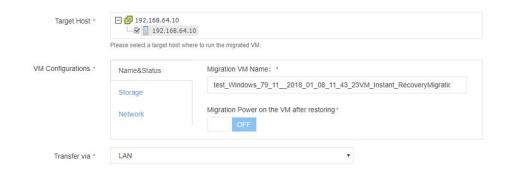
VM Migration

When performing instant recovery job, the VM and newly written data can be synchronously migrated to the business area via VMware vMotion or Vinchin backup's live-migration function without effecting the normal operation of your business.

Select a normally running instant recovery job and click "Migration" as below:



Select a host where to migrate the VM. Then you can rename the migrated VM and choose to whether power on it after migration, set storage, network info for the VM. You can also select transmission mode. For a detailed description of each transmission mode, please refer to "Transmission Network" in Chapter VM Backup - Create Backup Job.



Click "OK" to start the migration job. You can view the migration job running details in the previous instant recovery job.



After migration completed, the migration job will automatically change back to "Instant Recovery Job" and this job is still in a running status. But the VM in this job is powered off and the business will be taken over by the migrated

VM.

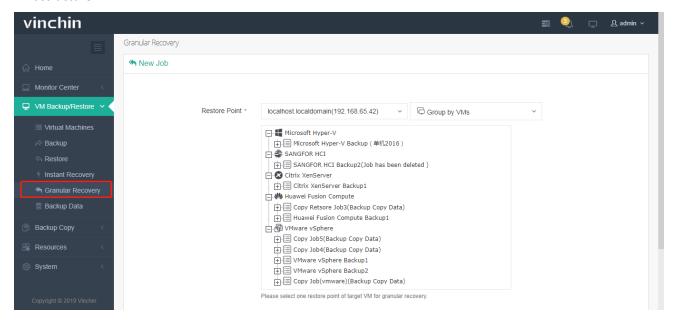
Note: You can also use VMware migration function to realize the above operations.

Warning: Do not power on the VM when it is being migrated, otherwise the VM will be damaged.

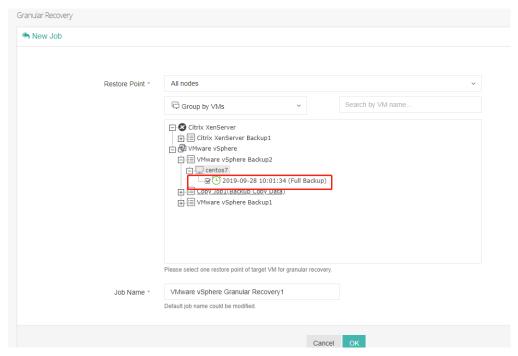
Granular Recovery

Create Granular Recovery Job

Single files can be recovered directly from the restore point, instead of restoring the entire virtual machine. Click "VM Backup/Restore" – "Granular Recovery", you will see all the available restore points under your virtual infrastructure.

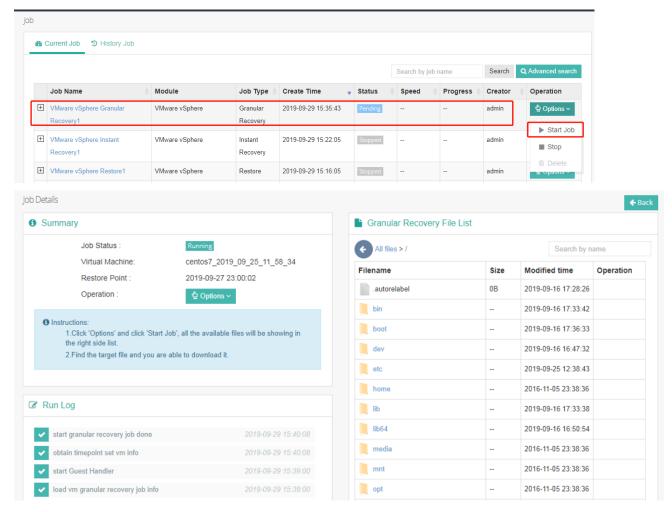


Select one restore point where you can find your target file. Rename the granular recovery job if necessary.

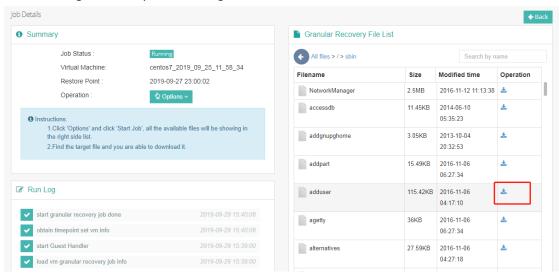


Perform Granular Recovery Job

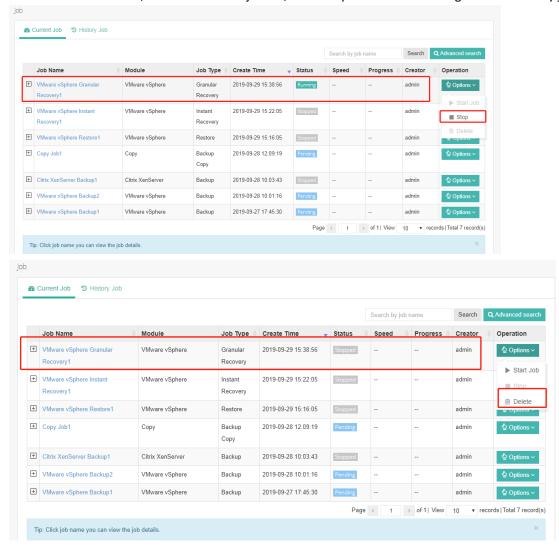
Click "OK" you are coming to the Current Job List. Click "Options"-"Start Job", the job starts running and click job name to view the job running details.



Enter the target directory, find the target file and click download button.

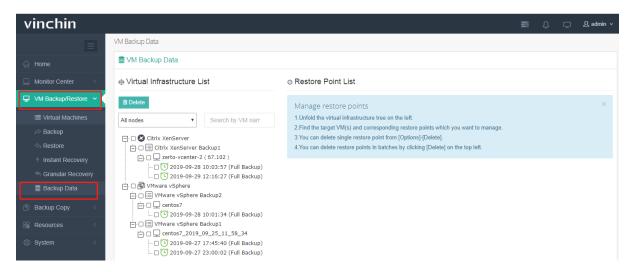


After download the file, return to current job list, click "stop" and "delete" the granular recovery job.

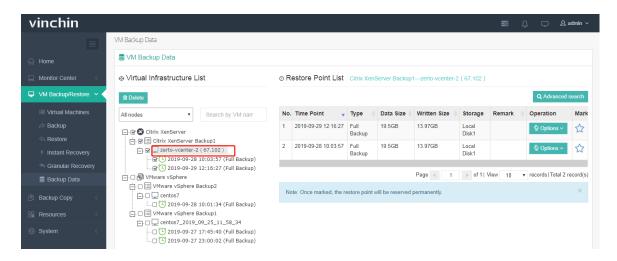


Backup Data

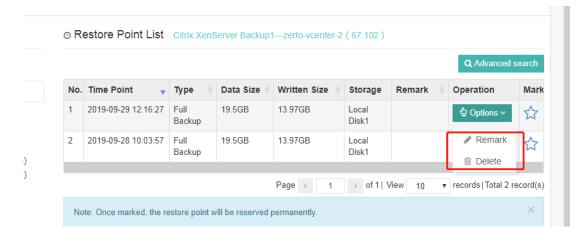
After complete a backup job, you can view and manage the corresponding restore point from "VM Backup/Restore" - "Backup Data".



If you want to delete multiple restore points in batches, you can first select target restore points from the left tree, and click "Delete". Expand the virtual infrastructure tree, find the target VM and click on it, you will see all the restore points of this VM are listed in the right side of the page.



Click "Options" under Operation, you will be able to remark or delete the restore point.



To delete a restore point:

For VMware, to delete a full backup restore point, you need to first delete corresponding incremental backup or differential backup restore point.

For other virtual platforms, when deleting full backup restore point, corresponding incremental backup or differential backup restore point will be automatically deleted with the full backup restore point.

Note: Once deleted, the restore point is not recoverable. If you want to reserve the restore point, you can mark it, it will not be auto-deleted due to retention policy.

For VMware, you can mark full backup, incremental backup and differential backup restore point. For other virtual platforms, only full backup restore point can be marked.

Retention Policy for restore points:

For VMware, when activating retention policy, the incremental restore points will be merged first, after the incremental points are merged or deleted, the full backup point will be auto-deleted due to retention policy. For other virtual platforms, retention policy will delete full backup restore points accordingly, when deleting full backup restore points, corresponding incremental and differential backup restore points will be deleted together.

Backup Copy

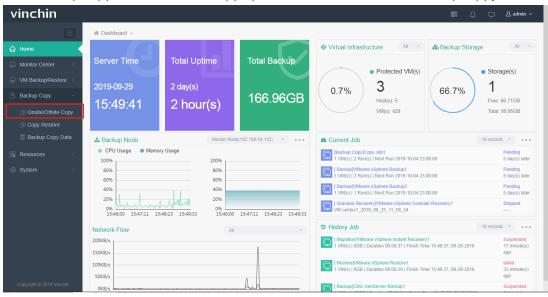
Here are preconditions to ensure the Backup Copy job complete successfully:

- 1. Add a storage where to store the backup copies, details please refer to Add Storage.
- 2. To run a backup copy job, first please run a VM backup job and make sure the VM backup data is available. To run a copy restore job, first please run a backup copy job to copy the backup data to a second storage.

Onsite/Offsite Copy

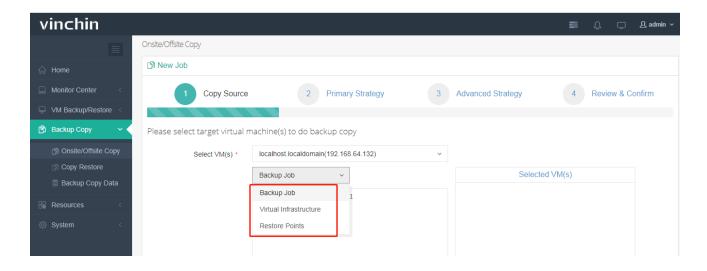
Create Backup Copy Job

Click "Backup Copy"-"Onsite/Offsite Copy", you can start to create a new backup copy job.



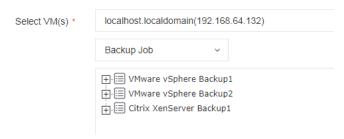
Step 1: Copy Source

When selecting a copy backup source, you need to first select the backup job of the target virtual machine or the node where the backup data is located. You can choose multiple VMs in different backup jobs at the same time. There are three ways to select virtual machines that need to perform copy job: Backup Job, Virtual Infrastructure and Restore Points.



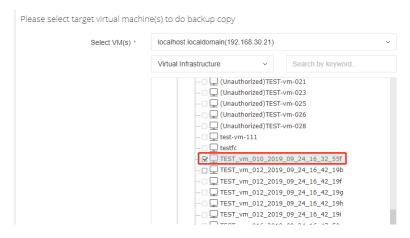
When choosing "Backup Job", all the backup jobs you've completed before will be listing here. Expand the backup job list, then select one or more virtual machines that need to copy, these virtual machines can come from different backup job or different virtual platforms. One virtual machine can exist in multiple copy jobs. As shown below:

Please select target virtual machine(s) to do backup copy



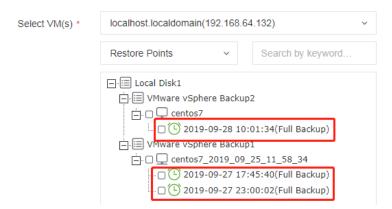
If you know where your target VM locates, you can choose "Virtual Infrastructure" and find the target VM. Expand the Virtual Infrastructure tree, you will see all virtual machines. You only are able to select the virtual machine that have been added to the backup job, the rest can't create the copy job.

