



PARAGON
VM BACKUP

Quick Start Guide

Why Paragon VM BACKUP?

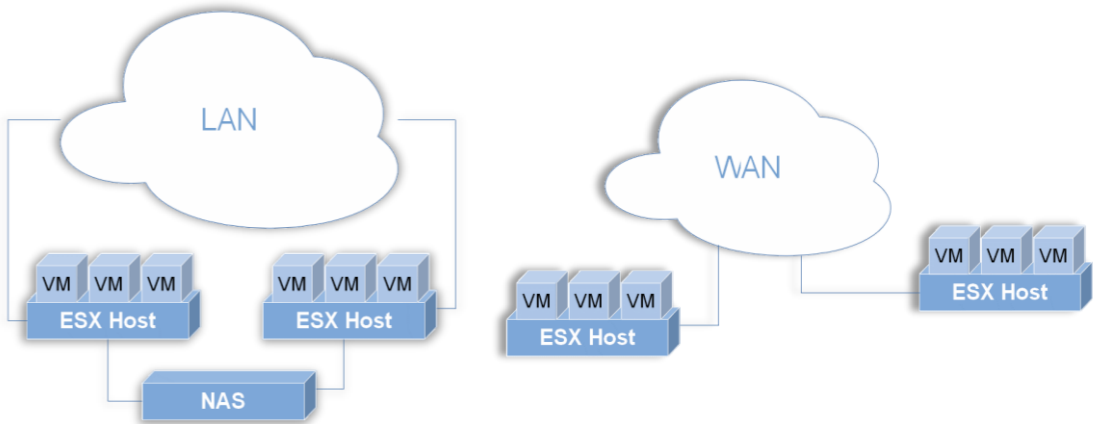
Paragon VM BACKUP is a BC/DR (business continuity and disaster recovery) solution for small businesses and organizations that use simplified VMware deployments. Such organizations can make a good start with VMware vSphere® Essentials Kit to get the industry-leading virtualization platform with low upfront investments and reduced TCO.

As is usually the case with simple environments, full-size orchestration being not a big issue, data protection needs systematic approach, especially if your business is subject to compliance regulations. While home-made scripts and point solutions can serve as a quick fix, they are not enough to build reliable IT operations and meet business requirements. On the other hand, enterprise-class solutions are often redundant and prohibitively expensive, given all the costs involved.

With Paragon VM BACKUP you can go with bare minimum VMware configurations. Technically speaking, you don't necessarily need vMotion®, vShield Endpoint™ and other VMware components to sufficiently protect your data and make it readily available when needed. Paragon VM BACKUP will help you with:

- Managed backup and retention for business and user data (RPO minutes to hours; RTO from minutes to few hours),
- Continuous protection of business-critical applications and data (near-zero RPO; RTO up to half an hour),
- Enhanced availability of mission-critical resources (near-zero RPO; RTO within a few minutes).

For this guide, we consider a virtual infrastructure with two ESX hosts running a few workloads each. Depending on whether your hosts are in the same building or connected via WAN to mitigate the risks of possible disaster, your network layout may vary. The workflow, however, remains pretty much the same.



Before You Begin

Supported VMware Platforms

You can use Paragon VM BACKUP to protect virtual machines running on the following platforms:

Hypervisor	<ul style="list-style-type: none">• VMware® vSphere® 6.5, 6.7, 7, 8• VMware ESX® or VMware ESXi™ 6.5, 6.7, 7, 8 <p>Note 1: VMware ESX free versions are not supported.</p> <p>Note 2: VMware fault-tolerant configurations are not supported.</p>
Guest Machines	<ul style="list-style-type: none">• All guest operating systems supported by VMware• All types and versions of virtual hardware <p>Note: It's recommended that you install latest OS patches and VMware Tools.</p>

System Requirements

To install Paragon VM BACKUP you need a Windows machine:

Hardware	<ul style="list-style-type: none">• CPU: x86/x64; minimum 2 cores (4 cores or more recommended)• Memory: 2GB or more• Disk space: 1GB• Network: 1Gbps or faster.
Operating System	<ul style="list-style-type: none">• Windows 10, 11• Windows Server 2008 R2 (x64), 2012 R1/R2, 2016, 2019, 2022

Microsoft .NET Framework	Microsoft .NET Framework 4.6.1. Note If you don't have Microsoft .NET Framework installed, you will be prompted to install it during setup (this takes an extra 4.5GB on your disk).
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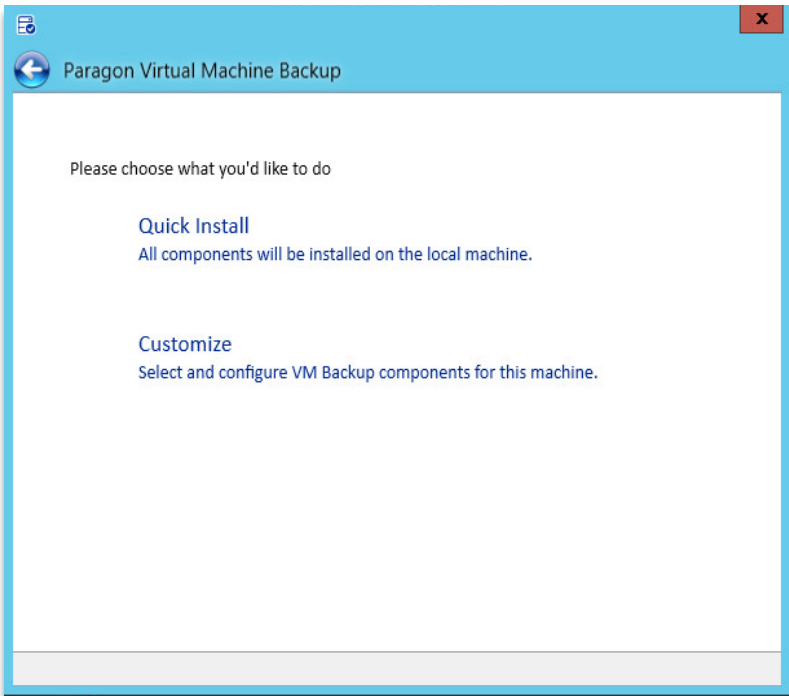
Required Privileges

Paragon VM BACKUP may need different privileges on guest machines. You can granularly configure necessary permissions, as may be required. For basic deployments, you can simply use your VMware vCenter administrative account.

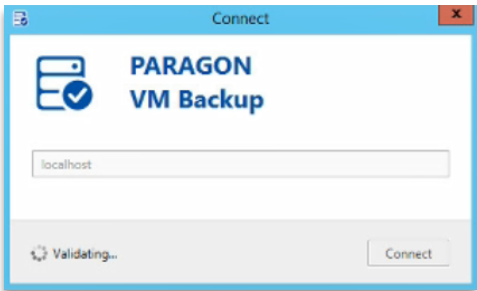
Getting Started

Installing the Product

For evaluation purposes and with most simple deployments, you can safely select Express Install to install all Paragon VM BACKUP components on a physical or virtual machine, and apply default settings (you can change them later, if needed).

