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Paragon Protect & Restore VM Copy Tool

User Manual

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Product Overview

Protect & Restore VM Copy Tool is a user-friendly wizard that is designed to help you accomplish two scenarios:

- Export a Windows or Linux virtual machine with its snapshot tree from a standalone ESXi host or vCenter Server to a local or network folder.
- Import a previously exported machine to a standalone ESXi host or vCenter with registering this machine in the inventory of the virtual infrastructure.

Our program leverages the native VMware NFC (Network File Copy) protocol and Paragon's unique data transfer technology. To minimize network traffic and the target storage requirements, contents of a virtual machine are double compressed during the export process: when creating data streams and then by archiving these streams into a .zip file. To avoid unauthorized access, all VM files are not exported as they are, but as a set of secured data containers with GUID names.

In this guide you will find the answers to many of the technical questions, which might arise while using our program.

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Features

- Supports any ESX or vCenter from 4.1 update 3 up to 6.5.
- Object-oriented data processing for optimal performance (skips lazy data on virtual disks, compresses data streams, archives into .zip).
- Exports a Windows or Linux virtual machine with its snapshot tree from a standalone ESXi host or vCenter Server to a local or network folder.
- Imports a previously exported machine to a standalone ESXi host or vCenter with registering this machine in the inventory.
- Saves all time stamps while exporting including the current state of a suspended virtual machine.
- Additionally copies all connected external devices during the export process, e.g. ISO-images.
- Supports virtual machines with up to 32 snapshots.
- Supports independent disks (copies the current state for a turned off machine without snapshots).
- Supports linked disks, also known as “linked clones”.
- Partially supports VMware DRS (Distributed Resource Scheduler) configurations. Click here for more information.

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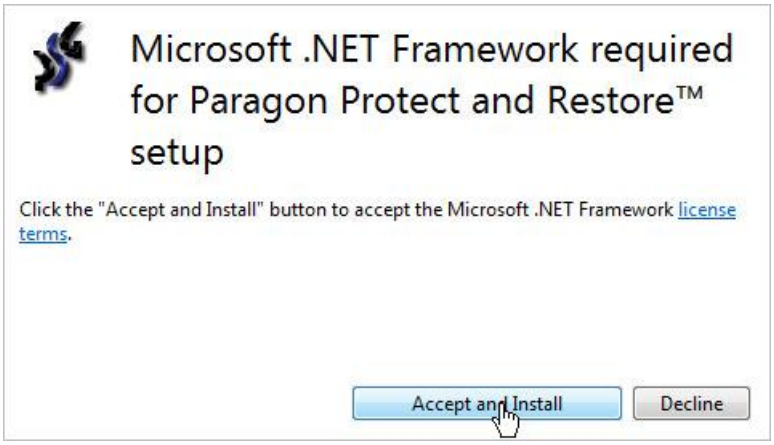
Getting Started

System Requirements

- Target Environment:
  - Hardware requirements: A 1-core CPU, 1024MB RAM, up to 30MB of free disk space.
  - Software requirements: An x64 Windows-based computer with .NET 4.6.1. Therefore, on Windows 7/8.0/8.1 specified updates have to be present, while on Windows 10 the utility works from the box.
- Supported VMware hypervisors: ESXi or vCenter 4.1 update 3 up to 6.5.

Installation

1. The product comes in one .exe file. Click on it to initiate the installation.
2. First the installation wizard checks the machine for the presence of Microsoft .Net Framework 4.6 and prompts to install it if required.



3. In order to proceed, please read and accept all conditions of Paragon's license agreement by selecting the appropriate option.

4. The installation process takes a couple of minutes. The wizard will also analyze the computer for required prerequisites and additionally install them if necessary.

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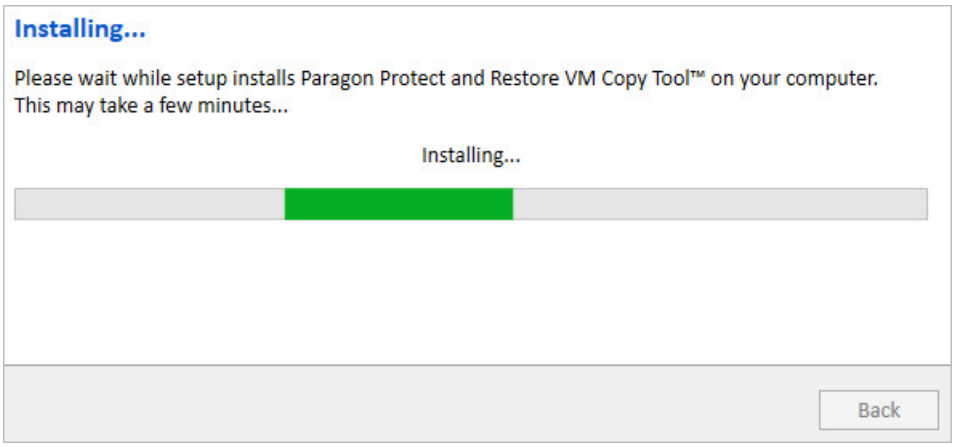

First Start

After the installation you can see a program icon on the Windows desktop. Double click it to launch the utility.