You can select target VMs to do copy job from different virtual platforms. As shown below:

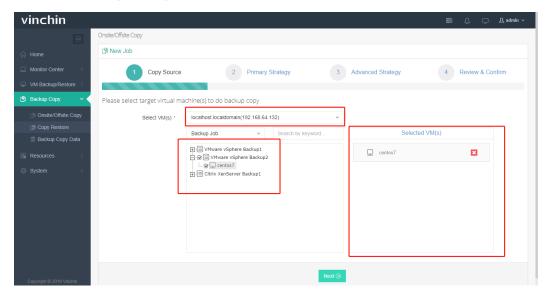


When choosing "Restore Points", all the restore points will be listing here. You can select any of the restore points from different virtual platforms, deleted backup jobs. If you choose an incremental backup restore point, all the previous incremental and full backup restore points on the same time chain will be auto-selected.

Please select target virtual machine(s) to do backup copy



Tick target virtual machines that you want to do backup copy and they will be showing in the "selected VM(s)" column. If you want to delete a selected VM, you can click "x" button in the right column or directly un-tick this VM. Click "Next" once you complete the selection.

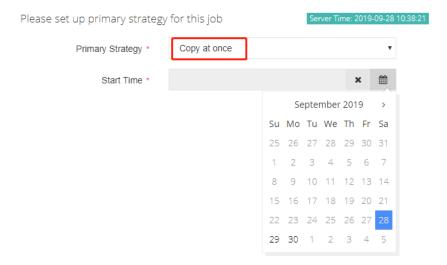


Step 2: Primary Strategy

In the Primary Strategy page, there are two backup copy options available, "Copy at once" and "Copy as scheduled".

Copy at Once

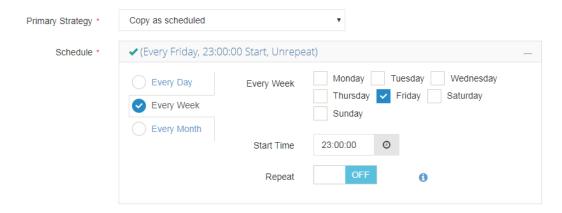
The backup copy job only perform one time. Choose "Copy at once", then click "" to choose YY/MM/DD and HH:MM:SS, then click "Next", the backup copy job will be performed at the exact time for only once.



Copy as Scheduled

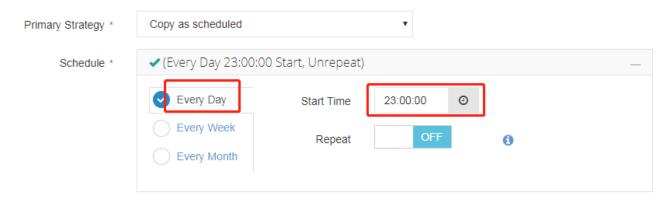
The backup copy job repeats as scheduled.

Choose "Copy as scheduled", then click the schedule bar, you will see there are some schedule options, you can choose to repeat the backup copy job at any time in any day.

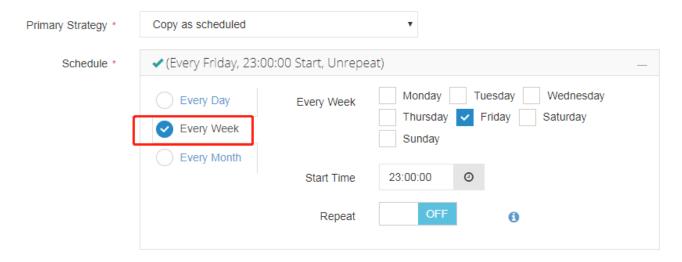


The time schedule of backup copy job includes 3 types: Every day, Every Week and Every Month.

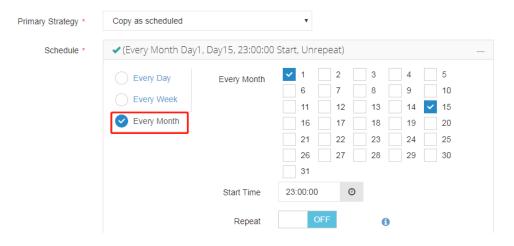
Every Day schedule only needs to set Start Time as below:



• Every Week schedule needs to choose which days to perform the backup copy job as below:



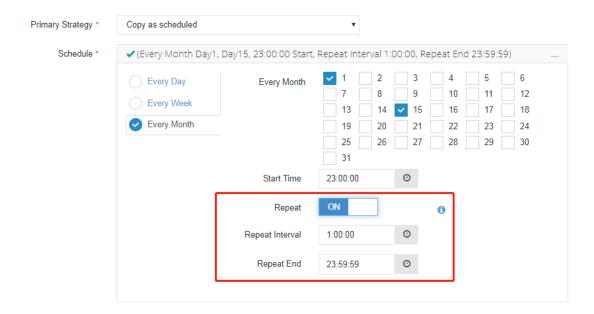
• Every Month schedule is similar with Every Week schedule, needs to choose which days to perform the backup copy job, details as below:



Set the copy "Start Time" and choose whether to enable the "Repeat".

"Repeat" means repeatedly perform the backup copy job every xx hours/minutes/seconds. Once enable the "Repeat" option, you need to set the time of "Repeat Interval" and "Repeat End" accordingly.

(Example: Choose Every Month schedule, and tick day 1 and day 15, set the Start Time as 7:00:00, and enable the "Repeat", Repeat Interval Time 2:00:00 and Repeat End Time 21:00:00. This schedule means on 1st and 15th of each month, this backup copy job will start running from 7:00am, and it will repeat once every 2 hours until 9:00pm of the day.)



Note:

- 1. If you choose restore point of a VM as "Copy Source", you can only execute one time copy job for the restore point, which means only "Copy at Once" is available.
- 2. "Copy as scheduled" relies on the backup job, if new VM data has been backed up, but the backup copy job hasn't start running yet, the dependent backup job will not execute retention policy (old time point will not be merged or deleted).

Step3: Advanced Strategy

Copy Destination

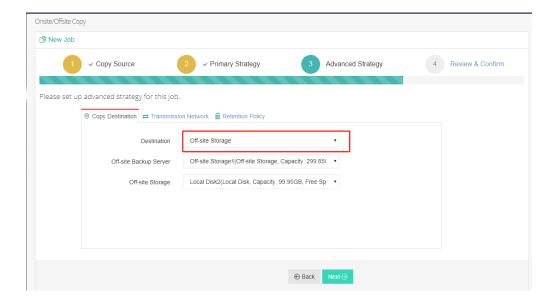
Select a storage to store the backup copies. First select to store the data in "On-site Storage" or "Offsite-Storage".

If you have mounted multiple storages to your onsite Vinchin backup server, you can choose one of them to store the backup copies.

Please set up advanced strategy for this job.



If you have deployed a Vinchin backup server in a second location (offsite) and mounted a storage device on that Vinchin server, you can choose "Off-site Storage" to store your backup copies to the second location (That is your offsite DR center).



Note:

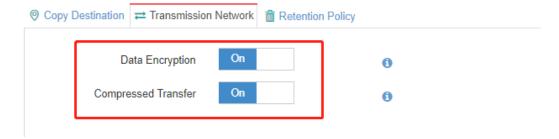
You can restore the target VM to offsite production environment using offsite Vinchin backup server and the backup copies which you've stored in offsite storage.

You can also restore the target VMs to onsite production environment by executing a "Restore Copy" job to send the offsite backup copies back to onsite storage.

Transmission Network

Data encryption and compressed transfer mode can be set in the transmission network option.

Please set up advanced strategy for this job.



Data Encryption: Transmission encryption adopts AES 256 encryption algorithm. When transmission encryption is turned on, the data transmitted from backup source to backup storage will be encrypted, and ciphertext transmission will be adopted to guarantee the data security. The encryption transfer switch is off by default.

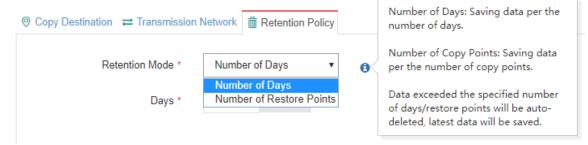
Compressed Transfer: Enable it to compress the backup copies data size during transmission to shorten transmission time. The size of the backup copy data will not be compressed when it arrives to the storage. Compressed Transfer feature is default enabled.

Retention Policy

Backup copy retention policy is a policy to reserve backup copies on disk according to number of days/restore points.

Old restore points out of date/over range will be auto-deleted. Retention Policy includes "Number of Restore Points" and "Number of Days".

Please set up advanced strategy for this job.



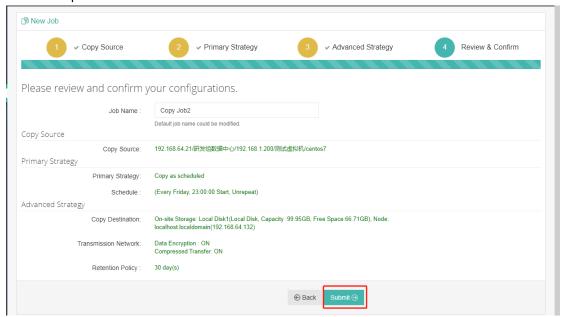
For VMware vSphere, the retention policy is based on every single restore point no matter its full backup, incremental backup or differential backup time point. It will lead a deletion of the furthest restore point when a new restore point is generated.

For other virtual platforms, the retention policy is based on full backup restore points. It will lead a deletion of the furthest full backup point together with its corresponding incremental or differential backup points when a new full backup point is generated.

Note: If the backup job has a new restore point, but the dependent copy job has not been performed, the retention policy of the backup job will not be executed. If the new restore point has been copied in a backup copy job, the retention policy will be executed in next backup job.

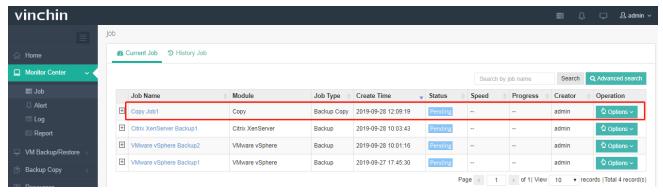
Step4: Review & Confirm

After finish, you are able to review and confirm the settings. Click "Submit" if confirm, the backup copy job creation will be completed.

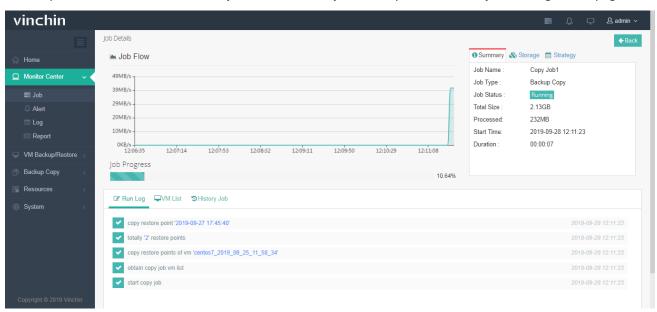


Perform Backup Copy Job

After creating a new backup copy job, you will see this job in the "Current Job List".



Click "Options"-"Start Job" to start this job. Then click the job name, you will see the job running details page.



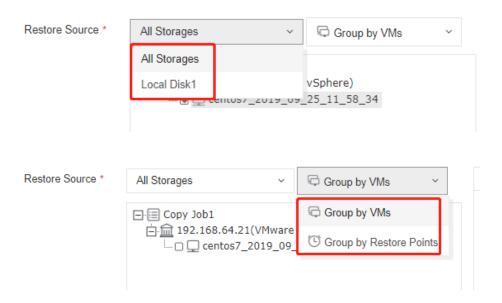
After the job complete, the backup copy data has been stored to target storage successfully.

Copy Restore

Create Copy Restore Job

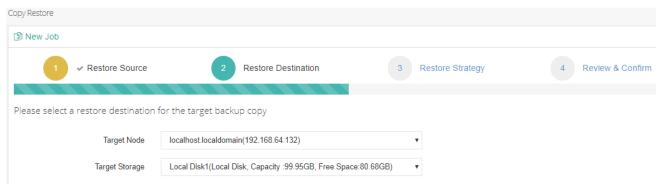
Step 1: Restore Source

Click "Backup Copy" → "Copy Restore". Select a target VM or a target restore point which you want to restore its copy from a storage. You can quickly find the target VM by selecting "Group by VMs", or find the target restore point by selecting "Group by Restore Points" accordingly.



Step 2: Restore Destination

Select an onsite storage where you want to store the restored backup copies.