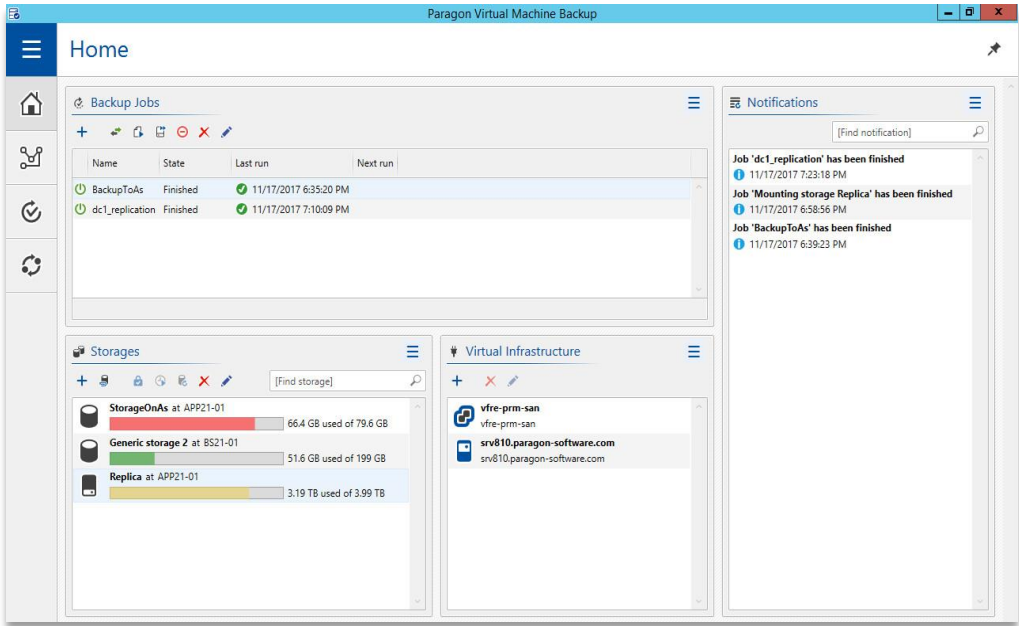


In this situation, when you start VM BACKUP Console, it connects automatically to the localhost.



Getting Around Your Workspace

Paragon VM BACKUP is built around widgets that help you quickly configure your environment. When you select an object, you can launch action wizards that will guide you through typical tasks for the selected object.



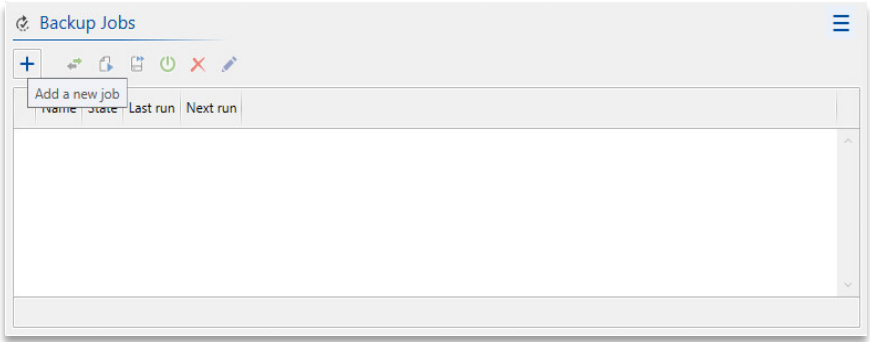
Virtual Infrastructure	Connect to virtual infrastructure servers. You can connect to a vSphere Server or an ESX hosts. Once connected, you get access to virtual machines running on the selected server.
Storages	Attach storages where you want to save you backups. You can attach a local disk, a network share, or ESX datastore where you want to keep hot replicas.
Backup Jobs	Configure jobs that back up selected VMs on schedule. You can further enforce integrity checks and retention options for your backups.
Restore Points	Explore your backups and select the point to which you want to restore the selected machine. You can choose whether you want to replace the original VM or to clone it to another location.
Notifications	Monitor ongoing progress and possible errors for the current session.
Activities	Access and examine all activities (you can filter activities by time, specific computers, selected jobs, etc.), drill down to details, and check logs.

You don’t have to configure everything beforehand. By the same token, you are not limited to pre-configured objects. Whatever you do, when an object is required, you can either select the existing one from the supplied list, or create a new object from scratch. When ready, you will be taken back to the context of the current task, and the newly created object becomes reusable in the global scope.

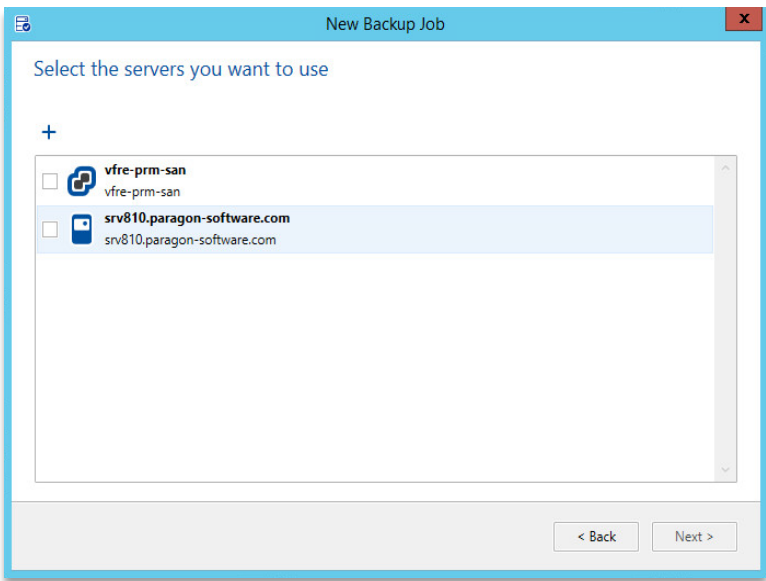
How to

Back up Virtual Machines

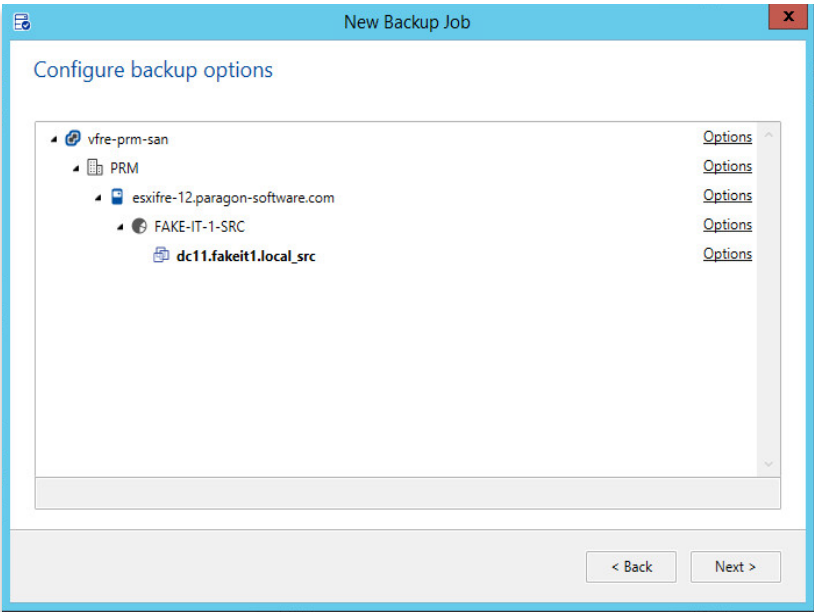
You can simply create a new backup job for this. In the Backup Jobs click Add.