For more information, please consult:

- Exporting a Virtual Machine from VMware Infrastructure
- Importing a Virtual Machine to VMware Infrastructure

Exporting a Virtual Machine from VMware Infrastructure

1. Launch the utility, then select **Export a virtual machine**.

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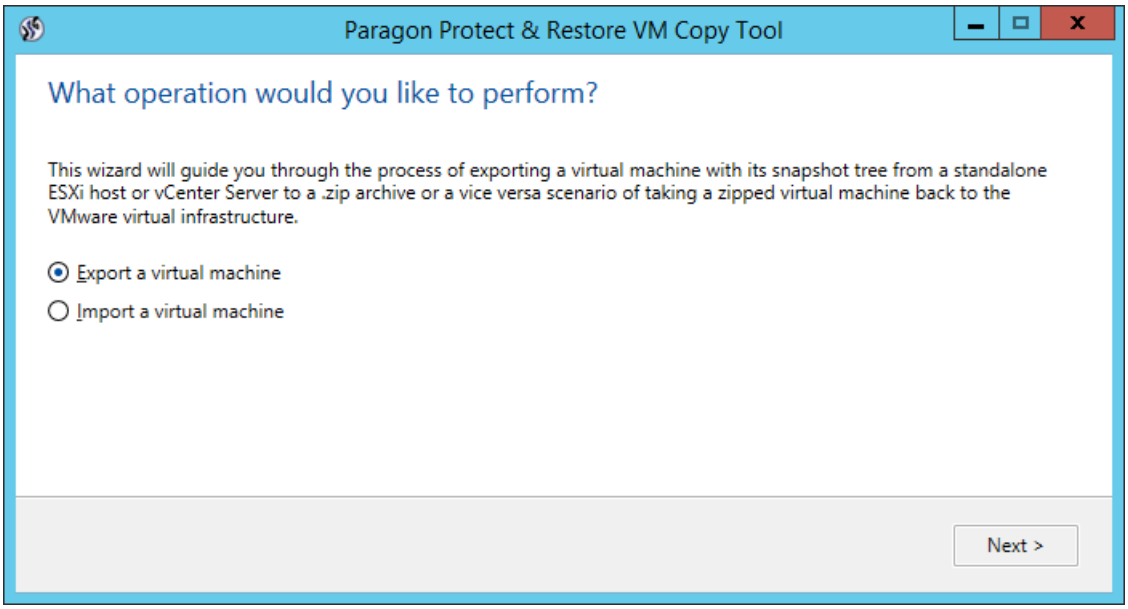
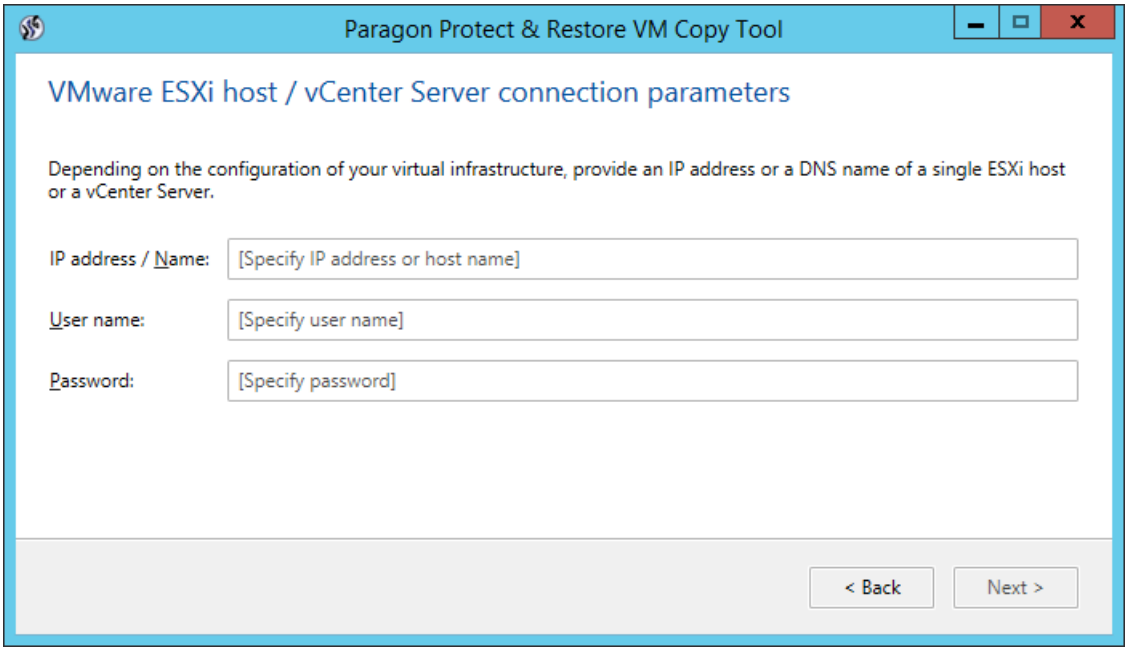


2. Specify an IP address or DNS name of a single ESXi host or vCenter Server that hosts a virtual machine you're going to export and also access credentials.



