



Macrium Site Manager

Macrium Site Manager User Guide

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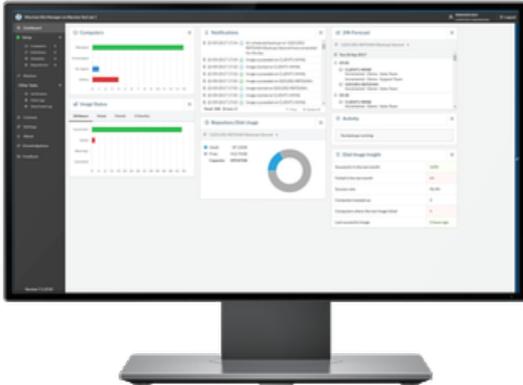
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This guide describes the capabilities of Macrium Site Manager, and provides information on how to use it to configure and use Site Manager.

There are a number of sections to this guide, covering all areas from installation and use through to troubleshooting and integration with other products. The sections available are:

- [Introduction to Site Manager](#) - general overview of Site Manager, showing the basic concepts and elements involved
- [Interface Overview](#) - introduces the basics of accessing and getting started with Site Manager
- [Installation and Update](#) - how to install Site Manager and how to keep it up to date, including system requirements
- [Licensing](#) - how the licensing model works, what licensing is required and how to update licenses
- [Configuration and Security](#) - an overview of how security and networking is managed in Site Manager and the different configuration options available
- [Scheduling Centrally Managed Backups](#) - how to set up or modify a set of scheduled network backups in Site Manager
- [Monitoring and Management Tools](#) - how to use Site Manager to monitor scheduled backups and be notified about important events
- [Managing and Restoring Backups](#) - how to access backup files or restore computers from backup
- [Troubleshooting and Advanced Guides](#) - a set of troubleshooting guides covering common areas and problems encountered with Site Manager

Introduction to Site Manager

Overview

Site Manager enables backup, restore and monitoring of multiple networked computers running Macrium Reflect technology. The Site Manager server is installed as a Windows service on a server computer and may be accessed using a web browser user interface. Supported browsers are Google Chrome, Firefox, Microsoft Edge and IE 11.

A **Macrium Agent** is installed on each remote computer which then communicates via TCP/IP to a single installed instance of the **Macrium Site Manager Server**. This service also exposes an HTTP/HTTPS server service on a configurable port which enables web browser sessions to manage the **Macrium Agent** installed computers.

The Site Manager Server service can be installed on any single networked PC or Server. Both Domain and Workgroup networks are supported.

Requirements and Installation

The **Macrium Site Manager** server can be installed on all Windows operating system from Windows 7 and later, 32 or 64 bit.

The Agent which runs on managed computers can be installed on any Windows operating system from Windows XP onwards.

MSMQ version 3 and onward is required in the Server in order to support old versions of the Agent, this is a standard Windows feature. MSMQ will be dropped in future version of Site Manager. The Server installer will automatically enable MSMQ if required.

A detailed installation guide for the server is available [here](#). Agent computers can be installed through the server either automatically or through manual install. More details on this process are available [here](#).

Release Notes

Site Manager Release Notes

v7.2.4276 - 2019-05-09

Added

- Added ability to grant non-Administrator users or security groups access to Site Manager
- Added ability to connect to non-joined Domains for login authentication
- Added CSV export to Computers page
- Added Agent Config Tool to test connectivity from Agent to Server
- Added option to disable automatic Agent updating
- Added option to Computers page to migrate Agents to another Site Manager

Changed

- Changed Agent to Server communications to use TCP/IP sockets instead of MSMQ for flexibility and performance reasons. See [KnowledgeBase](#) for more details.
- Changed MultiSite integration to show status in settings page and support upcoming MultiSite changes
- Improve performance of repository checks and reduce number of login events in Windows Event Log
- Updated email sending to support TLS 1.1 and produce more readable errors
- Updated Macrium Reflect Backup components to latest release

Fixed

- Fixed date not showing in Summary Email subject line
- Fixed Repository last synchronization times to display dates as well as times

v7.2.4091 - 2019-03-13

Fixed

- Fixed about page being blank for offline Site Manager installations
- Fixed crash when remote synchronization credentials become invalid

v7.2.4075 - 2019-02-26

Fixed

- Fixed standalone license keys not being read from some Agents
- Fixed license key table showing MAL licenses in the standalone license list
- Fixed drop-down selection on Run Now and Schedule Backup dialogs from sometimes failing to select the correct item

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v7.2.4000 - 2019-02-11

Changed

- Improved forecast performance with large numbers of scheduled backups

Fixed

- Fixed issue with restore, validation and image browsing interfaces failing to validate image file passwords under some circumstances
- Fixed issue with restore failing with an error in "iLib::GenerateXMLRestore"
- Fixed email settings showing the incorrect options for encryption after a page refresh
- Fixed disk view in new definition dialog being broken by new Chrome version
- Fixed dashboard notification widget options interface not updating when it should
- Fixed an issue where building rescue media on a computer with both the Site Manager Agent and Macrium Reflect installed could fail

v7.2.3985 - 2019-01-23

Fixed

- Fix for VSS timeout errors on some systems
- Fix for Agent showing older Rescue Media creation interface
- Fix unusable dialog boxes when adding triggers on a smaller resolution screen

v7.2.3971 - 2019-01-15

Added

- Updated the Agent to use Reflect 7.2 technology including updated CBT drivers and WinRE based restore environment
- Added CSV export to license and event log pages
- Added clear event log facility
- Added Azure repository type
- Added default install credentials for remote Agent install to settings

Changed

- Improved dashboard loading performance
- Improved forecast performance
- Updated event log page to improve look and performance
- Improved internal repository credential handling
- Made repository sync errors clearer

Fixed

- Fixed issue preventing backups on some headless Windows Server Core systems

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- Fixed Site Manager not using HTTPS-only cookies when configured to use HTTPS
- Fixed Repository browsing not picking up changes when whole folders were manually deleted from repositories
- Fixed crash on startup when encountering corrupt image files

v7.1.3778 - 2018-10-23

Fixed

- Initial setup wizard was not setting HTTPS mode correctly
- Forecast view was not showing weekly triggered backups which have multiple days of the week selected

v7.1.3720 - 2018-10-09

Added

- Remote synchronization of repositories - a repository can now be configured to synchronize with an SFTP server or any Windows share (including Azure and AWS Storage Gateway) on a daily basis.
- Configuration backup and restore - from the settings page, Site Manager configuration can be backed up, downloaded and restored, to help disaster recovery or redeployment
- Added an option to set the description for a computer
- Added the Local Repository type. This repository type is to allow computers with locally attached storage to be backed up and managed by Site Manager

Changed

- Adding computers will now not start the network scan automatically - in addition, there is a new option to list computers from a Windows domain server
- Adding a MAL license key when the Site Manager server will now prompt for an offline activation key instead of failing
- Improved Event Log and Backup Log performance

Fixed

- Slack instructions now contain the correct link
- Removed older cryptographic cipher suites from HTTPS

v7.1.3436 - 2018-07-24

Fixed

- Fixed image browser returning "Unable to start PSMounterService" error

v7.1.3420 - 2018-07-20

Fixed

- Fixed last operation columns in computers view not displaying correctly

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- Fixed repositories with no credentials showing the wrong status

v7.1.3396 - 2018-07-18

Added

- New dashboard interface with resizable widgets and warning tiles
- New branding and colour scheme, including updates to side menus and tables
- Ability to open backups and download individual files from the browser
- Allow the number of days a computer has gone without a backup before a warning is added in the summary email to be set in the interface

Changed

- Changed license checking code to recheck licenses more frequently if the check failed due to network issues, this should help reduce problems caused by temporary internet disconnections during Site Manager startup
- Improve loading times when starting up the interface
- Improve a number of UI components including time pickers
- Improve backup summary emails to include computers which are waiting to backup, computers which failed to start backups and other conditions which may need attention

Fixed

- Fix a rare crash on server stop
- Fix backups not showing in the restore view if there are no repositories when the Site Manager service was started
- Fix deferred backups not being deferred correctly

v7.1.3268 - 2018-06-13

Added

- Option to install agents without creating desktop shortcuts
- Added pause and cancel buttons to detailed backup progress dialog
- Added ability of the agent to run a user-supplied script to disable backups (e.g. when on WiFi or VPN)

Changed

- Improve computer name sorting
- Improve time display in time picker
- Additional Wake on LAN options for retry and timeout
- Improve Environment Check tool to be more flexible about different IP configurations

Fixed

- Fix issue with being unable to edit the 'Test Recipients' field for email

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- Fix issue with broken screen layout when editing schedule triggers multiple times on a smaller resolution screen/window
- When restarting the server, paused backups should no longer be lost from the dashboard progress widget

v7.1.3017 - 2018-03-29

Added

- Implement metered licensing
- Wake on LAN option in schedules

Fixed

- Agents which cannot receive communications from the server should no longer appear as managed in the UI
- Fix crash in restore PE environment when source image cannot be read
- Improve performance of the dashboard when large numbers of updates are happening
- Fix unauthorised agents generating unnecessary network communications
- Fix fortnightly schedules triggered close to midnight on a Saturday occurring on the wrong week
- Fix crash when removing an agent immediately after refreshing the agent status

v7.1.2916 - 2018-02-27

Fixed

- Fix exit to login screen on restore
- Fix email notification defaults not being applied until settings are saved

v7.1.2910 - 2018-02-26

Added

- New calendar view of schedules
- Email notification of individual events

Changed

- License keys now require an internet connection on startup to validate
- Performance improvements
- Updated settings page to be more responsive
- Improve forecast display and performance

Fixed

- Fixed retention rules not being applied to old backups when changing partitions in a Backup Definition
- Fixed case where remote install of agent could fail claiming computer is offline when it isn't
- Fixed memory leak when adding multiple computers with large numbers of backup logs simultaneously

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- Fixed consolidation rules not being correctly applied when a Backup Definition is changed after backups have been taken
- Fixed rare crash on login
- Fixed backup summary computer showing nonsensical numbers when a Site Manager has no computers
- Fixed rare instance of computers being lost from the dashboard on reboot
- Fixed agent version displayed in 'Programs and Features'
- Fixed performance issues when running with over 200 agents

v7.1.2860 - 2018-01-24

Fixed

- Fixed summary emails not appearing correctly on iPhones and other clients
- Fixed agent not logging events in the Windows Event Log correctly

v7.1.2821 - 2018-01-08

Added

- Added *Browse* capability to the repositories
- Added function to delete backups from the repository browse feature
- Added network information diagnostic to the detail panel in computers view
- Added warning to agents which require a reboot for the CBT component to function
- Improved speed of file listing from repositories
- Added region selection to AWS Storage Gateway repositories
- Added new filters to Backup Definitions to exclude some disks/partitions from the backup
- Added computer health information to summary emails
- Added different computer icon to show which computers are Virtual Machines

Changed

- Improved error handling for Repository connection errors due to network problems
- Improved performance with large numbers of agents
- Improved performance of agent related data requests
- Updated logos and icons
- Added warnings for deleting a Backup Definition which has been used to create backup images
- Added paging in restore and verify file lists to better handle large numbers of files
- Added icons for full, differential and incremental images to restore and verify tables
- Updated 'Unprotected Computers' dashboard widget to show more useful information
- Disabled cancelling of backups in places it's not valid to cancel

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- Moved log resync function to details panel of the agent
- Improved performance with large number of active backups

Fixed

- Fixed issue where restore does not show backups from some NAS repositories
- Fixed issues where transient network errors could cause a repository to require manual intervention before reconnecting
- Fix issue with support upload uploading the wrong data
- Fixed confusing error when adding a version 7 upgrade key with a base v6 key fails
- Fixed spurious timeouts and backup failure messages happening when a verification operation takes an extremely long time
- Fixed license key upgrade dialog not being hidden correctly in some situations
- Fixed complex Backup Definitions with overlapping rules not backing up the correct backup set
- Fixed some display issues with selected months in Schedule triggers

v7.1.2678 - 2017-11-06

Fixed

- Fixed issue where computers with both the Agent and Site Manager server installed would generate large numbers of Windows Event Log events
- Fixed issue with verification page not allowing file additions
- Fixed issue with a crash on computers using third-party encryption tools

v7.1.2657 - 2017-10-20

Fixed

- Fixed Backup Definition rules becoming unavailable after creating a new Backup Definition
- Fixed Backup Definition wizard last page being incorrectly aligned
- Fixed monthly Schedule triggers not displaying the active months correctly

v7.1.2625 - 2017-10-03

Changed

- Central Management Console is now Macrium Site Manager
- Updated user interface, numerous fixes and updates
- Update license page layout
- Updated 'Unprotected Computers' dashboard widget to group computers and be clearer about errors
- Improved performance of user interface
- Agent backup technology is now based on Macrium Reflect 7.1 technology

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- Site Manager is able to work with repositories protected with Macrium Image Guardian

Central Management Console Release Notes

v6.3.1846 - 2017-09-29

Changed

- Internal changes to support upgrade to Site Manager 7.1

v6.3.1844 - 2017-07-04

Changed

- Update 'Disk Image Insight' widget description to be more accurate

Fixed

- Fix a bug where an unauthorised computer can appear in the error state
- Fix broken Knowledgebase links

v6.3.1833 - 2017-06-14

Added

- Interface and wizard to upgrade to version 7 of CMC when released
- Added facility to upgrade licenses to version 7 on both Macrium Agent Licenses and standalone Reflect licenses installed on agent computers
- All trial licenses will automatically be upgraded to version 7 licences
- Added 'Standalone Keys' view to 'Licenses' page, showing all computers with standalone licenses, whether they exempt the computer from consuming a MAL and an upgrade facility

Changed

- Agents which repeatedly fail to patch to the latest release will be flagged as having an error in the computers view. To fix this, perform a manual full install or remote full install on the agent
- Show additional information for Macrium Agent License keys such as support information and version
- Tidy layout of 'Image Status' widget

Fixed

- Starting a Run Now backup now updates the forecast immediately
- Macrium Agent Licenses which become invalid can now be removed
- Improve handling of unicode values in computer descriptions
- Fix cancelled backups having a duration of 0 seconds in summary emails

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v6.3.1791 - 2017-04-17

Changed

- Improved backup performance in some cases

Fixed

- Remote management integration fix
- Log view will no longer display a loading spinner forever when there are no logs or computers
- Scheduled backups can fail for systems with very large and complex disk configurations
- Fixed repository loading forever in some cases
- Fixed Environment Check tool to continue with checks if LLNMR broadcast IP check fails

v6.3.1787 - 2017-04-10

Added

- Added settings for remote management integration
- Added start date for schedule triggers

Fixed

- Fixed bug where a month by day schedule trigger with multiple weekdays set would not show some days on the forecast
- Fixed bug causing backup errors on some systems with multiple simultaneous user sessions
- UI fixes for overlapping fields and button issues at some resolutions
- Fixed bug where a failed update download would require a server restart to recover

v6.3.1773 - 2017-03-23

Fixed

- Fixed edit definition dialog. Navigation buttons inaccessible
- Fixed edit retention rules. Fields overlap each other in Firefox and Edge

v6.3.1769 - 2017-03-22

Added

- Add Windows Event Log notifications - this can be configured in the Notifications section of the Settings view
- Added 'Last Activity Time' column to the Computers view. This column is hidden by default

Changed

- Updated definition view to show computers which are fully and partially backed up more clearly and improve performance
- Improve performance of the computers view during heavy activity

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- Improve performance of all views which list computers
- Improve performance when multiple simultaneous backups are being performed
- During restore, check that the image file was created from the computer which is being restored

Fixed

- Fixed rare issue where the dashboard would not come out of the 'initializing' state
- Fix multiple tooltips being on screen at once in the forecast view
- Fix update available pop-up message appearing while already downloading an update
- Fix some rare network logon issues during backup
- Fix scheduled backups not being updated when a computer is affected by licensing issues
- Fix issue where attempting to update a repository with incorrect credentials would take that repository offline
- Fix issue which caused the service to crash when stopped in service manager

v6.3.1757 - 2017-03-10

Fixed

- Repositories showing 'Unknown Error' in some conditions
- Improve Agent network handling

v6.3.1750 - 2017-03-03

Added

- Automatic logout of the console after period of inactivity (configurable in security settings)
- Additional logging for launching backup on remote agents

Fixed

- Fixed issue where antivirus on a client could block backup and stall all scheduled backups
- Fixed issue where sometimes the dashboard would not leave the 'initializing' state

v6.3.1738 - 2017-02-22

Added

- Added drag and drop reorganisation of Dashboard widgets
- Added detailed progress log button to progress widget and Computers page
- Added additional information to the forecast to show which stage the backup is performing
- Added additional information to the backup progress widget to show backup source and target
- Added ability to set multiple agent passphrases simultaneously

Changed

- Made notification of new Management Console versions more obvious

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- Repositories with incorrect credentials now enter an error state instead of repeatedly retrying the credentials
- Schedules and Definitions in the 'Scheduled Backups' section of the Repository page are now links back to the appropriate page
- Added key version to the Macrium Agent License table in the Licenses page
- Limited the number of notifications in the Dashboard notifications widget to 100 for performance reasons

Fixed

- Added scroll bars to verification view when a large number of files are verified
- Fixed forecast display not updating when backups complete
- Fixed a scheduled backup hanging if it is run when another scheduled backup to the same computer is already in progress
- Fixed computers sometimes appearing as both 'Managed' and 'No Agent'
- Spacing on disk and partition tables in the computers view is fixed
- Fix issue with email not being sent in some circumstances
- Fix Definition page not showing the correct definition as being selected in the left hand menu under some circumstances

v6.3.1713 - 2017-02-02

Fixed

- Fixed issue where some log files were not limited in size
- Fixed issue where fields under settings would only show the numeric parts of mixed alphanumeric content

v6.3.1708 - 2017-01-31

Added

- Ability to rearrange dashboard panels using drag and drop.
- Update agent preinstallation to have a user interface and provide diagnostics on network and communications.

Changed

- Updated remote installation of Agent software to distinguish between offline computers and computers with firewalled WMI components.
- Update startup sequence so that large numbers of agents are handled more efficiently.
- Remote installation of Agent software is now limited to 10 simultaneous installs to reduce network and system load. If more than 10 installs are requested, excess installs will wait until an earlier one completes before starting.
- Updated Amazon AWS Storage Gateway repositories to store local share information in the Storage Gateway, making re-adding AWS Storage Gateway repositories simpler.
- Improved computer view to no longer close menus during high update activity.

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- Updated computer connection code to fall back to IP based message sending when communication cannot be established with an agent.
- Improved handling of domains in Repository create/edit interface

Fixed

- Upgrading an agent now correctly blocks scheduled backups for that agent and vice versa.
- Fixed email summary showing SQL and Exchange Backups as 'Image' backups.
- Fixes for validation on Settings page.
- Layout fixes for Internet Explorer 11.

v6.3.1699 - 2017-01-16

Changed

- General performance improvements.

Fixed

- New widgets added to the *Dashboard* were not persisted in some cases.

v6.3.1694 - 2017-01-11

Added

- New security option to configure agent passphrase usage to simplify setting up and maintaining a deployment-wide security policy. Existing installations will generate a new random passphrase which can be seen and modified in the security section of the Settings page.

Fixed

- Intermittent connectivity issues
- Corrected various UI text labels

v6.3.1680 - 2016-12-26

Added

- Number of Computers linked to a *Backup Definition* is now featured prominently in the UI.
- New Event Log events added for Email reports.
- Failed log files are now attached to Email Summary reports.
- Email Summary Reports can now show error messages.

Changed

- Updated a 3rd-party UI library (*Contains several fixes & improvements*).
- Assorted minor UI improvements.

Fixed

- Invalid data entered during *Restore* wizard could prevent progress through the wizard.

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- Duplicate Email Summary reports being sent for some users.

v6.3.1669 - 2016-12-15

Added

- CMC system restore will now copy required drivers from the client Windows OS for the PE rescue environment. This enables automatic system restores to cater for NIC and RAID hardware not natively supported by Windows PE.

Fixed

- Problems with starting the Agent service on some Windows 7 32-bit computers. This has been resolved.

v6.3.1666 - 2016-12-12

Added

- Amazon AWS Cloud Storage Gateway integration. You can now associate an AWS Cloud Storage Gateway with a repository. This enables easy tracking of the upload buffer and other parameters provided by AWS.
- System image restore now copies static IPv4 assignments to the Windows PE rescue environment.
- When launching the Macrium Agent version of Reflect, if the Agent service isn't successfully communicating with the CMC then an appropriate diagnostic error message is now displayed.

Changed

- New tabbed layout for the computers view makes fixing problem computers easier.
- New layout for the licensing view makes managing licenses more intuitive.

Fixed

- Scheduled backups could run twice if the first backup was initiated a second prior to the scheduled run time. This has been resolved.
- SMTP server configuration was incorrectly setting 'Plain Text' authentication. This caused emails to an SMTP server without authentication to fail. This has been resolved.
- Summary backup emails could incorrectly report the backup duration by 1 hour.
- Many small bug fixes and enhancements.

v6.3.1630 - 2016-11-15

Fixed

- Backups could fail to authenticate against repositories causing the failure 'The user name or password is incorrect'. This has been resolved.

v6.3.1629 - 2016-11-14

Added

Backup Queue improvements:

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- The 'Backup Now' function in Backup Definitions now queues jobs on the chosen Repository, reducing network flooding
- Schedules now contain a backup options section to improve the reliability of backups. This adds the following features:
 - Scheduled backups for offline computers may now be deferred until the computer is online instead of failing.
 - A number of attempts can be set for failing backups. If a scheduled backup fails, it will be reattempted up to 10 times after the specified number of minutes has passed

Summary Emails

- Column configuration, email sending time, and inline email view. Choose which columns appear in the summary email, preview the results and enter the time of day for automatic sending.

Dashboard Widgets

- The 'Backup Status' and 'Computers' widgets can now be clicked to view the detail behind the numbers.

Changed

- The verify view UI has been redesigned to make the verification steps more logical.
- License summary section is now more readable.
- Computer now have an 'Upgrading Agent' status.

Fixed

- Backup forecast view could hang indefinitely when displaying the forecast. This has been resolved.
- IE11 compatibility Improvements.

v6.3.1596 - 2016-10-21

Initial public release of the Macrium Central Management Console (CMC)

The Macrium CMC enables backup, restore and monitoring of multiple networked computers running Macrium Reflect using a Web browser user interface. Supported browsers are Google Chrome, Firefox, Microsoft Edge and IE 11.

A Macrium Agent service is installed on each remote computer which then communicates using Microsoft Message Queueing (MSMQ) to a single installed instance of the Macrium Server service. This service also exposes an http server service on a configurable port which enables web browser sessions to manage the Macrium Agent installed computers.

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Interface Overview

Accessing the Site Manager Interface

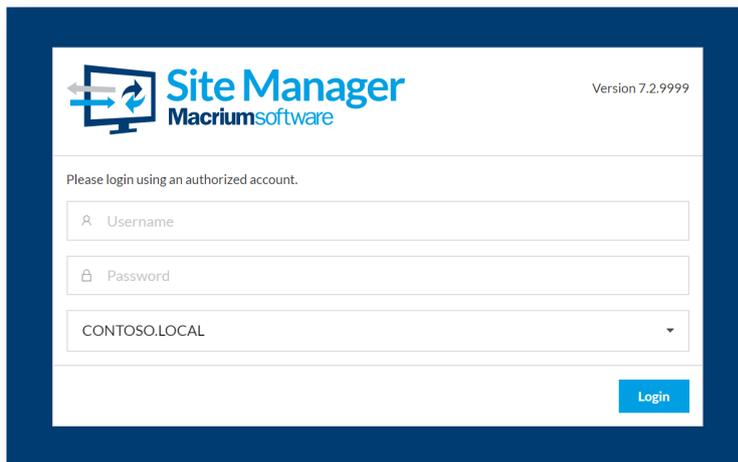
Once installed, the Site Manager interface is available via web browser. Chrome, Firefox, Edge and Internet Explorer 11 are supported. If this is the first time the Site Manager has been run on this computer, the security configuration profile selection screen will be shown. For more details, see [Installation and Update](#).

For the default simple setup profile, the Site Manager is accessible only from the computer it is installed on via **http://localhost:2904**

In the default secure setup, Site Manager is accessible from **https://<IP or DNS name>:2904**

Logging In

If Site Manager has been configured to require a login, the following screen will be shown:



The screenshot shows a login page for Site Manager. At the top left is the Macriumsoftware logo and 'Site Manager' text. At the top right is 'Version 7.2.9999'. Below the header is the instruction 'Please login using an authorized account.' followed by three input fields: 'Username', 'Password', and a dropdown menu with 'CONTOSO.LOCAL' selected. A blue 'Login' button is at the bottom right.

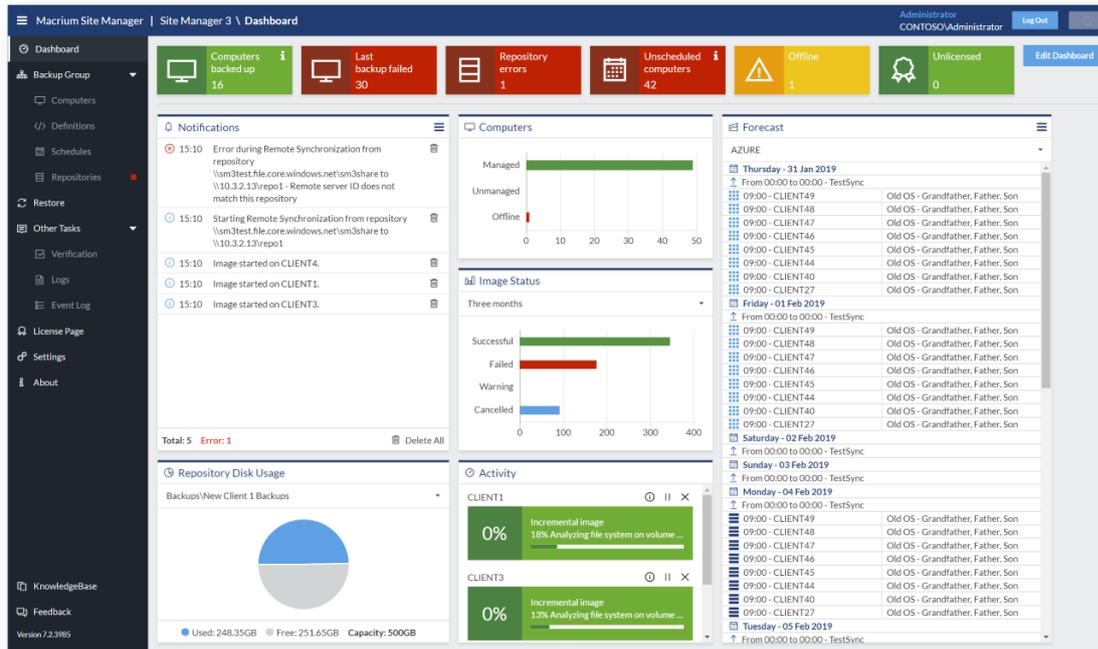
Select a login provider to authenticate against its associated authentication resource. Some login providers are created automatically and enable domain and local administrators to login. More information can be in [Access Control](#).

If the Site Manager installation is not configured to require login, the dashboard page is shown instead.

The Dashboard Page

The Dashboard page is shown after login:

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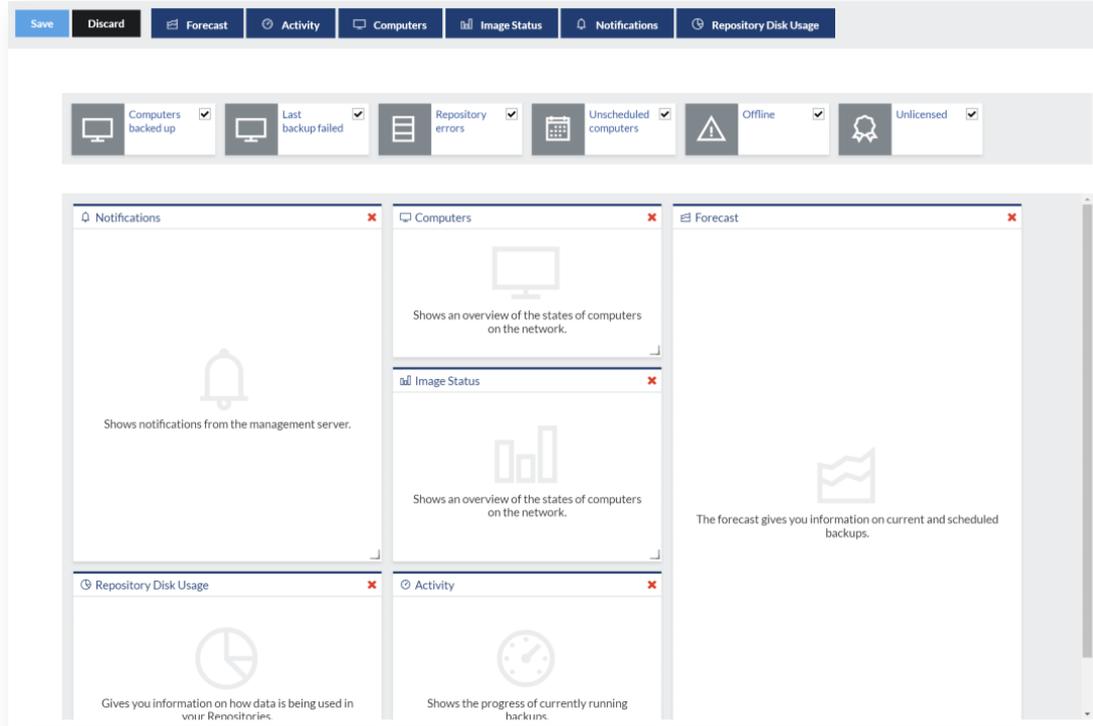
The Dashboard page shows a fixed set of warning tiles at the top, to indicate whether there are any items of concern in the Site Manager deployment and a number of different widgets to monitor the status of the Site Manager and connected computers. The overall layout of widgets and the configuration of each widget is stored on a per-user basis, so different users can set up their Dashboards in different ways.

The warning tiles are:

Warning Tile	Description
Computers backed up	Number of computers which have a recent backup and where the last backup was successful.
Last backup failed	Number of computers where the last backup failed.
Repository errors	Number of repositories which are in an error state.
Unscheduled computers	Number of computers which are not part of a scheduled backup and do not have a locally scheduled backup in Macrium Reflect.
Offline computers	Number of computers which have been added to Site Manager but which are not currently connected.
Unlicensed computers	Number of computers which cannot backup because they don't have a valid license (either a standalone Reflect license or a server-assigned Agent license)

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To edit the widget layout, click on the **Edit Dashboard** button on the top right of the screen. The Dashboard will enter edit mode:



The top bar allows new widgets to be added to the Dashboard - clicking a button will add a widget to the Dashboard below the existing widgets. Multiple widgets of the same type may be added (e.g. adding two Repository Disk Usage widgets to show disk usage on two different repositories). The configuration may also be saved or changes discarded here.

Below this, individual warning tiles may be turned on or off.

In the large Dashboard area, the currently enabled widgets can be moved by dragging them, resized by dragging the resize handle on the bottom right or deleted by using the delete button on the top right.

The available widgets are:

Widget Name	Description
Forecast	An overview of any upcoming backups - may be configured to show different repositories or time periods
Activity	Progress bars and information for any currently backing-up computers.
Computers	Overview of the status of computers currently being managed, and their connection status.
Image Status	A bar chart of image results for a chosen time period.