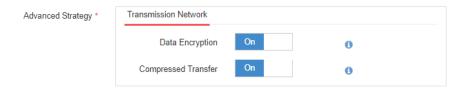


Note: If you want to restore the target VM at offsite, please use offsite Vinchin backup server to execute a "Copy Restore" job.

Step 3: Restore Strategy

Transmission Network

Data encryption and compressed transfer mode can be set in the transmission network option.

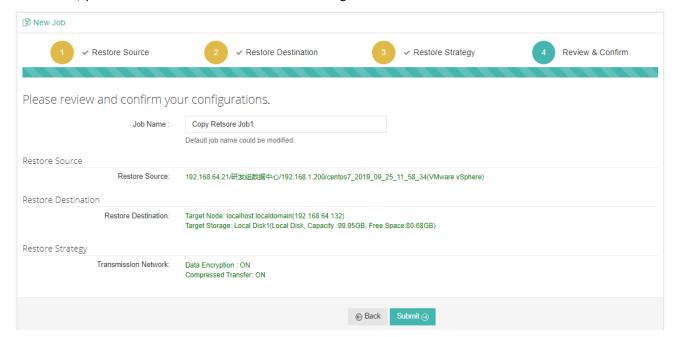


Data Encryption: Transmission encryption adopts AES 256 encryption algorithm. When transmission encryption is turned on, the backup copy data transmitted from second storage to onsite storage will be encrypted, and ciphertext transmission will be adopted to guarantee the data security. The encryption transfer switch is off by default.

Compressed Transfer: Enable it to compress the backup copies data size during transmission to shorten transmission time. The size of the backup copy data will not be compressed when it arrives to the storage. Compressed Transfer feature is default enabled.

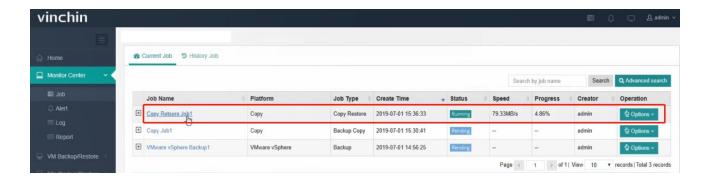
Step 4: Review & Confirm

After finish, you are able to review and confirm the settings. Click "Submit" if confirm.

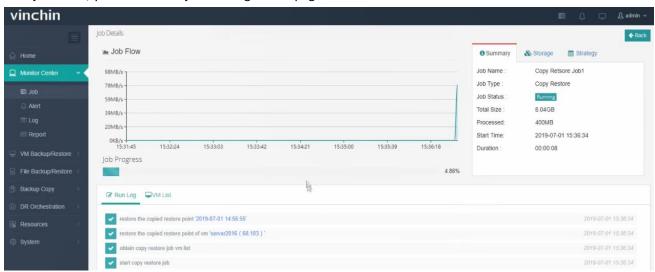


Perform Copy Restore Job

After creating a new copy restore job, you will see this job in the "Current Job List" and it will start running immediately.



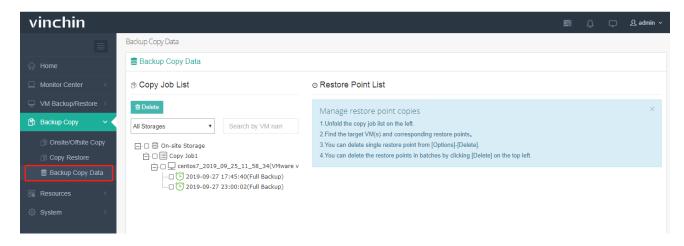
Click job name, you will see the job running details page.



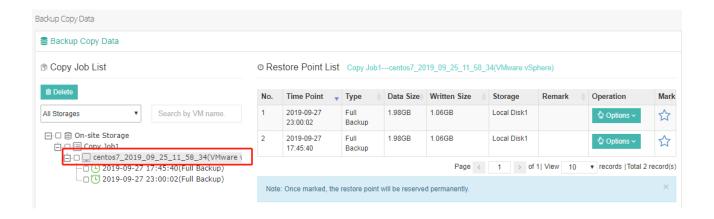
After the job complete, the backup copy data has been restored to target storage successfully.

Backup Copy Data

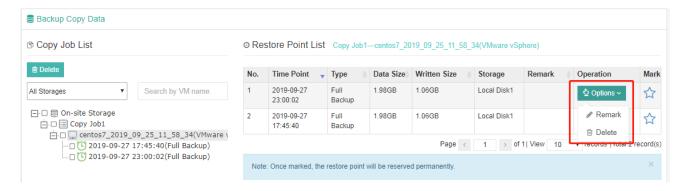
After complete a backup copy/copy restore job, you can view and manage the corresponding restore point from "Backup Copy" - "Backup Copy Data".



If you want to delete multiple restore points in batches, you can first select target restore points from the left tree, and click "Delete". Expand the virtual infrastructure tree, find the target VM and click on it, you will see all the restore points of this VM are listed in the right side of the page.



Click "Options" under Operation, you will be able to remark or delete the restore point.



To delete a restore point:

For VMware, to delete a full backup restore point, you need to first delete corresponding incremental backup or differential backup restore point.

For other virtual platforms, when deleting full backup restore point, corresponding incremental backup or differential backup restore point will be automatically deleted with the full backup restore point.

Note: Once deleted, the restore point is not recoverable. If you want to reserve the restore point, you can mark it, it will not be auto-deleted due to retention policy.

For VMware, you can mark full backup, incremental backup and differential backup restore point. For other virtual platforms, only full backup restore point can be marked.

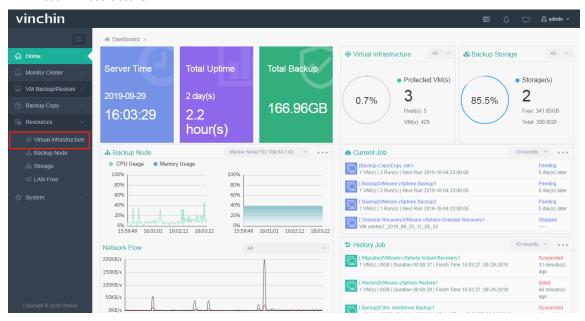
Retention Policy for restore points:

For VMware, when activating retention policy, the incremental restore points will be merged first, after the incremental points are merged or deleted, the full backup point will be auto-deleted due to retention policy. For other virtual platforms, retention policy will delete full backup restore points accordingly, when deleting full backup restore points, corresponding incremental and differential backup restore points will be deleted together.

Resources

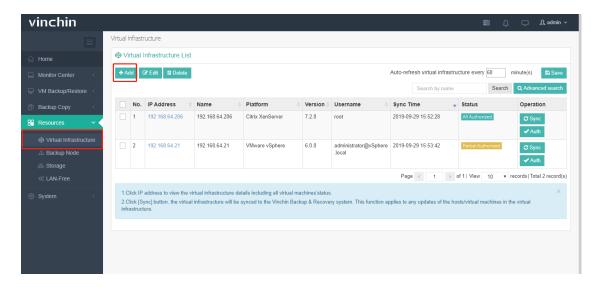
Virtual Infrastructure

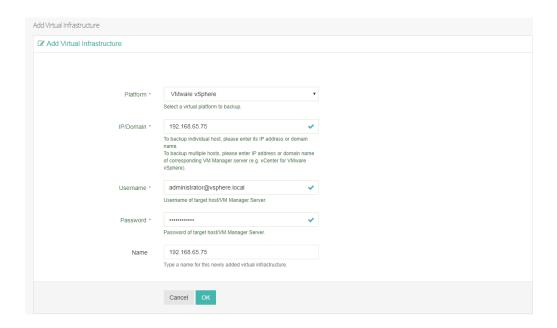
Before starting backup, you need to register your virtual infrastructure in Vinchin backup server. Click "Resources" → "Virtual Infrastructure".



Add Server

Click "Add" you are coming to the virtual infrastructure adding page. Choose a virtual platform (depends on your virtual environment) → Enter IP address, username, password of standalone host /management platform and rename it, then click "OK" to save.





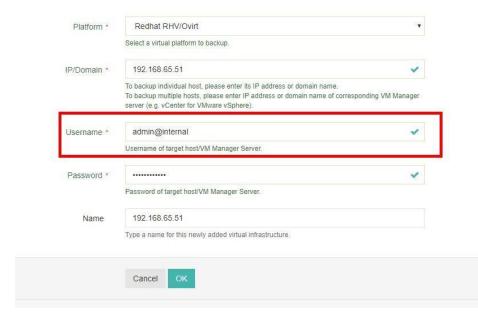
Platform: Select your virtual platform type.

IP Address/Domain: Either a standalone host IP address/domain (e.g. VMware ESXi host) or VM manager server IP address/domain (e.g. VMware vCenter).

Username/Password: The username /password to access to the host /VM manager server.

Rename: Edit a name for this new added virtual infrastructure.

For RHV/oVirt, username please enter admin@internal



For **Huawei FusionCompute**, username please enter FusionCompute Internal northbound interface authentication account **gesysman**, default password: **GeEnginE@123**

For **Hyper-v**, there are three types:

If you add a standalone host, username please enter **Administrator**.

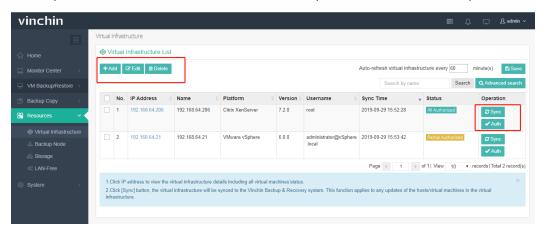
If you add SCVMM, username please enter "domain/domain user who manage the SCVMM".

If you add failover cluster, username please enter "domain/domain user who manage the failover cluster".

Edit Server

After adding the servers, you can find them in the Virtual Infrastructure list.

Click "Sync" button, the virtual infrastructure will be synced to the Vinchin backup server.

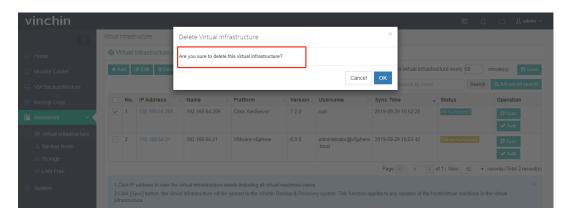


Note: This function applies to any updates of the hosts/virtual machines in the virtual infrastructure. You can also click "Sync" to refresh your server when creating a new job.

Tick a virtual infrastructure and click "Edit", you are able to edit the details of the virtual infrastructure, click "OK" to save the changes.

Delete Server

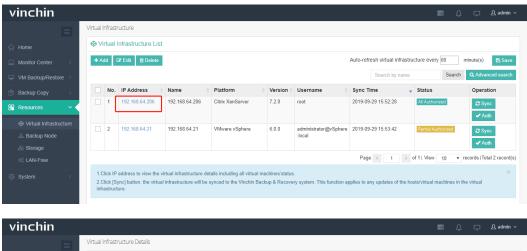
Tick a virtual infrastructure and click "Delete", the system will re-confirm with you this action as below, click "OK" the server will be deleted.

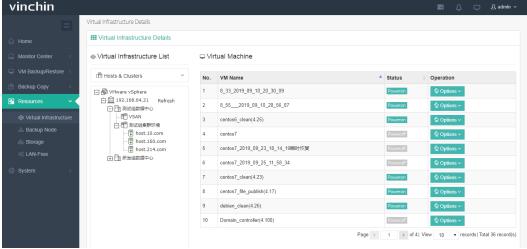


Note: The virtual infrastructure cannot be deleted when it is used in a running job. You must delete the running job before deleting the virtual infrastructure.

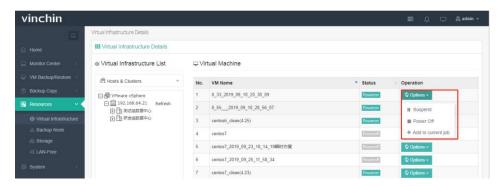
Manage Virtual Machines

Click IP address of one virtual infrastructure you are coming to the page showing the virtual infrastructure details including all virtual machines status. Expanding the virtual infrastructure tree on the left, you will see all the VMs under this infrastructure on the right side.