3. The specified virtual infrastructure will be browsed for guest environments. Please note that you're allowed to export a powered off or suspended Linux or Windows VM only. Right click the mouse button, then select **Refresh** to update the information, if necessary.

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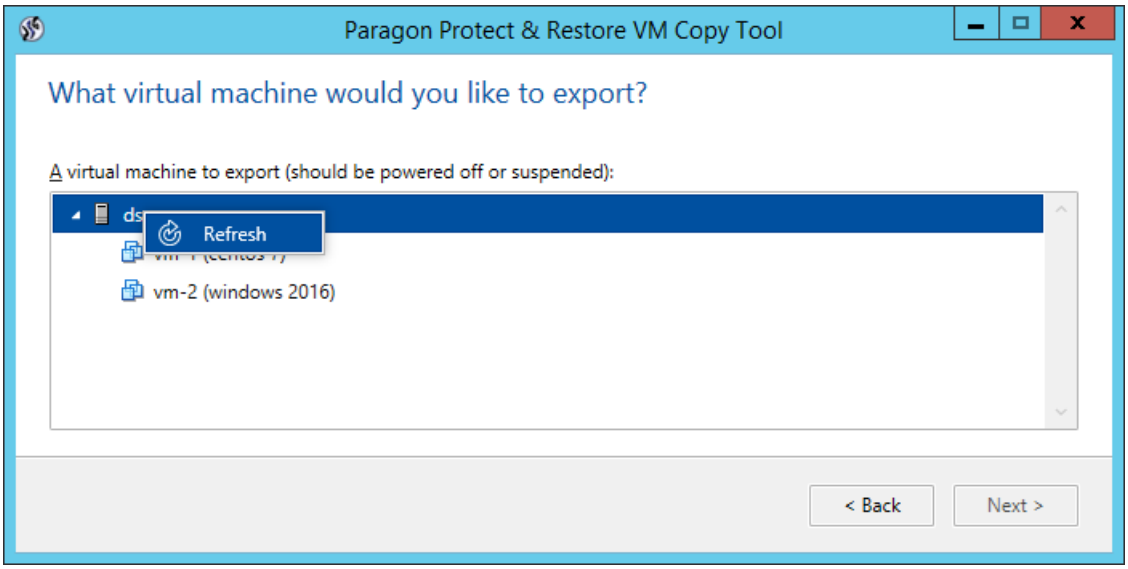
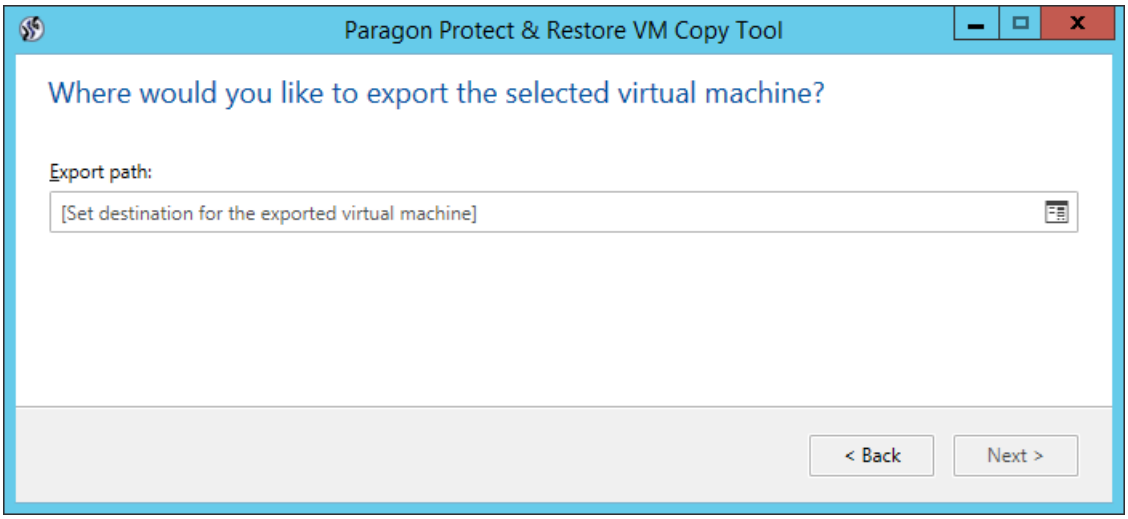


4. Either manually enter a full path to a local or network folder, where the resulted VM archive should be placed to, or use the browse button to find it.



5. You can see in real-time a detailed report on all actions carried out by the utility. After completing the operation you can save all performed actions into a text file by clicking **Save log**. That's all.