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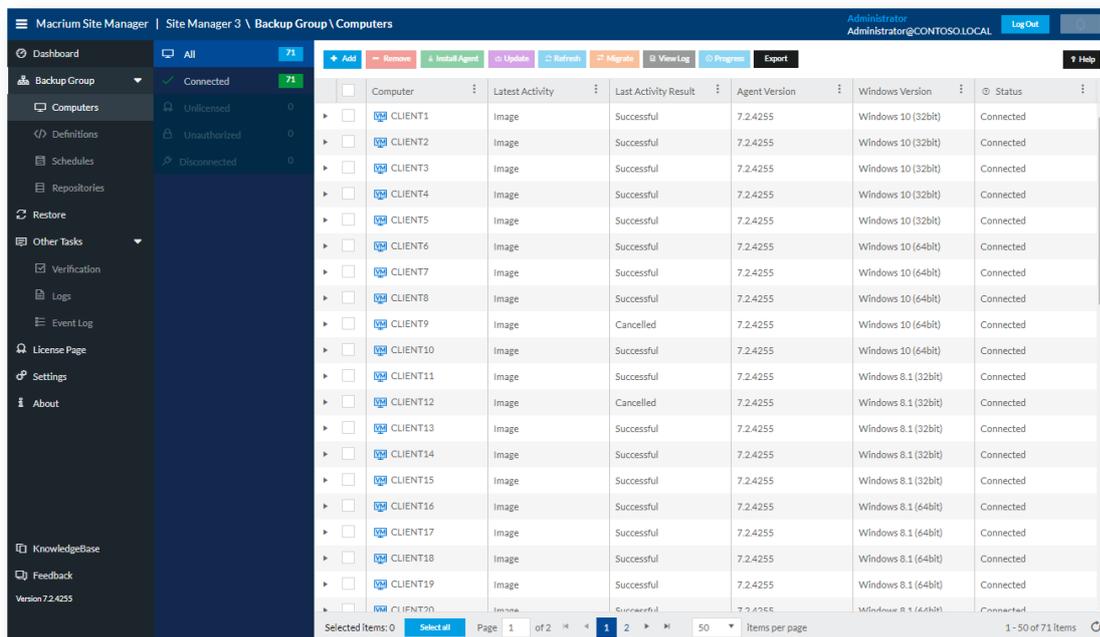
Widget Name	Description
Notifications	The events and notifications which have been generated by the management server, with tools to filter and delete them.
Repository Disk Usage	The free and used space on a repository, shown in pie chart format.
Unprotected Computers	Warnings about computers with failed backups.

Setup Pages

These pages are grouped under the 'Setup' heading in Site Manager and contain all the setup and configuration steps for [Scheduling Centrally Managed Backups](#).

Computers

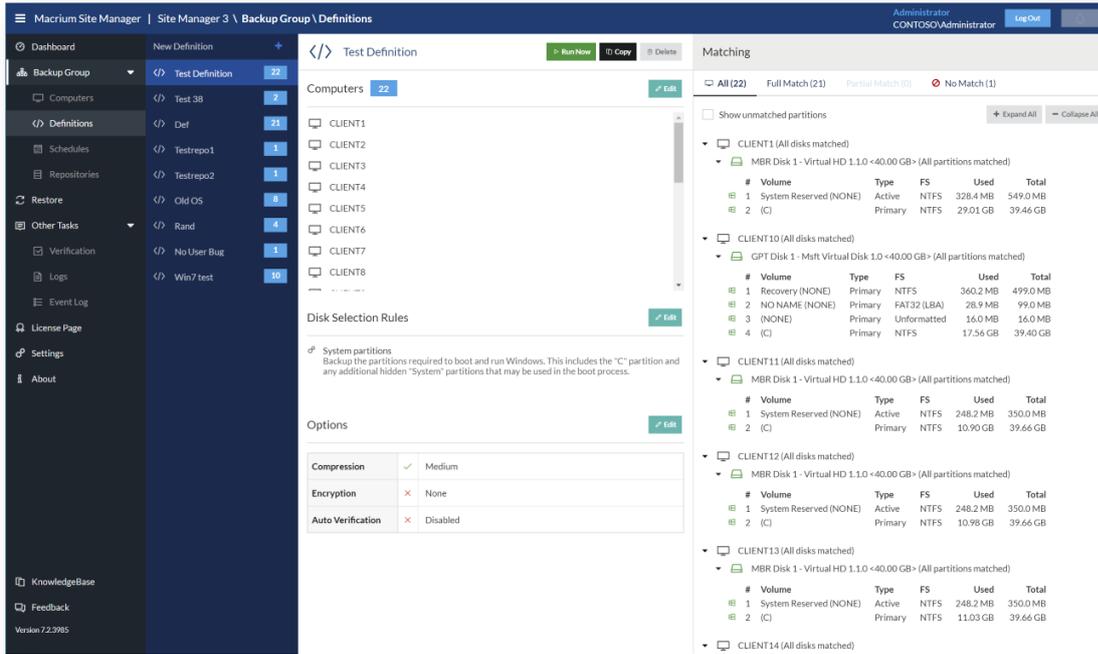
The [Computers](#) page manages the connected client computers of the Management Console and provides tools to add, remove and configure them.



Backup Definitions

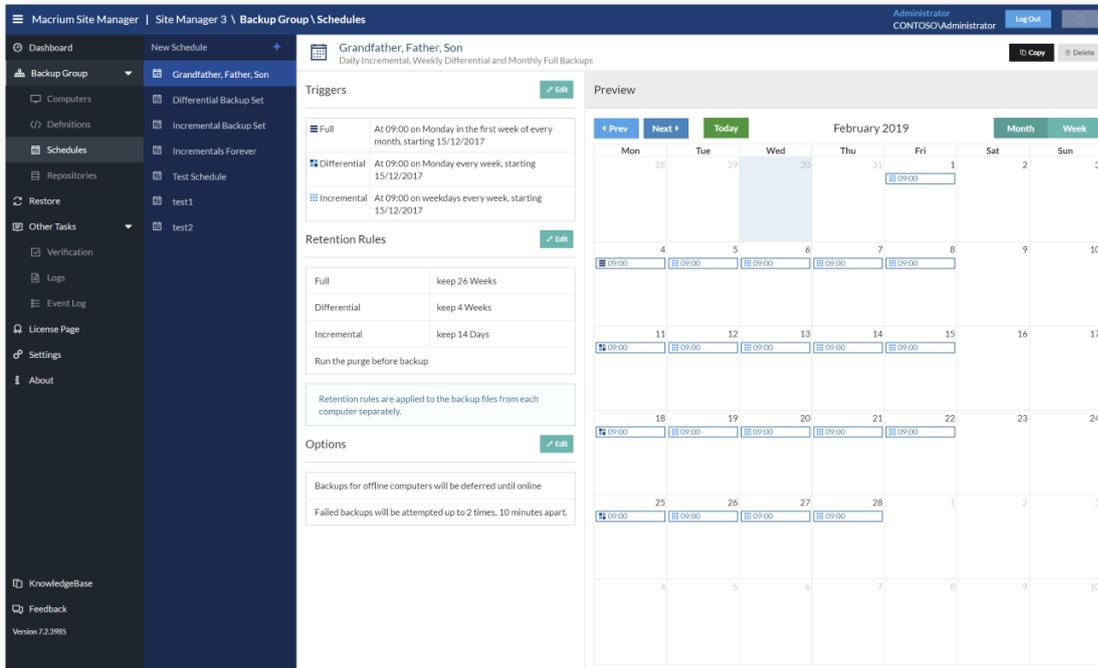
The [Backup Definitions](#) page contains definitions of what and how computers should be backed up. These definitions can be run manually or scheduled to run automatically:

Macrium Site Manager User Guide



Schedules

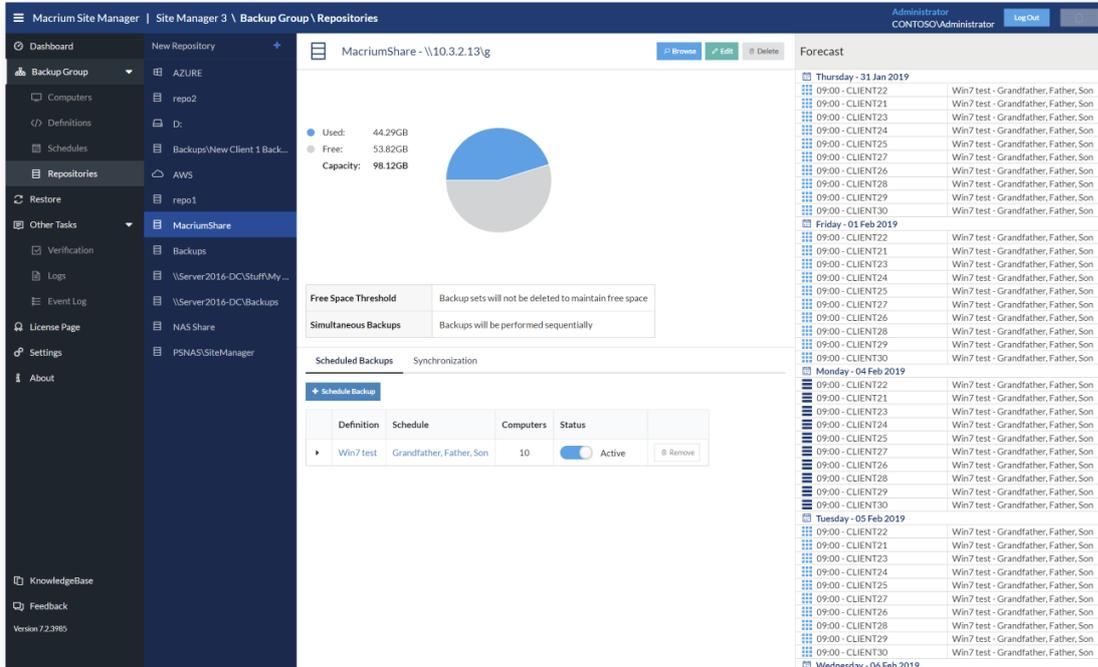
Schedules describe when backups should be run and the rules behind retention of backups.



Macrium Site Manager User Guide

Repositories

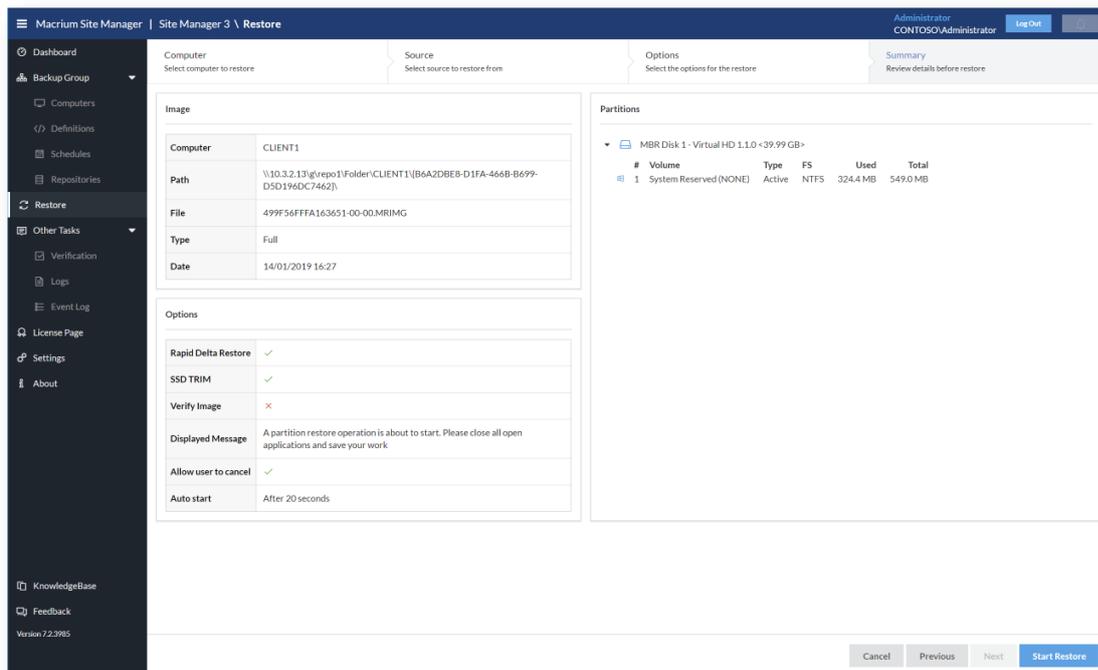
Repositories are locations which backup data is saved and managed. A Backup Definition can be set to backup to a Repository according to a Schedule.



Restore

The Restore page allows image stored in repositories to be remotely restored onto a managed computer in a simple manner. See Restoring an Image through Site Manager for details.

Macrium Site Manager User Guide



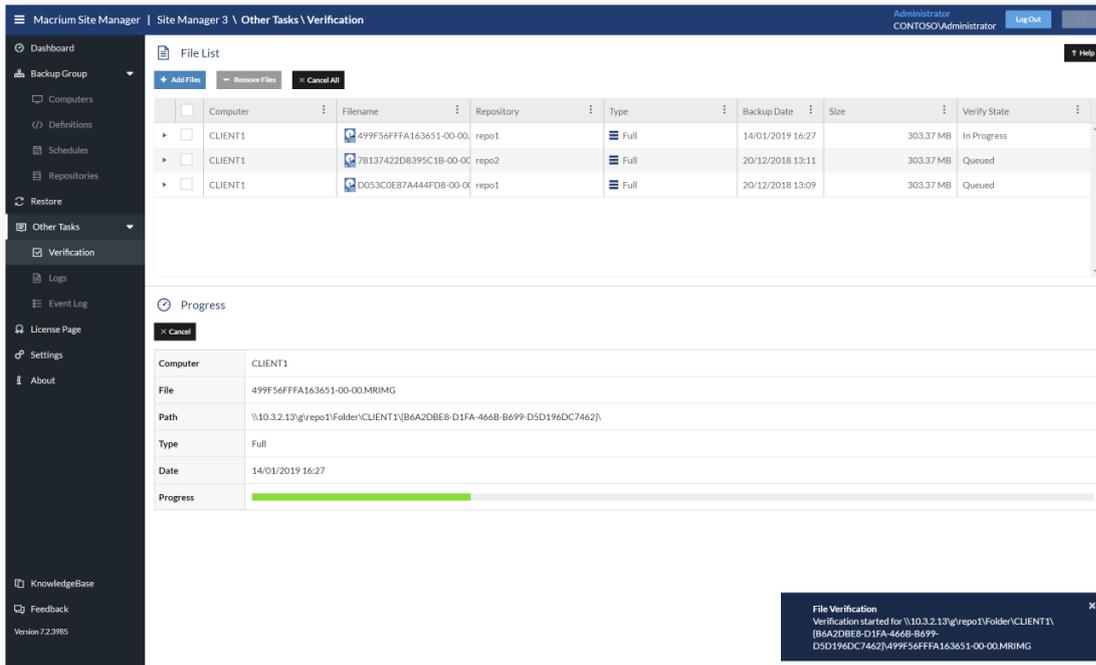
Other Tasks

These pages contain functions outside of setting up automated backups, restoring images or configuring Site Manager.

The Verification Page

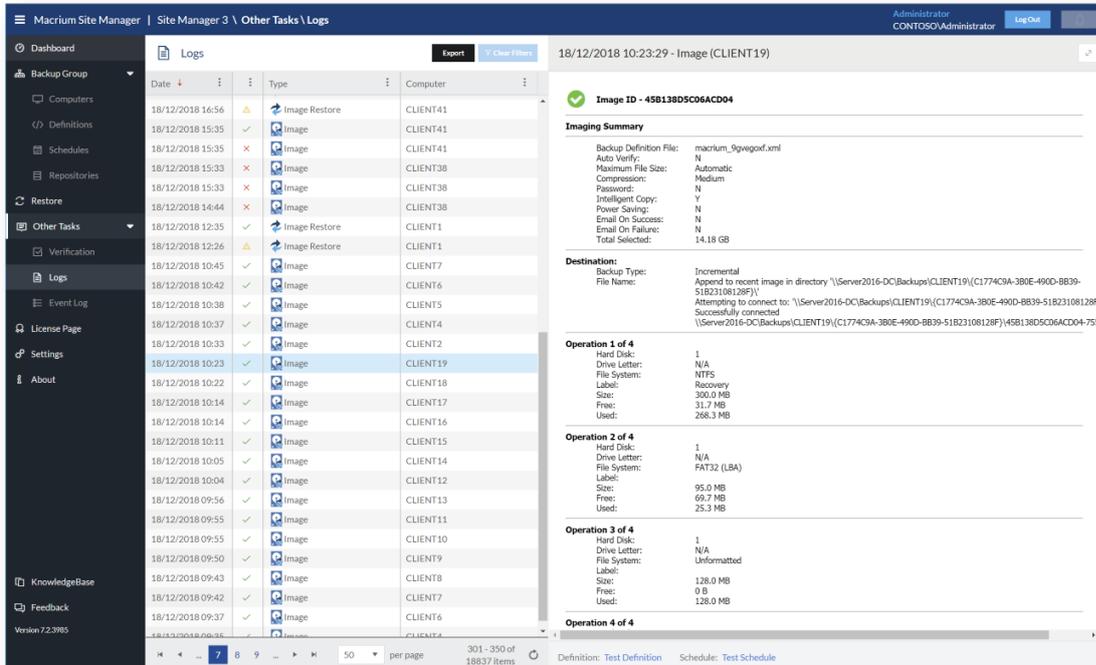
This page is used to verify the integrity of any backup images stored in your repositories. See [Verifying Backups](#) for more information.

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The View Logs Page

The View Logs page is used to review backup history and gives access to all backup logs on connected computers. For more detailed information see [Reviewing Backup Logs](#).



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The View Event Log Page

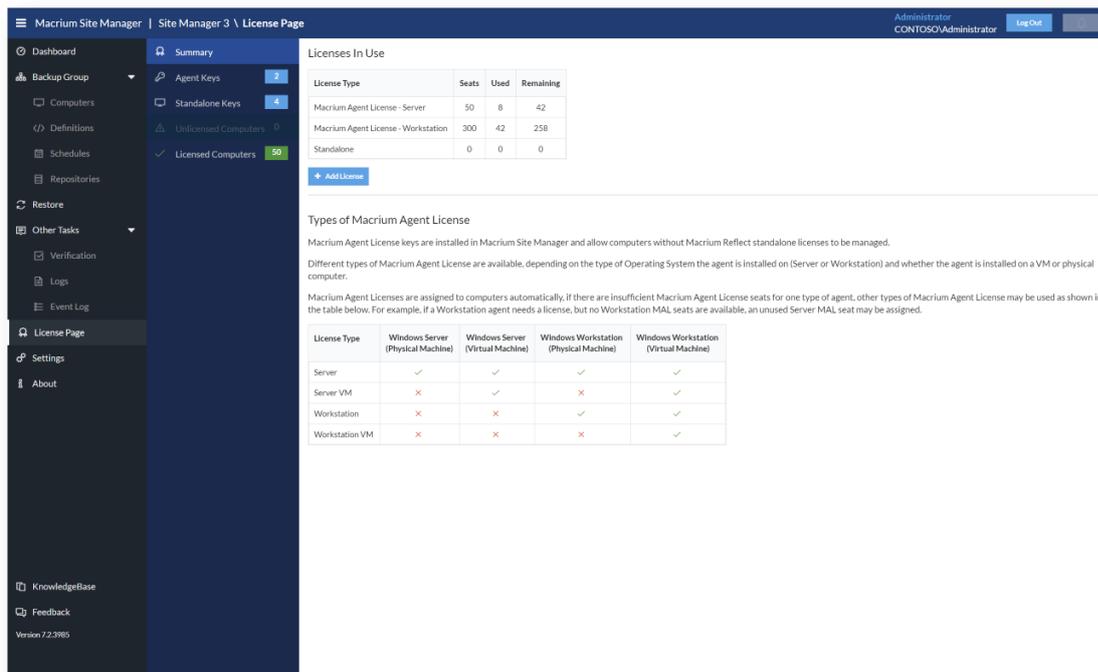
The event log contains a log of all the actions that have been taken in Site Manager and can be used to help review activity and audit the system. See [Reviewing Event Logs](#) for more details.

Time	Type	Source	Event	Computer	User	Message
30/01/2019 15:35	Info	Scheduler	Scheduled Backup Removed		Adminis...	Scheduled Backup of Backup Definition "Win7 test" on Schedule "Grandfather, Fi...
30/01/2019 15:35	Info	Scheduler	Scheduled Backup Added		Adminis...	Scheduled Backup of Backup Definition "Win7 test" on Schedule "Grandfather, Fi...
30/01/2019 15:35	Info	Scheduler	Scheduled Backup Removed		Adminis...	Scheduled Backup of Backup Definition "Test Definition" on Schedule "Grandfath...
30/01/2019 15:34	Info	Scheduler	Scheduled Backup Added		Adminis...	Scheduled Backup of Backup Definition "Test Definition" on Schedule "Grandfath...
30/01/2019 15:32	Info	Schedulers	Scheduled Backup Deleted		Adminis...	Schedule "Intra-daily" Deleted
30/01/2019 15:17	Info	Computers	Agent Passphrase Remote ...	CLIENT39		Remotely updated passphrase on CLIENT39
30/01/2019 15:14	Warning	Scheduler	Backup Finished	CLIENT8		Backup (Image) failed on CLIENT8 - Operation Cancelled
30/01/2019 15:14	Info	Dashboard	Backup Cancelled	CLIENT8	Adminis...	Cancel backup request sent to CLIENT8
30/01/2019 15:14	Warning	Scheduler	Backup Finished	CLIENT9		Backup (Image) failed on CLIENT9 - Operation Cancelled
30/01/2019 15:14	Info	Dashboard	Backup Cancelled	CLIENT9	Adminis...	Cancel backup request sent to CLIENT9
30/01/2019 15:14	Info	Scheduler	Backup Started	CLIENT8		Backup (Image) started on CLIENT8
30/01/2019 15:13	Warning	Scheduler	Backup Finished	CLIENT7		Backup (Image) failed on CLIENT7 - Operation Cancelled
30/01/2019 15:13	Info	Scheduler	Run Now Backup Triggered	CLIENT8		Attempting Run Now Incremental backup of CLIENT8 on \\Server2016-DC\Back...
30/01/2019 15:13	Warning	Scheduler	Backup Finished	CLIENT6		Backup (Image) failed on CLIENT6 - Operation Cancelled
30/01/2019 15:13	Info	Dashboard	Backup Cancelled	CLIENT7	Adminis...	Cancel backup request sent to CLIENT7
30/01/2019 15:13	Info	Dashboard	Backup Cancelled	CLIENT6	Adminis...	Cancel backup request sent to CLIENT6
30/01/2019 15:13	Info	Scheduler	Backup Started	CLIENT9		Backup (Image) started on CLIENT9
30/01/2019 15:13	Info	Scheduler	Run Now Backup Triggered	CLIENT9		Attempting Run Now Incremental backup of CLIENT9 on \\Server2016-DC\Back...
30/01/2019 15:13	Error	Scheduler	Backup Finished	CLIENT5		Backup (Image) failed on CLIENT5 - Failure: User - No user - Access is denied. Fail...
30/01/2019 15:13	Info	Scheduler	Backup Started	CLIENT5		Backup (Image) started on CLIENT5
30/01/2019 15:13	Info	Scheduler	Backup Started	CLIENT6		Backup (Image) started on CLIENT6
30/01/2019 15:13	Info	Scheduler	Backup Started	CLIENT7		Backup (Image) started on CLIENT7
30/01/2019 15:12	Info	Scheduler	Scheduled Backup Stopped		Adminis...	Scheduled Backup of Backup Definition "Old OS" on Schedule "Grandfather, Fath...
30/01/2019 15:12	Info	Scheduler	Run Now Backup Triggered	CLIENT6		Attempting Run Now Incremental backup of CLIENT6 on \\Server2016-DC\Back...
30/01/2019 15:12	Warning	Scheduler	Backup Finished	CLIENT4		Backup (Image) failed on CLIENT4 - Operation Cancelled
30/01/2019 15:12	Info	Scheduler	Run Now Backup Triggered	CLIENT7		Attempting Run Now Incremental backup of CLIENT7 on \\Server2016-DC\Back...
30/01/2019 15:12	Warning	Scheduler	Backup Finished	CLIENT3		Backup (Image) failed on CLIENT3 - Operation Cancelled
30/01/2019 15:12	Info	Dashboard	Backup Cancelled	CLIENT4	Adminis...	Cancel backup request sent to CLIENT4
30/01/2019 15:12	Info	Scheduler	Run Now Backup Triggered	CLIENT5		Attempting Run Now Incremental backup of CLIENT5 on \\Server2016-DC\Back...
30/01/2019 15:12	Warning	Scheduler	Backup Finished	CLIENT1		Backup (Image) failed on CLIENT1 - Operation Cancelled
30/01/2019 15:12	Info	Dashboard	Backup Cancelled	CLIENT3	Adminis...	Cancel backup request sent to CLIENT3
30/01/2019 15:12	Info	Dashboard	Backup Cancelled	CLIENT1	Adminis...	Cancel backup request sent to CLIENT1
30/01/2019 15:10	Info	Scheduler	Remote Synchronization Co...		Adminis...	Synchronization of \\sm3test.file.core.windows.net\sm3share using TestSync fail...

The Licenses Page

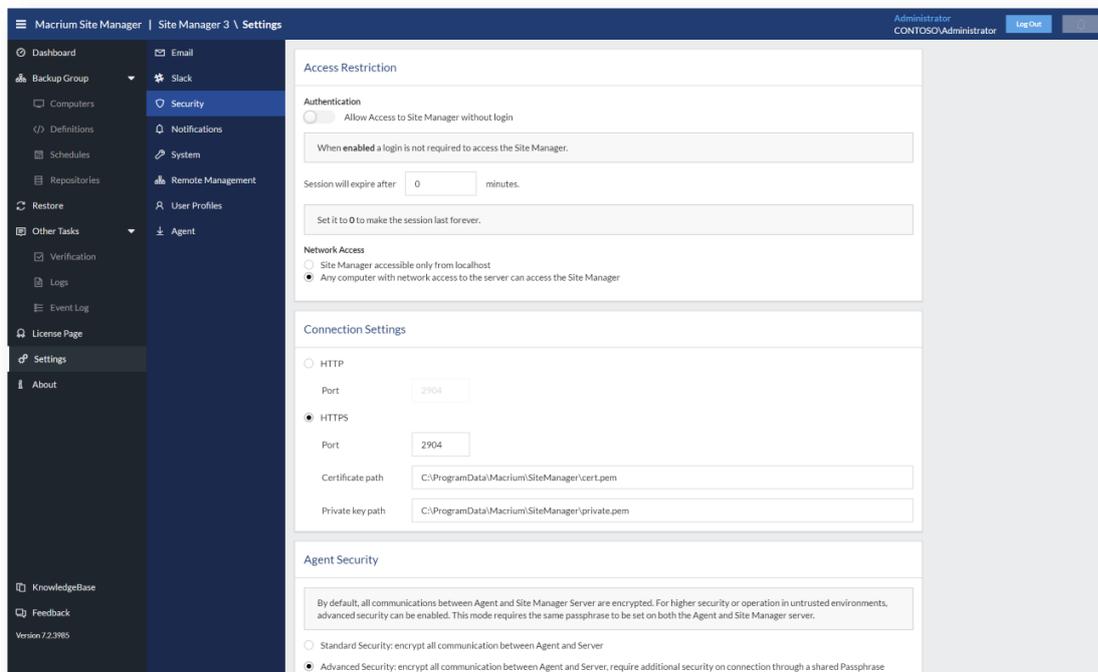
The Licenses page is used to display license information for connected clients and allow management of Macrium Agent Licenses to enable clients without standalone Macrium Reflect installed to be licensed and managed. See [Licensing](#) for more details.

Macrium Site Manager User Guide



The Settings Page

The Settings page contains settings for security, third-party integration and controls for features such as notifications. See [Configuration and Security](#) for more information.



Installation and Update

Installing the Site Manager Service

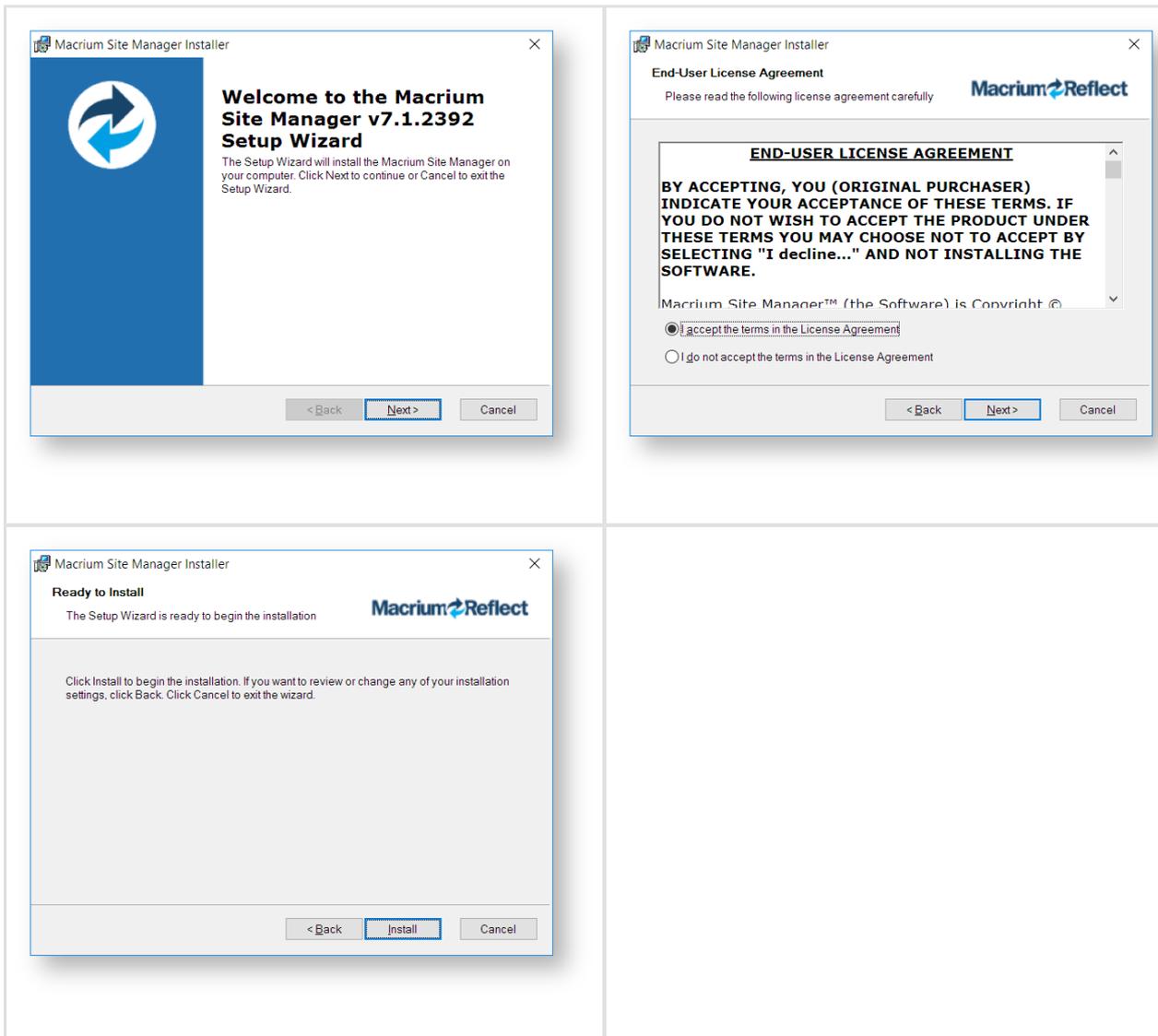
The Site Manager service can be installed on any computer or Virtual Machine running Windows 7/Windows Server 2008 R2 or greater. As the service must be running to perform scheduled backups, it should be installed on a computer which is not turned off during these times.

Download

The Site Manager Server is available for download as either a 32-bit Windows Installer or a 64-bit Windows Installer.

The download links can be found on [this page](#).

The installer provides a standard install interface:

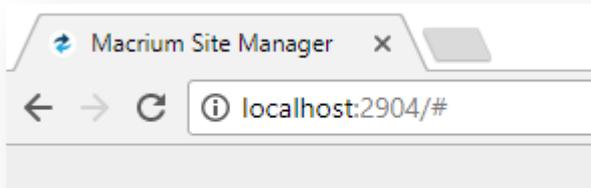


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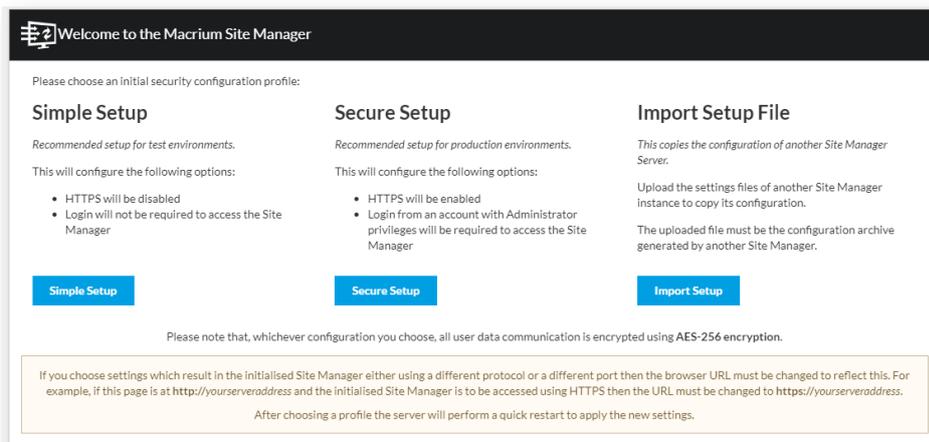
Once installed use a local web browser to connect to the running server on the default port 2904. (<http://localhost:2904>).