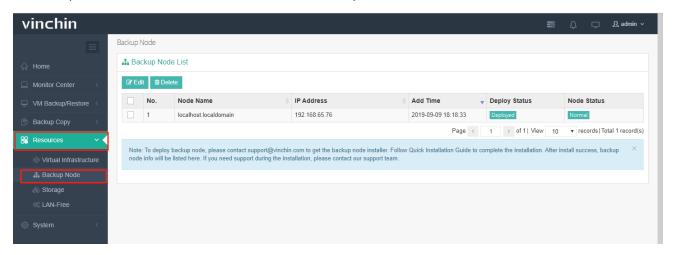
Choose one VM and click "Options" under "Operation", you can power on, pause or power off the VM. You can also choose to add this VM to the existed backup jobs.



Note: After you change the VM status, please go back to the virtual infrastructure page and sync the VM located virtual infrastructure manually.

Backup Node

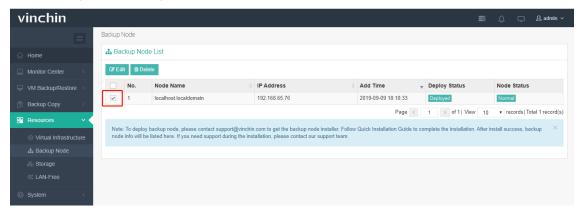
Deploy the backup nodes by following Vinchin Backup & Recovery "Quick Installation Guide", then you can view all the backup nodes information in the "Resources" \rightarrow "Backup Node" as below:



Note: After the backup node (slave node) is deployed, it connects to the backup server (master node) in active mode. The backup server (master node) cannot be deleted.

Edit Backup Node

Tick a backup node which you want to edit as below:

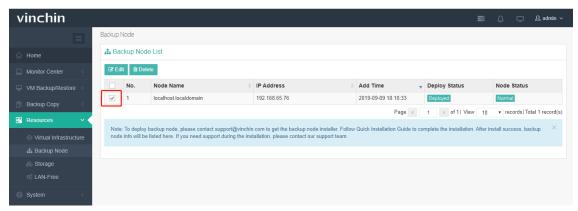


Click "Edit", you can edit a new name for this node as below:

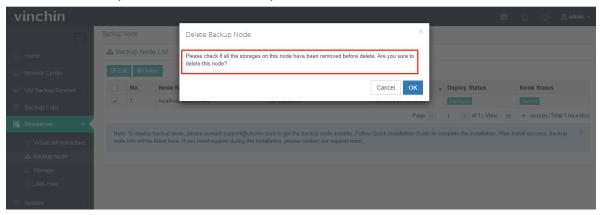


Delete Backup Node

Tick a backup node you want to delete as below:



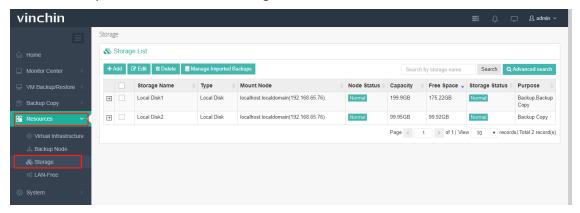
Click "Delete", the system will re-confirm with you, click "OK" the node will be deleted as below:



Note:

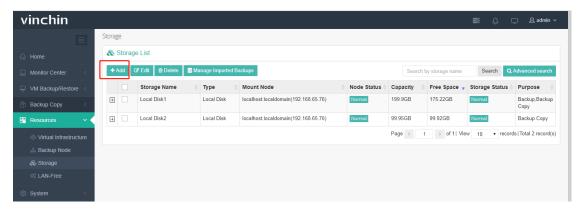
- 1. If there's storage mounted on this backup node(slave node), it is undeletable. Please delete the storage and ensure no jobs running on this node first.
- 2. After deleting the backup node (slave node), you need to modify the node config file in the corresponding node system and delete the connected backup server (master node) IP address.

Storage



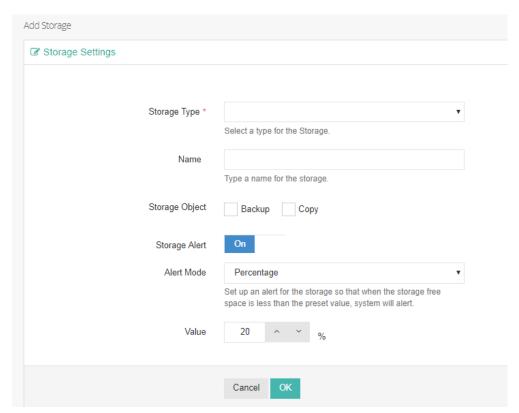
Add Storage

Click "Add" to add a new backup storage by following below steps:



First, select a storage type for your storage device. Then choose a backup node from the "Node IP address/domain" where you want to mount your storage. If there's more than one backup node in your virtual environment, choose one of them to mount your target storage.

At the "Storage Object", you can also choose to use this storage for storing backups or copies. Backup and Copy can be selected at the same time, that means this storage can be used to store both backups and backup copies.



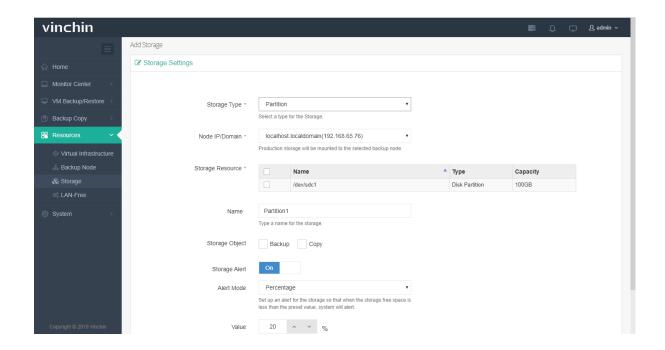
Note: Please make sure the specified storage type is the one your production system actually is using.

Set up a critical value of storage from storage alert so that when your backup storage is insufficient, system will alert and send you email notification.

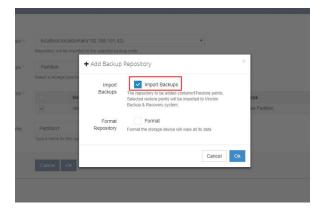


> Partition

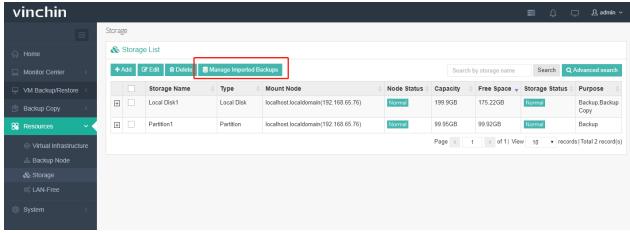
Choose Partition from the "Storage Type", system will recognize the un-mounted /un-used partitions as below shows:



Tick the selected partition, if there is previous backed up data in this partition, you can choose to import the backups so that you can restore them whenever necessary:



After importing the previous backups, please refer to Manage Imported Backups to manage these backups:

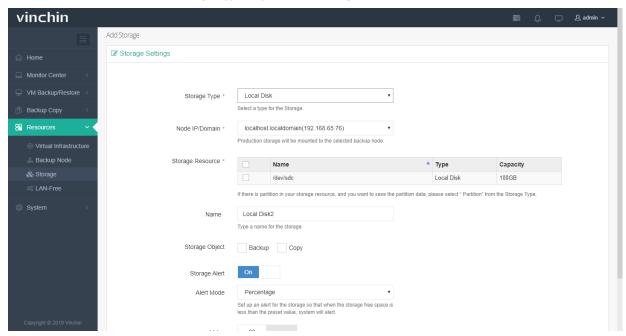


If you don't want to save these data, you can tick "Format" to format the storage:

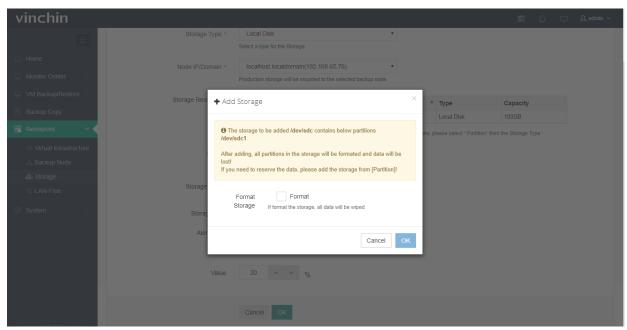
Warning: If you choose "Format", all the data in this storage will be erased.

Local Disk

Choose Local Disk from the "Storage Type", system will recognize the un-mounted /un-used disks as below:

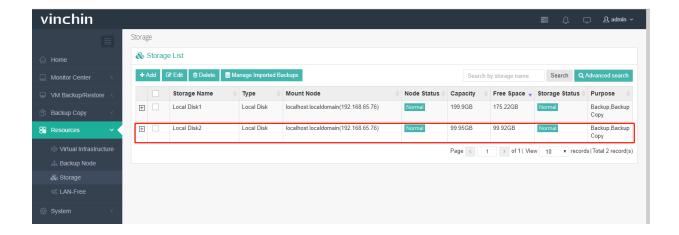


Tick the selected disk, a window with Format Storage will come out as below:



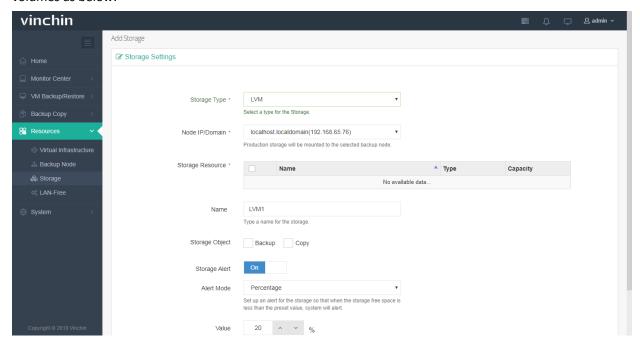
Warning: If you add a local disk as backup storage, the disk will be forcibly formatted, all the data in this disk will be erased.

After adding storage completed, you can see the added storage in the Storage List as below:

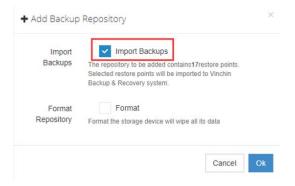


> LVM

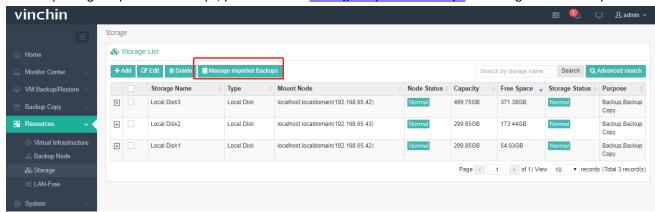
Choose LVM (Logic Volume) from the "Storage Type", system will recognize the un-mounted /un-used logic volumes as below:



Tick the selected LVM, if there is previous backed up data in this LVM, you can choose to import the backups so that you can restore them whenever necessary:



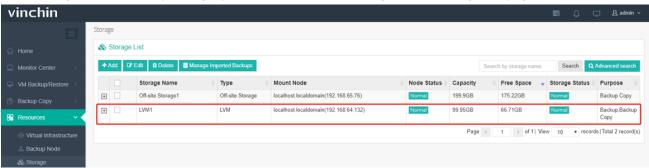
After importing the previous backups, please refer to Manage Imported Backups to manage these backups:



If you don't want to save these data, you can tick "Format" to format the storage.

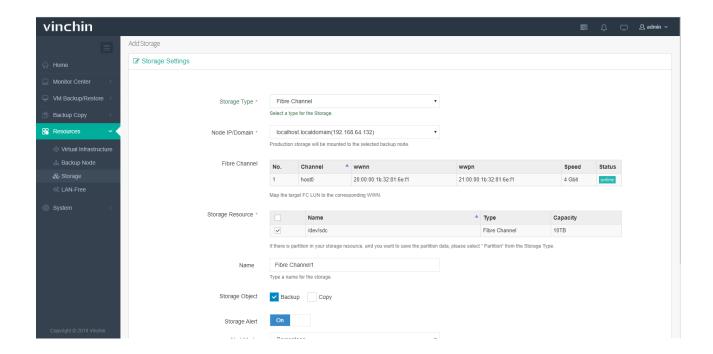
Warning: If you choose "Format", all the data in this storage will be erased.