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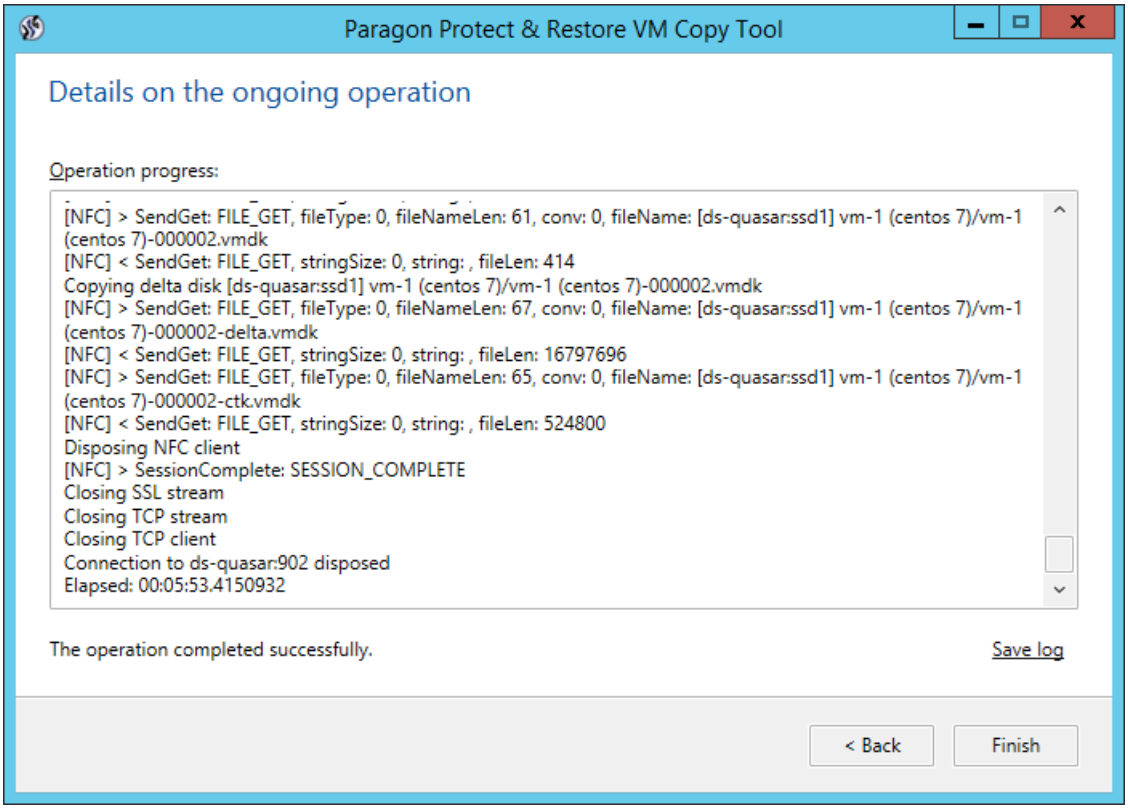
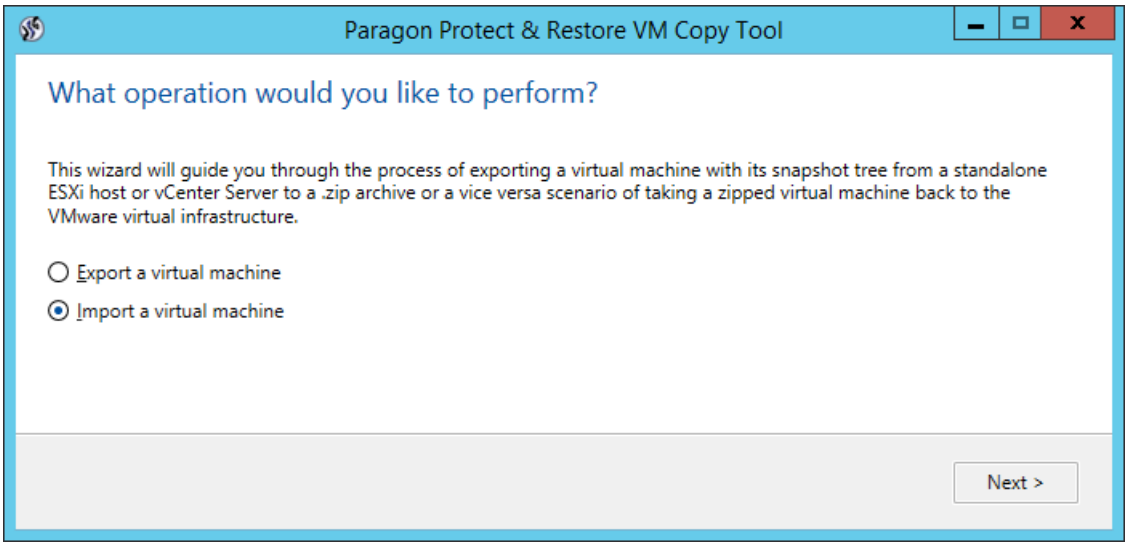


Importing a Virtual Machine to VMware Infrastructure

1. Launch the utility, then select **Import a virtual machine**.



2. Either manually enter a full path to a local or network folder, where a previously exported VM archive is located, or use the browse button to find it.