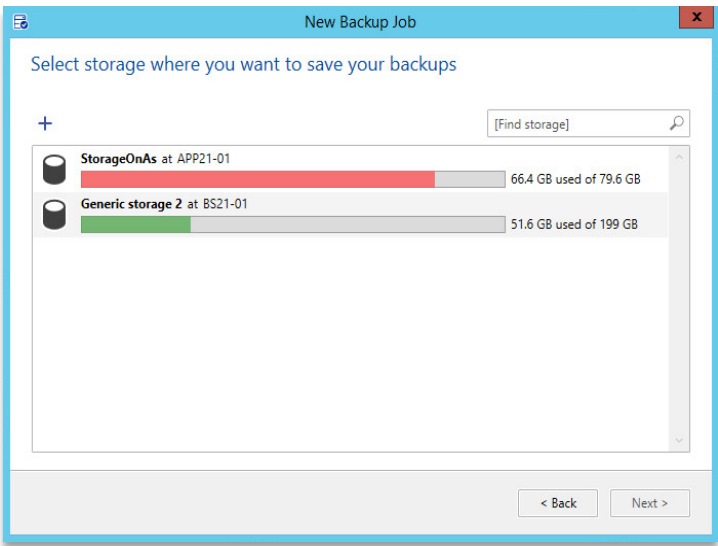
In the New Backup Job wizard supply the name and optional description for your job. Select or create a new server connection (you can select more than one connection if you want your job to work across different hosts).



All virtual machines in the selected connection will be enumerated. Select the machines you want, and configure default properties (to be propagated from the parent object) or tweak individual properties for each VM as may be needed.

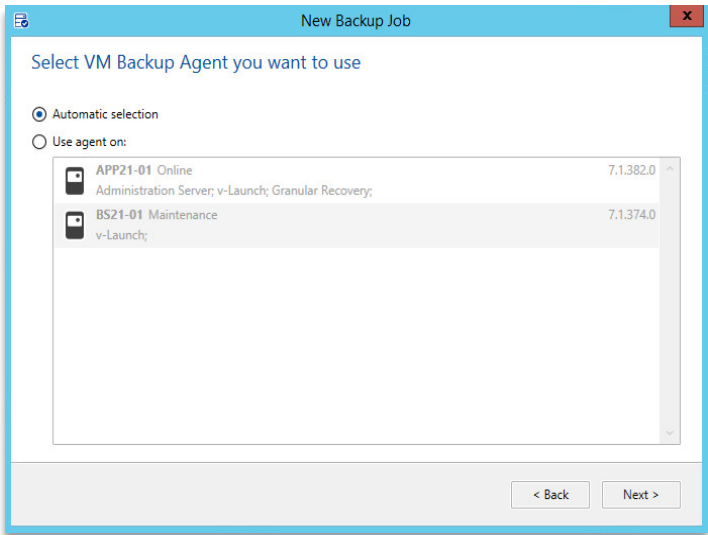


You may be prompted to supply credentials and specify where you want to save your backups. For regular backups use Local drive or Network path to keep your backups on a network share.

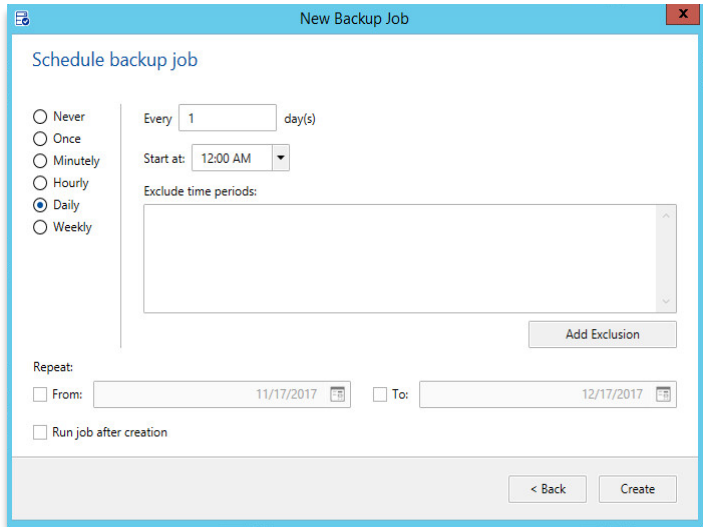


You can safely leave defaults for advanced options, such as processing method, the number of concurrent tasks, VMware transport mode, and the like. You may want to fine-tune these parameters for complicated deployments only. Accordingly, you can leave automatically selected parameters, such as VM BACKUP Agent—with simple deployment the agent runs on the same machine where you have the Paragon VM BACKUP installed.

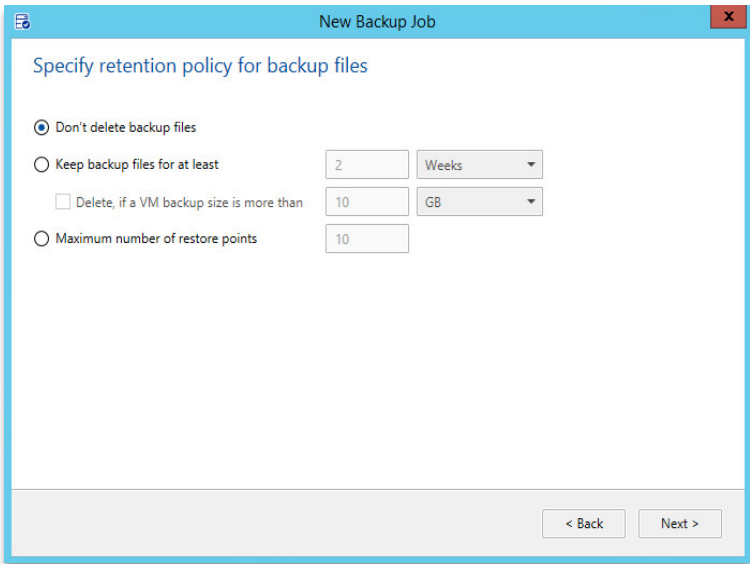
With advanced scenarios, you may want to install additional agents to balance the workload and speed up backup jobs and restore process.



Schedule your backup job. The more frequently you back up your machines, the smaller is the RPO, which is good. On the other hand, frequent backups may create additional network overheads and take too much storage space. Consider actual business needs and possible compliance requirements. Create as many backup jobs as you need to map closely your backup plan.