After adding a LVM as backup storage, you can see the added storage on the Storage List page as below:



> Fibre Channel

Choose Fibre Channel from the "Storage Type", system will recognize the Fibre channel information and WWPN No. of HBA card. Map the LUN of FC storage server to the backup server. After mapping, choose FC again from the "Storage Type", system will recognize the mapped LUN as below:



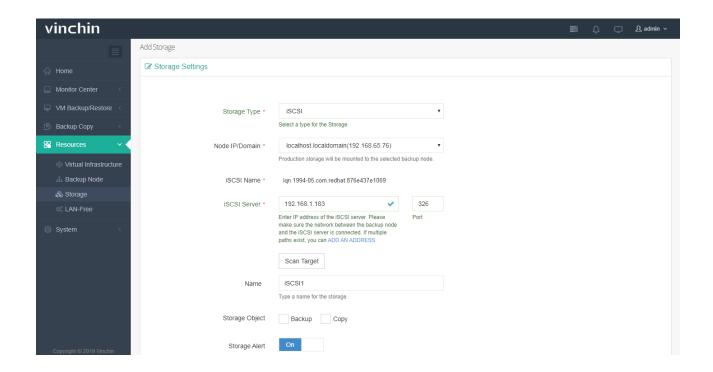
After adding a FC storage as backup repository, you can see the added storage in the Storage List as below:



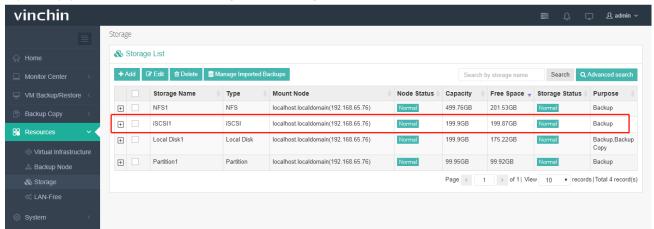
Note: If you add a FC storage as backup storage, the FC storage will be forcibly formatted, all the data in this storage will be erased. If there are previous backup data in this FC storage and you don't want to format it, please add this storage via "Partition".

> iSCSI

Choose iSCSI from the "Storage Type", you will see the iSCSI IQN information. Map the LUN of iSCSI storage server to the backup server IQN. After mapping completed, enter iSCSI server address and click "Scan the Target", system will recognize the mapped LUN as below:



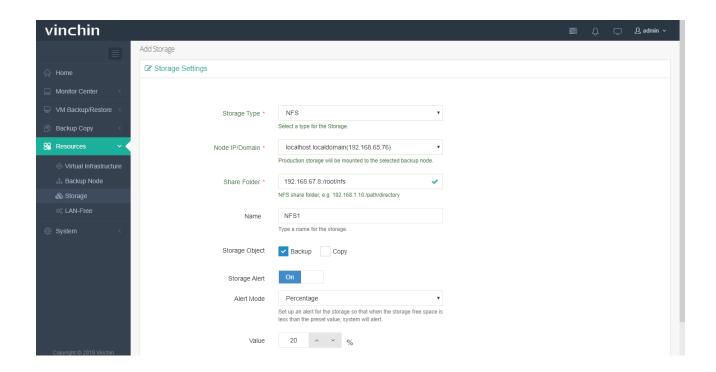
Choose a LUN and click "OK", the iSCSI storage will be added successfully. After adding an iSCSI storage as backup repository, you can see the added storage in the **Storage List** as below:



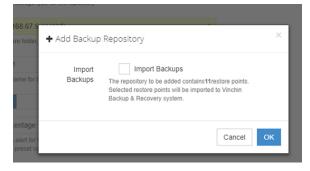
Note: If you add an iSCSI storage as backup repository, it will be forcibly formatted, all the data in this storage will be erased. If there are previous backup data in this iSCSI storage and you don't want to format it, please add this storage via "Partition".

➤ NFS

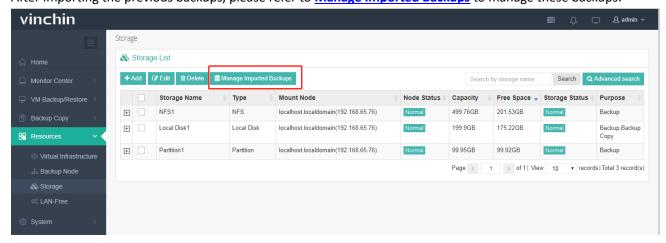
Choose NFS from the "Storage Type", enter your shared folder path as below:



If there is previous backed up data in this storage, you can import these data to Vinchin backup server by ticking "Import Backups" option so that you can restore them whenever necessary:



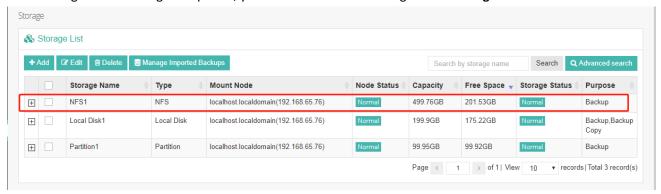
After importing the previous backups, please refer to Manage Imported Backups to manage these backups:



If you don't want to import these data, click "OK" without ticking the "Import Backups".

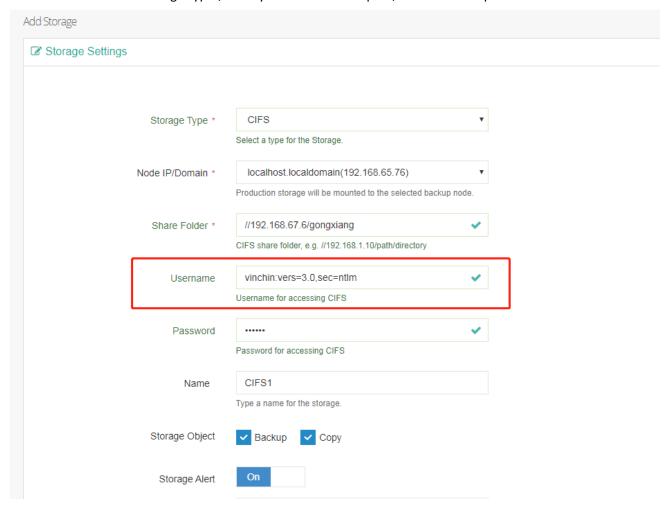
Note: The share folders' previous data will not be erased when adding NFS storage.

After adding the NFS storage completed, you can see the added storage in the Storage List as below:



> CIFS

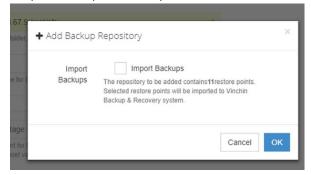
Choose CIFS from the "Storage Type", enter your shared folder path, username and password as below:



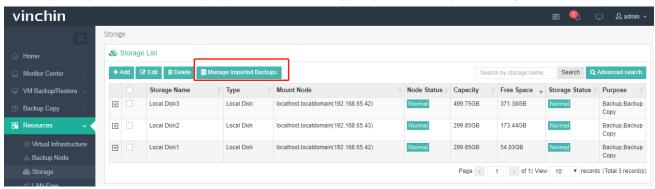
Note: In the Username column, we give you a format example, please follow the example to set your username. vers=x.x, "x.x" is your CIFS version number, e.g. 2.0, 3.0 or 4.0.

sec=xxx..., "xxx..."can be one of below values: none, krb5, krb5i, ntlm, ntlmi, ntlmv2, ntlmv2i, ntlmsspi.

If there is previous backed up data in this storage, you can import these data to Vinchin backup server by ticking "Import Backups", so that you can restore them whenever necessary:



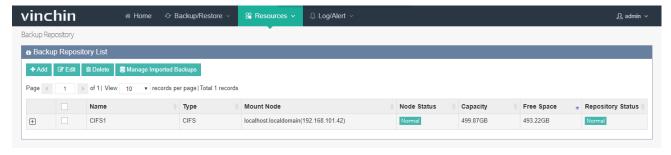
After importing the previous backups, please refer to Manage Imported Backups to manage these backups:



If you don't want to import these data, click "OK" without ticking the "Import Backups".

Note: The share folders' previous data will not be erased when adding NFS storage.

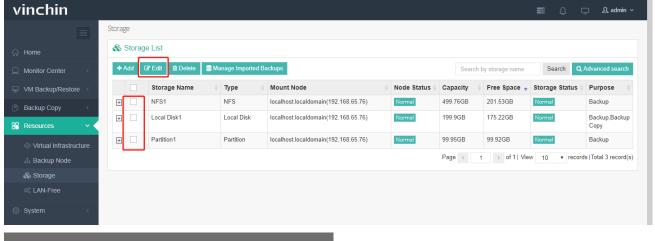
After adding the CIFS storage completed, you can see the added repositories in the "Backup Repository List" as below:

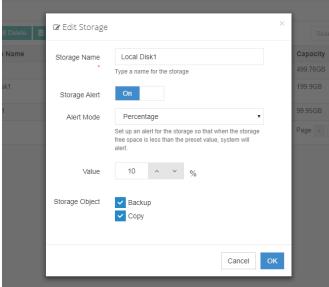


Note: The share folders' previous data will not be erased when adding CIFS storage.

Edit Storage

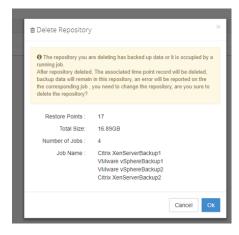
Choose a storage, click "Edit" you can edit the storage name.





Delete Storage

You can delete any of the storages from the "Storage List". Choose a storage, click "Delete". If there are backup data in this storage, system will remind you as below:

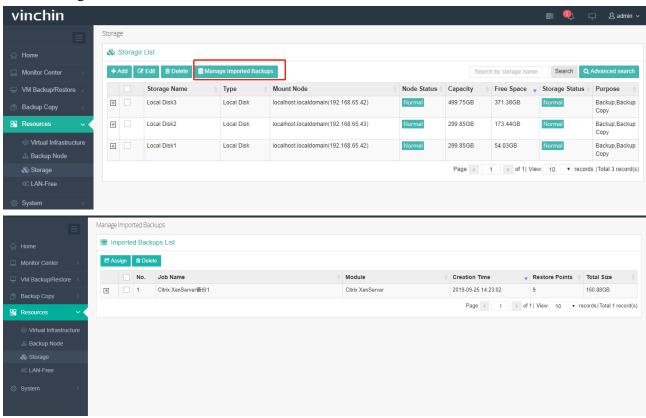


Click "OK" to delete the storage. The deleted storage can be re-added via "Partition".

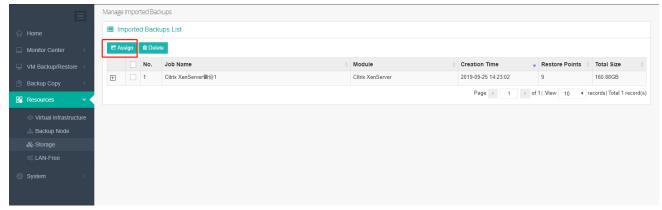
Note: Deleting the storage is a logical action rather than a physical action, which means the VM corresponding restore point record will be deleted, but the backups will not be deleted actually. If you need the backups, you can re-add the data located storage to vinchin backup server. Choose "Partition" to import the data.

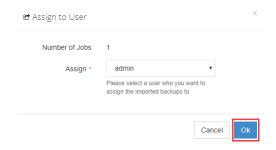
Manage Imported Backups

If you have imported the previous backups when adding **Partition, LVM, NFS** and **CIFS** as backup storage, you are able to manage these data from here.