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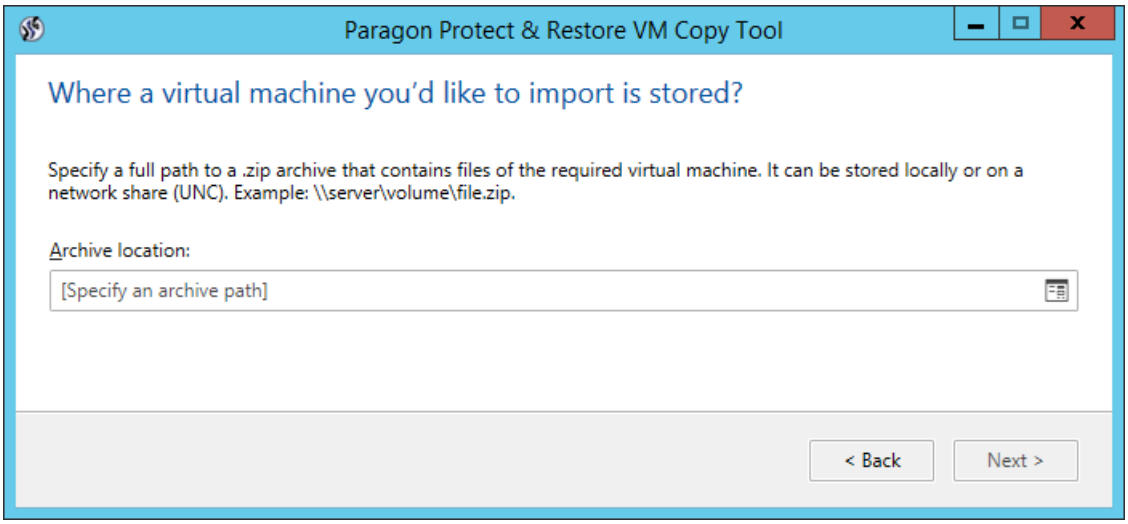
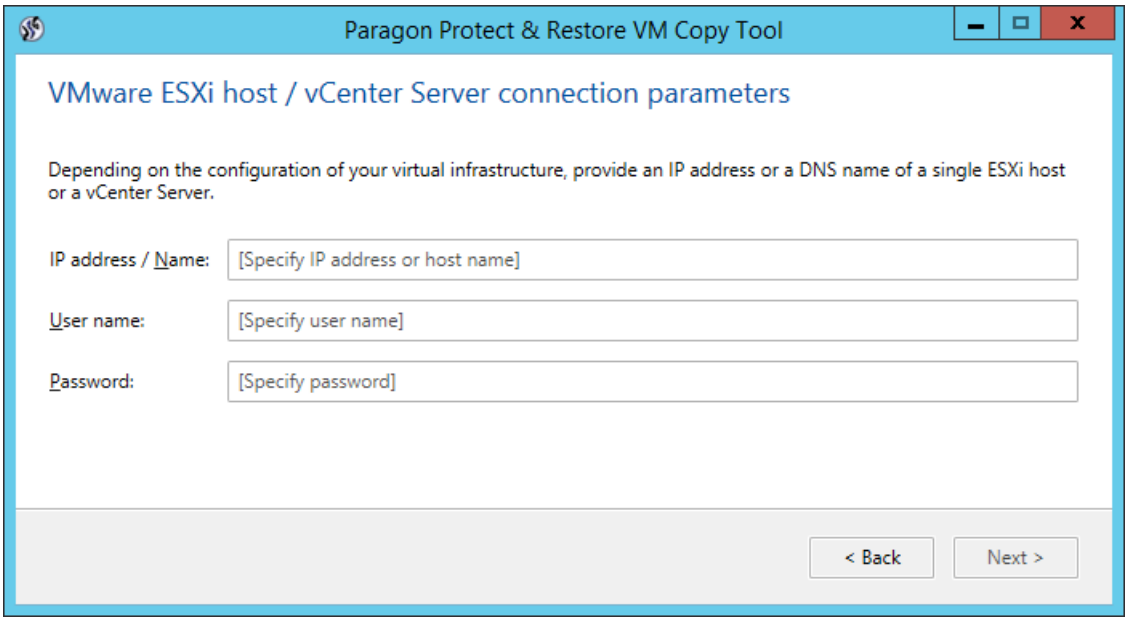


3. Specify an IP address or DNS name of a single ESXi host or vCenter Server to import the virtual machine to and also access credentials. Please note that if choose a standalone host as target of the import operation, there will be less steps to go through than described below.



4. Give a catchy name to the virtual machine to easily differentiate it from the others and also the preferred inventory location (required for a vCenter Server only).