Upgrade Installs

If you are upgrading from a previous installation of Site Manager, the protocol (http or https) and port will be set to the previously configured values



The first time you access the web interface, you will be prompted to select a security level to complete the security configuration:



The recommended security level is **Simple Setup** for internal and test installations and **Secure Setup** for production environments. **Import Setup File** may also be chosen to import a saved configuration from another Site Manager server.

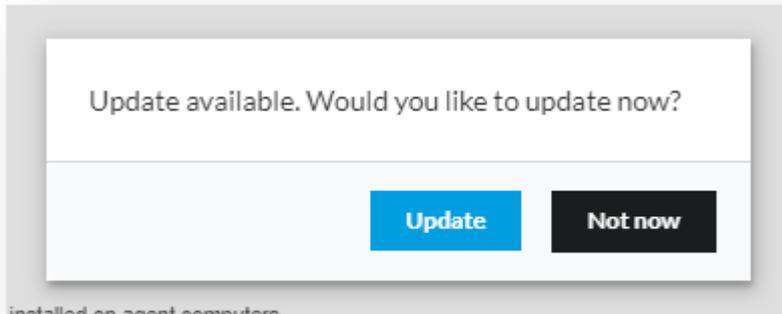
Note: These security settings may be changed at any time from the **Settings** page of Site Manager.

 After selecting your security configuration Site Manager will immediately restart

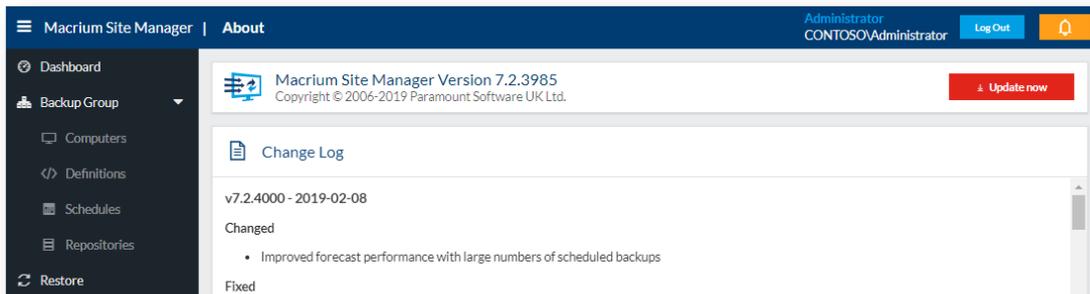
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Update

The Site Manager service will periodically check for updates with Macrium servers. If there is an update available, the following message will be shown on login:



If you click **OK** on this message or visit the **About** page, an **Update Now** button will be displayed:



Clicking this will download the update, apply it and automatically restart the Site Manager service. When the Site Manager service restarts, it will update the individual agents which are connected. Any offline agents will be updated as soon as they connect to the Site Manager.

i Any backups in progress during the update will continue and the agent performing the backup will not be upgraded until the backup has completed.

Due to the time and network traffic that upgrading causes, we recommend that upgrading the Site Manager is only done when there are no scheduled backups running.

Licensing

Overview

The Site Manager server can be installed and run with no license key or restriction on running. However, when adding computers to the Site Manager to be managed, each computer requires a license to be successfully managed.

There are two models for licensing - a license is deployed to the client computer as part of a standalone Macrium Reflect install or licenses can be added to the Site Manager server and dynamically allocated to client computers as needed. Licenses allocated in this way are called Macrium Agent Licenses

Standalone Licenses

If a computer to be managed already has an installation of Macrium Reflect with a valid Macrium Reflect license, this computer can be managed by Site Manager with no further licensing required. The Site Manager will automatically detect that the client computer has a valid Reflect license when it connects for the first time after the agent has been installed - no configuration is necessary.

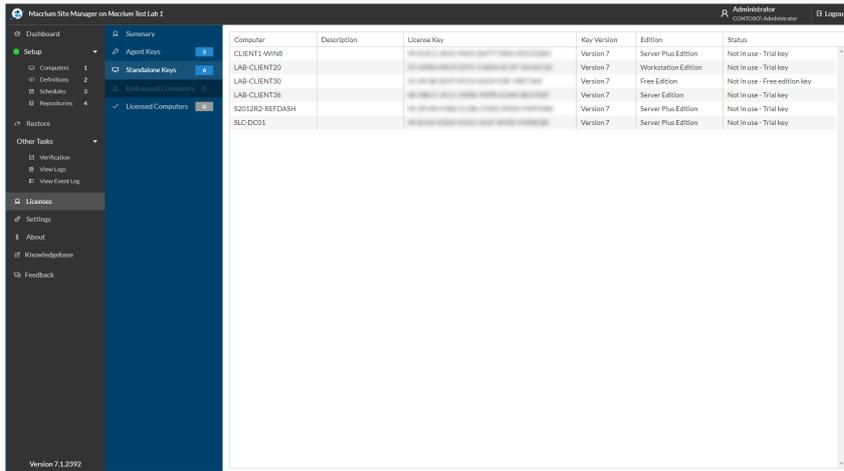
Managing computers with standalone Macrium Reflect licenses has the following benefits -

- Ease of transition from managing computers individually to via Site Manager - no licensing changes are needed to start using Site Manager
- No dependency on Site Manager server - if a computer has a standalone license, then it will be able to run and use Macrium Reflect even if it cannot contact the Site Manager server. This is especially useful for laptops and other devices which are not always connected to the LAN
- Extended options for servers - Individual servers which have the Server Plus edition of Macrium Reflect can still use Reflect to conduct Exchange and SQL backups, even though these features are not included with the Macrium Agent License edition of Reflect.

Macrium Reflect 7 Home, Workstation, Server and Server Plus licenses qualify as valid licenses for Site Manager. Licenses earlier than version 7, Free Edition or any trial license are not valid.

Computers using standalone keys may be reviewed on the **Standalone Keys** section. This shows all computers with standalone keys and whether they are valid for use within Site Manager:

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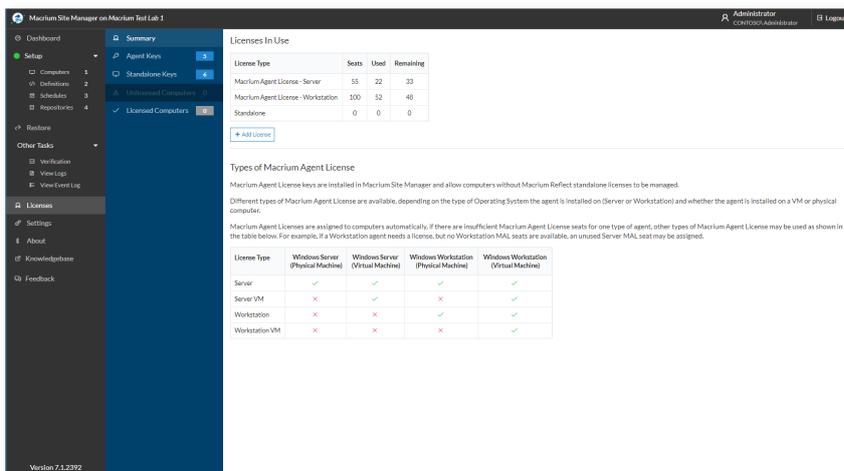
Macrium Agent Licences

Macrium Agent Licences (MALs) are installed on the Site Manager Server and each license provides a number of seats. These seats are automatically assigned to computers as they are connected to the Site Manager server. If a computer is removed from the Site Manager server, the seat is freed for use elsewhere. This makes using MALs quick and easy to use as they require no special client configuration. Multiple seats can be managed with a single key, making key and license management easier.

The drawback of these licenses are that they are dependent on communication with a Site Manager server - if the client computer cannot contact the Site Manager server, the agent cannot be used to perform backups as a standalone edition of Reflect could.

Managing Macrium Agent Licences

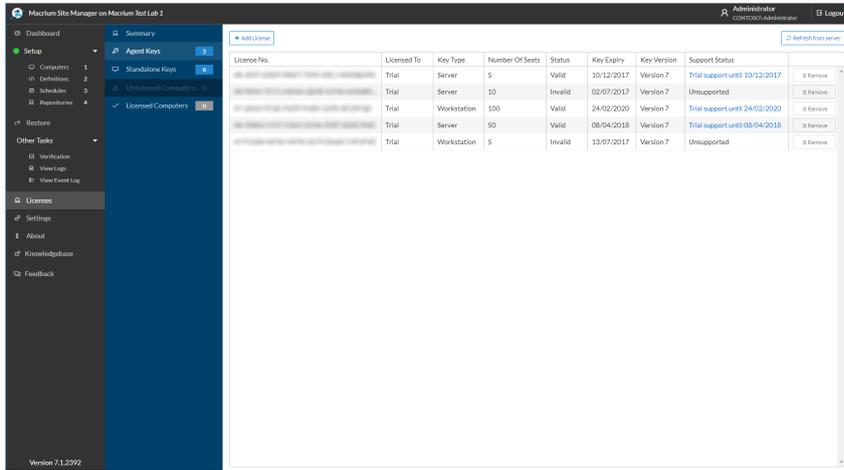
The **Licenses** section of the Site Manager interface provides an overview of Macrium Agent License seats available and used in the **Summary** section.



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This page also displays warnings if any agents are unlicensed or there is a shortfall in the appropriate license type. This may occur when there are insufficient workstation licenses for all workstation computers but excess server licenses. In this case, Site Manager will assign a server license to a workstation.

The individual Macrium Agent License keys can be added, removed and viewed on the **Agent Keys** tab:



The fields shown are.

Field	Description
License No.	The license key
Licensed To	The user or company the key is licensed to
Key Type	The type of key. This may be Server , Workstation or Server (VM)
Number of Seats	The number of computers which may be licensed by this key.
Status	Valid or Invalid . This shows the status of the key as determined by the Macrium license server
Key Expiry	The date the key expires if the key is a trial.
Support Status	Whether this key has paid support and when the support expired/will expire
Validation Type	

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Field	Description
	Online or Offline. If a key is added when there is no working internet connection, it can be added as an offline key if you have an appropriate validation key from Macrium. Online validated keys require regular checks with the Macrium license server, but are easier to add, remove and manage.

Pressing the **Add License** button will allow you to add a license. Please note if you enter an older version 6 key, you will be prompted to upgrade the key to version 7. If the version 6 key is eligible for a free upgrade, that will be performed otherwise Site Manager will ask for an upgrade key.



In addition to multi-seat Macrium Agent License keys, standalone keys from Macrium Reflect (Workstation and Server editions) may be added as 1 seat Macrium Agent Licenses. These licenses are treated like any other Macrium Agent License and are not tied to specific computers.

This is intended to ease the transition to using Macrium Agent Licenses for customers who have a number of existing Reflect licenses. If you want to use the Reflect license as a standalone license on a specific computer connected to Site Manager, you do not need to enter the license here



Offline Keys

If the Site Manager server is not connected to the internet, adding a MAL will display a code and link to the Macrium website which can be used to activate the key for offline use and provide a validation key which can be entered in the Site Manager interface to enable the offline key.

Configuration and Security

- Security
 - Agent Communications
 - Web Interface Access
- Configuration
 - Email
 - SMTP
 - Summary
 - Slack
 - Security
 - Access Restriction
 - User Permissions
 - Connection Settings
 - Agent Security
 - Notifications
 - System
 - Server Name
 - Configuration Transfer
 - Remote Management
 - User Profiles
 - Agent

This section is intended to discuss the security involved in Site Manager and show how these features and other features can be configured through the Site Manager interface.

Security

The various forms of network communication in Site Manager have some built in security with options for further configuring them.

Agent Communications

Communications between agent and Site Manager server are always encrypted using 256-bit AES encryption. This happens automatically, key generation, negotiation and encryption are all done without any additional configuration. In addition, a passphrase can be set in the Site Manager. This passphrase is set on any successfully connected agent and prevents any other Site Manager taking over that agent unless the new Site Manager has the same passphrase set.

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The purpose of this passphrase is for use in high integrity or untrusted environments where a guarantee that only the Site Manager server that has been configured for that agent can access that agent is required.

i If a passphrase has been set on an agent, it will fail to connect to a Site Manager which does not have the matching passphrase set. Reinstalling the agent will reset the passphrase.

The agent passphrase can be set in the **Agent Security** section of the **Security** settings below.

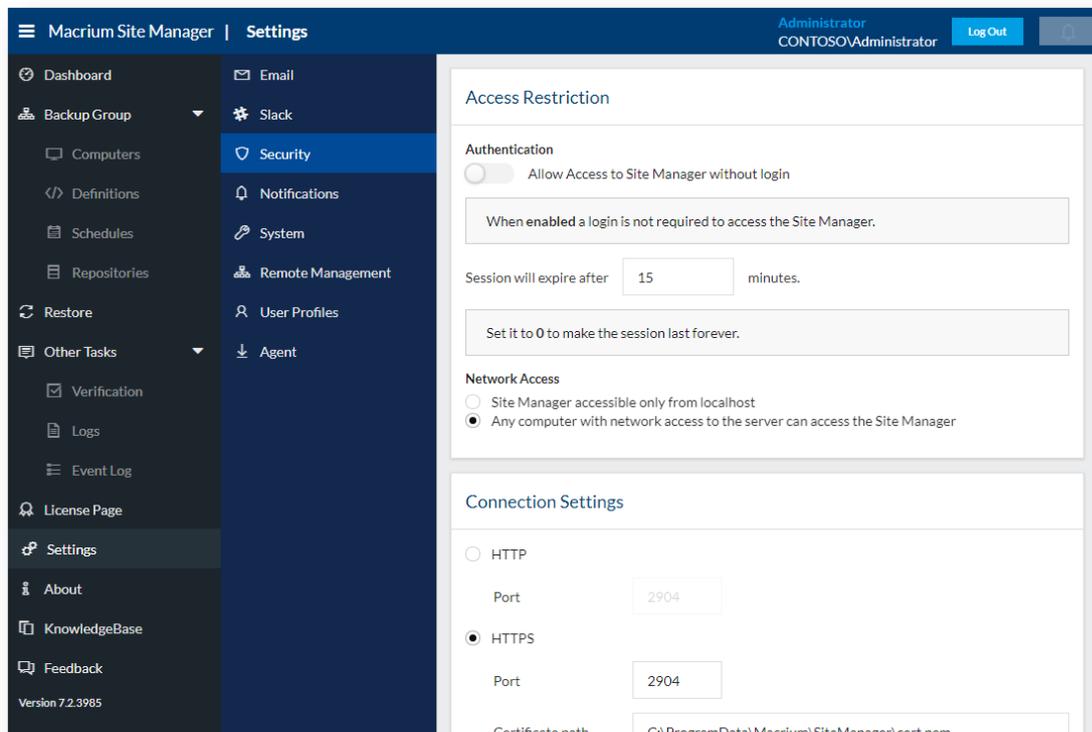
Web Interface Access

The web interface used to access the Site Manager interface can use HTTP or HTTPS. By default the Site Manager uses HTTP access but is only accessible from the computer it is installed on. This restriction can be removed in the **Connection Settings** section of the **Settings** page.

If the interface is exposed to a potentially insecure network or the internet, we recommend using HTTPS. When HTTPS is first enabled, a default self-signed certificate is used. This certificate is not recommended for use outside secure networks as it is shipped with every Site Manager installation. Any certificate in OpenSSL .PEM file format can be used in place of the built in certificate. If you have keys in a different format, the OpenSSL command line utility can convert a variety of formats. See <https://www.openssl.org> for details.

Configuration

To configure the settings for Site Manager, access the **Settings** page from the main menu:



This is divided into a number of sections which are explained in more detail below

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Email

The Email section is divided into two subsections - **SMTP** for setting up server details and **Summary Emails** for configuring which emails are sent automatically.

SMTP

This section allows Email server settings to be configured, including security settings.

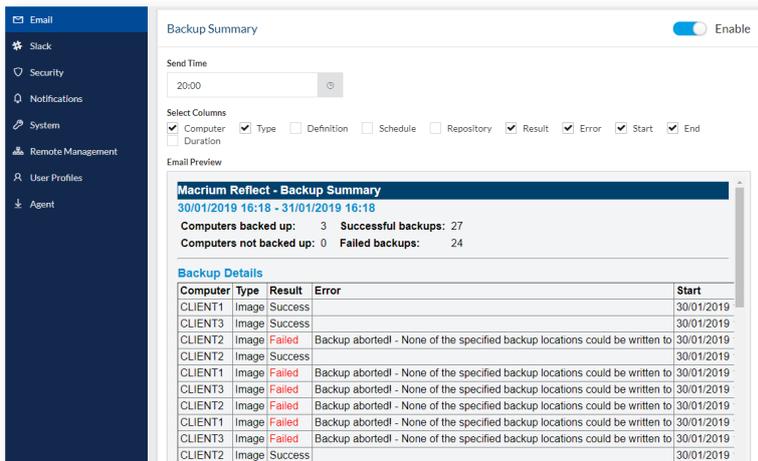
Option	Description
Recipient's Email Addresses	A semicolon separated list of email addresses which status emails will be sent to.
Sender's Email Address	The email address the summary emails will be sent from.
Subject	Text which should be added to the subject line of each email - this can be used to help differentiate emails from multiple Site Manager installations
SMTP Server	The address (DNS or IP) of the SMTP server to use for sending.
Connection Type and Port	The type of connection used by the SMTP server. Supported options are: <ul style="list-style-type: none">• Plain Text• Secure Sockets (SSL/TLS)• Transport Layer Security (STARTTLS)
Authentication	The authentication method used by the SMTP server. Supported options are: <ul style="list-style-type: none">• None

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Option	Description
	<ul style="list-style-type: none"> • Auto-Detect • Challenge/Response Authentication (CRAM-MD5) • Secure Username/Password login (AUTH LOGIN) • Username/Password login (AUTH PLAIN) • Microsoft NT LAN Manager (NTLM)
SMTP Username and Password	The username and password for the SMTP server. If left blank, no username will be used.
Test Email	Sends a test message to the recipients entered in the test box. If there are errors in the send, they will be reported back.

Summary

The summary section allows configuration of daily backup summary emails as below:



The options available are:

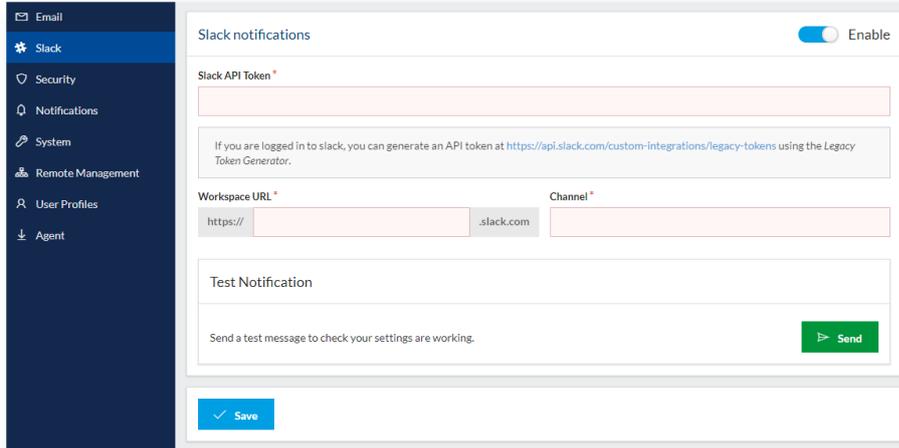
Option	Description
Enable Backup summary emails	This toggle can be used to turn summary emails on or off
Send Time	The time when the daily email will be sent
Select Columns	Which columns should appear in the summary email. Changes to this section are reflected in the email preview underneath

Macrium Site Manager User Guide

A preview of the daily email with the selected columns is shown below the

Slack

The Management Console supports sending notifications to Slack. Once configured, the types of notifications can be configured in the Notifications section, below.

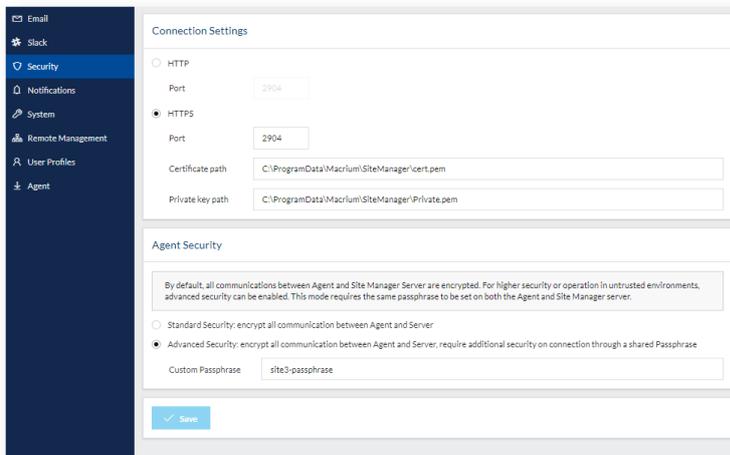
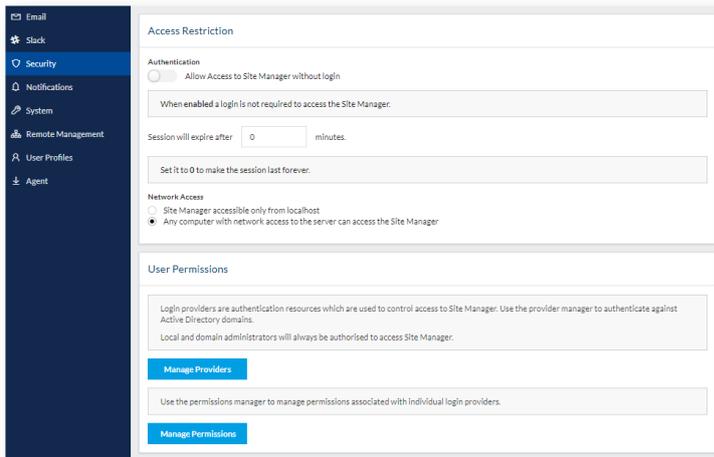


Option	Description
Enable	Toggle this to enable/disable Slack notifications.
Slack API Token	This is your API authorization token. This allows the Management Console to post to your company Slack account.
Workspace URL	This is the subdomain of your company Slack account. Usually this will be your company name.
Channel	Here you can specify which channel you wish to post to in Slack. You may wish to create a new channel in Slack for your notifications.
Test Notification	This button sends a test message the the slack channel configured above.

Security

Here you can customize the various security options for the Management Console.

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Access Restriction

This section is about controlling how permissive Site Manager is with respect to who can access the dashboard and from where. Finer control is provided under the **User Permissions** section.

Option	Description
Authentication	<p>Here you have the option to enable/disable the login prompt for new sessions connecting to the Management Console.</p> <p>Session expiry time can also be set to ensure that if the Site Manager interface is left open in a web browser, it will automatically log out after a specified number of minutes being idle.</p>
Network Access	<p>Here you can restrict network access to the Site Manager web UI to the server computer only or allow other computers to connect.</p>

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User Permissions

Dialogs to manage login providers and Site Manager access permissions can be accessed here. The provider manager is used to create, configure and delete login providers and the permissions manager is used to set permissions for each provider. For more information see: [Access Control](#).

Connection Settings

This section allows you to configure HTTP/HTTPS connection settings for the Management Console. The defaults should be fine for most installations but you may wish to provide your own SSL credentials and possibly alter the ports if they conflict with other applications on your server.

The main choice here is whether you wish to use HTTPS or plain HTTP.



By default, Site Manager supplies a self-signed certificate for HTTPS operation. As this key is shared between all Site Manager installations, it should not be considered secure if the Site Manager server is exposed to the internet or in any sensitive deployment. In these cases, we recommend an alternate key is used.

The keys supplied must be in OpenSSL .PEM format.

Option	Description
Port	You can change the communication port for both HTTP & HTTPS independently.
Certificate path	You may wish to use your company SSL certificate to prevent browser warnings when using HTTPS.
Private key path	If you change the SSL certificate you will need to provide the matching Private Key file.

Agent Security

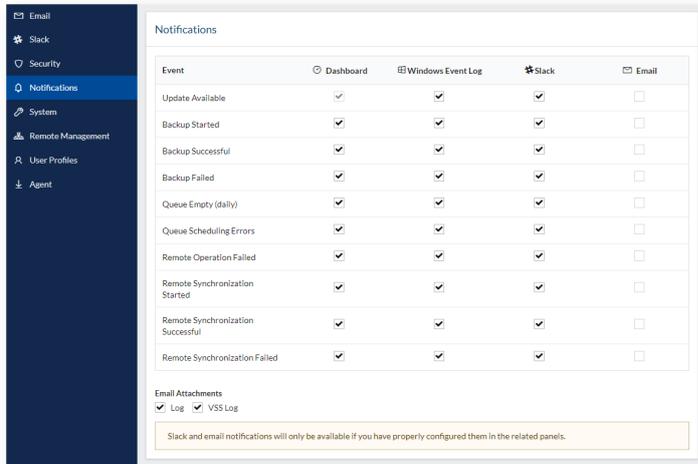
This section contains additional security settings for Agent communications. It allows an additional passphrase to be set - using a passphrase means that once communication has been established with an agent on a remote computer, the remote computer will only communicate with Site Manager servers which have the same passphrase set. This is intended to prevent any rogue processes emulating a Site Manager server from gaining access to the agent on a remote computer.

If a computer is added after previously having a passphrase set, the computer will be listed as **Unauthorized** in the computers list. To manage the computer, either the Site Manager server must have the correct passphrase, the passphrase on the agent must be changed (Requires local administrator access to the computer) or a passphrase can be entered on the Site Manager server to allow one-off access.

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Notifications

Here you can select which notifications appear in the User Interface, the Windows Event Log, over Slack or email (if configured).



The options available are:

- **Update available** - sent when a software update to the Management Console is available.
- **Backup Started** - sent when a backup has started to run on a managed computer
- **Backup Successful** - sent when a backup has completed successfully on a managed computer
- **Backup Failed** - sent when a backup has completed unsuccessfully on a managed computer
- **Queue Empty (daily)** - sent when a scheduled queue of backups has completed all operations until the next day. Useful to note time taken for scheduled overnight backup operations
- **Queue Scheduling Errors** - send when the server fails to start a backup on a managed computer. For example, if the computer is offline
- **Remote Operation Failed** - send when a fatal error happens when attempting any operation on a managed computer
- **Remote Synchronization Started** - send when a repository starts remote synchronization with another server
- **Remote Synchronization Successful** - send when remote synchronization with another server succeeds
- **Remote Synchronization Failed** - send when remote synchronization with another server fails

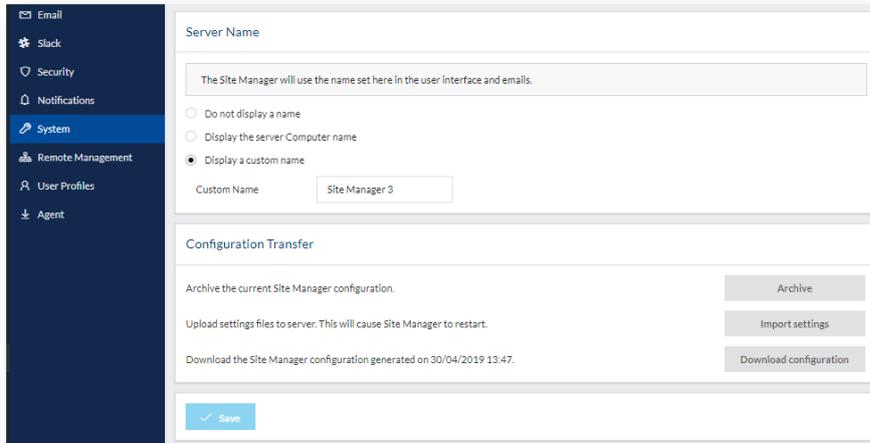
Additionally, there are options to set whether relevant backup logs should be attached to emails and how many days without a backup should be allowed before the daily summary email warns that a computer is unprotected.

System

The system section contains options for modifying the behavior of the overall system. The options available are as follows:

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Server Name



Option	Description
Server Name	<p>Allows a custom server name to be set. This server name will be shown in the title/tab bar of the browser, at the top of the CMC interface and in email subject lines.</p> <p>This allows organisations with multiple CMC installs to easily tell them apart. The naming options are:</p> <ul style="list-style-type: none">• Do not display a name - this is the default setting• Display the server Computer name - uses the NetBIOS name of the server• Display a custom name - the name entered in the Custom Name field will be used

Configuration Transfer

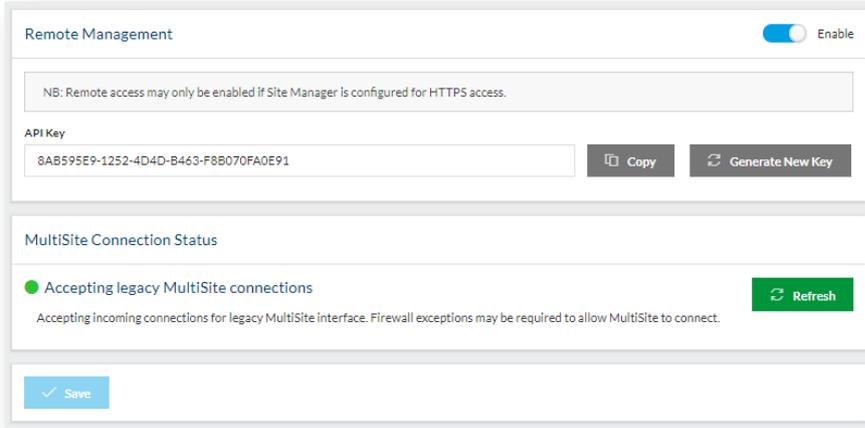
This section has options for backup up, downloading and restoring the Site Manager configuration:

Option	Description
Archive	Update the configuration archive on the Site Manager server with the current Site Manager configuration. Once complete, the timestamp shown by the Download configuration option will be updated
Import settings	Upload a previously create Site Manager configuration backup and apply the settings to this Site Manager server. The current Site Manager configuration will be overwritten
Download configuration	Download the latest created archive in the browser. This can be used to provide a backup of Site Manager settings in case of server hardware error

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Remote Management

The Remote Management section controls integration with Macrium MultiSite. If remote access is enabled and the HTTPS port configured in the **Security** section is exposed to the internet, the Site Manager can be managed by Macrium MultiSite.



The options in the **Remote Management** section are as follows:

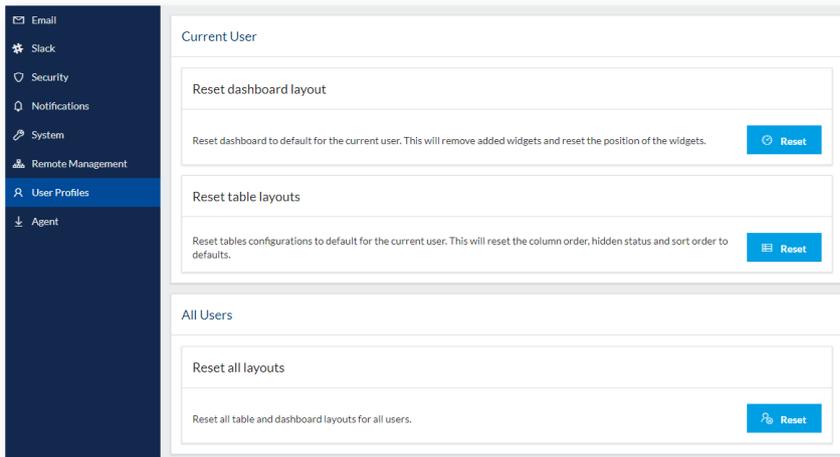
Option	Description
Enable	Enables the remote management interface for Macrium MultiSite on the same port used for HTTPS access. This does not affect HTTPS access.
API Key	This key is required to authorize MultiSite to access the Site Manager.
Copy	Copies the API key to the clipboard to make transferring it easier.
Generate New Key	Generates a new API key, replacing the old key. Note that if this Site Manager is managed by Macrium MultiSite, the key must be updated in MultiSite for continued access.