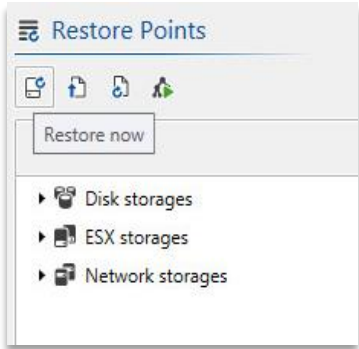
You can further specify retention policy for your backups. Your choice may depend on whether this applies to a regular machine for which you may want only a few restore points to roll back. Alternatively, your machine may contain sensitive data. You may need these data for the future forensic analysis and/or they can be subject to compliance requirements. In this case, you may want to consider moving these data to some long-term storage. As a matter of fact, Paragon VM BACKUP offers great flexibility in managing backup chains (check out product documentation for more details).



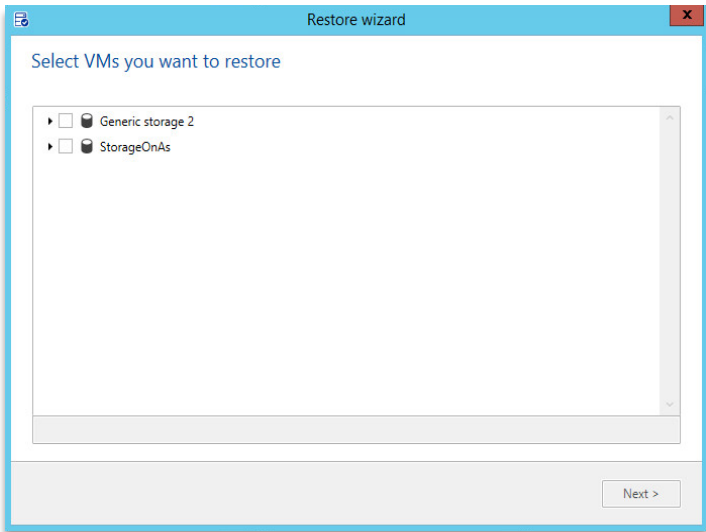
Now that your backup job is created, it will run automatically on schedule. If necessary, you can always start a backup job right away by clicking Run Now.

Restore Virtual Machines from Backup

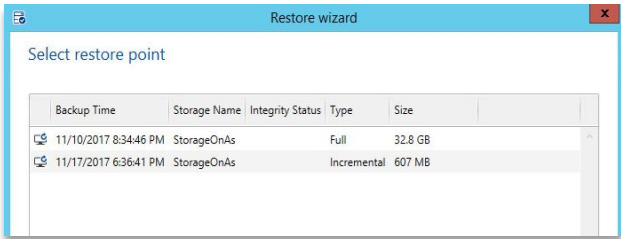
Once backups are created, you can restore your VMs. The easiest way to do this is to launch the Restore Wizard.



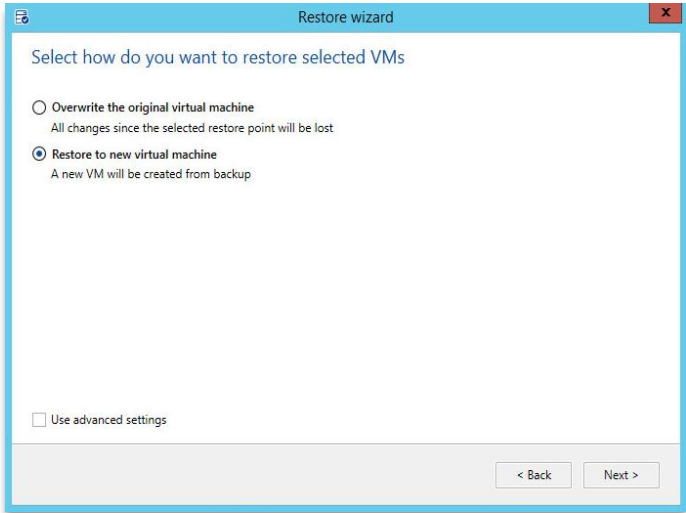
Select the storage where your backups are saved.



As there're normally many backups for each machine, you can select to which point you want to restore.



There're basically two restore scenarios. You can simply overwrite the original virtual machine, which will be replaced from the backup as of the specified restore point.

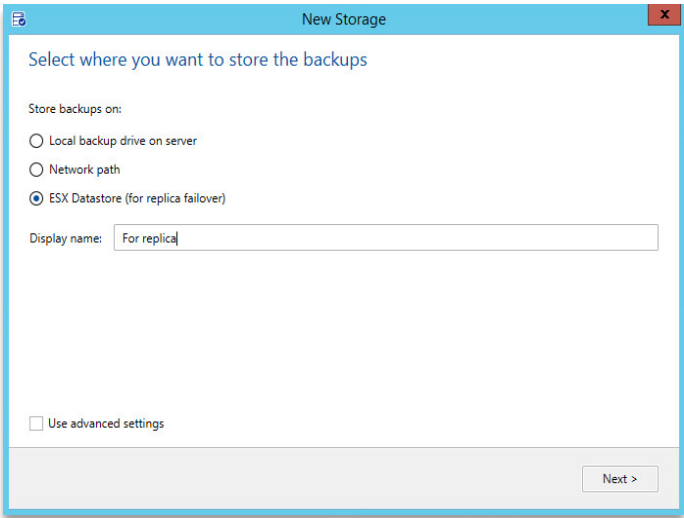


Alternatively, you can spin up a new virtual machine in a different location. This can be handy if, for whatever reasons, you experience problems with the host running the troublesome machine. In this case, select the alternative host where you want to run the clone.
As with backup job, you can skip advanced parameters and go with default options.

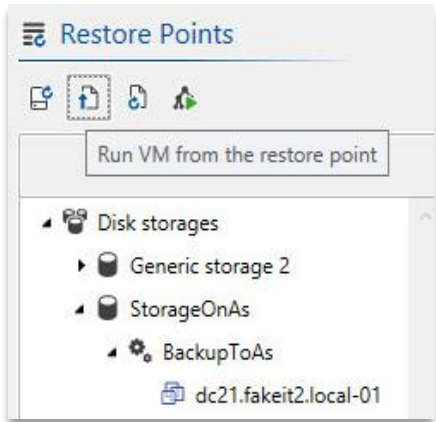
Failover from Replica

A replica is essentially the same backup. The main point is that it's kept on local ESX storage. Accordingly, it can be restored to the same host in almost no time or transferred quickly to another host. If your VMware license includes vMotion, you can do live migration of a virtual machine. If not, transferring VMs across different sites may take a little while.