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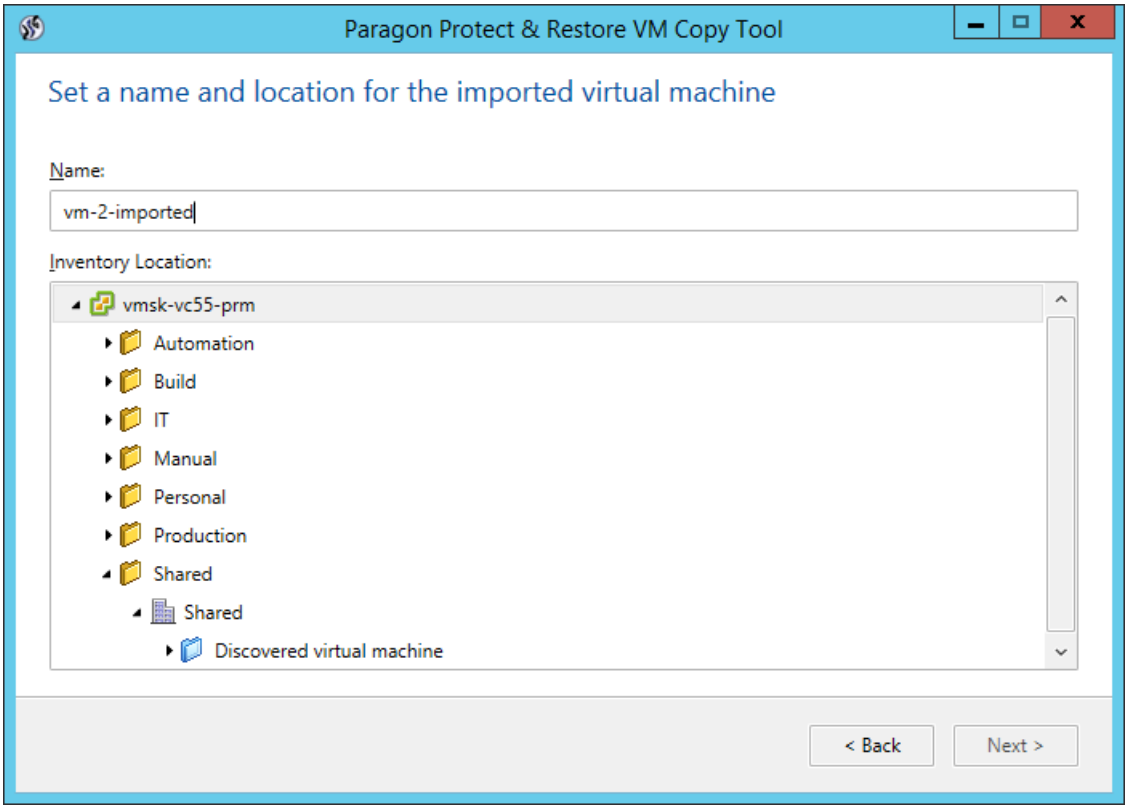
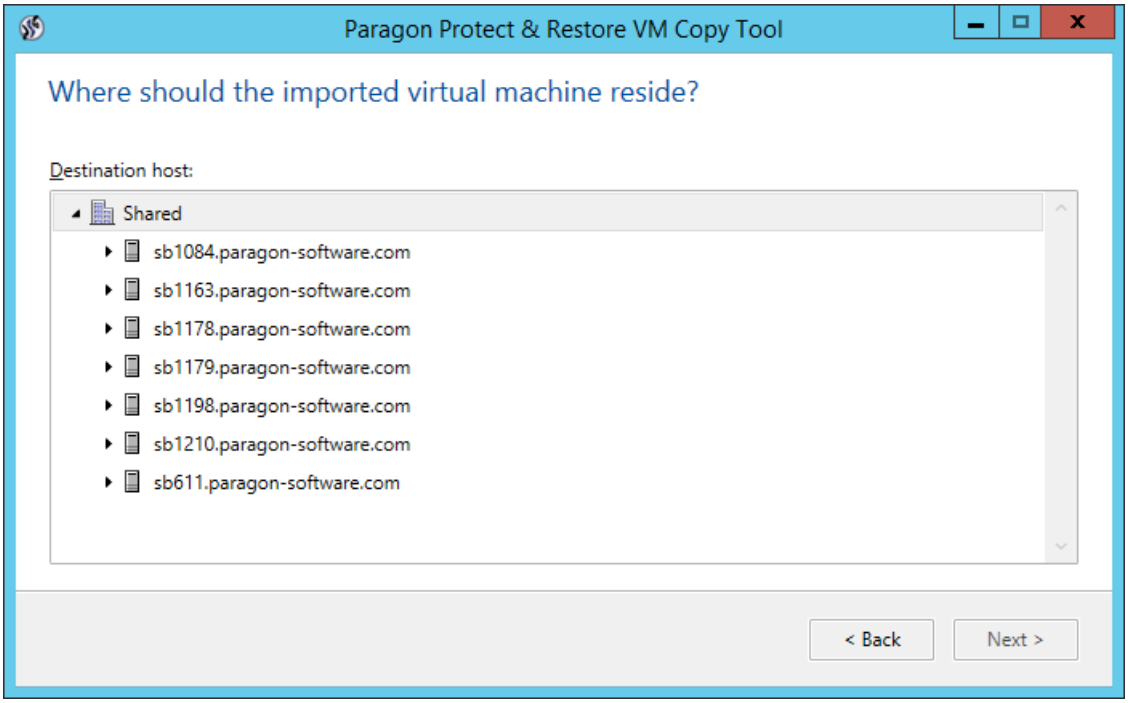