The **MultiSite Connection Status** section will only appear if Remote Management is enabled. This section will show the current status of the Site Manager's connection to MultiSite. The **Refresh** button retries the MultiSite connection if there are issues.

User Profiles

This section controls the per-user configuration of the Site Manager Dashboard and interface

Macrium Site Manager User Guide



Option	Description
Reset dashboard layout	This option will restore the dashboard to the default layout, removing all widget layout and notification tile customization. This only applies to the currently logged in user
Reset table layouts	This option will remove any changes to the table layouts on all Site Manager pages. This includes moving, hiding or sorting columns. This only applies to the currently logged in user
Reset all layouts	Removes all customization for all users and resets Site Manager to default layout settings

Agent

This section controls how Site Manager agents and remote agent installation work

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Option	Description
Install Settings - Quiet Agent Install	Setting this option will change the default install options for the remote agent install to install the agent without creating desktop or start menu shortcuts. This applies only to new agent installs and not to existing ones
Install Settings - Auto Update	If this option is set, the server will automatically update the agents when a new version is available
Maximum Simultaneous Updates	This option specifies the number of updates that will be performed simultaneously
Install Credentials	This option allows you to set credentials which will be used to install remote agents. This is useful if the majority of computers you wish to install agents on are on a domain which is not the same one used to log in to the Site Manager server
Server Connection Details	

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Option	Description
	To change these fields while agents are connected will cause the server to send the new details to the connected agents. When an agent receives the new details, it will drop the connection and try to reconnect to the server. If the agent is not able to reconnect or if it wasn't connected when the details were changed the details must be manually set on the agent via Agent Config tool or remote install
Server Connection Details - Server IP	Additional IP addresses the Agent should use to communicate with the Site Manager. If not set, the Server NetBIOS name and any additional configured DNS names will be used instead.
Server Connection Details - Server DNS	Additional DNS names the Agent should use to look up the Site Manager server IP address. If not set, the Server NetBIOS name and any additional configured IP addresses will be used instead.
Server Connection Details - TCP Port	The TCP/IP port used by Site Manager to communicate with Agents. If this is changed, the Site Manager server will update all connected Agents and restart.

Agent Server Connection

When installed via the Remote Install feature, Agents will automatically be configured with the NetBIOS name of the Site Manager server. The Agent will attempt to resolve the NetBIOS to an IP address and connect to the Site Manager server.

Additional IP addresses or DNS names may be configured to allow Agents to connect. The Agent will try all IPs and names to connect to Site Manager until it finds one which works.

Macrium Site Manager User Guide

Access Control

- Introduction
- Login Providers
- Managing Login Providers
- Configuring Permissions

Introduction

Site Manager can be configured to allow different users on the Site Manager server or a Windows Active Directory Domain to login to Site Manager.

By default members of the Administrators group on the Site Manager server and members of Domain Administrators on the Site Manager server's domain can login. Additional domains and permissions can be configured as described below.

Login Providers

Login providers serve as the interface between Site Manager and an authentication resource. There is a unique login provider for each authentication resource so that permissions for each resource can be managed independently by configuring the associated provider. Three types of Login Provider currently exist:

Login Provider Type	Authentication Resource	Included by Default	Notes
Server Local	User Account Control	Yes	This provider interfaces with accounts local to the Site Manager server. Administrator accounts will always have permission to access Site Manager. This provider cannot be deleted.
Server Domain	Active Directory	Yes (if the Site Manager server is connected to a domain)	<p>This provider interfaces with the domain the Site Manager server is connected to. It is created automatically and can not be removed by the user. Domain Administrators can always log in using this provider.</p> <div data-bbox="735 1608 1430 1888" style="border: 1px solid #ccc; padding: 10px;"><p>ⓘ Domain disconnections</p><p>If the server is disconnected from its domain then the provider will be converted to a Domain provider. A new Server Domain provider will be created when Site Manager upon reconnecting to a domain.</p></div>
Domain		No	

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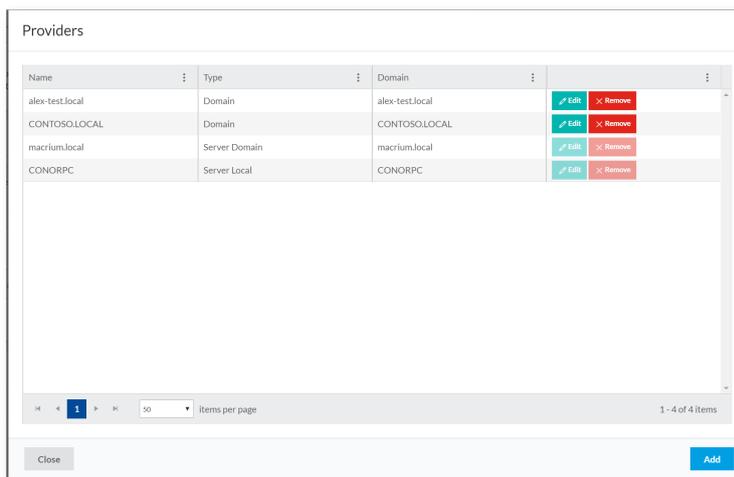
Login Provider Type	Authentication Resource	Included by Default	Notes
	Active Directory		This provider interfaces with Active Directory domains other than that which the Site Manager server is connected to.

Active Directory compatibility

Site Manager must connect with a Domain Controller which supports the Virtual List View controls (a part of LDAP V3) for permissions to be set for accounts on the Domain. LDAP over SSL will be used if available.

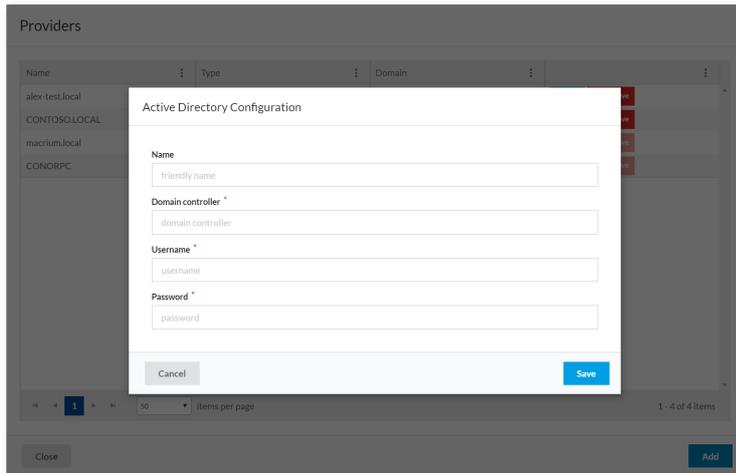
Managing Login Providers

Domain providers are created and configured by the user (Server Local and Server Domain providers are created automatically on startup) through a dialog accessed through the security settings page.



All providers are listed within the provider manager dialog. Providers can be configured or removed by clicking the respective buttons in the table. New providers can be created by clicking the **Add** button, which opens the a dialog to configure a new Domain provider.

Macrium Site Manager User Guide



A Domain provider can be configured with the following fields:

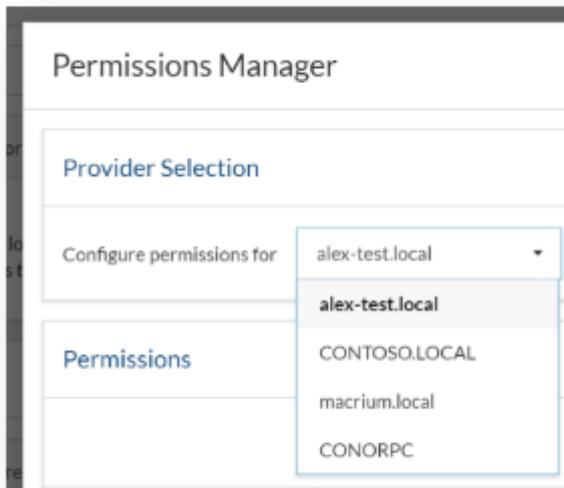
Field	Notes
Name	A friendly name which is displayed to users. If no name is provider then the provider will be named after the domain it is associated with.
Domain controller	The host name of a domain controller. This can be in the form of a DNS-style name, a NetBIOS address or an IP address. <div style="border: 1px solid #ccc; padding: 10px;"><p>i Custom ports</p><p>Site Manager will communicate with the domain controller using LDAP. To use custom ports (other than the default of 389 or 636) specify the domain controller in the hostname:port format.</p></div>
Username	The username of an account on the domain. The credentials of this account will be used to perform any lookups against the LDAP server.
Password	The password of the account specified by the username entered in the previous field.

After clicking "Save", Site Manager will check the validity of the configuration. If a provider can be created then the configuration is saved and a provider is added to the list of providers in the previous window. Otherwise, the an error message will appear explaining the problem.

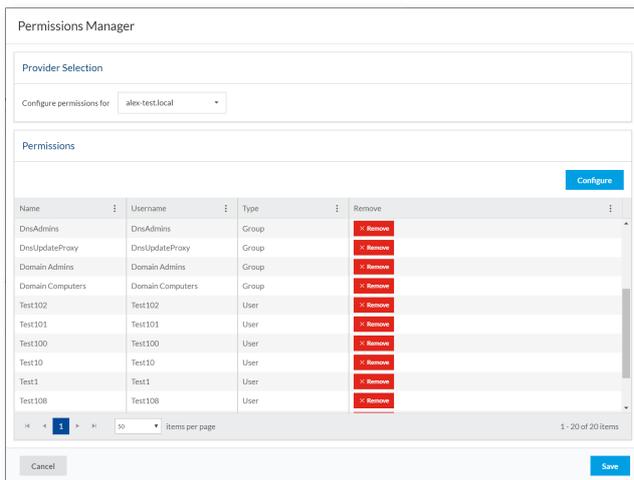
Configuring Permissions

Next to the **Manage Provider** button on the security settings page is the **Manage Permissions** button. Clicking this button will open the permissions management window.

Macrium Site Manager User Guide

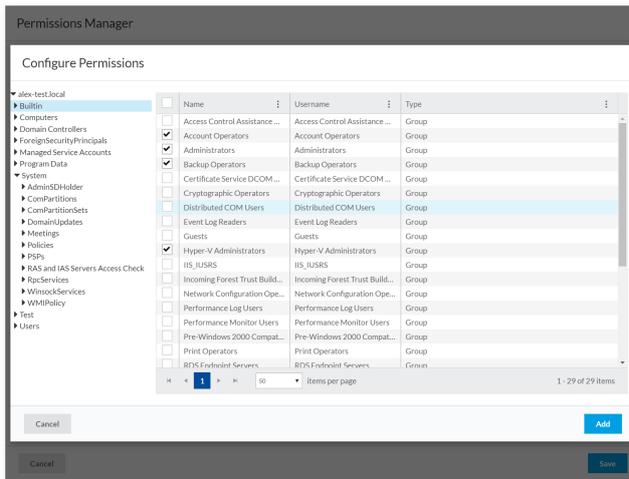


Permissions are configured separately for each provider; it is necessary to select the correct provider from the combo box before configuring permissions.



A table listing the active permissions is below the provider selection field. Here the names of authorized users and groups are displayed. All members of an authorized group are given the permissions of that group. Permissions can be deleted by clicking the **Remove** button. Click **Configure** to add permissions. Note that changes to permissions can be discarded by clicking cancel.

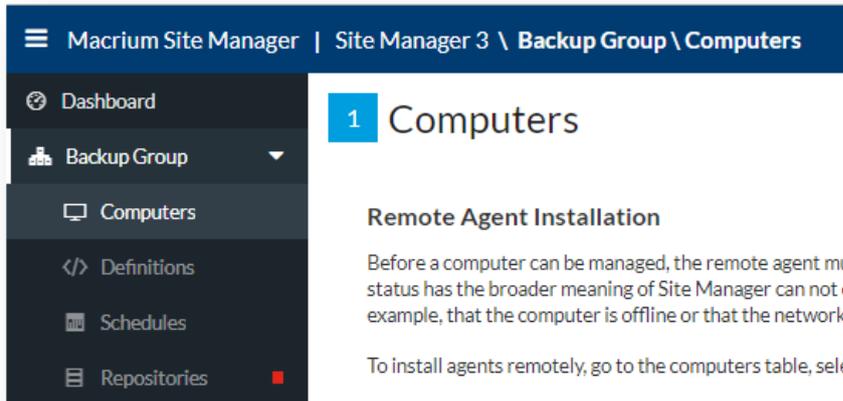
Macrium Site Manager User Guide



The structure of the directory is navigable through the tree on the left, which shows the folders and Organizational Units which have been configured on the domain. On the right is a table listing the users and groups in the selected folder. Rows can be selected to add corresponding permissions when the **Add** button is pressed.

Scheduling Centrally Managed Backups

Configuring the Site Manager to perform centrally scheduled backups can be done by following the **Backup Group** section of the menu on the left hand side of the user interface as shown below:



The sections are:

1. **Computers** - This section allows you to add client computers to the Site Manager, remotely install the Site Manager agent and monitor communication status between agents and Site Manager.
2. **Definitions** - This section is used to create Backup Definitions - a set of template based rules which allow you to quickly define backups for multiple computers simultaneously. A Backup Definition can also be run directly from this page, creating a single point in time backup
3. **Schedules** - This section is used to create Schedules - a set of rules which determine frequency of backups (daily, monthly etc), which type of backup is created (full, differential, incremental) and what backup retention rules apply.
4. **Repositories** - Repositories are storage locations for backups - once a repository has been created, a backup definition can be scheduled to run in the repository

Macrium Site Manager User Guide

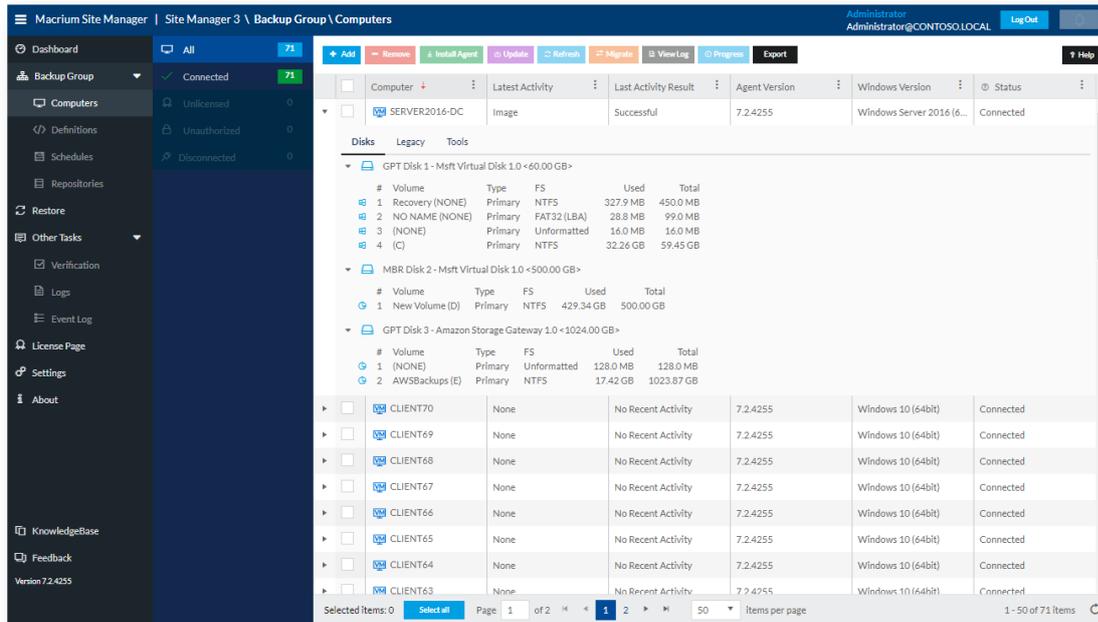
Setup - Computers

- Viewing and Managing Computers
 - Toolbar Buttons
 - Additional Toolbar Buttons
 - Computer Details
 - Disks
 - Legacy
- Adding a new computer to Site Manager
 - Scan Network
 - Add Computers by Domain
 - Add Computers
 - Add Computers Manually
- Installing the Site Manager Agent
 - Installing the Agent via Remote Install
 - Steps to Remote Install
 - Problems with Remote Installation
 - Installing the Agent Manually
 - Adding Computers With Agents Preinstalled
- Removing Clients from Site Manager

Viewing and Managing Computers

Remote computers are viewed and managed from the **Computers** page of Site Manager, under the **Backup Group** heading on the left hand side column. This page displays a list of all managed computers and relevant status information:

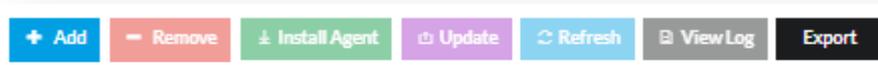
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This view is divided into a number of tabs, each representing a set of computers in particular states. Underneath the tab, there is a toolbar with functions appropriate to each state.

Toolbar Buttons

Each tab shares seven common toolbar buttons. They are:



- **Add** - Adds new computers to Site Manager. See the section later on this page for details.
- **Remove** - Removes selected computers from Site Manager.
- **Install Agent** - Uses remote MSI tools to install or reinstall the remote agent on computers.
- **Update** - If automatic update of Agents is turned off in settings, this button can be used to initiate Agent updates
- **Refresh** - Updates computer data from the selected computers
- **View Log** - Shows backup, restore and clone logs from the selected computer in the **View Logs** page
- **Export** - Exports the computers table data as CSV. This can be imported into other tools.

Additional Toolbar Buttons

Each tab has a set of additional options for recovering agents in that state. The list of tabs, description of what each state means and which toolbar options are available is listed below:

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Agent State	Description	Additional Toolbar Buttons
All	All computers added to Site Manager are shown in this view.	None - to recover computers in error states, first go to the tab for that specific error.
Connected Connected (Reboot Required) Connected (Update Required)	The computer is online and running a remote agent.	<ul style="list-style-type: none"> • Progress shows a dialog box with detailed progress information on a currently running backup or restore operation. • Migrate allows Agents to be transferred to another Site Manager server. See Migrating Agents for more details <p>If the status is Connected (Reboot Required), the computer is online, as in the Connected status, but there is a reboot pending due to an agent upgrade. The Agent will continue to function normally but will not use the CBT driver until it's rebooted.</p> <p>Connected (Update Required) Agents are running out of date Agent software. These Agents will either update automatically or require the Update function to be used depending on the Site Manager settings</p>
Initializing	The Agent is negotiating their connection with the Site Manager Server.	None - Initializing Agents cannot be interacted with until they enter the Connected state
Installing Agent Upgrading Agent	The Agent is in the process of installing or upgrading Agent software	None - These Agents cannot be interacted with until the install or update operation is completed.
Unlicensed	The computer does not have an appropriate standalone or Macrium Agent License.	<ul style="list-style-type: none"> • Add Key is a shortcut to the licenses page where an appropriate key can be entered to provide Macrium Agent Licenses. Alternatively, if a copy of Macrium Reflect is installed on an Unlicensed computer and the computer status refreshed, it will change state to Connected.
Unauthorized	Mismatch between the passphrase on the Agent and Server	<ul style="list-style-type: none"> • Set Passphrase allows the passphrase for the selected agent to be updated to the one used installing the Agent. If the passphrase set on the server and the agent match, the computer will re-initialize and enter the Connected state.

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Agent State	Description	Additional Toolbar Buttons
Disconnected	The Site Manager agent is not connecting to the server	Agents in this state may not have an Agent installed or may be experiencing communications issues. To resolve this, the Agent can be installed by the Install Agent function or manually on the Agent computer. If the agent is already installed on the computer, see the Troubleshooting Agent Communications page for more details.
Error	The agent or computer has encountered an error which needs manual intervention	If a computer is in an error state, there will be a short description of the error as part of the status. For example Error: Failed to upgrade agent.

Computer Details

Each managed computer row can be expanded to show detailed information on the computer. To open or close the computer detail information, click the ? marker on the left hand side of the computer row. The information is divided into tabs, as follows:

Disks

The disks and partitions on the computer are shown here, to help in determining how and what to backup from this computer.

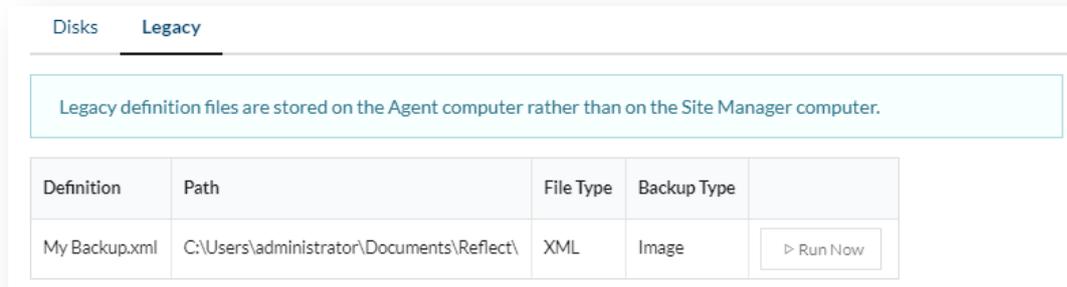
#	Volume	Type	FS	Used	Total
1	Recovery (NONE)	Primary	NTFS	315.4 MB	450.0 MB
2	NO NAME (NONE)	Primary	FAT32 (LBA)	23.5 MB	99.0 MB
3	(NONE)	Primary	Unformatted	16.0 MB	16.0 MB
4	(C)	Primary	NTFS	16.89 GB	19.45 GB

Legacy

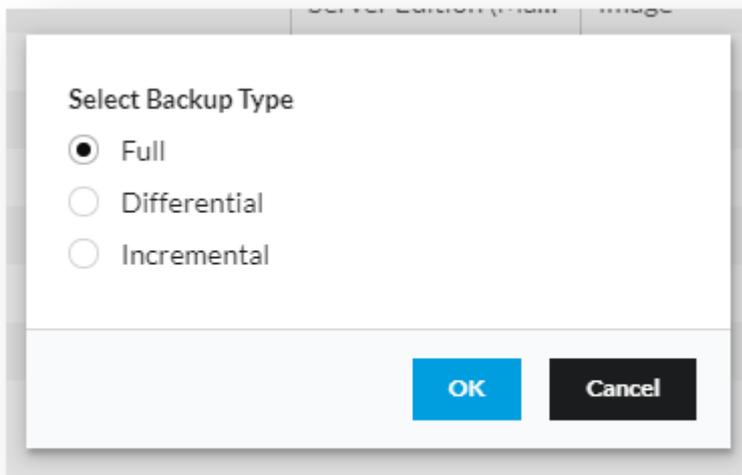
The legacy tab contains information from agents about standalone Macrium Reflect installations. This tab is included to help with the transition of backup scheduling from being locally scheduled on each computer to being centrally scheduled on the Site Manager.

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A list of .xml backup definitions and script files stored locally on the computer are listed here and may be run manually from Site Manager with the 'Run Now' option.



After pressing 'Run Now' a dialog will pop up to select the type of backup (Usually Full, Differential or Incremental but may have other options for different backup types) and confirm the backup:

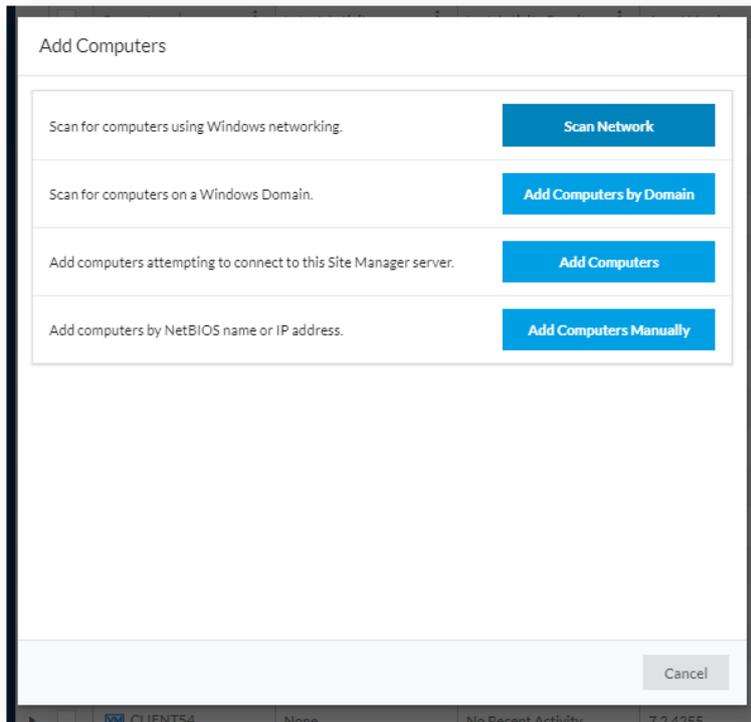


Adding a new computer to Site Manager

If there are any problems with adding computers, the [Troubleshooting Agent Communications](#) section has details of all ports, services and network requirements for adding agents to Site Manager.

Using the **Add** button on the toolbar in any tab of the computers view will display a list of methods to use to add computers to the Site Manager server.

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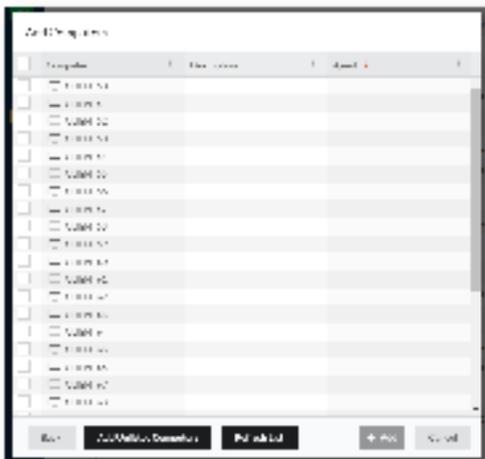


The different methods available are:

Scan Network

This mechanism runs a network search using Windows Networking. The results of this may vary depending on Windows version and network conditions.

Once the scan has completed, the following computer list is shown:

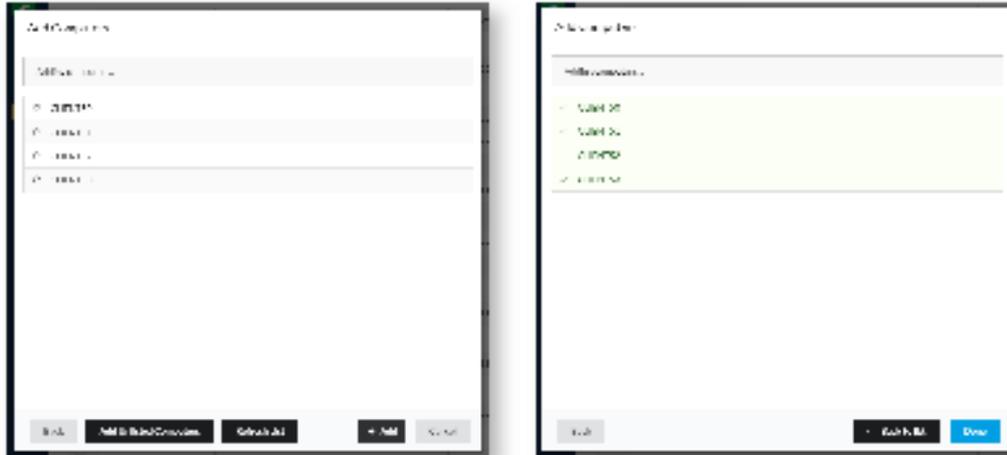


Columns may be filtered and sorted as in other Site Manager tables. To add computers, check the computer names to add and click the **+ Add** button.

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If the computers to be added are not listed, they can be added manually using the **Add Unlisted Computers** button or the network search repeated using the **Refresh List** button.

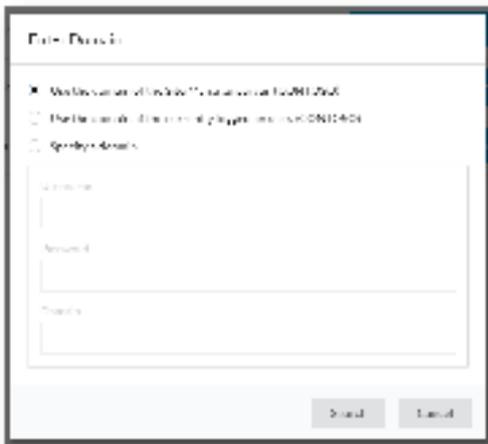
Once the computers have been selected, the dialog will show progress and the result of adding them:



The Site Manager Agent is not installed as part of the **Add Computers** dialog. If the Agent is not already installed on the added computers, it must be installed using the **Remote Install** feature below or manually before the newly added computers can be managed.

Add Computers by Domain

This option allows a Windows Active Directory domain to be queried for available computers. Selecting this option will bring up the following dialog to select the domain to query:



The domain can be determined by the domain the Site Manager user is joined to, the domain that the logged on user is part of or manual entry of a domain.

Once an option has been selected, the search is performed and the results are displayed as for the **Network Search** method above. The domain search will include computers which have domain accounts but currently offline.

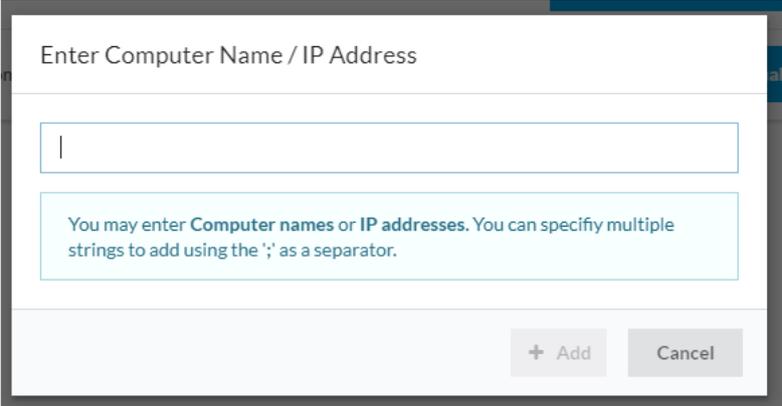
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Add Computers

If an Agent has been previously connected to this Site Manager server or has been manually configured to connect to this Site Manager server will notify the Site Manager server that they are attempting to connect to it. To see the list of Agents attempting to connect and add them, use this option.

Add Computers Manually

Computers can also be added manually by a list of NetBIOS or IP addresses. Computers added in this way are not validated and it is possible to add computers which don't exist to Site Manager.



Enter Computer Name / IP Address

You may enter **Computer names** or **IP addresses**. You can specify multiple strings to add using the ';' as a separator.

+ Add Cancel

i Adding Computer by IP Address

Site Manager requires the NetBIOS name of a computer to allow Agent communications. If a computer is added by IP Address, the Site Manager server will attempt to determine the name of the computer by reverse DNS lookup. If this does not work, the add operation will fail.

Installing the Site Manager Agent

Adding a computer to Site Manager will add the computer in the **Disconnected** state unless the computer has had the Site Manager Agent installed and configured to connect to this Site Manager Server.

This can be done remotely via the Site Manager user interface or manually by installing the Site Manager Agent MSI installer.

Installing the Agent via Remote Install

If Site Manager is on a domain or the appropriate steps have been follow, the Agent software can be remotely installed on the client to be managed. See [Troubleshooting Agent Communications](#) for a detailed guide to network and firewall requirements for this process.