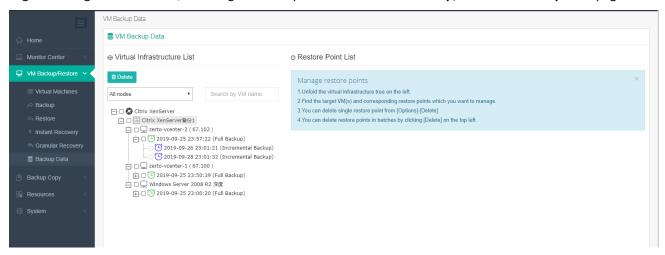


If you want to restore the imported backups, you need to first assign them to an user who has right to manage the backups, click "Assign" as below:



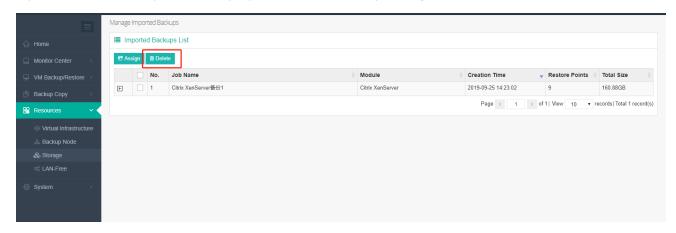


Log in the target user account, the assigned backups is listed in his VM Backup/Restore→ Backup Data page:



Note: You can create a new restore job to restore the imported backups, the imported backups will be scanned out automatically when creating new restore job.

If you don't need the imported backups, you can delete them by clicking "Delete" as below.



Warning: Once deleted, the imported backups are unrecoverable permanently.

LAN-Free

Data usually is transferred via LAN, but when the data size is too large, network jam will probably occur. Using LAN-Free to backup and restore under SAN environment can help to reduce network jam, improve backup and recovery speed without building any separate DR backup network.

Note: LAN-Free backup and recovery is not available for **Microsoft Hyper-v** and **Sangfor HCI** in version 5.0. For other virtual platforms, you can choose transfer via SAN (LAN-Free) in the "Transmission Network" options when creating a backup / restore job.

Add LAN-Free Path

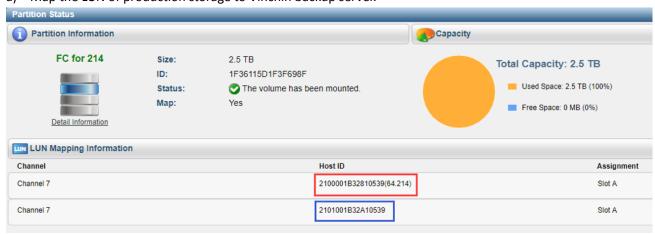
Mapping the production storage to Vinchin backup server, can let the Vinchin backup server directly read data from this storage. Highly improved the backup efficiency without affecting the production working network. Vinchin backup server currently supports **FC**, **ISCSI** and **NFS** LAN-Free settings.

Note: As different storage server has different LUN mapping methods, the following operations are for reference only.

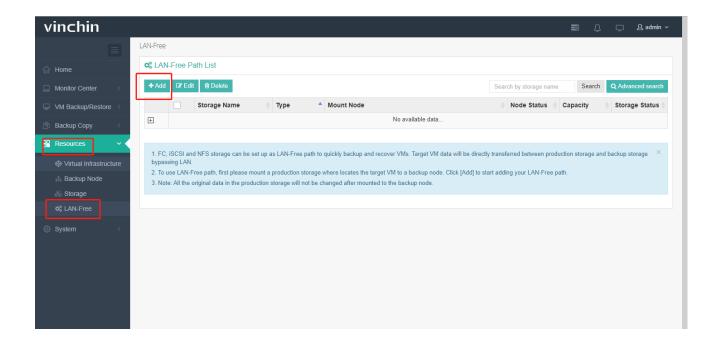
> FC Storage

Precondition: The LUN mapping of production storage is Fibre Channel mapping. LAN-Free configuration step of FC storage are as below:

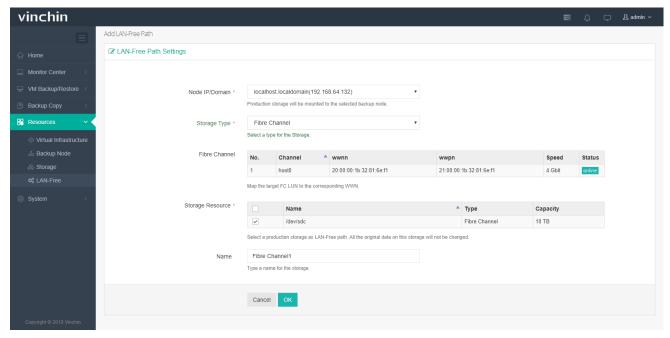
a) Map the LUN of production storage to Vinchin backup server.



b) Click "Resources"→ "LAN-Free Settings", you are coming to the LAN-Free settings page.

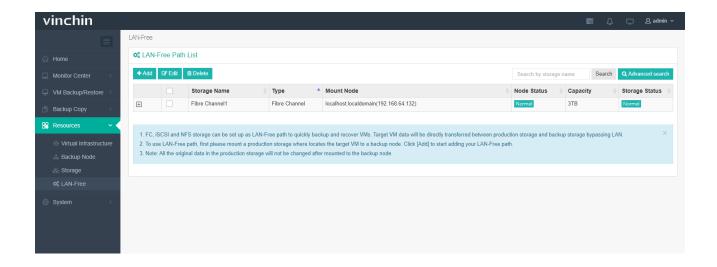


Click "Add", and choose "Fibre Channel" from Storage Type, the system will recognize the LUN which is mapped to Vinchin backup server, and display corresponding production server and its total size.



Note: The recognized production LUN type is the LUN mapped hypervisor type. If the production storage is mounted to ESXi host, the Type will be VMware vSphere. If it is mounted to XenServer host, the Type will be Citrix XenServer as above.

Choose a production storage resource and click "OK", you will find the added production storage in the LAN-Free Path List.

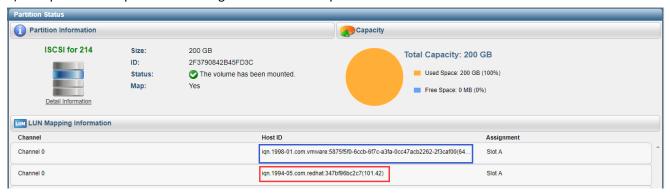


iSCSI Storage

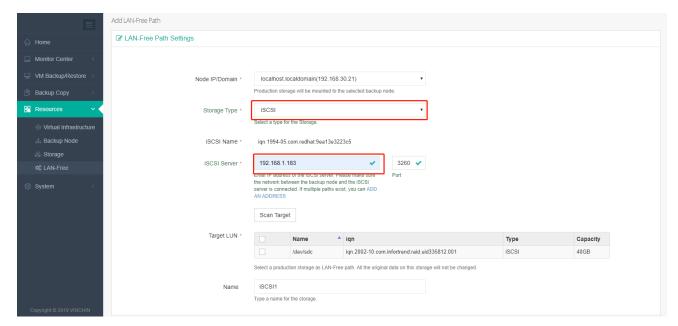
Precondition: The LUN mapping of production storage is iSCSI mapping.

LAN-Free configuration of ISCIS storage are as below:

a) Map the LUN of production storage to Vinchin backup server.

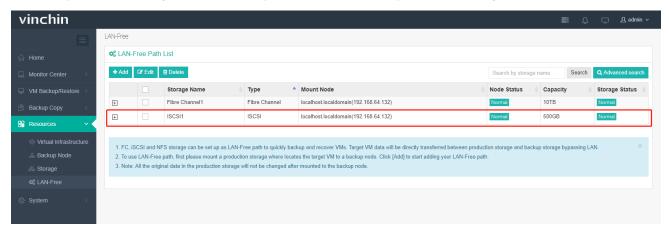


b) Click "Resources" — "LAN-Free Settings", you are coming to the LAN-Free setting page. Click "Add", and choose Storage Type as iSCSI and click "Scan Target". The system will recognize the LUN which is mapped to Vinchin backup server, and display corresponding production host and its total size.



Note: The recognized production LUN type is the LUN mapped hypervisor type. If the production storage belongs to an ESXI host, the Type will show VMware vSphere. If it belongs to XenServer host, the Type will show Citrix XenServer as above.

Choose a production storage and click "OK", you will find the added production storage in the LAN-Free Path List.

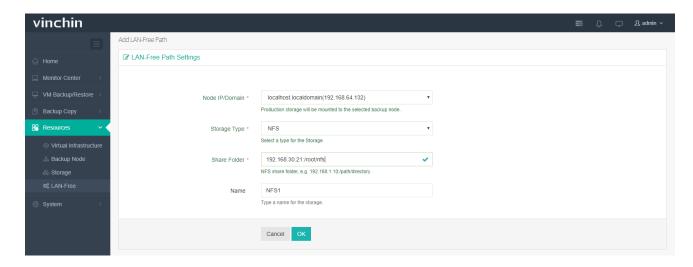


NFS Storage

Precondition: The storage type of production system is NFS.

LAN-Free configuration of NFS storage are as below:

Click "Resources" \rightarrow "LAN-Free Settings", you are coming to the LAN-Free setting page. Click "Add", and choose Storage Type as NFS, enter the storage shared folder path.

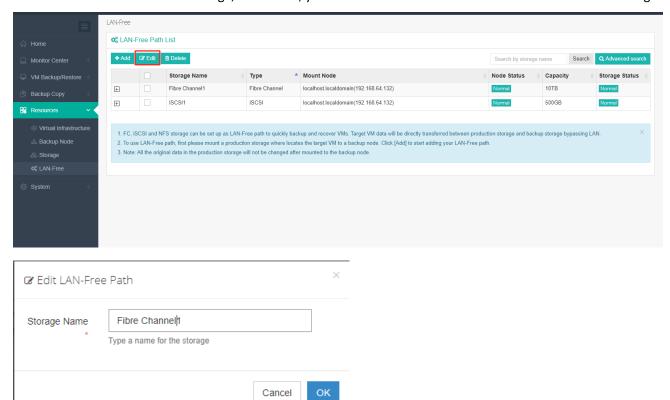


Warning: The production storage which has been mapped to the Vinchin backup server in LAN-Free Settings cannot be added as a backup storage! Adding a NFS storage as a backup storage will cause the production storage been formatted, all the data in there will be erased/ lost.

Note: If LAN-Free is only used in backup job, not in restore job, the production LUN can be mapped to the backup server with read-only permissions.

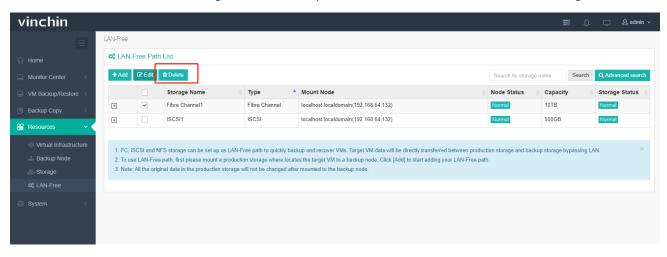
Edit LAN-Free Path

Choose a LAN-Free Production storage, click "Edit", you can edit a new name for this LAN-Free Production storage.



Delete LAN-Free Path

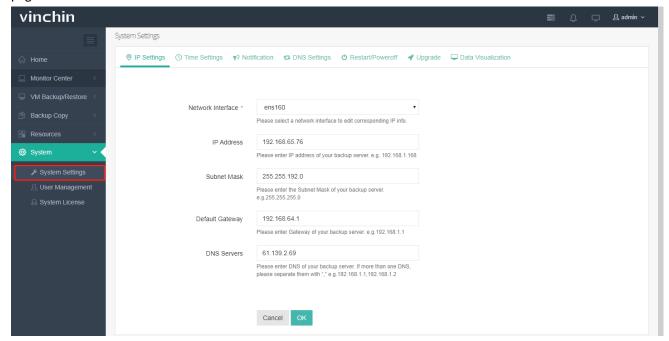
Choose a LAN-Free Production storage, click "Delete" you can delete this LAN-Free Production storage.



System

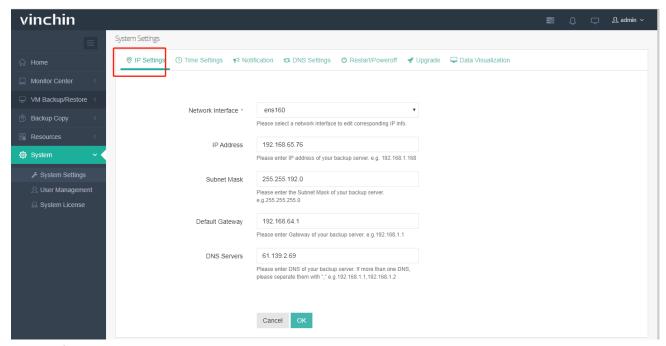
System Settings

Log in your Admin account, click "System" \rightarrow "System Settings" as below, you are coming to the system setting page.