5. Select a destination host (required for a vCenter Server only).



6. Choose a destination resource pool.

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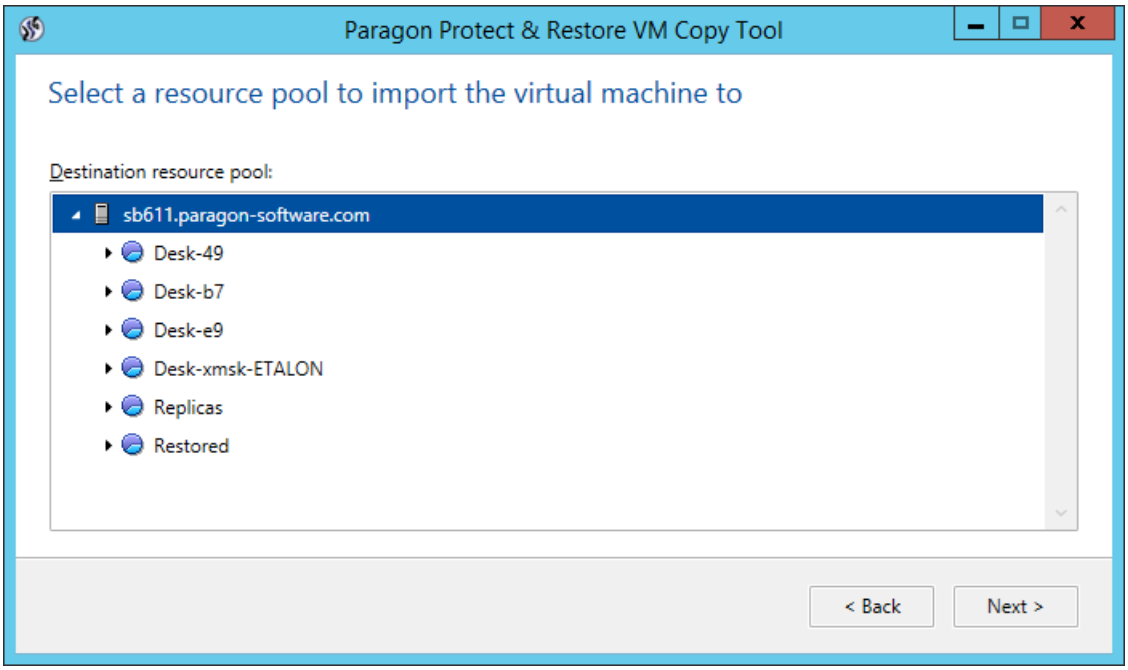
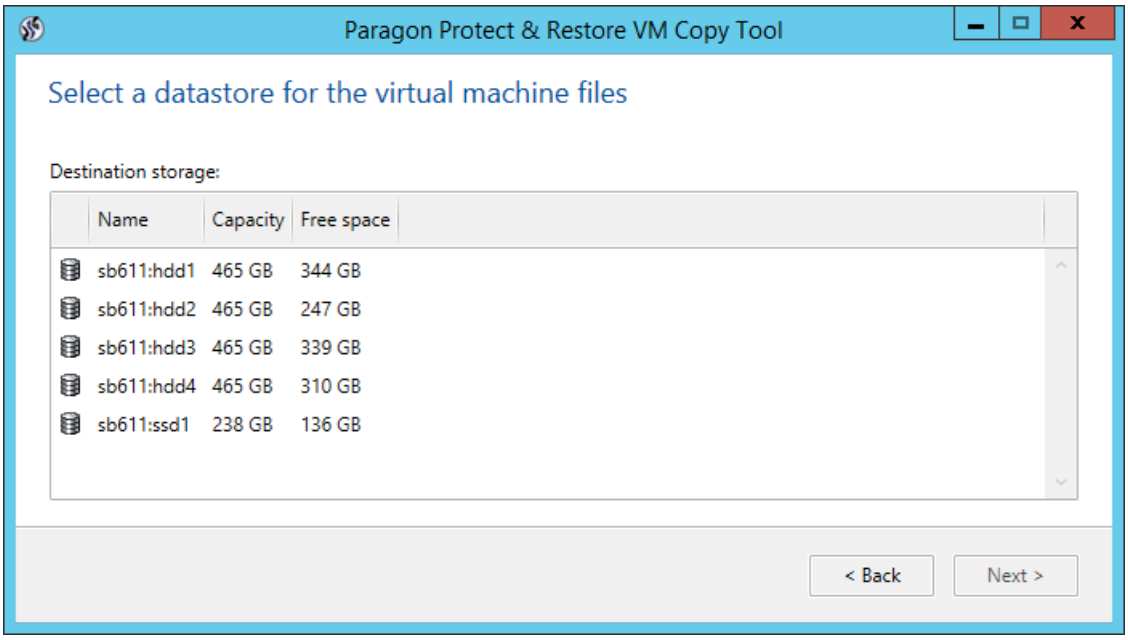


7. Specify a destination datastore.



8. You can see in real-time a detailed report on all actions carried out by the utility. After completing the operation you can save all performed actions into a text file by clicking **Save log**. That's all.