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Steps to Remote Install

Installation Credentials

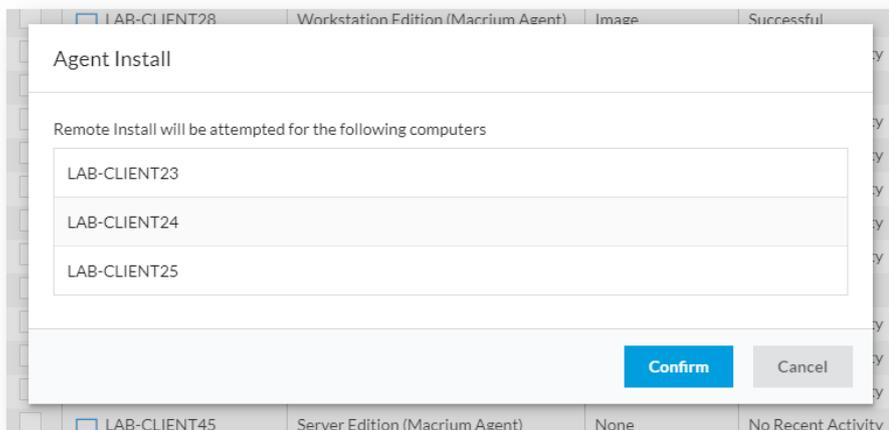
Administrator level access to the computer is required to install an Agent. If available, the credentials used to log in to Site Manager will be used. If Site Manager is configured to allow anonymous access, the installation process will prompt for credentials before attempting install.

Additional credentials may be configured in the **Settings** page.

- Select the computers to perform a remote install on. This can be in any tab.

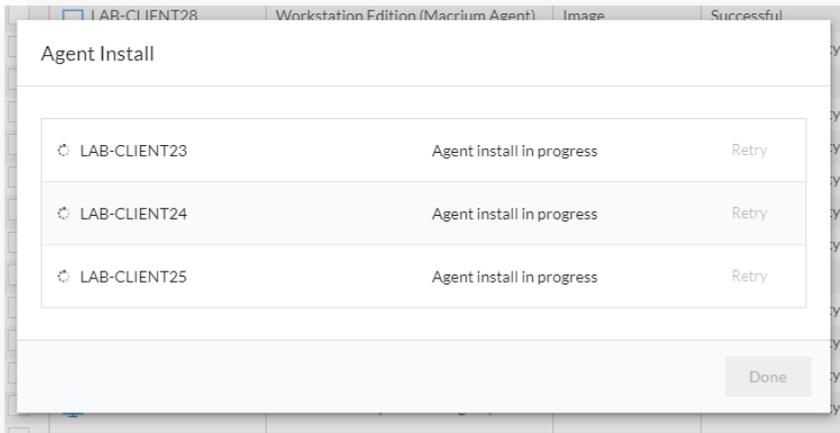
<input checked="" type="checkbox"/>	CLIENT3			None	No Recent Activity			 Disconnected
<input checked="" type="checkbox"/>	CLIENT4			None	No Recent Activity			 Disconnected
<input checked="" type="checkbox"/>	CLIENT6			None	No Recent Activity			 Disconnected

- Press the **Install Agent** button in the toolbar
- Select 'Confirm' in the dialog that pops up to attempt install or cancel to exit

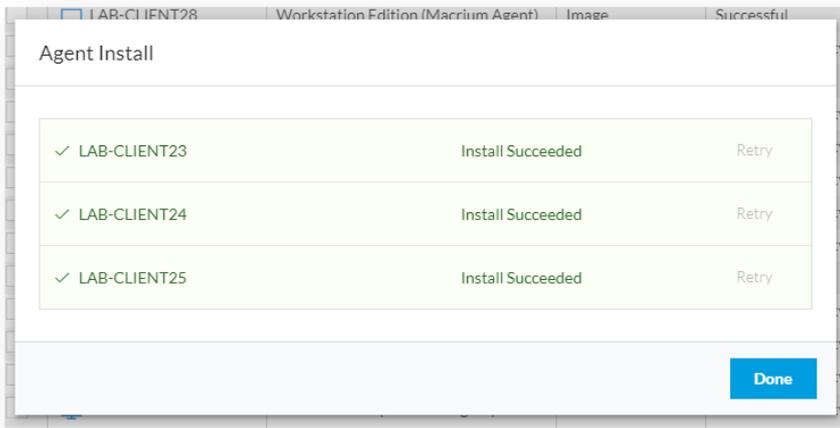


- Site Manager will attempt the install and show the status of each computer.

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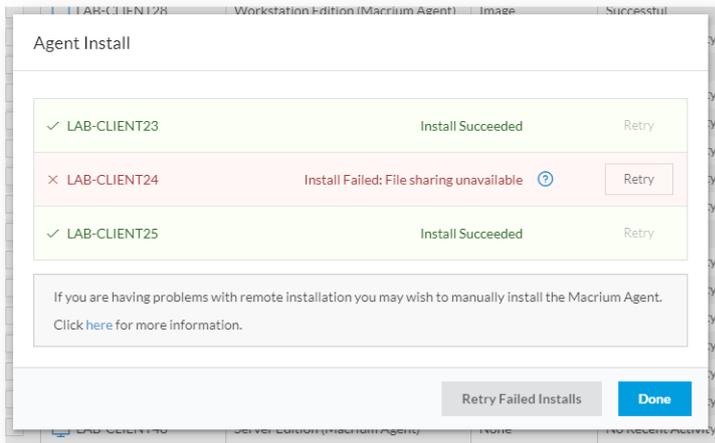
- Once each install has finished, the status will be displayed. If all computers succeeded then only 'Done' will be available



Problems with Remote Installation

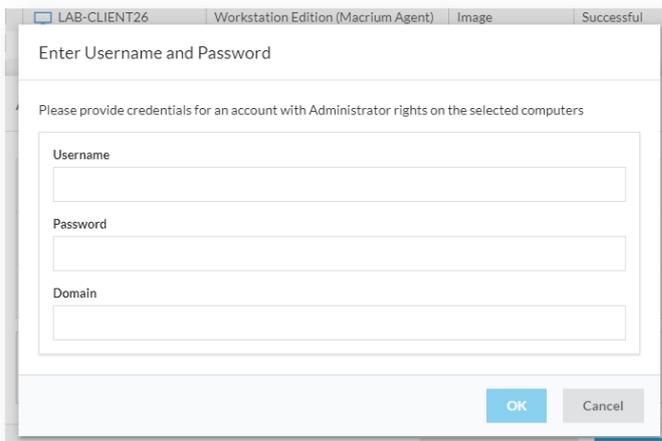
If there are any issues in installing the agent on any computer, this will be shown in the results:

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All failed installs can be retried simultaneously via the **Retry Failed Installs** button or on an individual computer basis by using the **Retry** buttons in the table next to the install status. Each failed computer has a help icon that can be clicked to provide detailed information about the failure.

If retrying the installation on a computer (or computers) which failed the install due to credential errors, Site Manager will prompt for new credentials:



Once new credentials have been entered and **OK** pressed, reinstallation will be attempted using the new credentials.

Other possible errors are:

Install Error	Description	Recommended Action
No Credentials Available	The installation cannot proceed because there are no cached credentials to try. This only occurs when attempting the install when the Management Console is set to allow anonymous login and the password prompt is cancelled on attempting the install	Retry the install and enter credentials when prompted

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Install Error	Description	Recommended Action
Credentials Rejected	<p>None of the entered or cached credentials were accepted by the computer as valid.</p> <div style="border: 1px solid gray; padding: 10px; margin-top: 10px;">  This may occur if the computer is not part of a domain and the computer is configured to only allow unelevated access remotely. See Remote Agent Prerequisites for more information </div>	<p>Retry the install with different credentials or attempt a manual installation.</p>
Remote Install Not Available	<p>The install process connected to the WMI server successfully, but the WMI installer component is not installed. This typically occurs on Windows XP machines as later editions have this component installed automatically. See Remote Agent Prerequisites for more information.</p>	<p>Install the Remote Installer WMI component on the remote machine and try again.</p>
WMI Not Available	<p>Could not find a WMI process to connect to. Either the computer is offline, not a Windows machine or WMI remote access is blocked for security reasons</p>	<p>Check the computer status and try again or manually install the agent.</p>
Operating System too old	<p>The computer connected but is below the Windows version required for the Agent.</p>	<p>Upgrade the OS on the computer or use a different computer.</p>
Installer Error - 1234	<p>The installer ran, but returned an error code and was not successful. The number in place of <i>1234</i> is the code from the installer</p>	<p>Contact Macrium support or try a manual install.</p>
Install Failed	<p>A general failure in installation.</p>	<p>Retry the install or contact Macrium support.</p>
Computer not present on network	<p>The computer name could not be resolved to an IP address by either DNS lookup or LLMNR broadcast.</p>	<p>Check that the computer is present on the network and that DNS is correctly configured</p>
File sharing unavailable	<p>The computer IP address could be lookup up, but an attempt to connect to the Windows administrative share failed (\\computername\admin\$)</p>	

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Install Error	Description	Recommended Action
		Check that the computer is present on the network and that Windows share traffic is not blocked

Installing the Agent Manually

If Remote Install is not available, the Agent can be installed manually. See [Agent Manual Install](#) for more details.

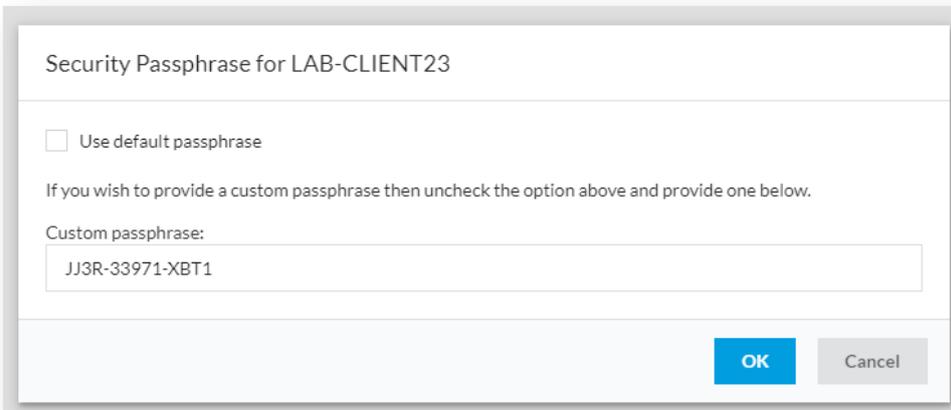
Adding Computers With Agents Preinstalled

When a Site Manager Agent is installed, it is configured with the information required to access the Site Manager server. This is provided automatically when the Agent is installed via the Site Manager **Install Agent** function or manually if the Agent has been installed via MSI installer file. If the Agent is properly configured, it will enter the **Connected** state automatically when added to Site Manager. If the Agent has been configured with the incorrect details (or details for another Site Manager server), the agent must be reconfigured by either reinstalling the Agent via the **Install Agent** function or running the Agent Configuration Tool on the Agent itself.

If the Site Manager has been configured with a different security passphrase than the one configured in the Security Settings page of the Site Manager server, it will enter the **Unauthorized** state.

To fix this and manage the agent, you can set the correct passphrase on the Agent using the Agent Configuration Tool, reinstall the Agent (remotely or manually) which will reset the passphrase, or supply the old passphrase in Site Manager. When this is done, Site Manager will connect to the agent using the old passphrase and update the passphrase to the appropriate one for the current installation.

To set the passphrase, select the computer in the **Unauthorized** tab by checking the appropriate box in the computers list and press the **Set Passphrase** button. This will open the passphrase editing dialog:



Security Passphrase for LAB-CLIENT23

Use default passphrase

If you wish to provide a custom passphrase then uncheck the option above and provide one below.

Custom passphrase:

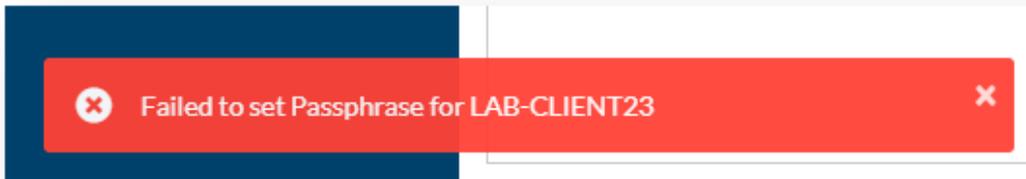
JJ3R-33971-XBT1

OK Cancel

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To set a passphrase, uncheck the **Use default passphrase** box and enter the passphrase in the box. Press OK to apply the passphrase.

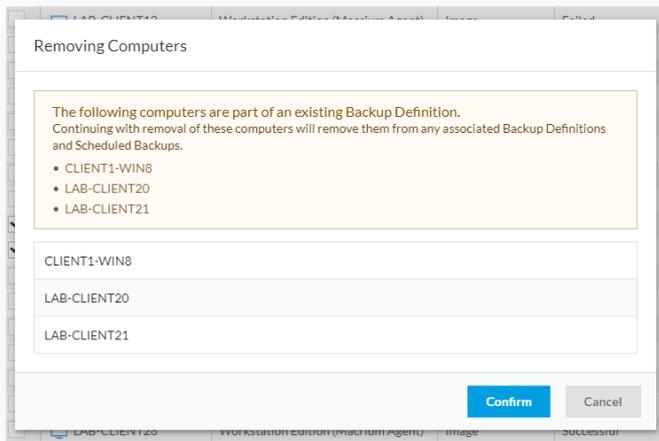
If the passphrase is correct, the computer will connect and enter the **Managed** state. If it is incorrect an error will be shown:



Removing Clients from Site Manager

To remove computers from Site Manager, select the computers to remove from any tab via the checkboxes and press the **Remove** button in the toolbar:

This will bring up a confirmation dialog box, including information of any computers which are part of currently scheduled backups or Backup Definitions:



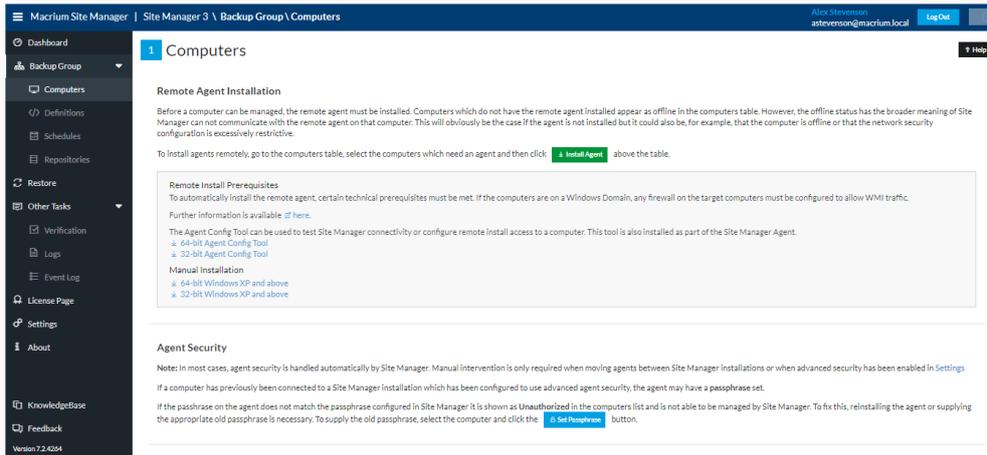
To remove these computers, press **Confirm**.

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Running the Installer

If your network is not part of a Windows domain or if you are unable to remotely install the Macrium Remote Agent then you can manually install the agent on the remote computer.

The agent MSI installer can be downloaded via the Site Manager interface - the wizard mode (shown automatically if no computers have been added to the console or via the wizard button in the upper right) has links to the .msi files for installing agents as shown below:

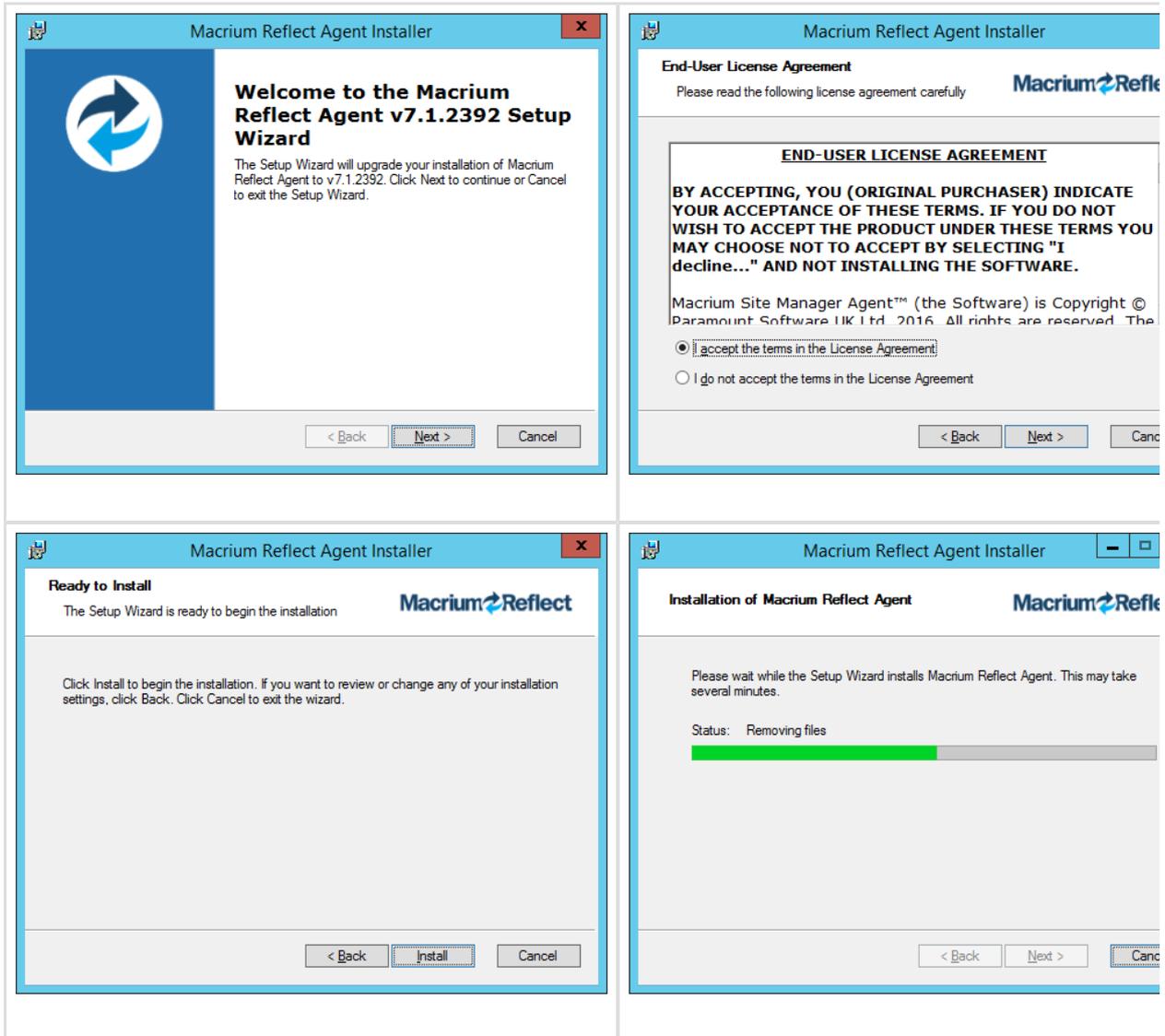


Alternatively the agent .msi installer can be found on the Site Manager server in folder: **C:\Program Files\Macrium\SiteManager\AgentFiles**



Copy either '**macrium_agent_x64.msi**' (64 Bit) or '**macrium_agent_x86.msi**' (32 Bit) to the client PC and run by **double clicking** in Windows Explorer.

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Once the install has completed, the Agent Configuration Tool will automatically run to configure the Agent's connection to the Site Manager server. See [Troubleshooting Agent Communications](#) for more details.

The connection to the Agent can be automatically configured in the MSI installer by using the MSI command line switches described in [Deploying Site Manager Agents Using SCCM](#)

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Setup - Backup Definitions

A **Backup Definition** contains the data needed to perform a backup on a set of computers. Each definition contains settings for the following information:

- A list of computers which should be backed up.
- A set of rules describing which partitions and disks to backup on each computer
- A set of options and settings controlling how the backup files should be created and stored.

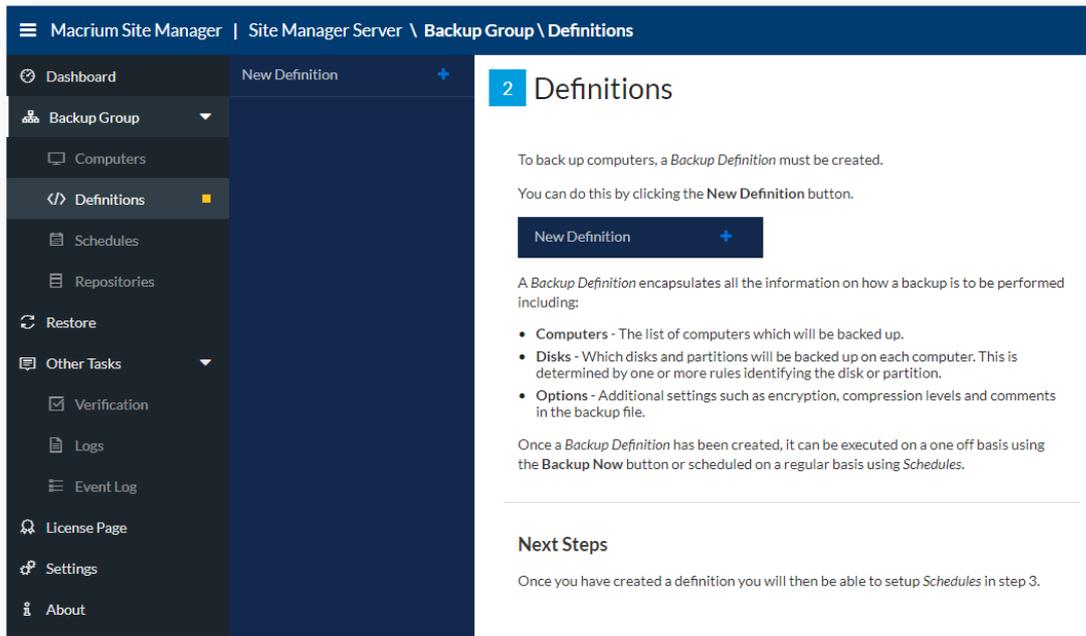
Backup Definitions contain all the information on *how* and *what* to backup. A Backup Definition can be run manually to perform a single backup of each computer or used to schedule regular backups into a **Repository**

- Creating a Backup Definition
 - Step 1 - Computers
 - Step 2 - Disks
 - Step 3 - Options
- Backup Definition Operations
 - Deleting a Backup Definition
 - Copying a Backup Definition
 - Editing a Backup Definition
 - Running a Backup Definition Manually
 - Running Backups Automatically on a Schedule

Creating a Backup Definition

The '**Backup Definition**' section option in Site Manager contains the list of existing Backup Definitions. If there are no Backup Definitions created, a quick help page is shown instead:

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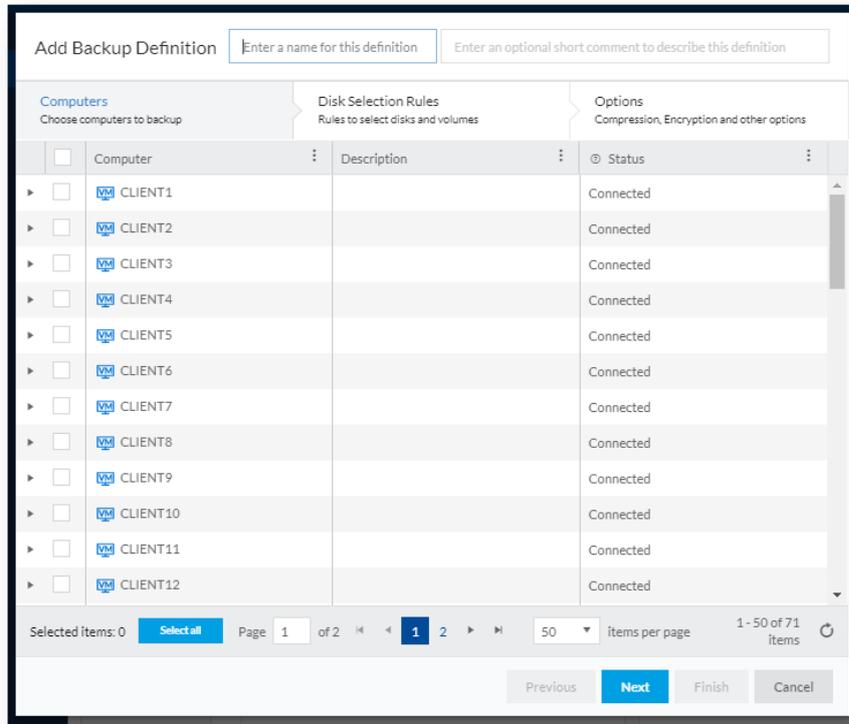


Clicking on '**New Definition**' will open the Backup Definition wizard. To create a Backup Definition, a name must be entered for the Backup Definition in the top of the wizard and all wizard steps completed. An optional description may also be entered.

The steps of the wizard are:

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Step 1 - Computers

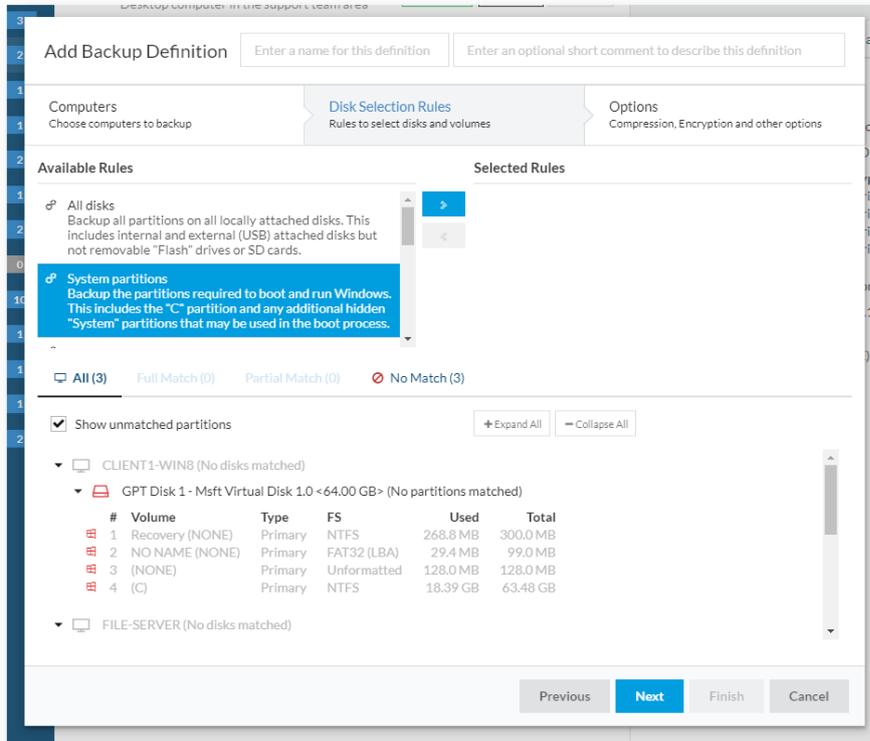


This stage lists available computers to be part of the Backup Definition. Once the computers required have been selected, press **'Next'** to advance to the next step.



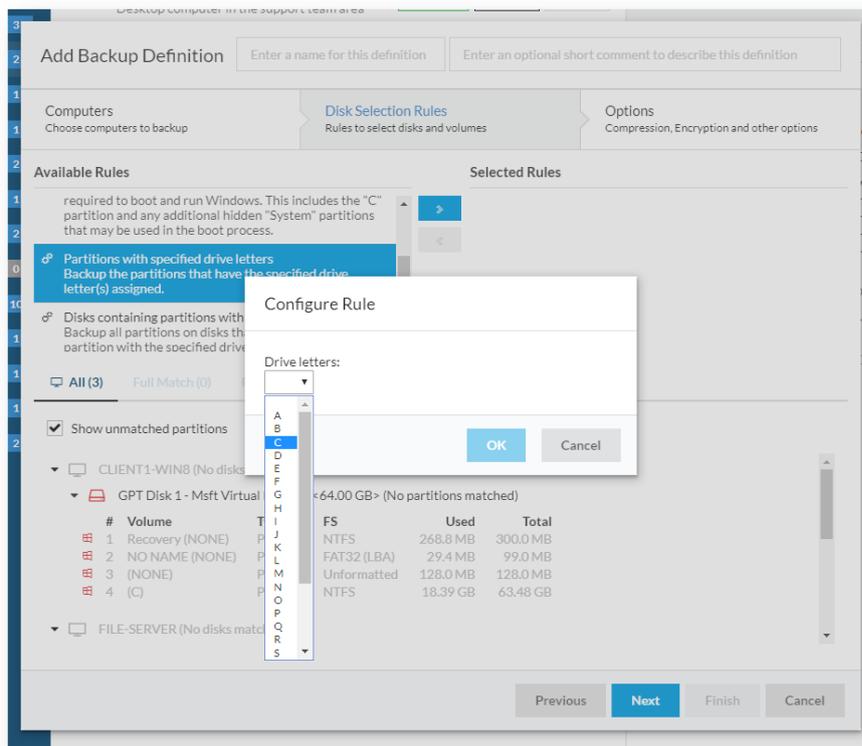
Columns can be filtered and sorted in the computer list to aid in finding the right computers. If there are large numbers of computers they will be split into multiple pages.

Step 2 - Disks



In this stage, rules are defined to determine which disks and partitions will be backed up as part of this Backup Definition. A set of rules are available on the left hand side of the screen. To use a rule, select it and press the '>' button to move it to the right hand side of the list. Some rules have additional configuration such as a volume label or drive letter to match. In this case, a dialog box will pop up when adding the rule as seen below:

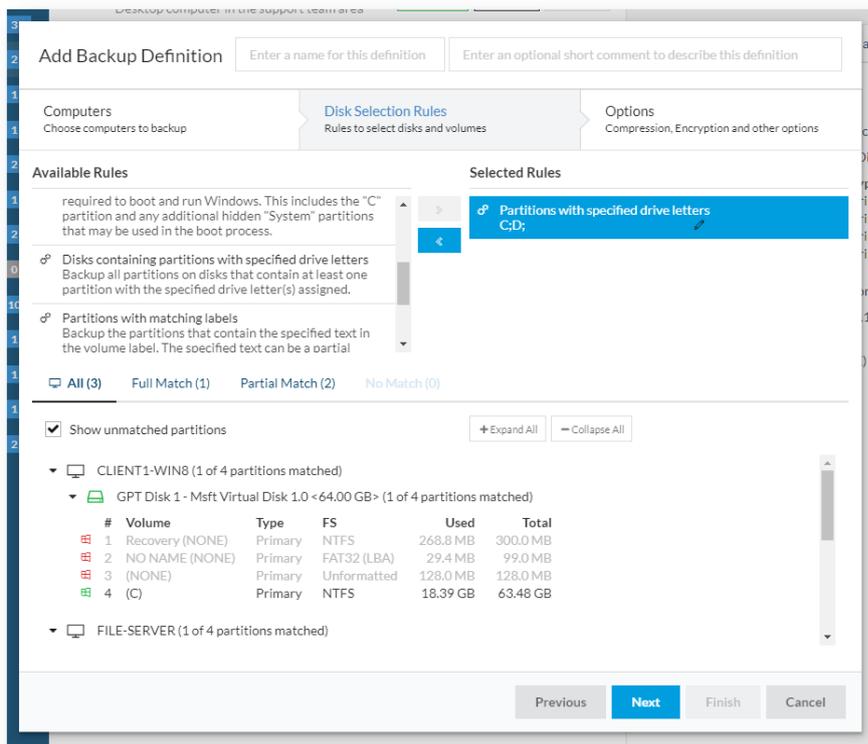
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Once rules have been added, they are listed in the right hand pane of the interface. If a rule has additional configuration, it can be reconfigured by pressing the pencil icon on the right of the rule name. A rule may be removed by clicking it to select and clicking the '<' button.

The area below the rule lists shows the disks and partitions of the selected computers and whether they match the selected rules. In the example below, a single partition on the computer shown matches:

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i The disk matching information can be filtered to show matching partitions/disks or non-matching ones only. This can help identify any gaps in rules.