IP Settings

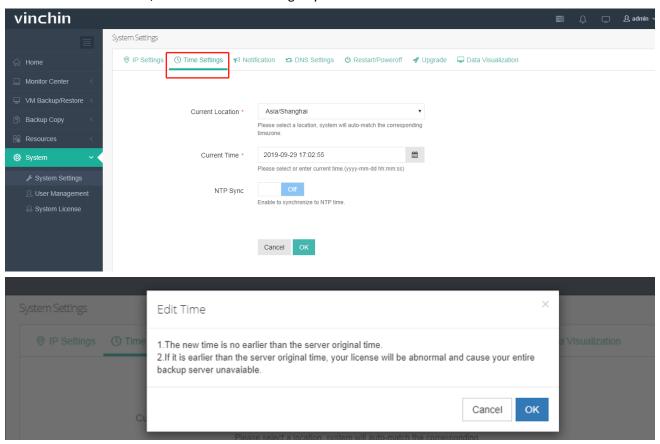
Click "IP Settings" you can set the IP information according to your actual network environment. Click "OK" to save the changes. Please make sure all the IP information are correct. Any wrong IP information will result in failure of accessing the Vinchin backup server.



Note: After changing IP address, please log out and re-access the login page by entering the new IP address.

Time Settings

You can set the time zone, time and date according to your current location as below:

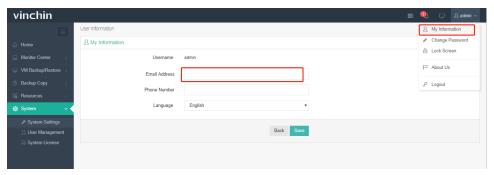


Warning: If you are using Vinchin trial version, please set the time details before uploading your license to Vinchin

backup server. Changing time details on a trial version will cause the license error. If error happens, you need to relicense the system with new license key. If you are using Vinchin perpetual version, please ignore this warning.

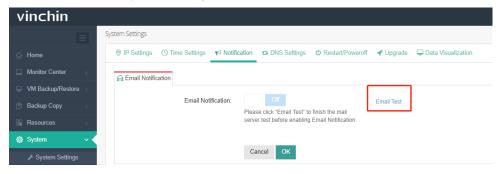
Email Notification

Email Notification helps users tracking the system operation such as job progress by email. Before enabling the email notification, you need to set the user's email address. Go to the top right "admin" \rightarrow "My Information" as below:



Fill in your email address and click "OK".

Then return to the "System Settings" \rightarrow "Notification". And click "Email Test" as below:

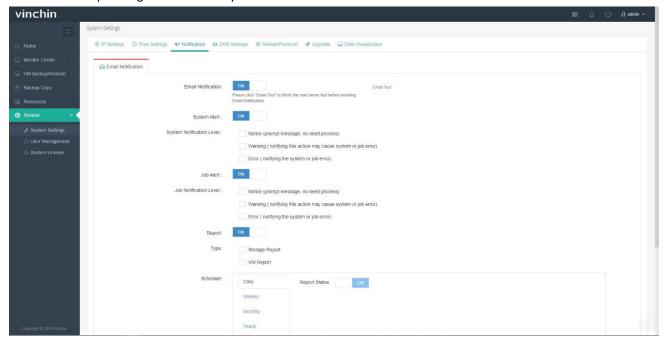


If you have your own mail server, you can change the default sender mail information to yours accordingly. We recommend you to use Vinchin sender mail server, please keep the default information and click "Send testing email", if the sending test is succeeded, click "OK" as below:



Then turn on the email notification.

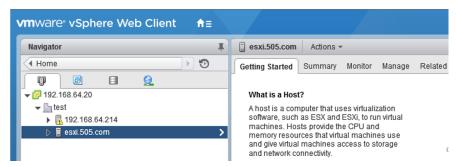
You can also choose to turn on the system/job alert and set different system notification levels as below. System will send the corresponding notification to your email address.



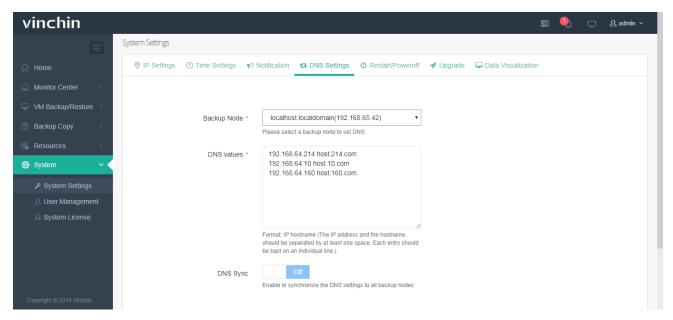
Note: Email notification is a free service. The system will automatically send notification emails to you once you turn on this function.

DNS Settings

If an ESXi host was added to the vCenter via its domain name as below, then this ESXi host's corresponding DNS need to be configured in the Vinchin backup server.



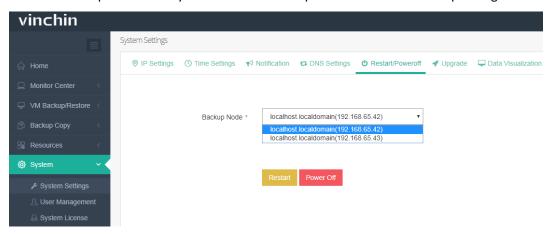
First fill in the IP address of the ESXi host and its domain name (e.g. 192.168.66.14 esxi.505.com), then click "OK" to save.



Note: If the Vinchin backup server has been deployed multiple backup nodes, please enable "DNS Sync". DNS settings is available for VMware virtual infrastructure.

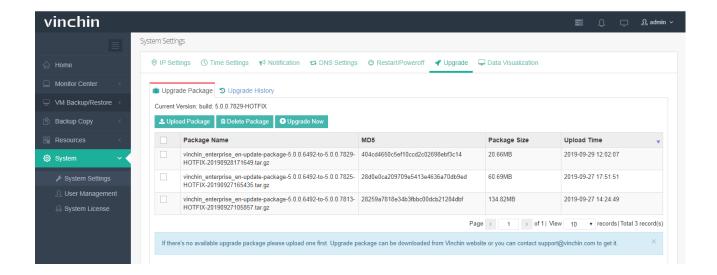
Restart & Poweroff

Choose a backup node which you want to restart or power off and click corresponding button.

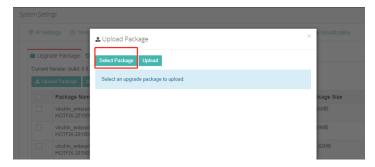


Upgrade

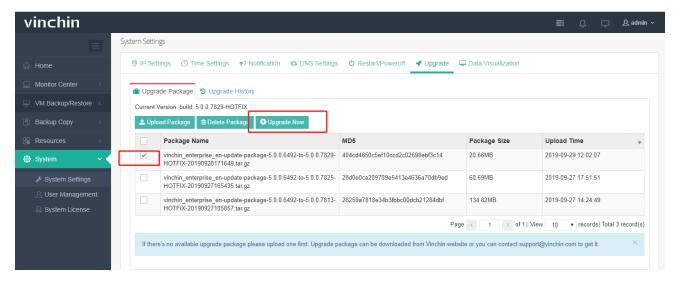
You can upgrade your software version by uploading Vinchin official upgrade package from here. Your current Vinchin version number is also showing here. Make sure there's no job running before upgrading.

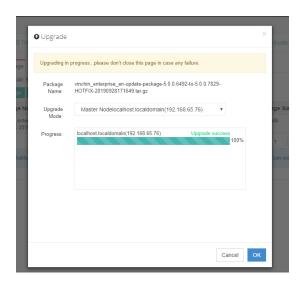


Click "Upload Package" and select upgrade package file from the upload page and click "Upload".

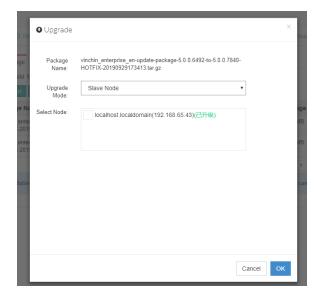


The package will be showing in the list, if the MD5 value is correct, please select this package and click "Upgrade" as below:

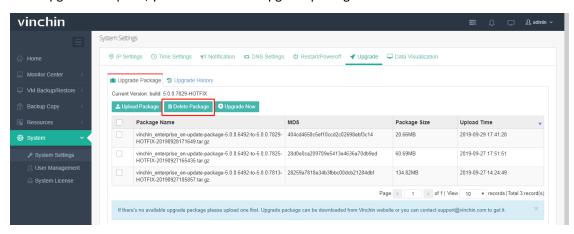




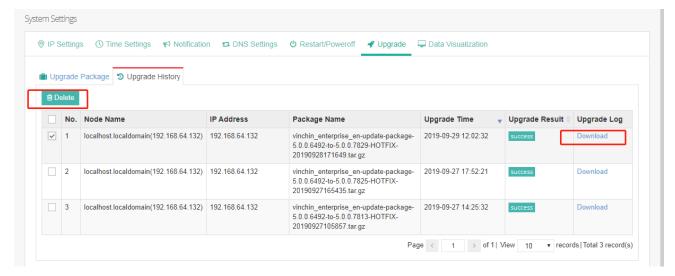
If you have deployed multiple nodes, please upgrade your backup server (master node) first, then you can upgrade backup node (slave node). System will report error that the service on backup node (slave node) stopped running or restarted, which is a normal situation.



After upgrade complete, you can delete the upgrade package.



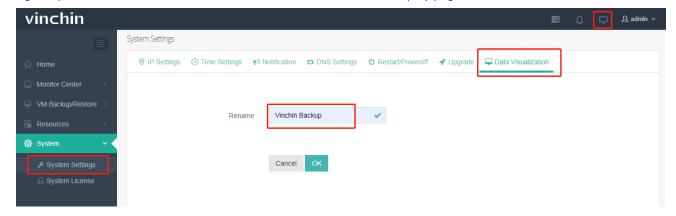
Click "Upgrade History" you can review the upgrade you've done in previous time. You can delete the failed upgrade history, but do not delete the success upgrade history. You can also download the upgrade log if necessary.



Data Visualization

Data visualization is a value-added service Vinchin provide for organizations who require to display data protection status on big screen.

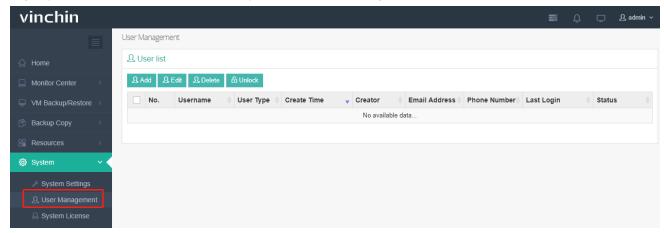
Click "System"-"System Settings"-"Data Visualization", you can set a name for your data visualization. Then click right top data visualization button "" comes to the visualization display page, click"F11" to view in full screen.





User Management

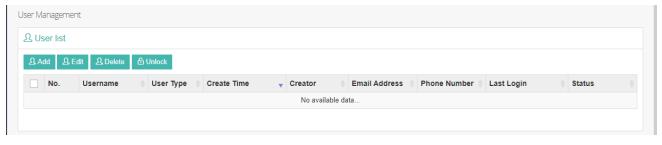
Log in your administrator account, click "System" \rightarrow "User Management" as below:

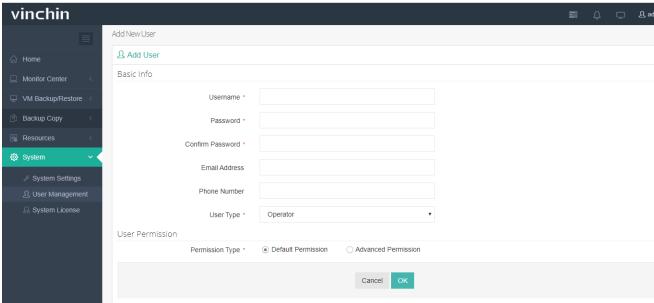


Note: Each administrator can only manage the accounts created by himself.

Add User

Click "Add" as below you are coming to the "Add New User" page.