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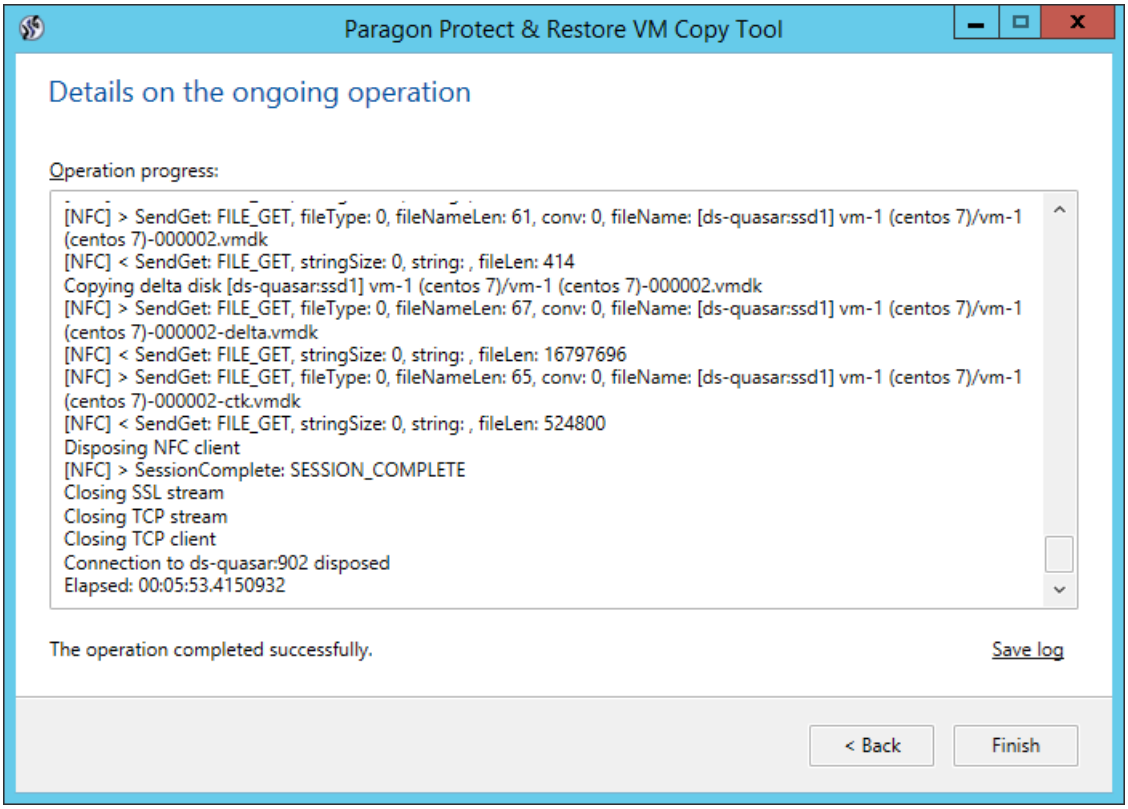

Known Issues

1. Our utility cannot import a virtual machine to vSphere 4.1. The VM export from this hypervisor works ok.
2. The current version of our utility doesn't support VMware vSAN. This will be fixed in future releases.
3. If you provide an IP address of a single ESXi host, which is a member of a vCenter Server, when importing a virtual machine, please be ready to certain issues, e.g. the imported VM won't be placed to the specified resource pool, but outside any pools. It's a known issue of VMware.
4. The only way to import a previously exported virtual machine to VMware DRS (Distributed Resource Scheduler) right now is first to import it directly to one of the DRS datastores and then use embedded VMware tools to add this machine to DRS. The VM export from DRS works ok.
5. When importing a virtual machine with snapshots that contain quotation marks in their names to a ESX 6.xx host, all quotation marks are replaced by "%22". Unfortunately, VMware doesn't allow quotation marks in snapshot names since ESX 6.0.
6. When importing a Windows 7 or Server 2008 virtual machine with a static IP configuration, it changes to dynamic. This problem occurs only with VMXNET3 adapters. It's a known issue described in the following VMware KB article:
   - https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=1020078.
7. When importing a virtual machine with snapshots that have different BIOS configurations, the latest BIOS configuration is applied to all snapshots of the target VM. It's a known issue and will be fixed in future releases.

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