For simple operation, there is an '**All Disks**' rule which will match everything on all computers.

i Exclude Rules

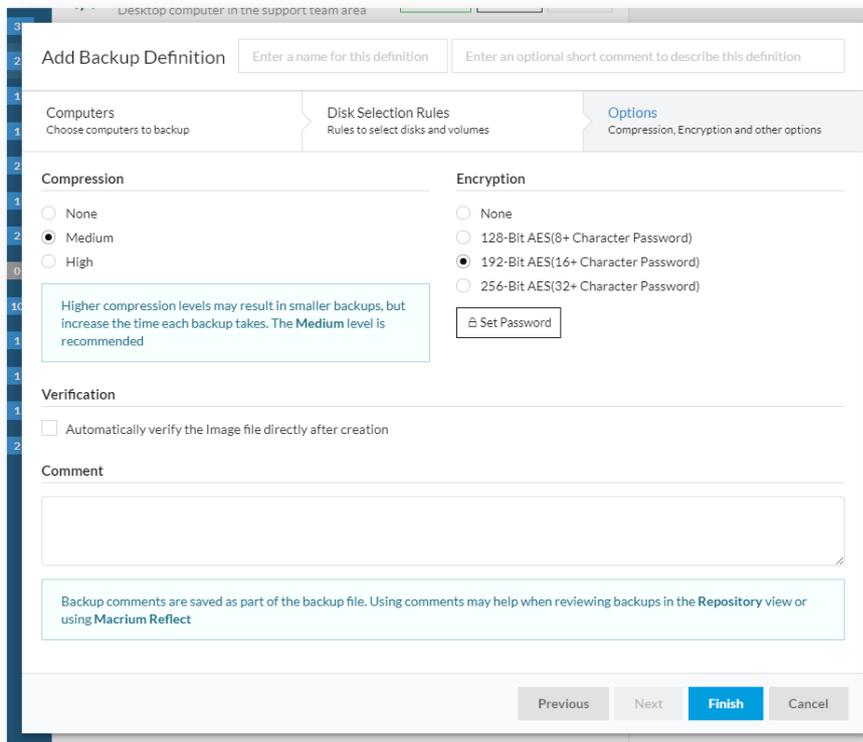
There are exclusion rules as well as inclusion rules - the exclusion rules make it easier to backup all data except those meeting the criteria. For example, if there are multiple computers in the definition, each with a number of partitions and drive letters which need to be backed up without backing up the Windows partitions, this can be achieved using an exclusion rule. Exclusion rules work in the following way:

- Exclude rules override include rules - a definition with an include rule for system drives plus an exclude rule for the C: partition will backup system partitions except for the C: partition.
- If there are only exclude rules, all partitions are included except for those specified by the exclude rule - a definition with just an exclude rule for C: and D: partitions will backup all other partitions.

Once rules are configured, press next to move to the next step.

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Step 3 - Options

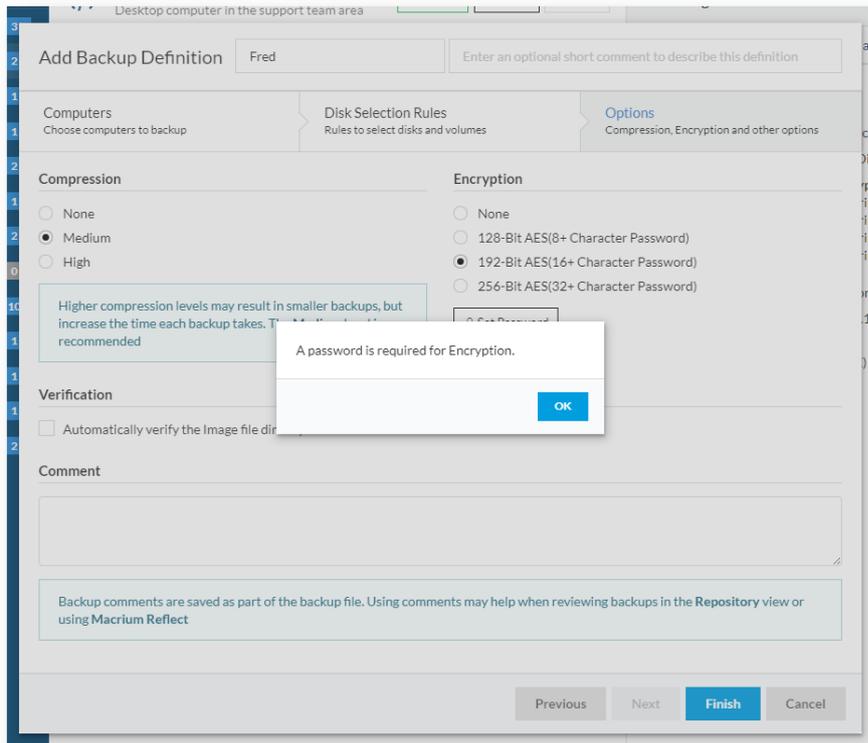


In step 3, options for how the backup files are created are set.

Backup Option	Description
Compression	The level of compression to use in any backup files created when using this Backup Definition. The default level is 'Medium' .
Encryption	The type of encryption to use on any backup files created from this Backup Definition. If AES encryption is used, a password must be entered using the 'Set Password' button.
Verification	If this option is selected, backup files will be reread and verified immediately after creation.
Comment	If a comment is entered here it will be saved as part of any backup files created and be visible to any restore tools.

Once the options are set appropriately, press finish to complete the wizard and save the Backup Definition. If there are any errors or issues with saving the Backup Definition, the wizard will not close and an error message will be displayed:

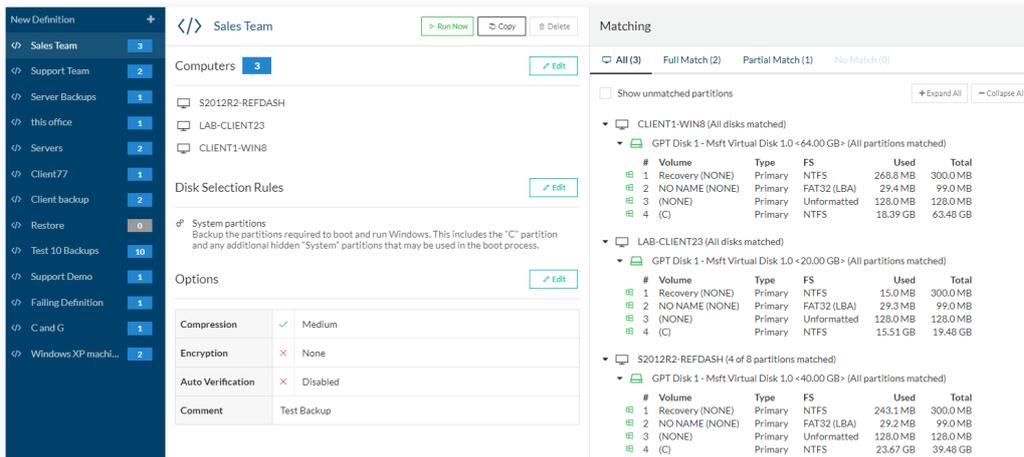
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Once the error message has been corrected, the issue can be fixed in the wizard. If appropriate any affected fields will be highlighted in red.

Backup Definition Operations

Once Backup Definitions have been created, they are shown in a list as below:



The selected Backup Definition can be changed by clicking on the list of names in the left-hand column. Once a Backup Definition has been selected, the configuration of that Definition is shown. Several operations can be performed on this Definition.

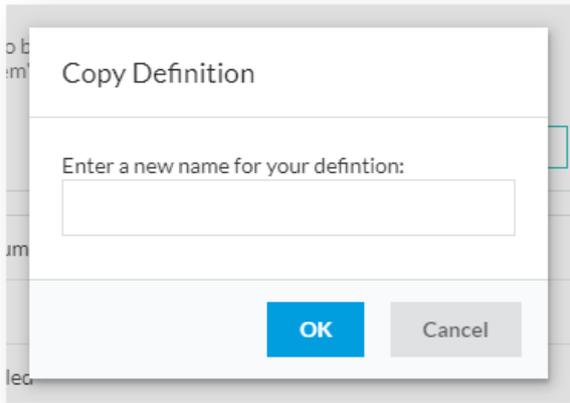
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Deleting a Backup Definition

Clicking the **Delete** button to the right of the definition name will delete the selected Backup Definition.

Copying a Backup Definition

Clicking the **Copy** button to the right of the definition name will copy the selected Backup Definition to a new Definition which can then be edited. This is useful for creating multiple Definitions with only minor differences. The new Definition must be given a new name:



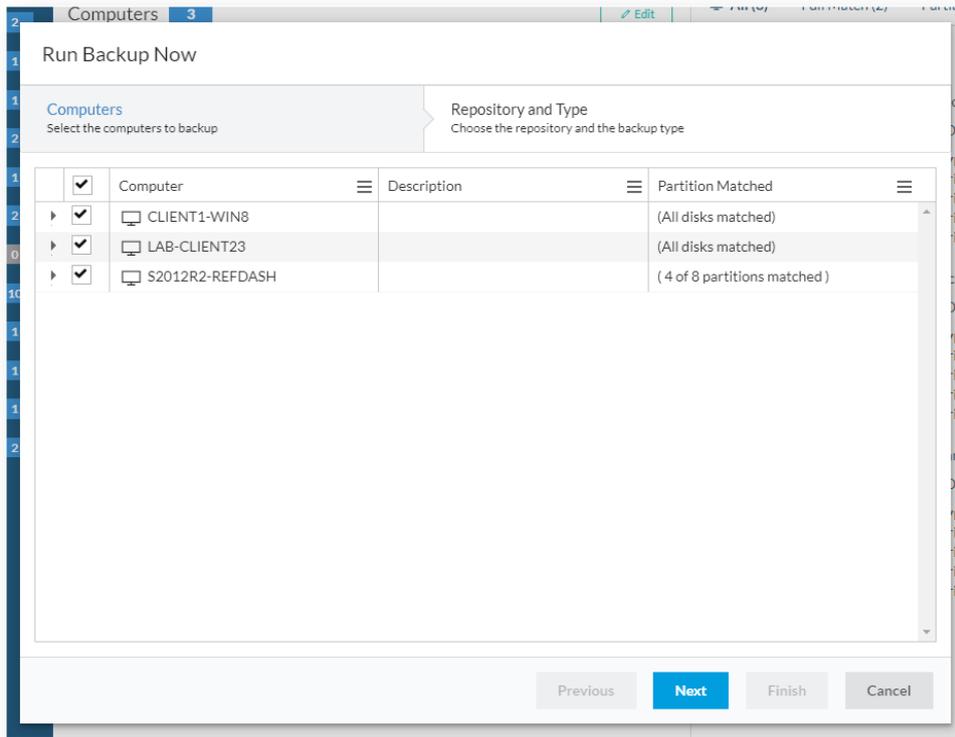
Editing a Backup Definition

Editing a Backup Definition is possible by clicking any of the **Edit** buttons in the page. Each button will open the Backup Definition wizard at the appropriate wizard step. This is the same process used in creating a Backup Definition except the wizard will be pre-populated with data from the selected Definition. When editing a Backup Definition the **Finish** button may be pressed at any stage and not just the final one.

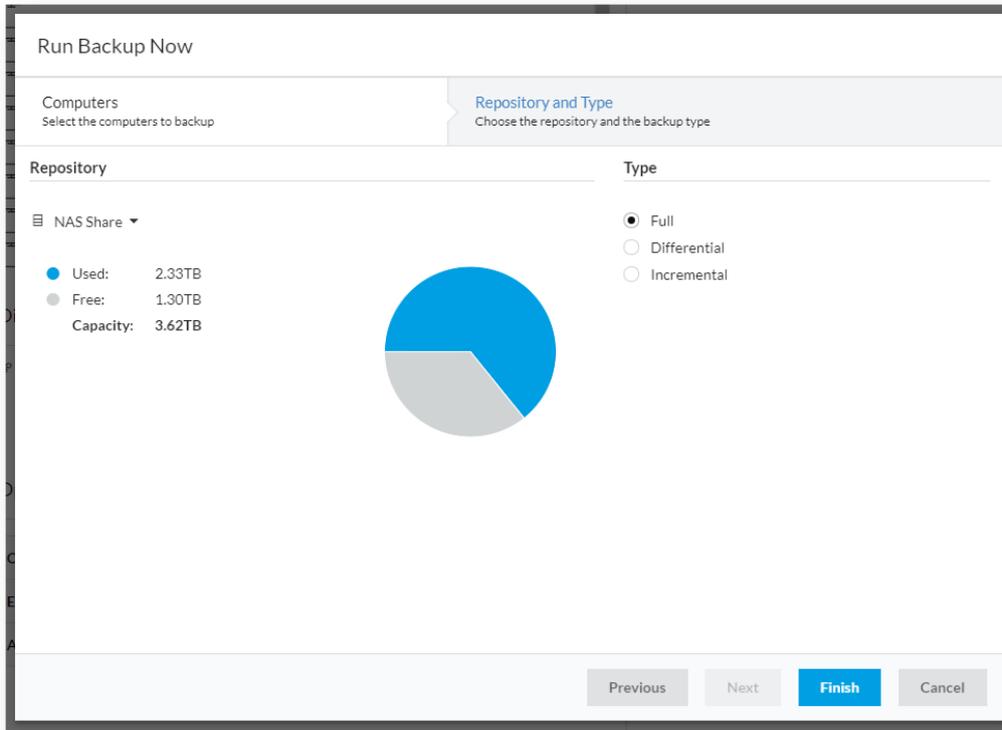
Running a Backup Definition Manually

To run a Backup Definition on a one-off basis, the **Run Now** button can be clicked. This opens a wizard to allow the computers to backup, type of backup and backup destination to be chosen:

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The first stage of the wizard allows computers to be selected. If only a subset of computers in the Backup Definition are to be backed up, they can be selected here.



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The second stage of the wizard allows a Repository to be selected to store the backup files made. This must be a Repository which has been created in the Repositories section of Site Manager. More information is available [here](#).

Additionally, the type of backup should be selected. This may be Full, Differential or Incremental. Once these have been selected, pressing '**Finish**' will perform the backup on the selected computers.

Backup Types

If a Differential or Incremental backup is selected without a corresponding Full backup in the Repository to base the Differential or Incremental backup on, the computer will perform a Full backup instead.

Running Backups Automatically on a Schedule

To perform automated backups according to a schedule, The Backup Definition can be scheduled to run in a Repository according to a Schedule. More information is available [here](#).

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Setup - Schedules

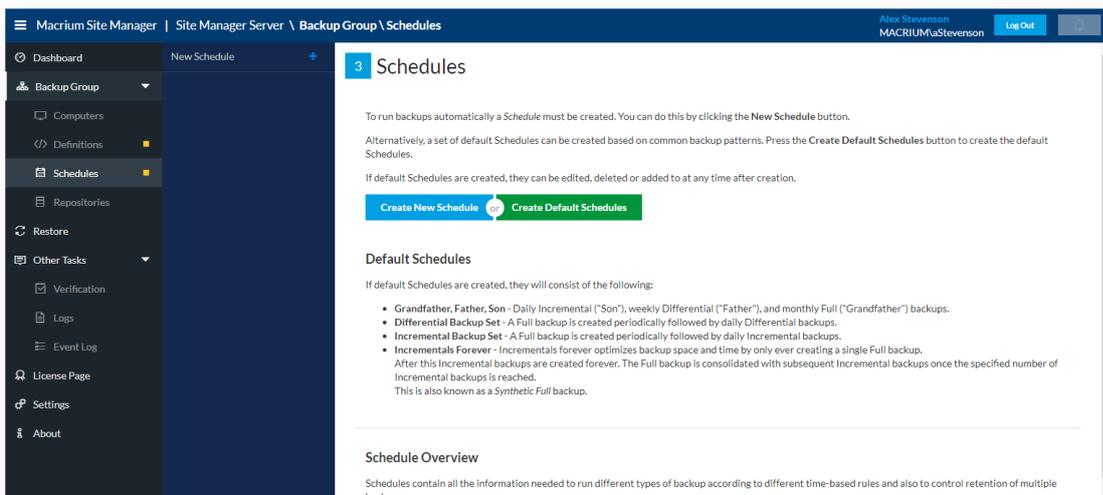
- Overview
- Default Schedules
- Creating a Schedule
 - Step 1 - Triggers
 - Step 2 - Retention Rules
 - Step 3 - Options
 - Finalizing the Schedule
- Editing and Deleting Schedules
- Copying Schedules

Overview

A **Schedule** contains information on when backups are to be performed and how long each backup is to be kept. The data in a Schedule includes:

- Triggers which define when backups should be taken and what type of backup (Full, Differential, Incremental)
- Retention rules describing how long or how many backups should be kept before old backups are removed.
- Options for advanced behaviors of how retention rules should be applied

To work with Schedules, visit the Schedules page of the Management Console by clicking the '**Schedules**' link under the '**Setup**' heading. On the initial visit to the Schedules page, or if all Schedules are deleted, the page will show some general help and information on Schedules:



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Default Schedules

On the initial guidance page for Schedules, there is an option to create a set of default Schedules. These defaults can be edited and modified once created to provide the exact scheduling required. The defaults created are:

- **Grandfather, Father, Son** - Daily Incremental ("Son"), weekly Differential ("Father"), and monthly Full ("Grandfather") backups.
- **Differential Backup Set** - A Full backup is created periodically followed by daily Differential backups.
- **Incremental Backup Set** - A Full backup is created periodically followed by daily Incremental backups.
- **Incrementals Forever** - Incrementals forever optimizes backup space and time by only ever creating a single Full backup.

After this Incremental backups are created ad infinitum. The Full backup is consolidated with subsequent Incremental backups once the specified number of Incremental backups is reached.

This is also known as a Synthetic Full backup.

Creating a Schedule

To create a new Schedule, click the **'New Schedule'** button in the upper left of the interface. This opens the Schedule creation wizard:

The screenshot shows the 'Add Schedule' wizard interface. At the top, there are two input fields: 'Enter a name for this schedule' and 'Enter an optional description'. Below these are three tabs: 'Triggers' (active), 'Retention Rules', and 'Options'. The 'Triggers' tab contains a message: 'No triggers associated with the selected schedule. To create a new trigger press New trigger'. A '+ New Trigger' button is located at the bottom left of the Triggers section. At the bottom of the wizard are four buttons: 'Previous', 'Next', 'Finish', and 'Cancel'.

Each Schedule must have a name set in the box at the top. An additional description may be included.

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Step 1 - Triggers

The first stage of the wizard is to define the triggers for when backups are to be run. To create a new trigger, press the **'New Trigger'** button. This opens a dialog box as seen below:

The Add Trigger dialog has a number of options for creating the trigger. These are:

Option	Description
Operation	<p>Which type of backup to perform when this trigger initiates a backup. May be Full, Differential or Incremental.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> If a trigger fires for an Incremental or Differential backup, but no Full backup exists in the repository to base the Differential or Incremental backup on, the backup is automatically converted to a Full backup.</p> </div>
Start Time	The time of day the backup operation will occur. If a backup is delayed because another backup is running, the backup will run as soon as able.
Start Date	The date when the trigger starts. The trigger will not initiate a backup before this date. This is useful to ensure that complex rules start at the right time. For example, making sure a trigger for an Incremental backup on Tuesdays doesn't occur before a Full backup trigger on Fridays.

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Option	Description
Trigger Type	<p>The type of trigger - the options are listed below in the 'Trigger Details' section.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> When triggers occur at the same time, only one backup is taken, with the more thorough backup taking precedence (Full over Differential, Differential over Incremental). For example: given a weekly Full backup trigger which occurs at 10:00 PM and a daily Incremental backup trigger at the same time, the Full backup will take precedence and run. This allows for simpler trigger creation - for example a weekly and daily trigger which overlap rather than two weekly triggers, one for one day and the other for all other days of the week.</p> </div>
Trigger Details	<p>The panel changes depending on the trigger type.</p> <ul style="list-style-type: none"> • Daily - Interval (every nth day) • Weekly - Interval (every nth week) and Active Days (Monday, Weekends etc) • Monthly (by Date) - Active Days (the day number(s) in the month - 1st to 31st) and Active Months (which months of the year the trigger is active during) • Monthly (by Day) - Week of the month (which week number, 1st to 4th or last the active days entry applies to), Active Days (the day(s) of the week the trigger will fire on) and Active Months (which months of the year the trigger is active during)

Once the trigger data is correct, press '**OK**' to save the trigger. The trigger will then be displayed in the trigger list:

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Add Schedule

Enter a name for this schedule | Enter an optional description

Triggers (Configure Triggers) | **Retention Rules** (Configure Retention rules) | **Options** (Configure Options for Backups)

Full	At 09:00 on Monday in the first week of every month, starting 04/02/2019	Edit	Delete
Differential	At 09:00 on Monday every week, starting 04/02/2019	Edit	Delete
Incremental	At 09:00 on weekdays every week, starting 04/02/2019	Edit	Delete

+ New Trigger

Previous | **Next** | Finish | Cancel

Each trigger listed has an '**Edit**' button to re-open the trigger creation dialog to edit the trigger and a '**Delete**' button to remove the trigger.

Once triggers have been created, press the '**Next**' button to continue to step 2. There must be at least one trigger to proceed.

Step 2 - Retention Rules

Retention rules govern how long backups are kept in the repository before being deleted to conserve space. The retention rules step appears as follows:

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The **'Rules'** section contains the retention rules for each backup type. If the checkbox next to each rule is checked, if there are any backups older than the time period or count of backups specified in the dropdown boxes.

 If the **Retention Rule** for a given backup type is unchecked, those backups are kept forever unless manually deleted from the repository.

 **Retention rules** are applied on a per-computer basis. If a retention rule is configured to keep 10 Full backups, the rule will keep 10 Full backups per computer in the backup plan.

The **'Options'** section contains options for additional and fine control over the way retention rules are applied. Options available are:

Option	Description
Create a Synthetic Full Backup if possible	If this options is checked, Instead of deleting Incremental backup files once they have reached the limit of retention, they are merged into the Full backup they are based on, creating a new Full backup containing all the data up to the merge point

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Option	Description
	<p>This option only applies to backup plans such as 'Incrementals Forever' where a single Full backup is followed by frequent Incremental backups. The retention rule for Incremental backups must be enabled and set to 'Backups' mode for this option to become available.</p>
<p>Run the purge before backup</p>	<p>This option applies retention rules and deletes any files according to retention rules before the backup starts.</p> <p>i This keeps repository space usage lower but may result in fewer retained backups when new backups fail</p>

Step 3 - Options

Options control how backups are scheduled and what actions are taken on failure. The interface appears as below:

The screenshot shows the 'Options' configuration window for a backup schedule. At the top, the schedule is named 'Grandfather, Father, Son' and is set to 'Daily Incremental, Weekly Differential and Monthly Full Backup'. The 'Options' tab is selected, showing settings for 'Offline Computers' and 'Failed backups'. In the 'Offline Computers' section, 'Defer backups until computer is online' is selected. In the 'Failed backups' section, 'Retry backups which fail' is checked, with 'Backups should be attempted up to 2 times' and 'Allow 10 minutes between attempts of failed backups'. Navigation buttons 'Previous', 'Next', 'Finish', and 'Cancel' are at the bottom.

The available options are:

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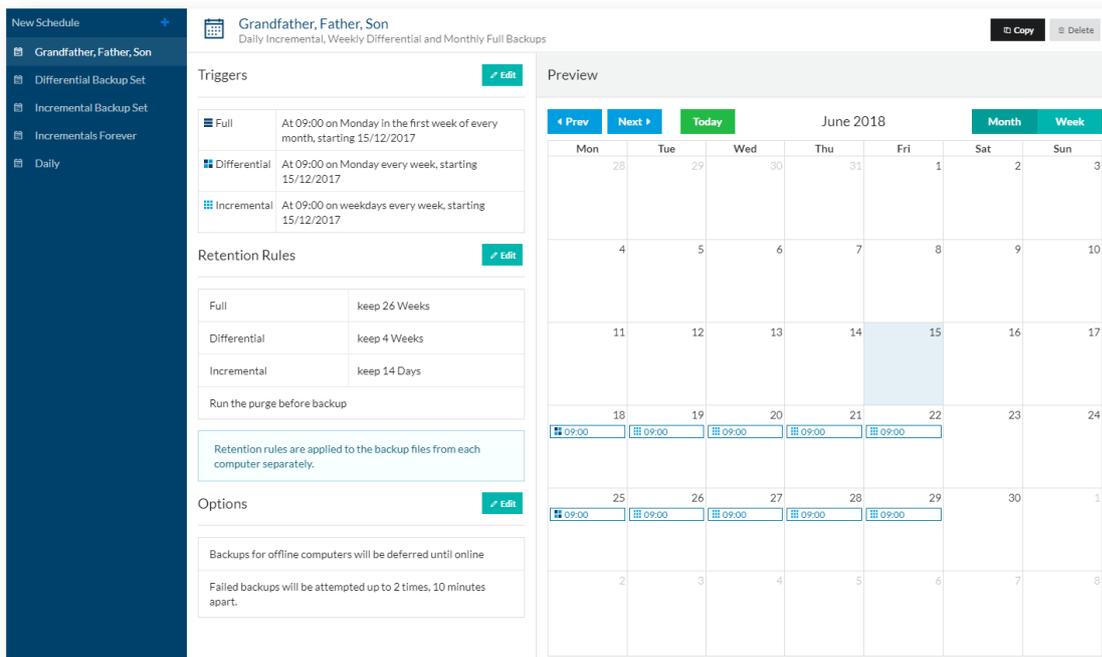
Option	Description
Defer backups until computer is online	If this option is selected, scheduled backups cannot be performed because a computer is offline will be performed when the computer comes back online. If the option is unchecked, scheduled backups will fail if the computer is offline
Send Wake On LAN message before backup	If this option is selected, Site Manager will attempt to use Wake On LAN to wake offline computers before starting a backup. If Wake On LAN attempts fail, it will behave as the "Fail backups for offline computers" option Additionally, UDP port, number of wake attempts and time between attempts can be set.
Fail backups for offline computers	If this option is selected, backups will be failed if the computer is offline and the computer will not perform a backup until the next trigger time or next retry time as set below.
Retry backups which fail	If a backup attempt fails, it can be retried up to the number of times specified here
Allow X minutes between attempts of failed backups	The time between each attempt which Site Manager will wait. May be set to between 2 and 120 minutes. Backups of other computers may occur between the retries.

Finalizing the Schedule

Once the options have been set appropriately, press '**Finish**' to save the Schedule.

Once the Schedule is saved, the Management Console will display the Schedule list with the newly created Schedule selected:

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Editing and Deleting Schedules

Once a Schedule has been created, it can be edited by selecting the '**Edit**' button in the top right. This will reopen the Schedule wizard and allow the Schedule to be edited. In addition, the retention rules panel has an edit button which can be pressed to open the Schedule for editing and jump to the retention rules section.

Deleting Schedules

Deleting a Schedule may fail if that Schedule is being used to schedule backups in a Repository. In this case, deleting the Schedule will require those scheduled backups to be removed or changed to use a different Schedule first.

The triggers may be edited directly by using the pencil icon on each trigger's display in the view. They can also be deleted with the delete icon and new triggers can be created with the '**New Trigger**' button. Creating and editing triggers this way launches the dialog box for triggers and not the whole Schedule wizard:

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Edit Trigger

Operation

Full

Differential

Incremental

Start Date 04/02/2019

Type

Daily

Weekly

Monthly (by date)

Monthly (by day)

Start Time 9:00

Interval 1

Active Days

Monday Tuesday Wednesday Thursday Friday

Saturday Sunday

OK Cancel

Copying Schedules

An existing Schedule can be copied to a new Schedule to make creating Schedules which are almost the same simpler. Pressing the **'Copy'** button on the top right of the interface will prompt for a name for the copy of the selected Schedule.

Copy Schedule

Enter a new name for your schedule:

OK Cancel

Selecting OK will copy the Schedule.

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Setup - Repositories

- Introduction
- Adding a Repository
 - Network Share Repository
 - Amazon AWS Storage Gateway
 - Azure Storage Account
 - Local Repository
 - Adding a new Repository - Final Steps
- Viewing Repository Information
- Scheduling Backups
- Synchronizing a Repository with a Remote Server

Introduction

Repositories are required in order to use the central backup scheduling and queuing facilities in Site Manager. Once a repository has been set up, a Backup Definition can be configured to back up to the Repository according to a Schedule.

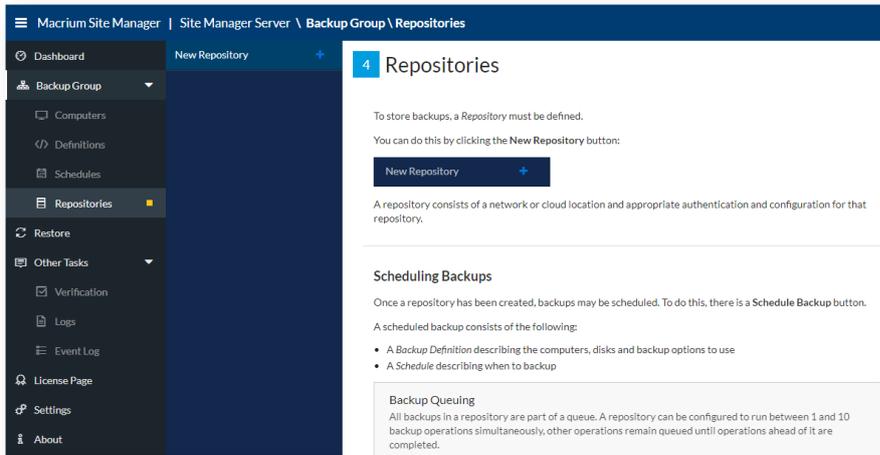
A repository is a storage location with a standardized folder layout and some tracking information. Each repository contains backup information such as, storage location, network access information, credentials required to access the resource and other basic storage management.

The following types of Repository backend are available:

- **Network Share** - Any Windows or SMB network share may be used as Repository storage
- **Amazon AWS Storage Gateway** - if an AWS Storage Gateway is available, it can be used as a Repository backend.
- **Azure Storage Account** - if Azure storage is exposed as an SMB share in Azure, it can be used as a Repository directly.
- **Local Repository** - Storage which is directly attached to a managed computer can be used as a Repository

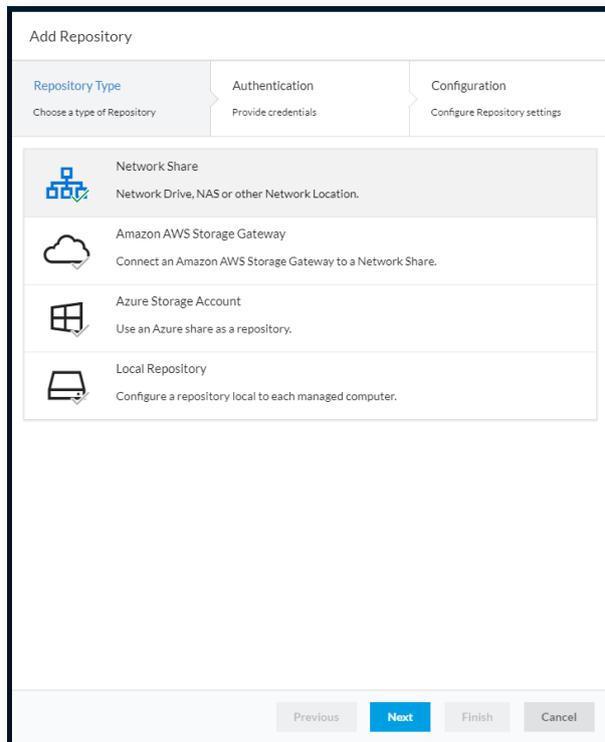
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Adding a Repository



Repositories are managed by selecting the '**Repositories**' link from the main interface under the '**Setup**' main category. Initially the **Repository** interface will have no saved repositories and show some quick help notes.

To create a new Repository, click the '**New Repository**' link in the upper left, as seen in the image above. This will display the 'Add Repository' wizard shown below:



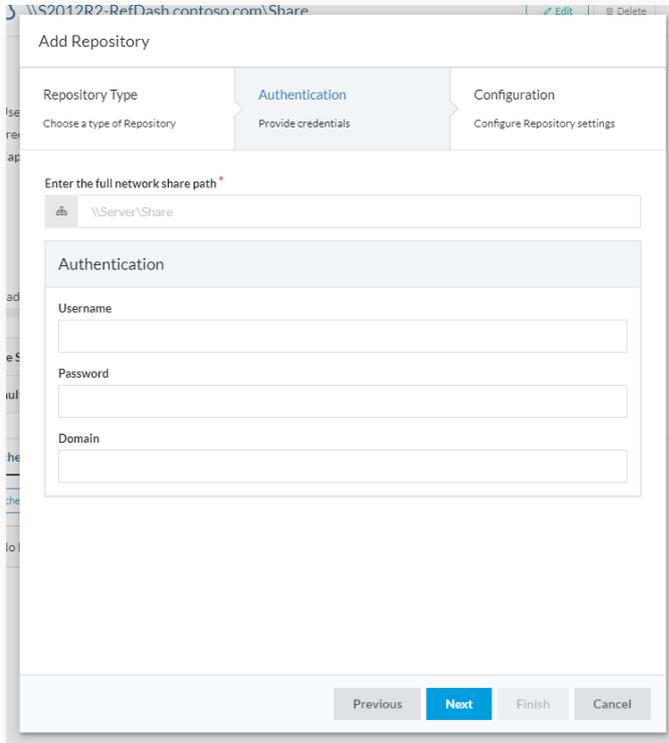
The initial repository wizard page allows the type of Repository to be selected. Once the appropriate type has been selected, click '**Next**' to move to the next step.