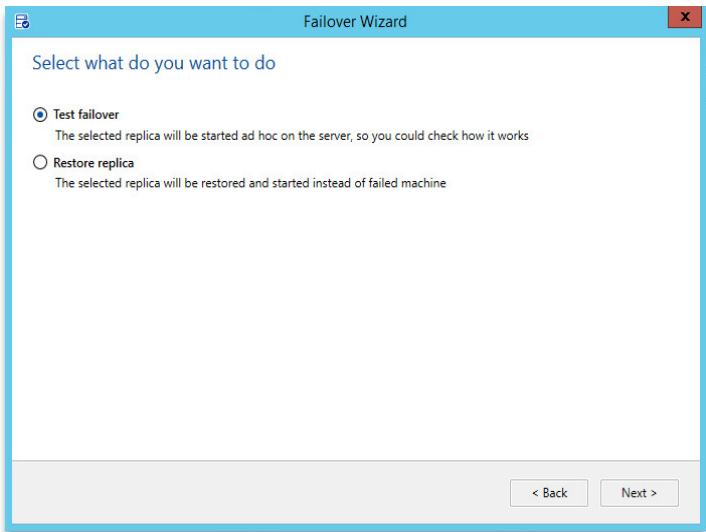
Since ESX storage is a limited and expensive resource, you want to replicate only the machines, which are running critical services and/or contain data that must be quickly brought back in case of failure. To create a replica, you start in the same way as with regular backup job, but select a ESX datastore, and that's basically it.



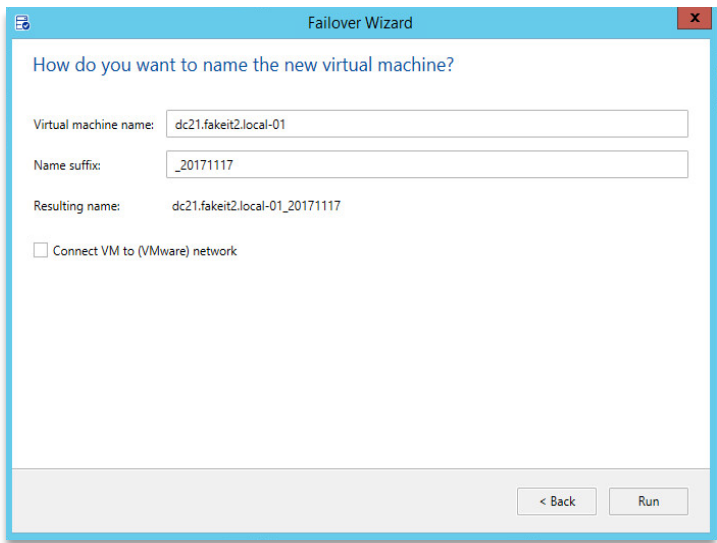
The restore from replica, you start the Failover Wizard.



You can either test how your replica works or failback the machine.



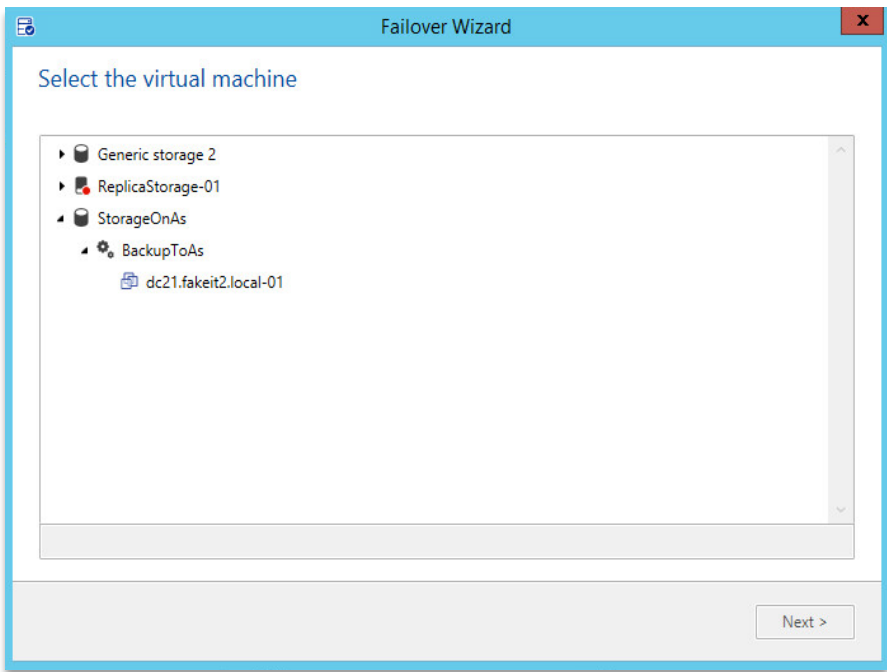
Now, you must supply the name for the restored machine (by default the current date is suffixed to the machine name). Pay special attention to the Turn on network support option; make sure there will be no network conflicts.



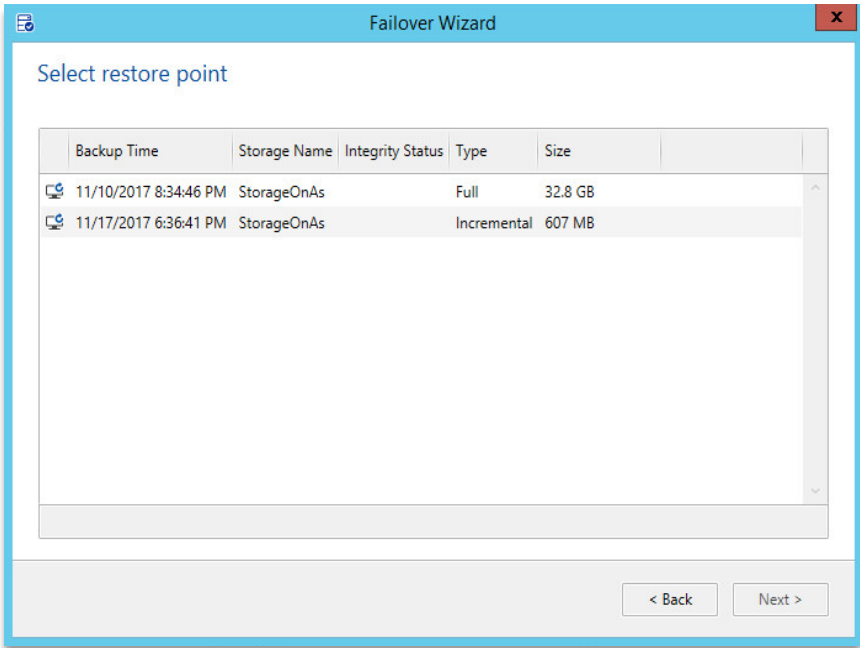
Once you click Run, your machine will be immediately up and running in no time.
For more details on working with replicas, see product documentation.