Fill in the blanks with required username, password and confirm password. Choose a user type and permission

type for this new user, then click "OK".

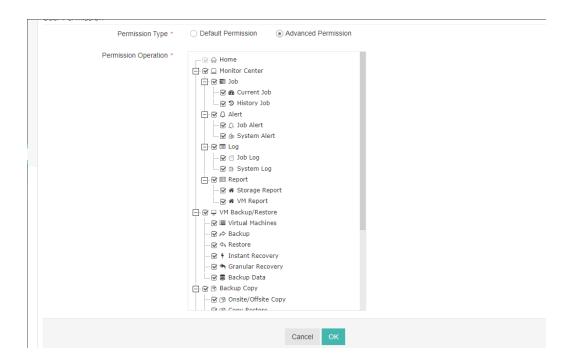
User Type includes Admin, Operator and Auditor. Default operation permissions are as below:

Operator: Create & perform Backup/Restore jobs, job monitor, logs/warnings etc.

Auditor: Check logs & warnings

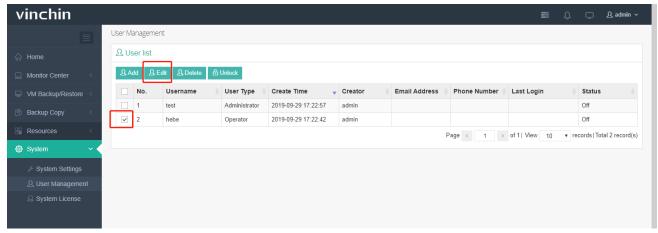
Admin: All permissions

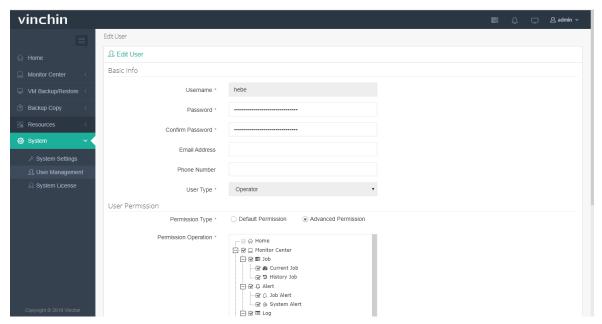
If choosing "Advanced Permission" in the "Permission Type", you can add or cancel any permission from the default options manually, but you cannot add a permission which is not in the default options, details as below:



Edit User

Tick a user from the User List, and click "Edit" as below you are coming to the user editing page.

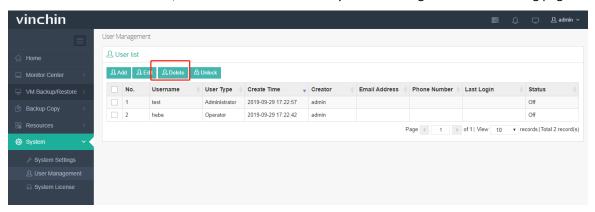




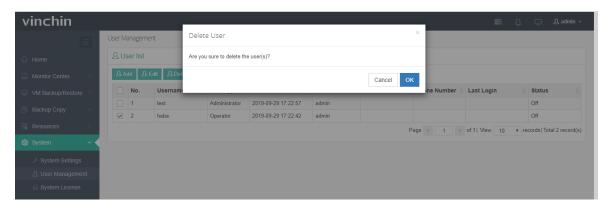
You can edit the user's information, after finish, click "OK" to save the changes.

Delete User

Tick a user from the User List, and click "Delete" as below you are coming to the user deleting page.



The system will re-confirm your operation as below, click "OK", the user will be deleted.

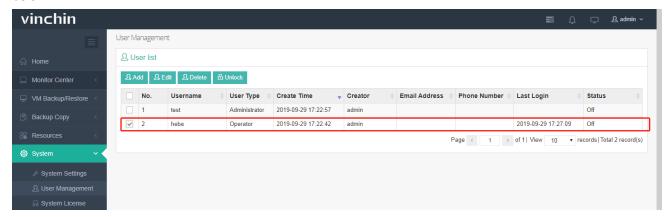


Note: Before deleting a user, you need to empty all the virtual infrastructures registered by this user. Otherwise this

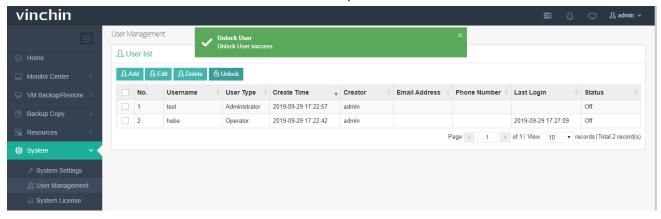
operation will be failed.

Unlock User

If enter wrong password for 5 times, the account will be locked. Only the Admin has the permission to unlock the account. Log in the Admin account, click "Resources" \rightarrow "User Management", tick the locked user account as below:

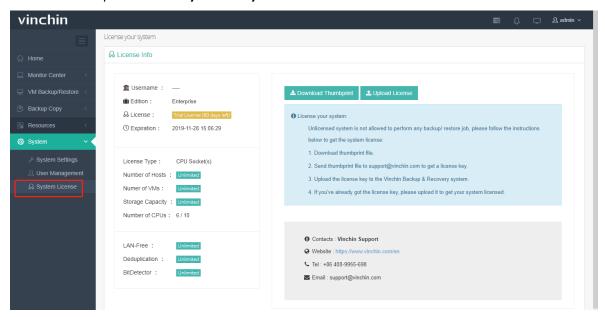


Click "Unlock" and this account will be unlocked immediately.

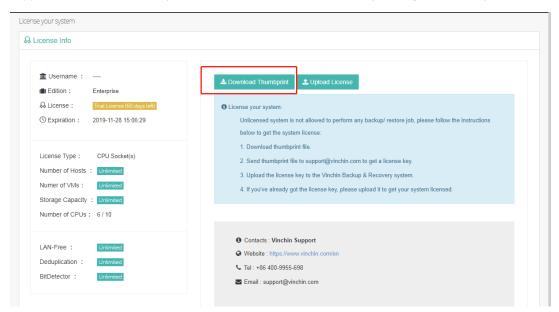


System License

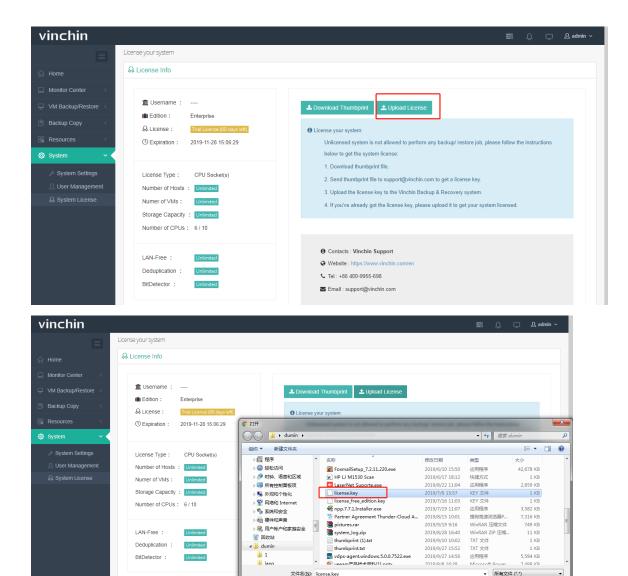
Before starting backup your VMs, you need to get a license key from Vinchin and successfully activate your license in Vinchin backup server from **System** \rightarrow **System License** as below:



Then click "Download Thumbprint", a txt file named "thumbprint.txt" will be downloaded. Send this txt file to support@Vinchin.com and you will receive an email with corresponding "license.key" file in a minute.



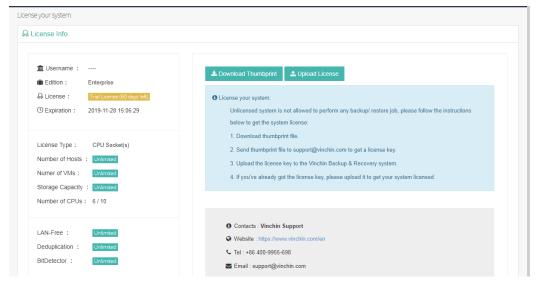
After receiving the "licence.key" file, click "Upload License", choose the "licence.key" file and click "open":

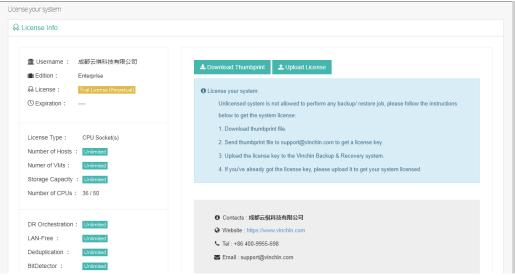


After uploaded the "license.key" file, you will see the detailed information of your username, software edition (Essential, Standard or Enterprise), expiration date, license type and license limitations etc.

If you already have a license in hand, please upload it directly.

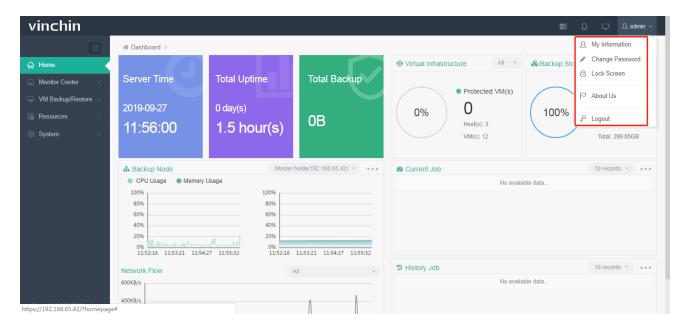
If you are using a perpetual license, there will be no expiration date. If you are using a trial license, the license will be expired and unavailable after a specified period. Please contact Vinchin Support for a perpetual license or extension license before expiration.





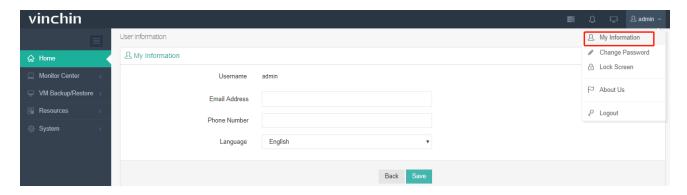
Admin





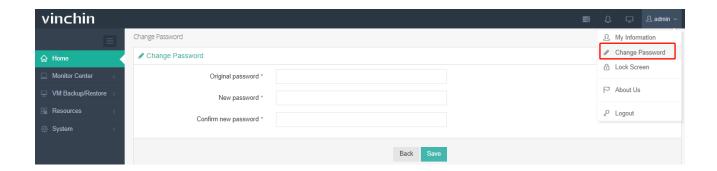
My Information

Click "My Information" you can edit email address, phone number and change language (currently support English, Chinese simple, Chinese Traditional).



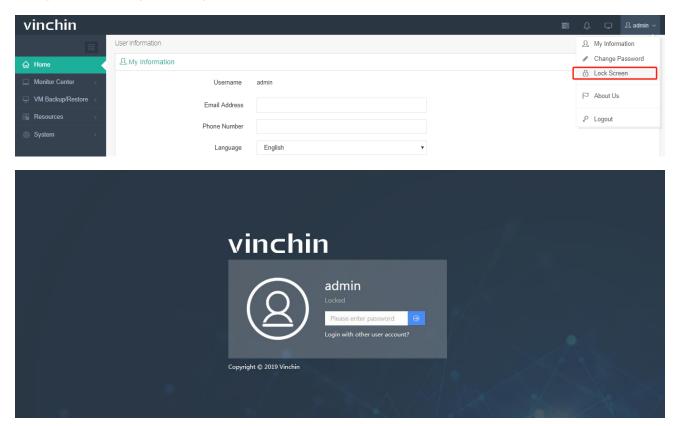
Change Password

Here you can change system login password as below:



Lock Screen

Here you can manually lock the system as below:



About Us

Here is the link to Vinchin Official Website.

https://www.vinchin.com/en/

Help

Click "Help" you can review Vinchin Backup & Recovery user manual online at any time.

Logout

Click "Logout" to manually log out Vinchin Backup& Recovery server as below:



vinchin

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