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Depending on the Repository type chosen, the next stage will be different. See the appropriate section for details.

Network Share Repository

For a **Network Share** type repository, the next stage of the wizard is shown below:



This stage of the wizard allows you to configure the network path and access credentials for the Repository. The available options are as follows:

Option	Description
Path	<p>This option will let you select the path to the network share in Windows UNC format.</p> <p> Example: \\SERVERNAME\Share</p>
Authentication	<p>Here you will input the authentication credentials that are needed to access the repository.</p> <p> The user requires to have Read and Write access to the repository so that the backup may be created and retention rules can be applied. If the field is left blank anonymous access will be used.</p>

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The screenshot shows the 'Edit Repository' wizard with the 'Storage Gateway' step selected. The wizard has four steps: Repository Type, Storage Gateway, Authentication, and Configuration. The 'Storage Gateway' step is active, showing fields for 'AWS authentication' (Access Key ID, Secret Key ID, Region), 'Select a gateway' (SiteManager3), and 'Select a volume' (vol-Obe5891859bfe900c). A 'Validate' button is present. At the bottom, there are 'Previous', 'Next', 'Finish', and 'Cancel' buttons.

Once the correct gateway name and volume have been selected, press next to move to the next step, configuring the local share and authentication options.

The screenshot shows the 'Add Repository' wizard with the 'Authentication' step selected. The wizard has four steps: Repository Type, Storage Gateway, Authentication, and Configuration. The 'Authentication' step is active, showing a field for 'Enter the full network share path' (\\Server\Share) and an 'Authentication' section with fields for 'Username', 'Password', and 'Domain'. At the bottom, there are 'Previous', 'Next', 'Finish', and 'Cancel' buttons.

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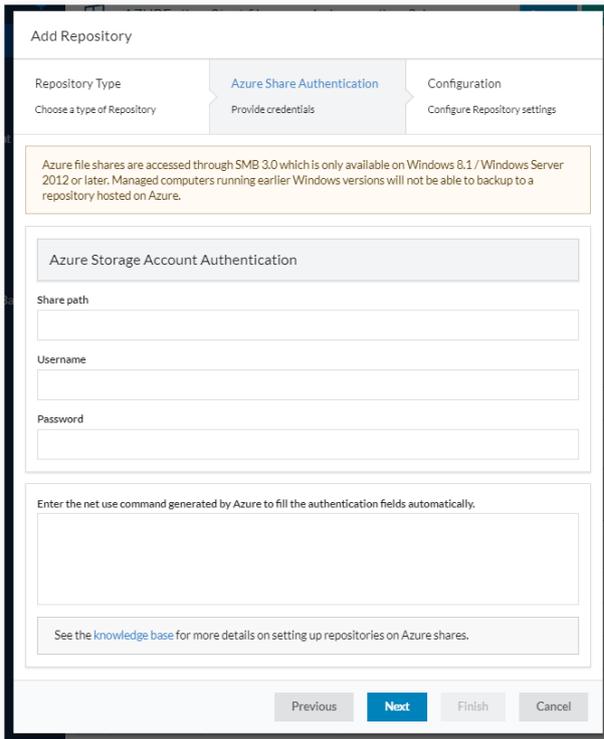
This stage of the wizard allows you to configure the network path and access credentials for the Repository. The share entered must be mapped to the AWS Storage Gateway volume selected. The available options are as follows:

Option	Description
Path	This option will let you select the path to the network share in Windows UNC format. <div style="border: 1px solid #ccc; padding: 5px;"> Example: \\SERVERNAME\Share</div>
Authentication	Here you will input the authentication credentials that are needed to access the repository.

Once this step has been completed, the next step is the final configuration page, described [here](#).

Azure Storage Account

This repository type connects to an Azure storage account which has been configured to be accessible over the SMB protocol.



The screenshot shows the 'Add Repository' wizard with three steps: 'Repository Type', 'Azure Share Authentication', and 'Configuration'. The 'Azure Share Authentication' step is active, showing fields for 'Share path', 'Username', and 'Password'. A note states: 'Azure file shares are accessed through SMB 3.0 which is only available on Windows 8.1 / Windows Server 2012 or later. Managed computers running earlier Windows versions will not be able to backup to a repository hosted on Azure.' Below the fields is a text area for a net use command and a link to the knowledge base. Navigation buttons 'Previous', 'Next', 'Finish', and 'Cancel' are at the bottom.

Detailing information on configuring Azure to enable share access is available here - [Backup to the cloud with Azure File Shares](#)

Azure Repository Limitations

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Azure shares use the SMB version 3.0 protocol. This requires that the computer accessing the share is running a version of Windows which supports this on both the Site Manager server and each managed computer which backs up to the Repository. Versions of Windows which support SMB 3.0 are:

- Windows 8 or later
- Windows Server 2012 or later

The wizard page has fields for the **share path**, **username** and **password** of the Azure share. These can be filled in directly, or the **net use** command generated by the Azure portal can be pasted directly into the box below to extract the share information and automatically fill in the other fields.

Once this step has been completed, the next step is the final configuration page, described [here](#).

Local Repository

A local repository is a path which is evaluated on each individual managed computer such as a Windows file path.

This allows scenarios where some computers may be backed up to locally attached storage (USB drives, iSCSI, Windows Shares which are not visible to the Site Manager server etc) but still centrally managed.

Local Repository Limitations

Because each computer evaluates the Local Repository path separately, the Site Manager server cannot provide most management features for a Local Repository.

This includes browsing, image verification, free space and status monitoring, Site Manager initiated restore and remote synchronization.

Repository browsing and restore should be done from the managed computer

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The screenshot shows the 'Add Repository' dialog box with three tabs: 'Repository Type', 'Authentication', and 'Configuration'. The 'Authentication' tab is active, showing a text input field for the repository path (containing 'X:\BackupFolder'), a message box stating 'Site Manager cannot monitor or browse local repositories as they are different on each managed computer.', and three input fields for 'Username', 'Password', and 'Domain'. At the bottom, there are 'Previous', 'Next', 'Finish', and 'Cancel' buttons.

The Local Repository configuration consists of a path to be evaluated on the managed computer - e.g. **X:** which will backup to the local X: drive on each computer, not the Site Manager server's X: drive.

Optionally authentication information can be entered. This will be used for paths which require authentication such as Windows share paths.

Once this step has been completed, the next step is the final configuration page, described [here](#).

Adding a new Repository - Final Steps

This page contains configuration options for how the Repository will be used by the scheduled backup system. This step is the same for all Repository types.

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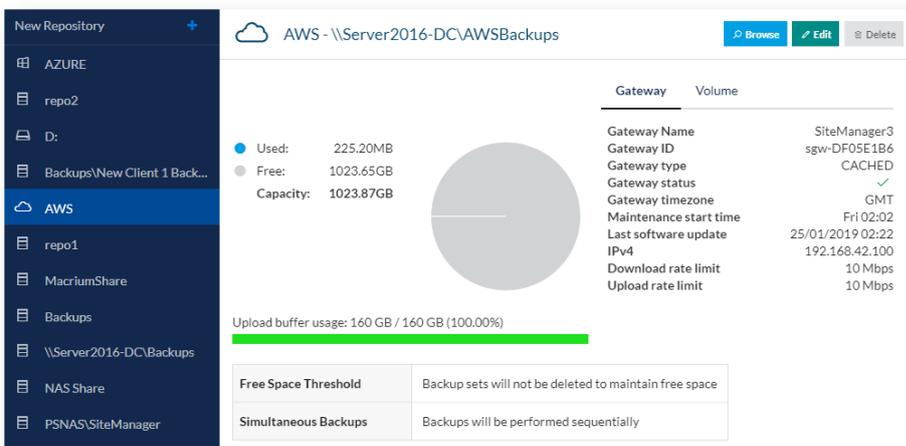
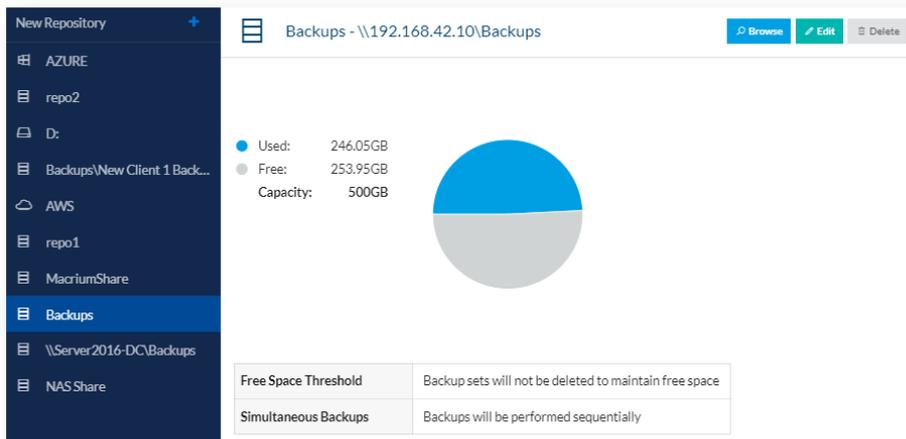
The available options are:

Option	Description
Custom Name	A name which will be displayed in the Site Manager interface for this repository. If left blank, it will default to the network path of the repository
Purge oldest backup set(s)	An optional value that will delete your old backups once the free space has reached a defined threshold. <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p> This setting is independent of any retention rules configured in Backup Definitions and applies to all activity to this repository.</p> </div>
Simultaneous Scheduled Backups	This value sets the number of backups which can be performed to the repository simultaneously. The default value is 1, but it can be increased to a maximum of 10.

Once completed, the **Repository** can be saved by clicking the **'Finish'** button, which will return to the Repository list.

Once **Repositories** have been created, the interface shows the **Repository** list, as seen below

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For the **Amazon AWS Storage Gateway** Repository, the following additional data is available:

- Free space on the volume as a pie chart
- Upload buffer used/free
- Gateway information and statistics
- Volume information and statistics

Viewing Repository Information

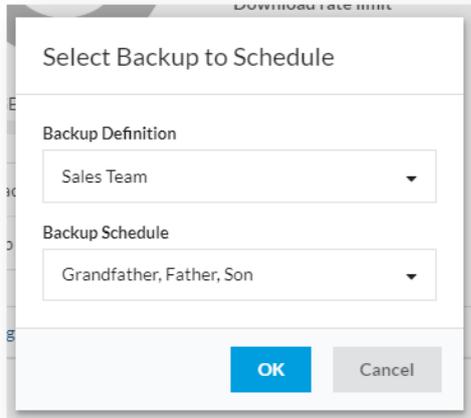
The Repository view shows information on the Repository which has been selected in the list on the left-hand side of the screen. This information consists of:

- **Repository Status** - Disk space used and any specific information for the selected repository.
- **Scheduled Backups** - Any Backup Definitions scheduled to run on this repository are listed here.
- **Forecast** - If Backup Definitions are scheduled, a forecast of upcoming activity is shown.
- **Synchronization** - Interface to schedule regular synchronization of all backup files in a repository to a remote server.

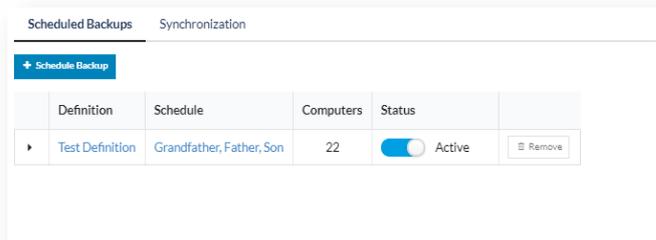
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Scheduling Backups

The **'Schedule Backups'** button shows a list of all Backup Definitions and Schedules which can be scheduled in this Repository:



Pressing **'OK'** will schedule the selected Backup Definition to be backed up to the Repository according to the chosen Backup Schedule. The Repository information and forecast will update to show the newly scheduled backups:



The scheduled items can be paused by the toggle control in the **'Backup Status'** column or removed permanently by the **'Remove'** button.

Synchronizing a Repository with a Remote Server

Under the **Synchronization** tab in a Repository, remote synchronization can be scheduled using SFTP or any remote system accessible by a Windows Share.



See [Synchronizing a Repository with a Remote Server](#) for a detailed guide to this process.

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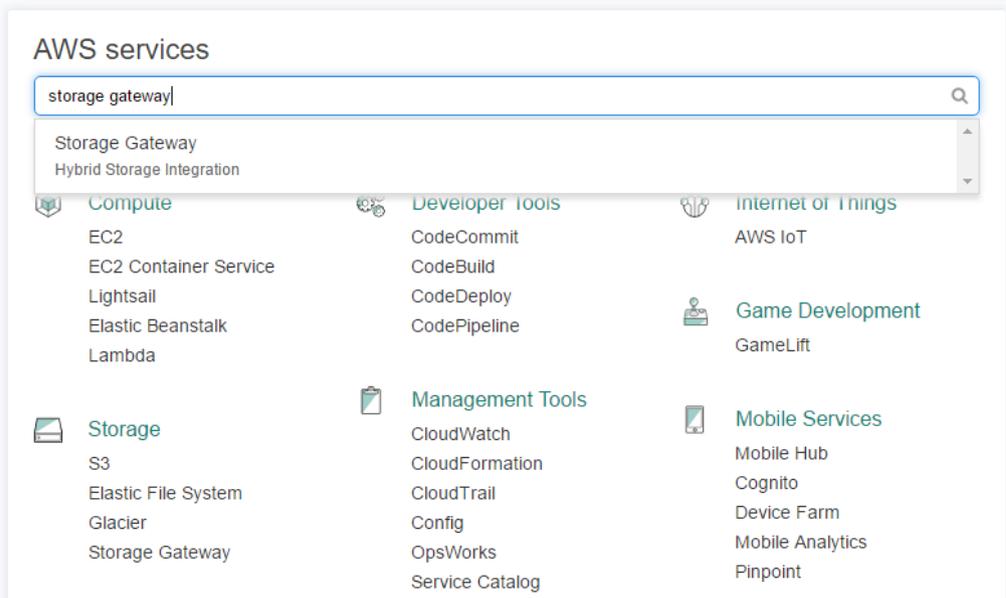
Configuring AWS Storage Gateway

AWS Storage Gateway connects an on-premises software appliance with cloud-based storage. Macrium Site Manager can connect to a Volume Gateway via a iSCSI device mapped as a network share.

Creating Your Gateway

This section describes the steps to create a AWS Gateway that can be used as a Site Manager repository.

After logging on to AWS, you will need to access the AWS Storage Gateway dashboard:

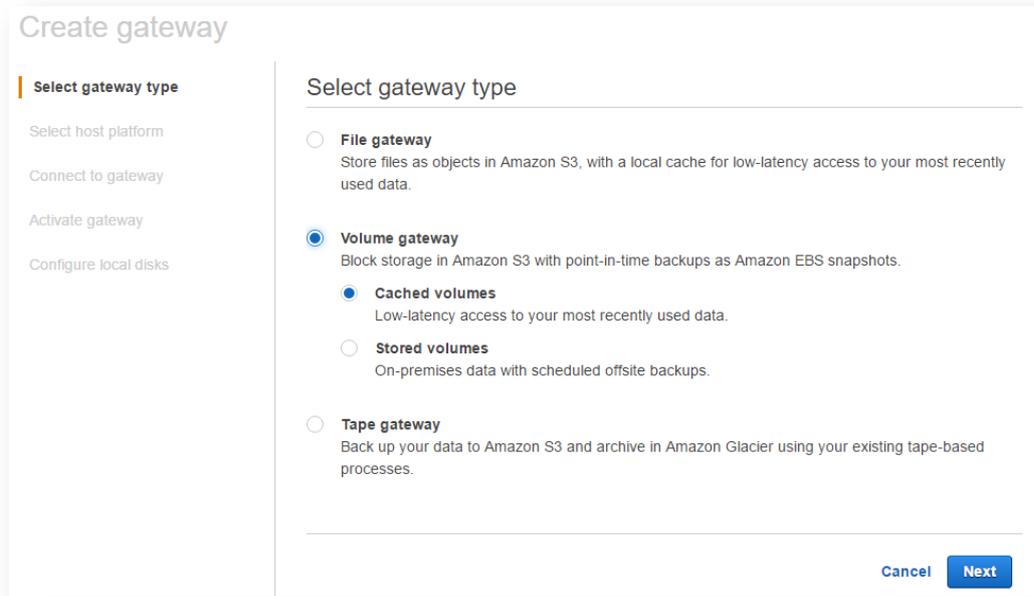


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Click the "Create gateway" button to start the "Create gateway" wizard:

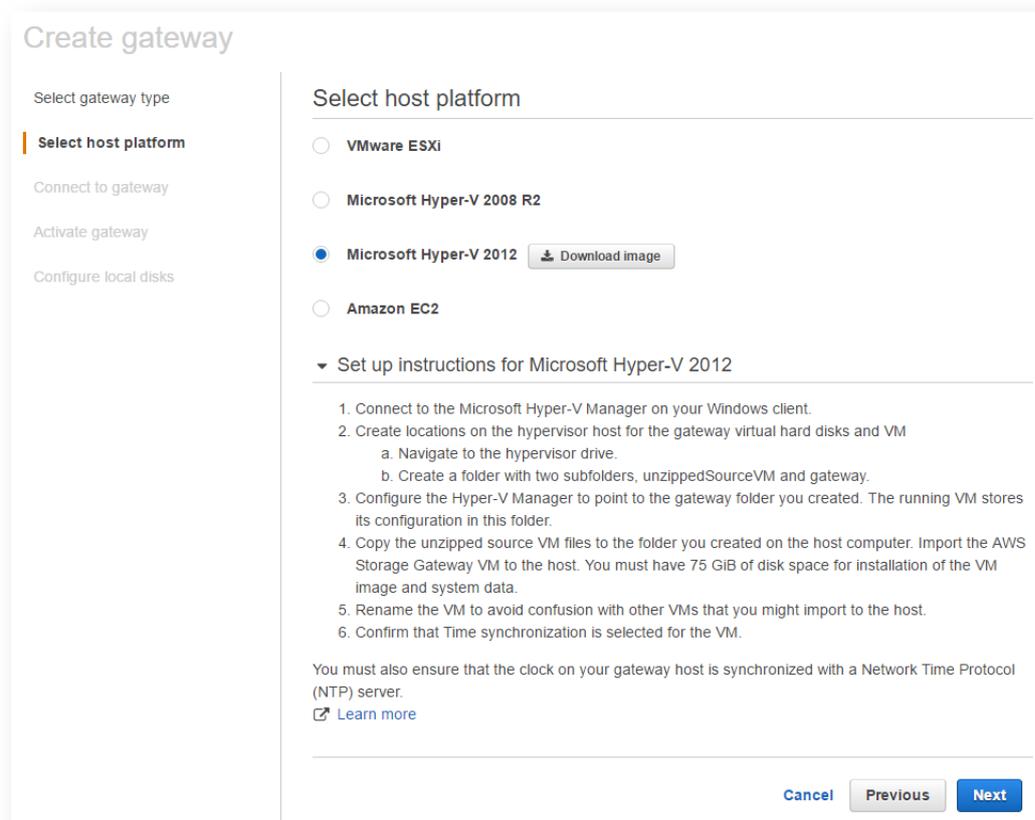


In this example we are creating a volume gateway with cached volumes:



Amazon provide a virtual machine that will host the gateway. This is downloaded and added to your VM provider. In this example we are using Microsoft Hyper-V 2012

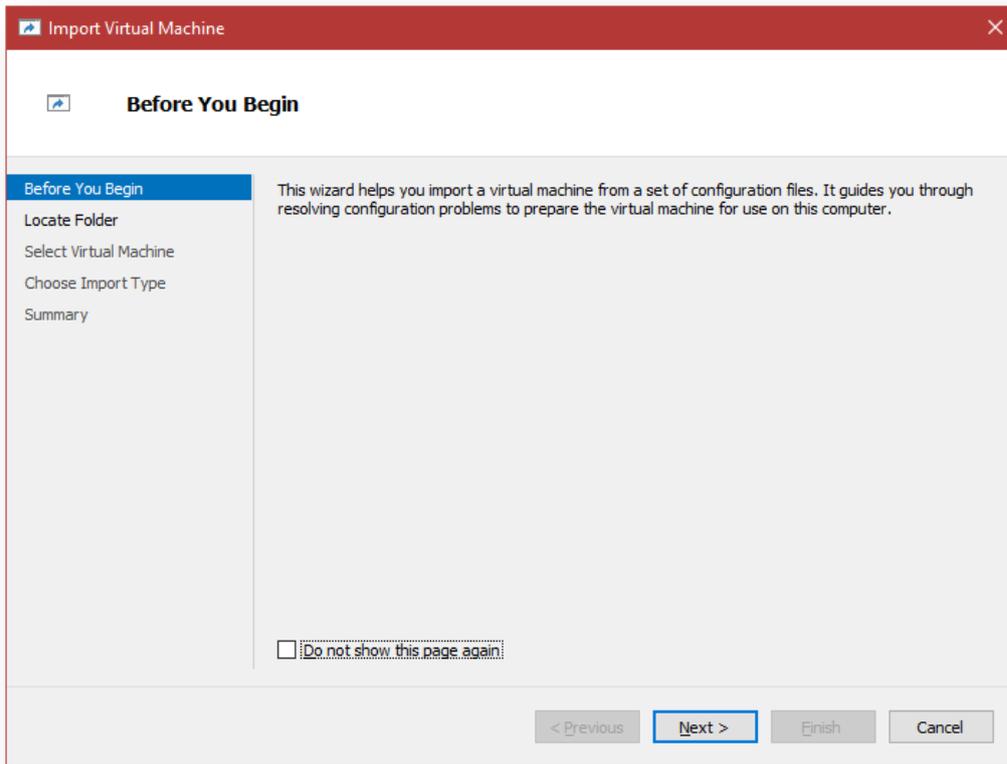
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Configuring the Gateway VM

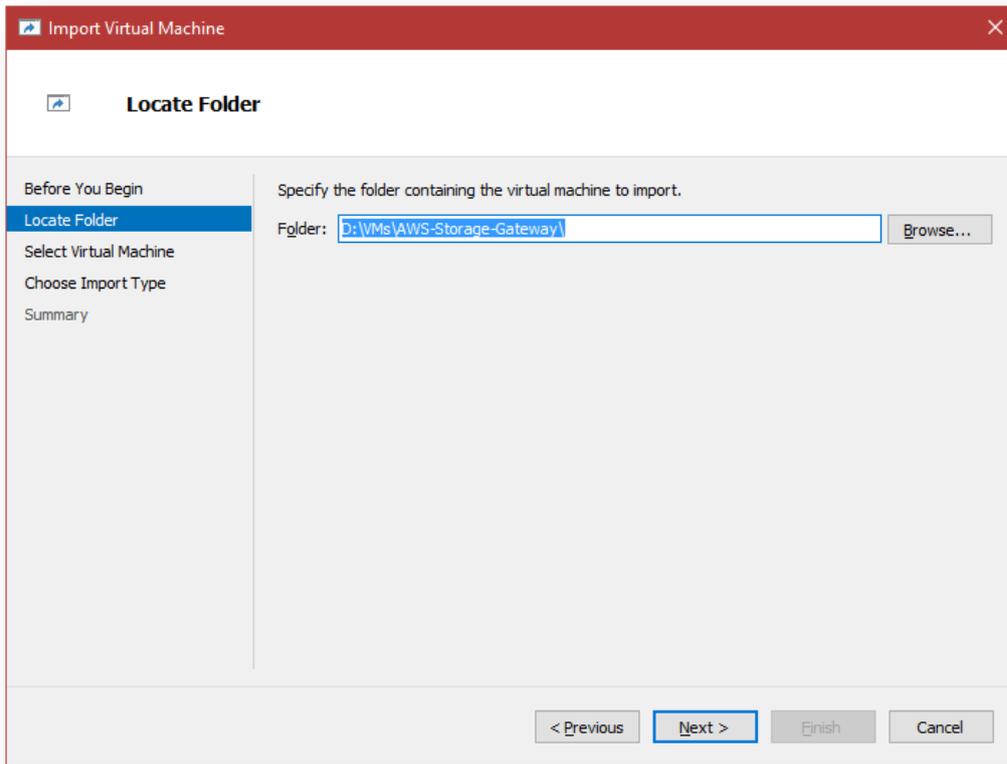
Once the VM image is downloaded, extract the contents of the zip file to disk and run the Hyper-V Manager to import the VM image.

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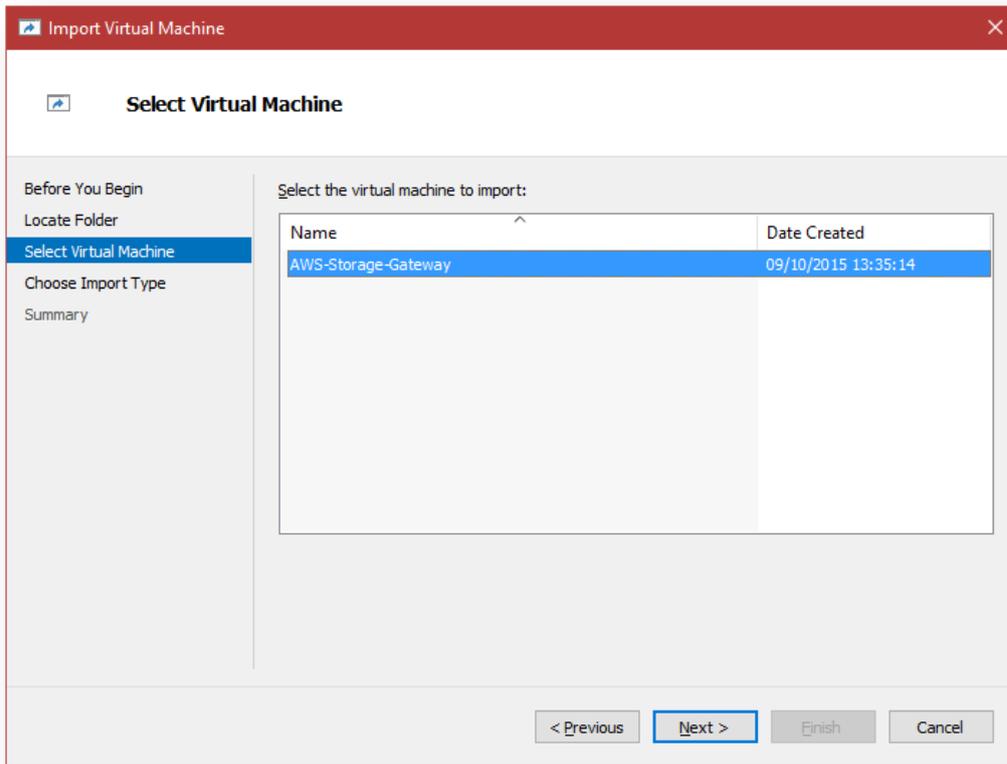
Specify the location where the zip file was extracted:

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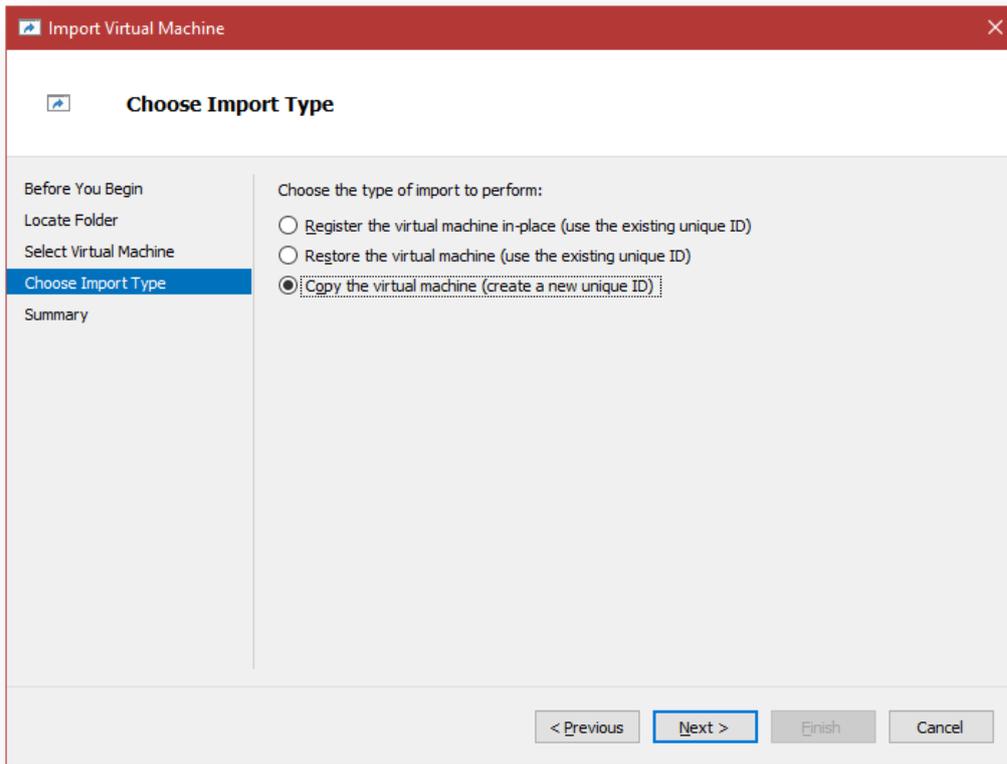
Select the "AWS-Storage-Gateway"

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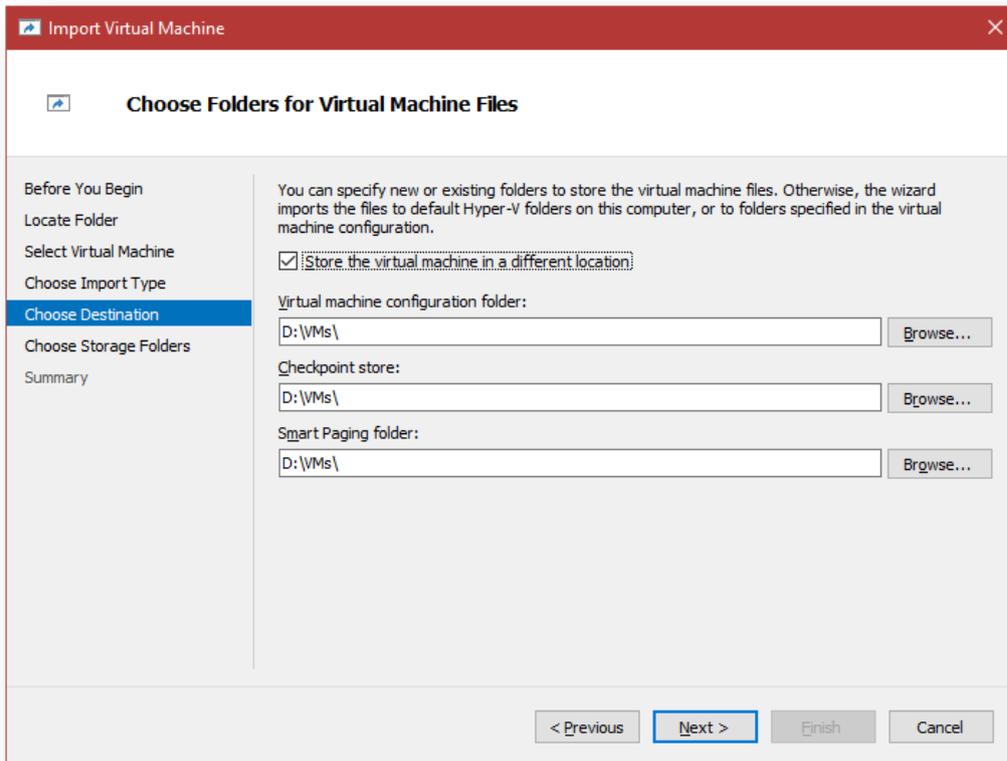
Create a copy of the VM to create a new unique ID for the VM