Start VM Directly from Backup

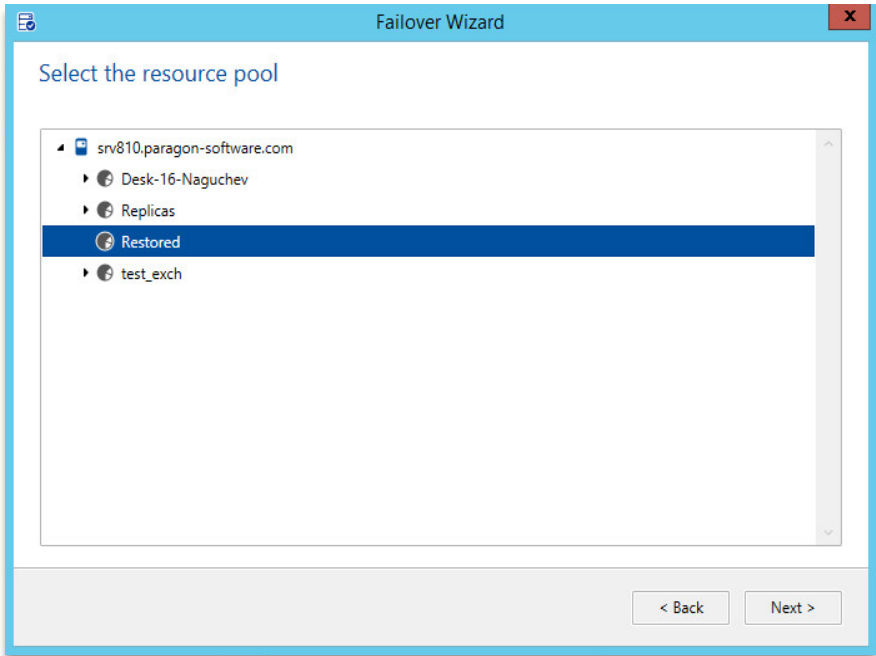
You can instantly start a VM from a backup on local disk or network share. Paragon VM BACKUP comes with v-Launch component, which lets you virtualize and spin up a virtual machine right away. You simply start the same Failover Wizard, which walks you through the necessary steps depending on what type of source store is selected.



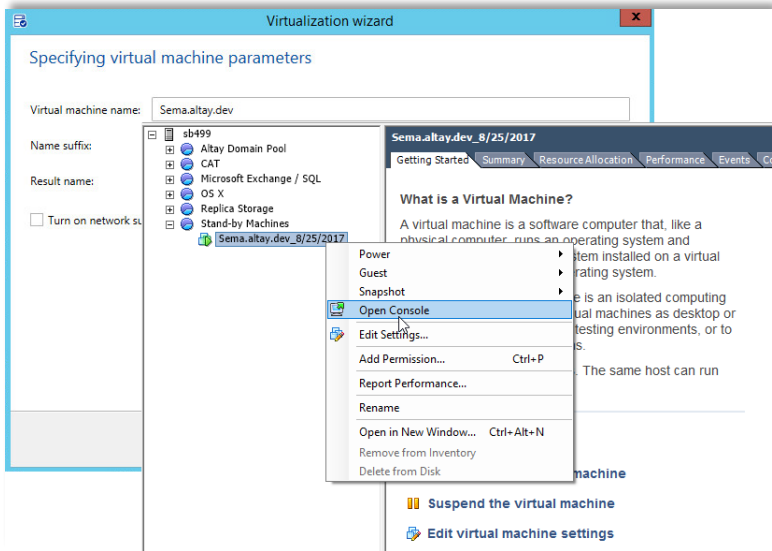
Now you can select he restore point you want.



And select the target host, which is going to run your machine.



Note, that by default, network support is disabled to avoid possible conflicts. Supply the name for the new machine, and click Run. You can go directly to the VMware Console to see your machine running on the selected target host.

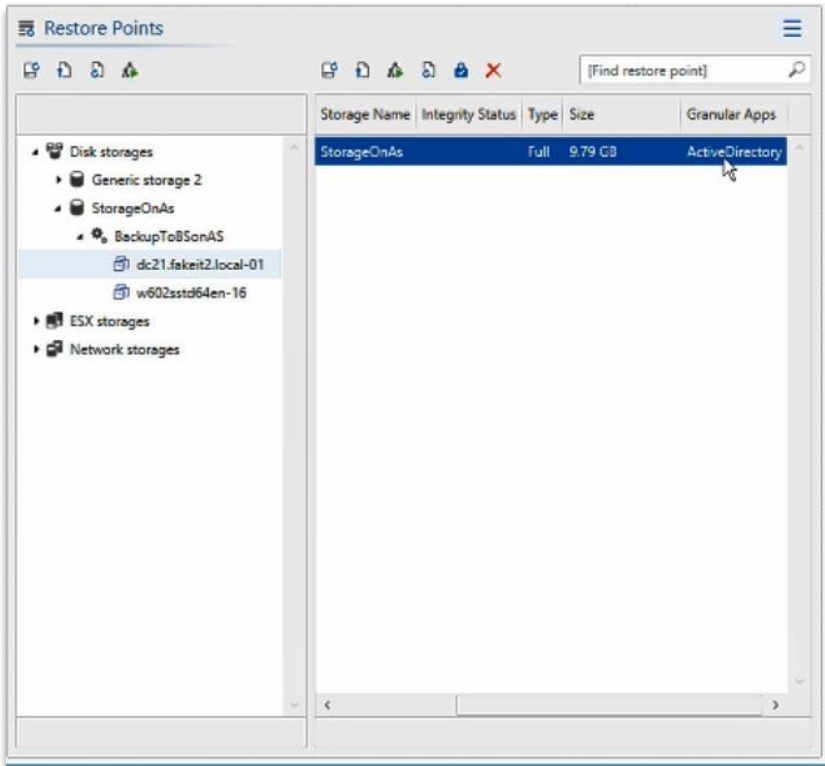


To roll back the running machine, simply click Stop v-Launch; the selected machine will be stopped and deleted from the host.

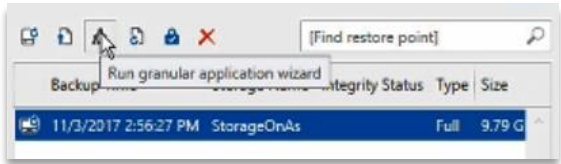
Granularly Restore Files and Objects

Paragon VM BACKUP Granular Restore component lets you granularly restore individual files and objects from local backups on your Backup Server (if backups are stored on a network drive, simply install the Backup Console there). You just need to specify credentials for the VMs for which you want to do granular restore.

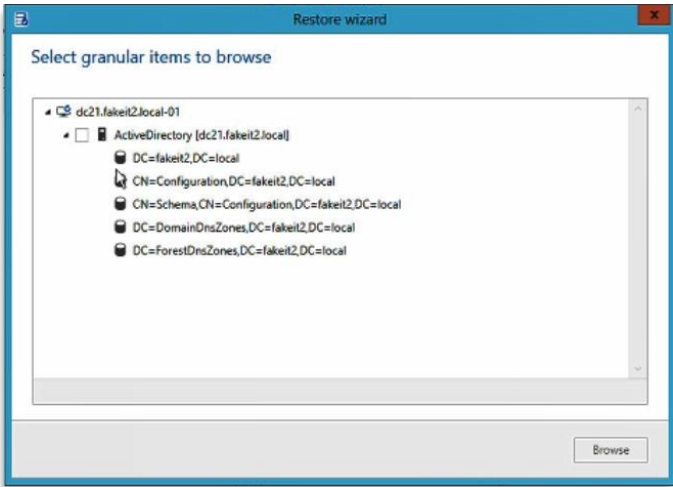
Restoring files is a trivial task. By way of illustration, let's see how it works for Microsoft Active Directory. When you select a backup of the VM running a domain controller, AD objects are detected automatically.



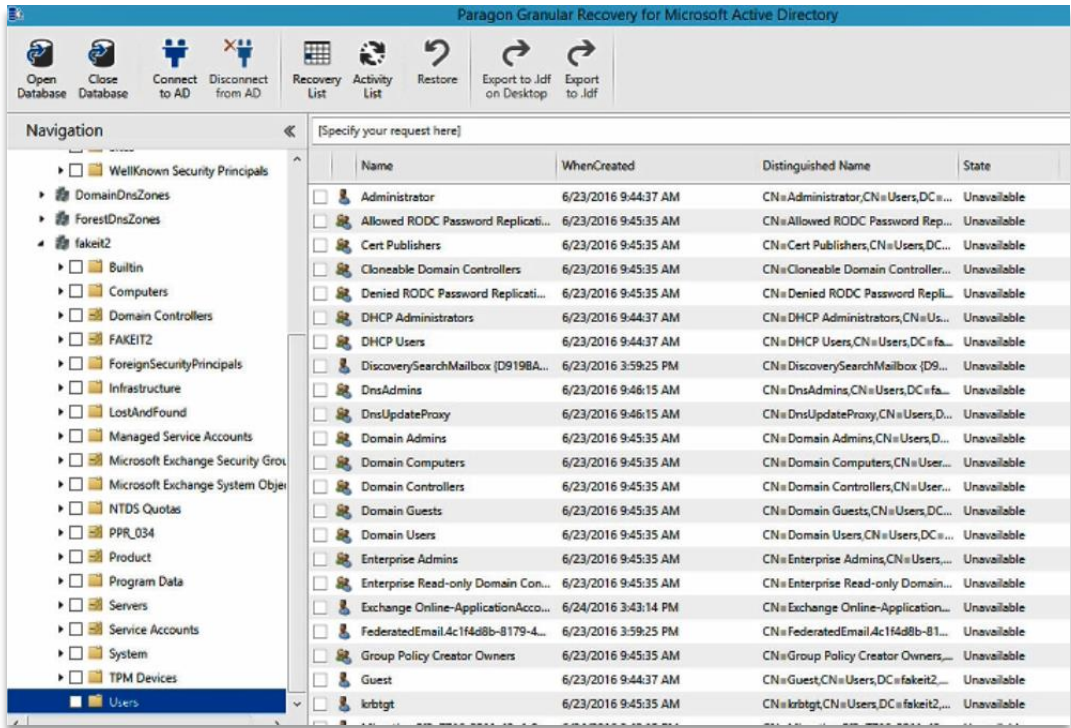
Simply select Granular Recovery.



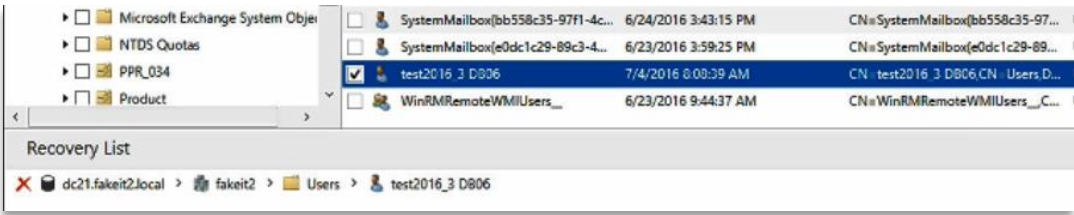
The wizard shows you the available objects.



Select the required object and click Browse. The system mounts a dedicated partition where you can explore the objects you want. Suppose, you want to restore a specific user, which has been accidentally deleted.



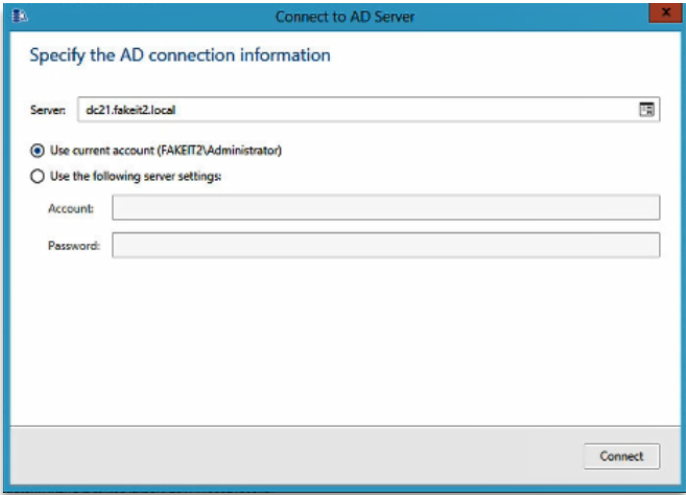
Select the user you want, and export to .ldf file, which you can add later to the system.



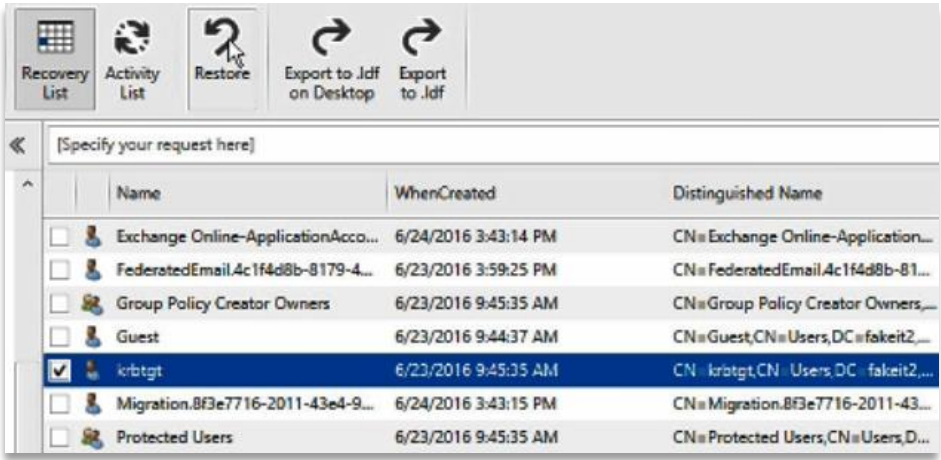
It would be much easier, however, to connect to Active Directory.



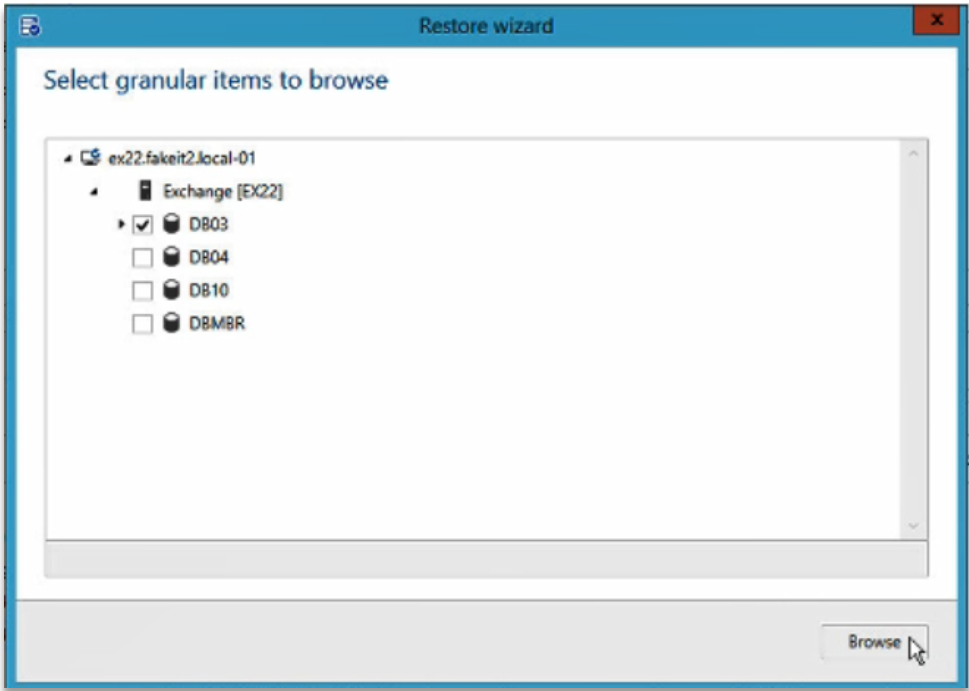
Supply the AD server and supply necessary credentials.



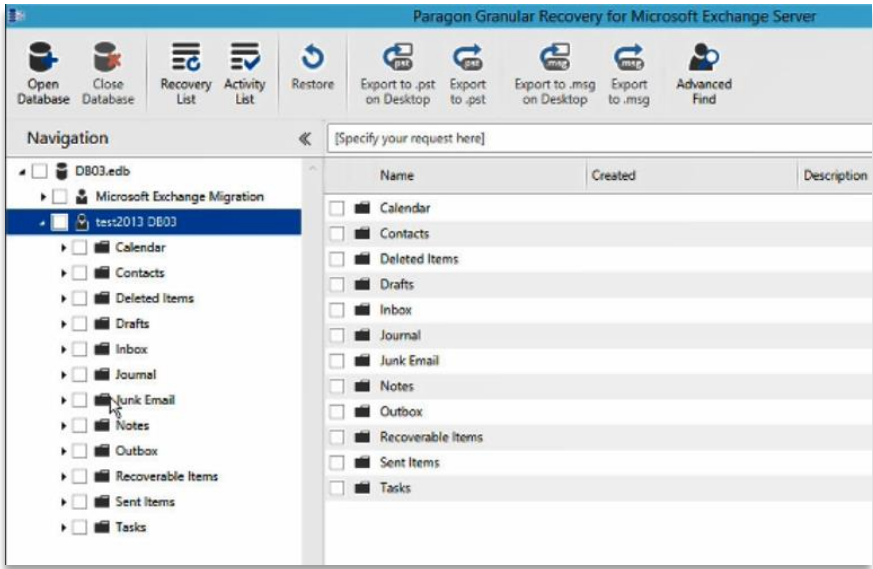
Now you can restore the selected objects directly to your Active Directory.



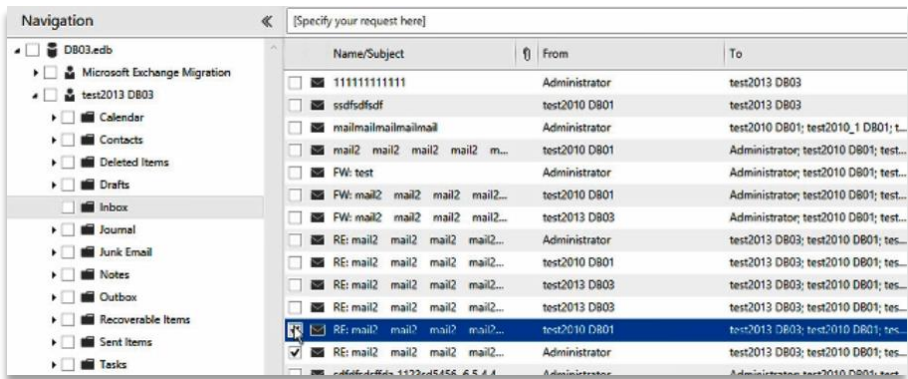
The same drill works for Microsoft Exchange. Select the database from which you want to restore.



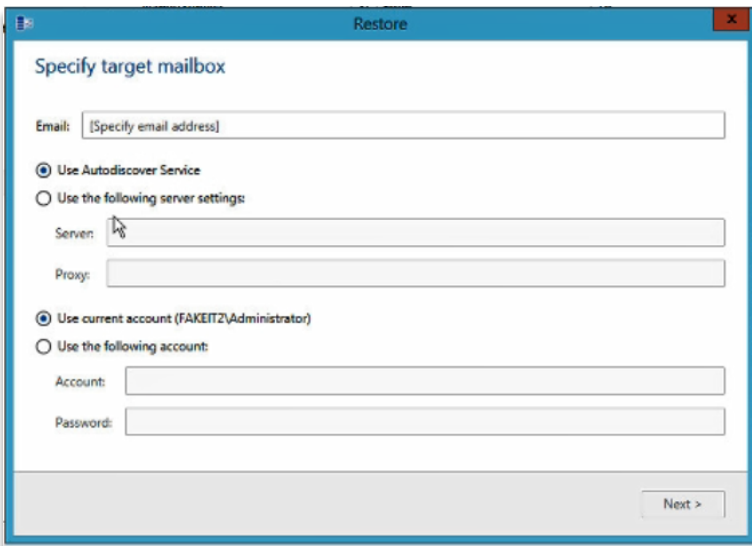
And then drill down, for example, to the mailbox you want.



You can select entire mailbox folders or individual emails.



When ready, export the selected objects to .pst or .msg files, which you can later attach or import into the Microsoft Outlook.
Alternatively, you can click Restore to restore the selected objects directly to the specified Microsoft Exchange account.



- Note that the target can be any valid Microsoft Exchange account. By this means, you can
- Recover lost or damaged mailbox items for specific users.
 - Transfer items to another account (suppose an employee quits and someone must take up their correspondence for a specific project or client).
 - Set up an *ad hoc* account and consolidate .pst files across multiple users to make forensic analysis.

IT Essentials Toolkit

Paragon VM BACKUP also comes as a part of the Paragon IT Essentials Toolkit, which further provides:

- Support for heterogenous environments
- Backup and restore for physical machines
- System deployment and migration
- Advanced storage management
- Paragon File System Link suite

To learn more, please check out <https://paragon-software.com/business/vmbackup/>

About Paragon Software Group


- Acknowledged technology experts since 1994
- Reliable products that every day help PC users, IT professionals, and businesses of all sizes
- Mature solutions trusted by OEM manufacturers, Service Providers, and IT organizations all around the world

Since 1994, Paragon Software Group has delivered a wide selection of software tools, products and solutions. These offerings range from low-level storage management and file system drivers to safekeeping and recovery of operational, business, and user data across heterogenous platforms and environments.

We provide:

- Products that are easy to use
- Solutions that can adequately address both technical and business challenges
- Time tested, reliable technology and expertise
- Responsive services and qualified support for rapid resolution
- Technical and economic efficiency

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