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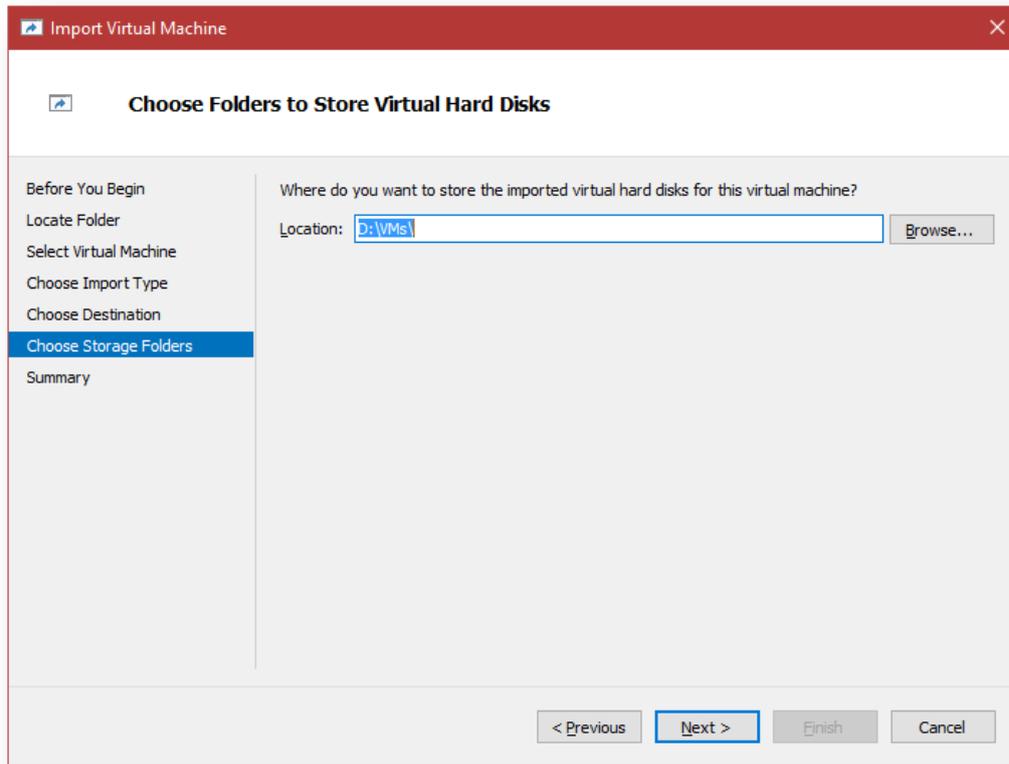
Specify the location where you want to save the VM

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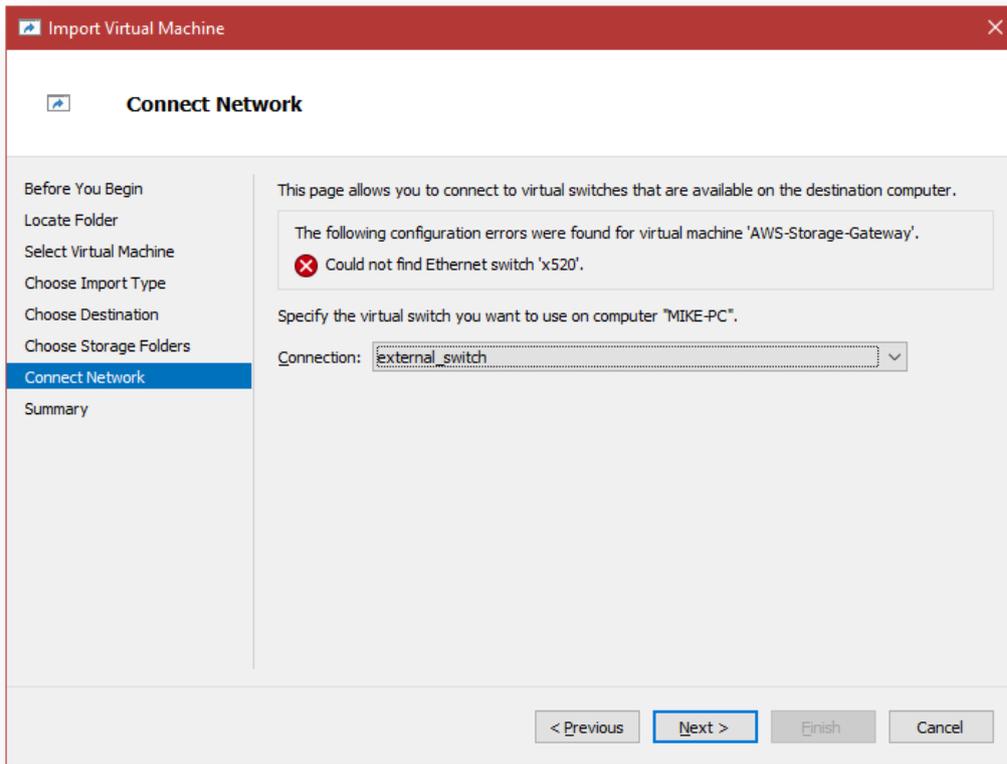
Specify the location where you want to save the VM hard disks

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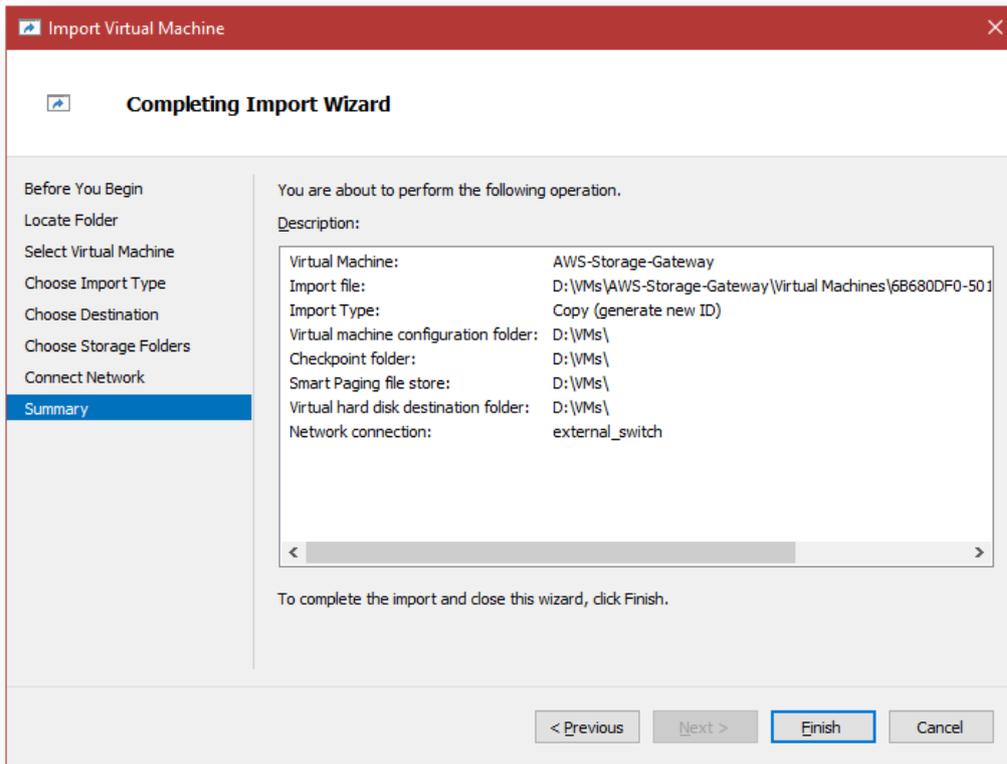
Ensure that you specify a network switch that is visible to the internet

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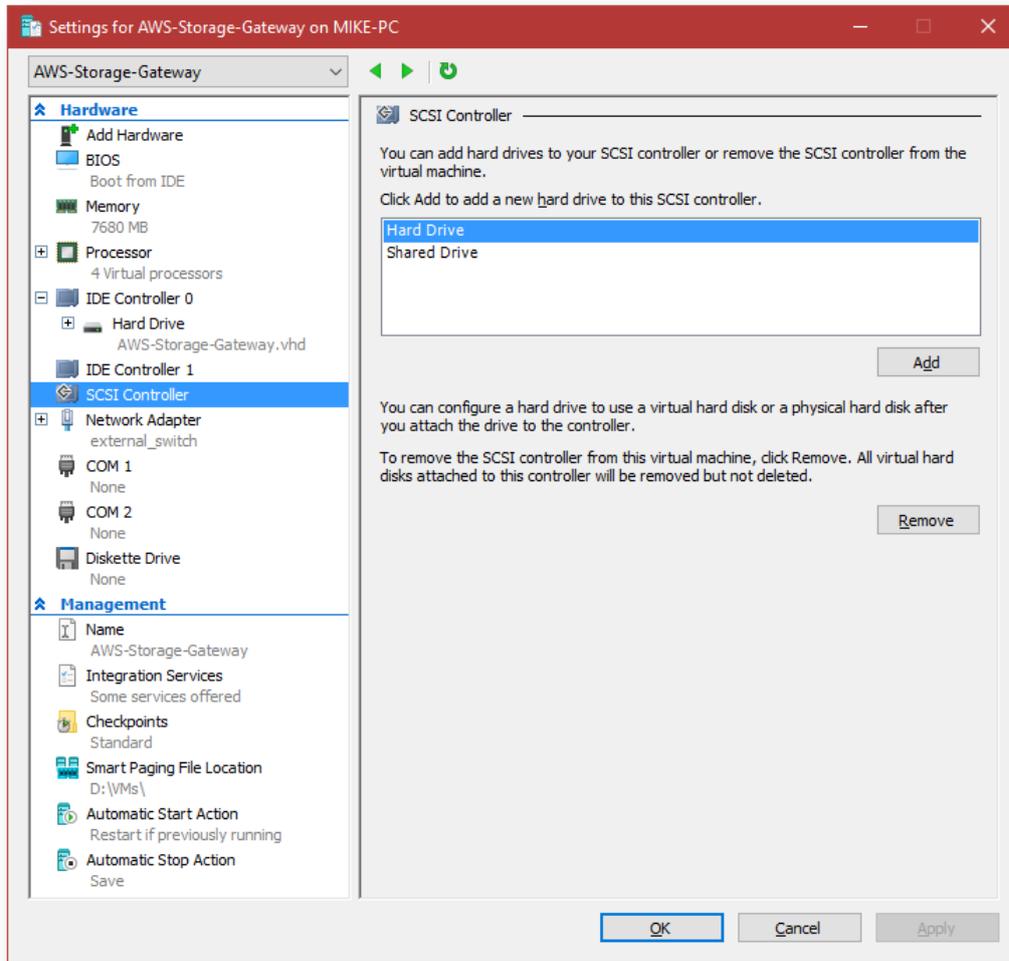
Click "Finish" to complete the VM creation process

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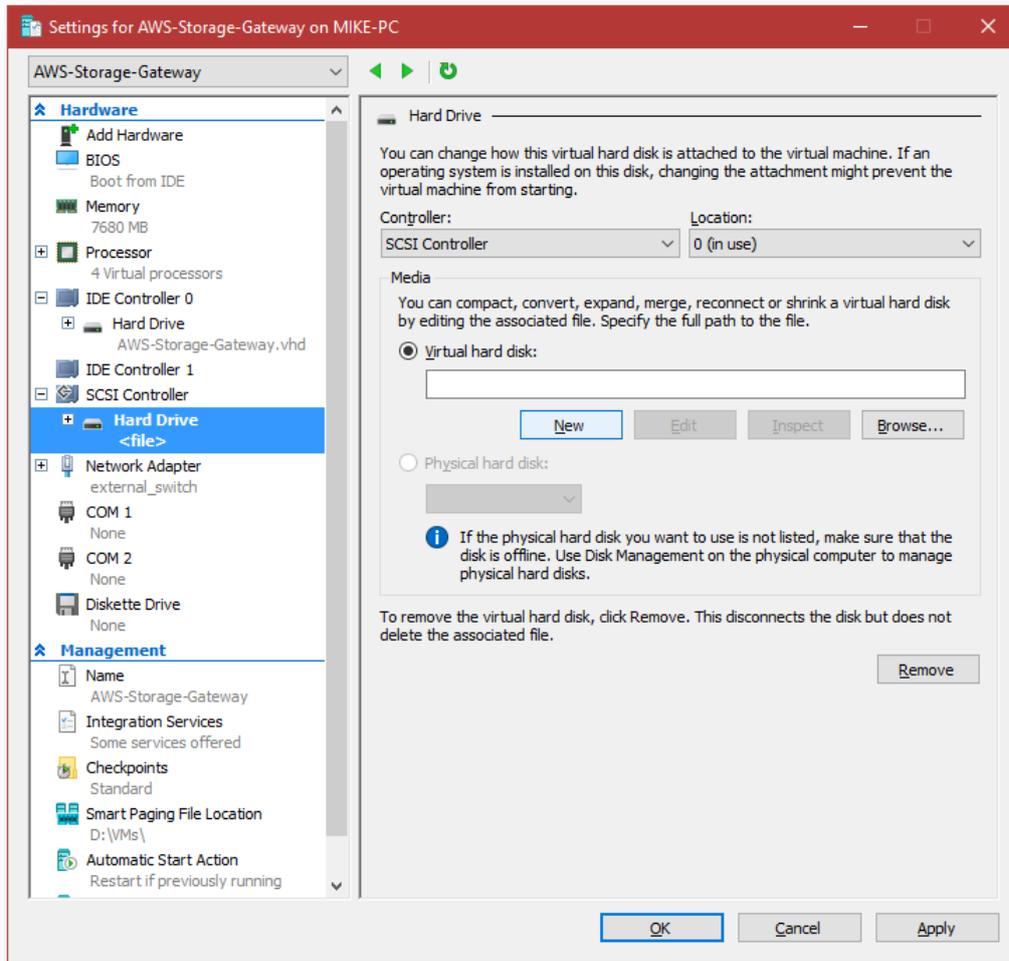
Once the VM is created two new virtual hard drives are required for the Volume Gateway. Edit the settings for the new VM and create two new hard drives.

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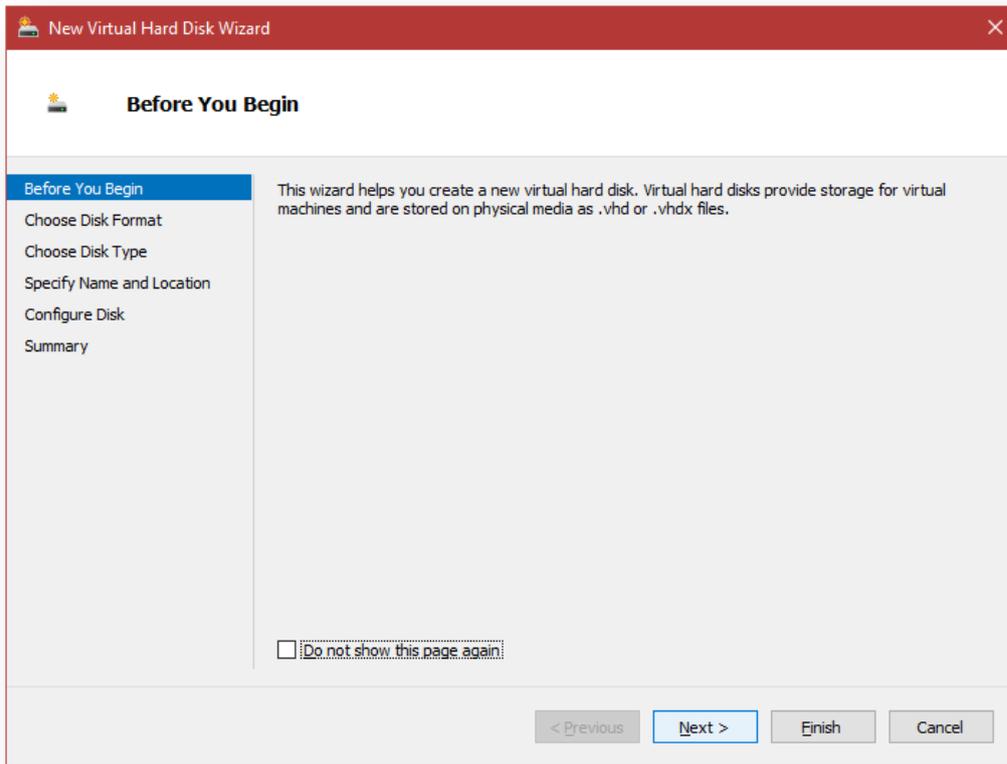
Create the hard drives on the SCSI Controller.

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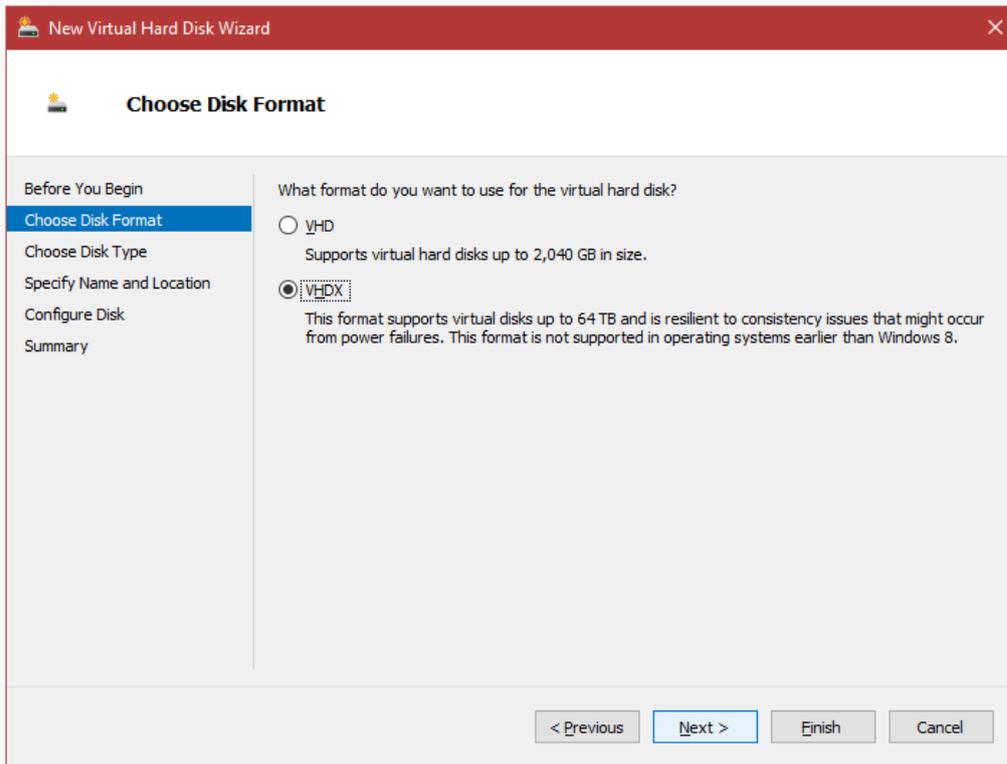
Click "Next" to continue.

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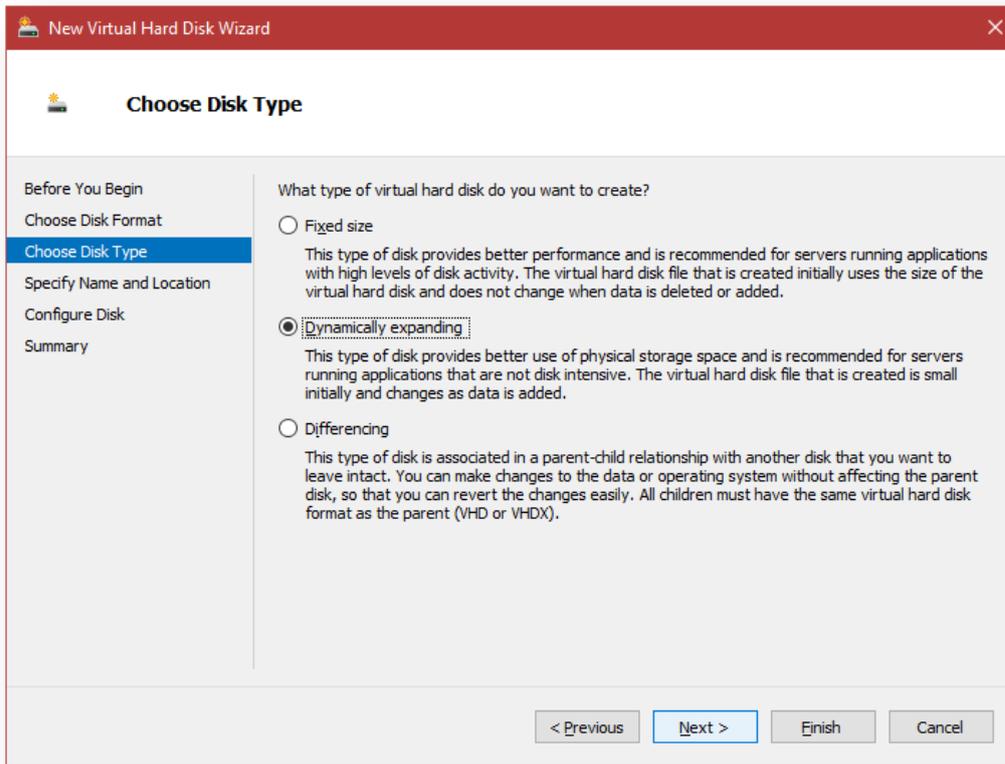
Specify the "VHDX" format for the disks.

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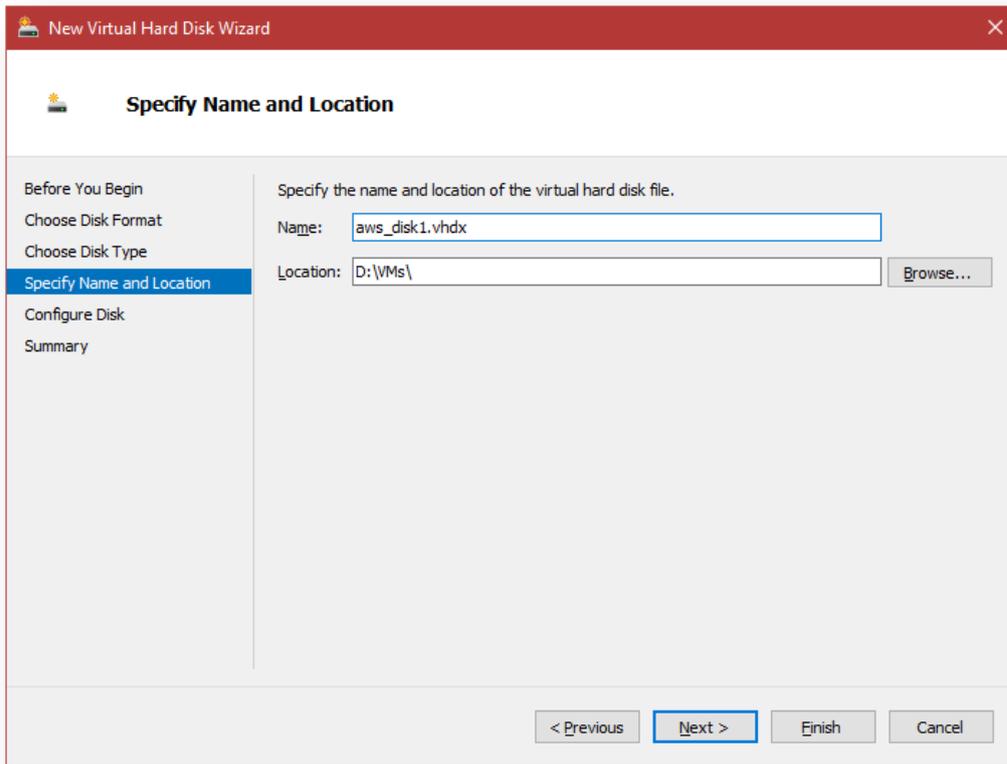
In this example the the disks will dynamically use physical disk space.

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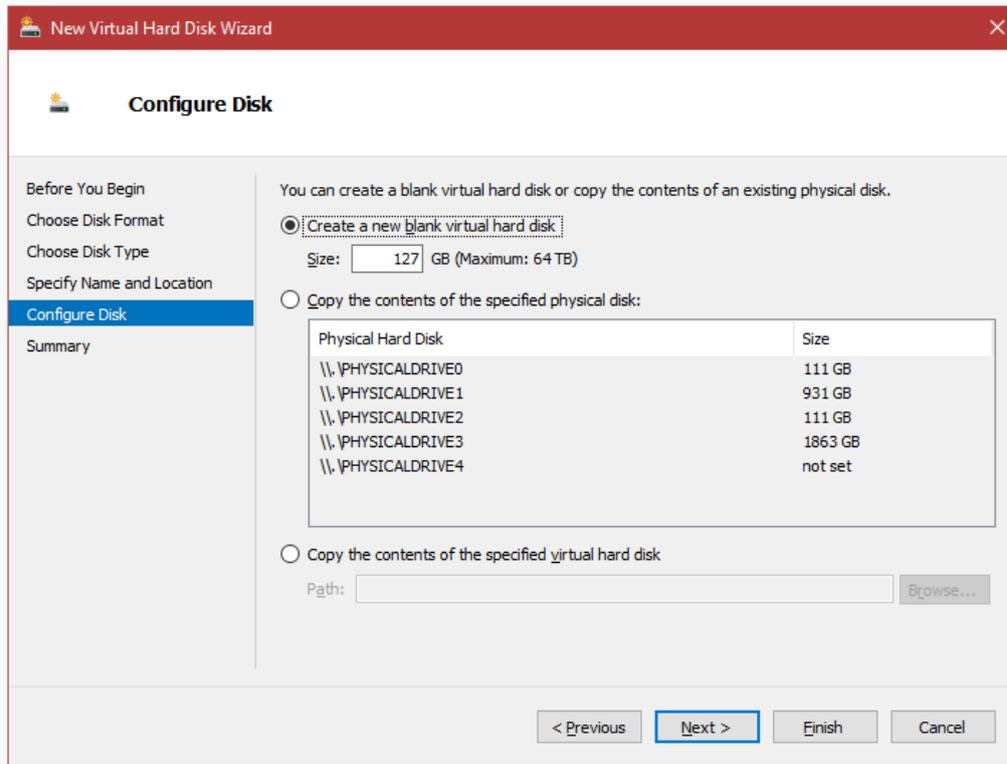
Specify location for the virtual disks.

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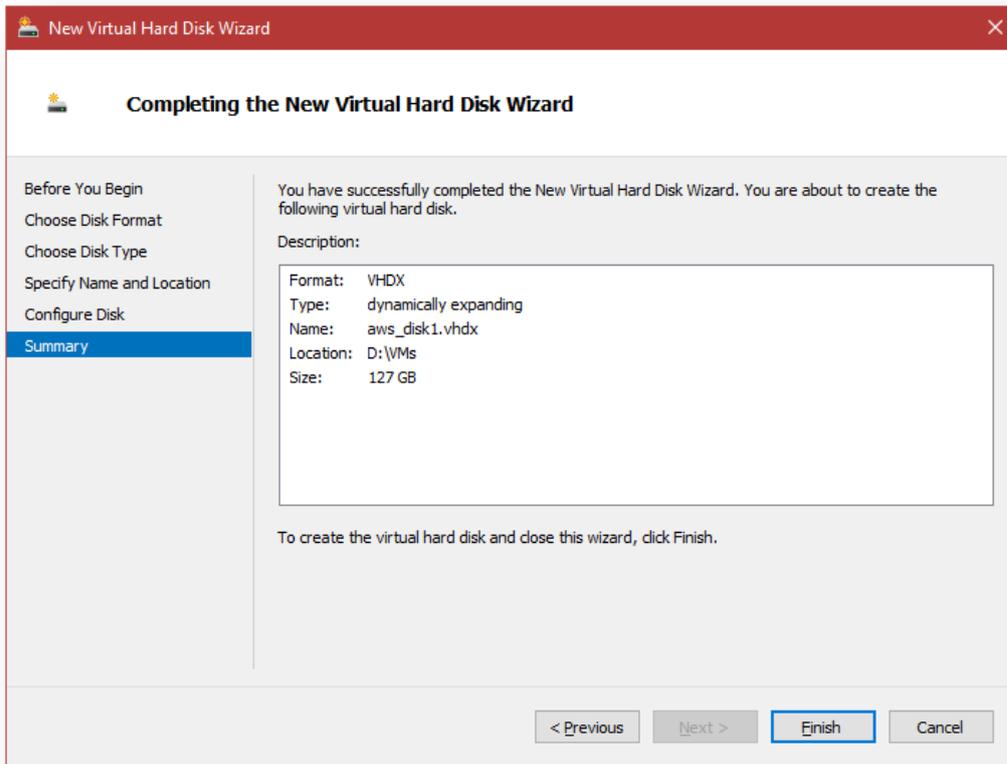
Specify the size of the virtual hard disk.

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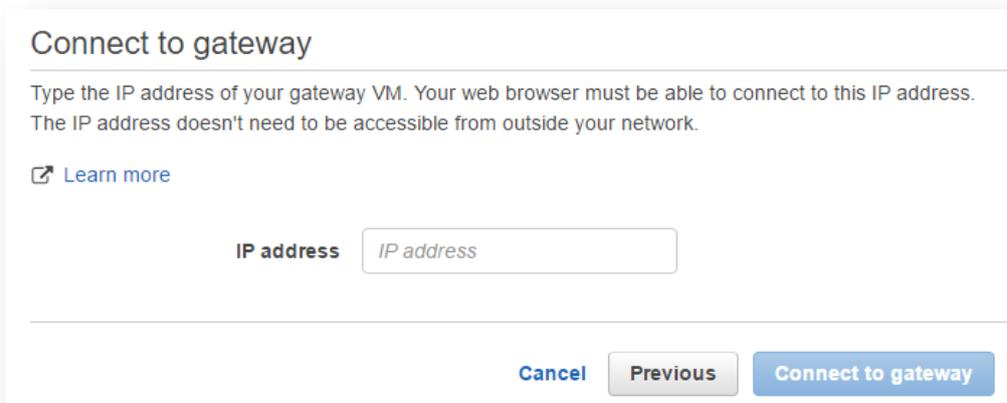


Click "Finish" to create the hard disk. *Repeat this process to create the second disk.*

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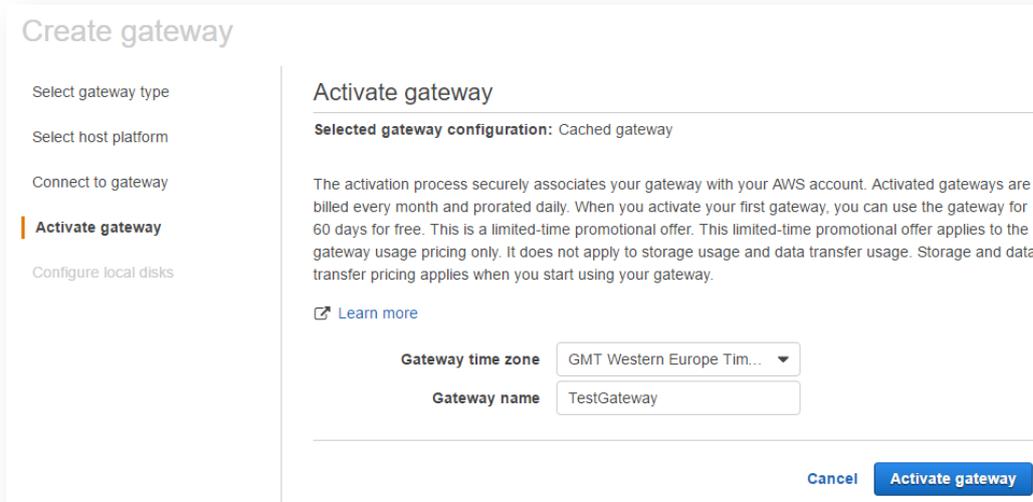


Once the VM is configured, creation of the gateway can continue by providing the IP address of the VM:

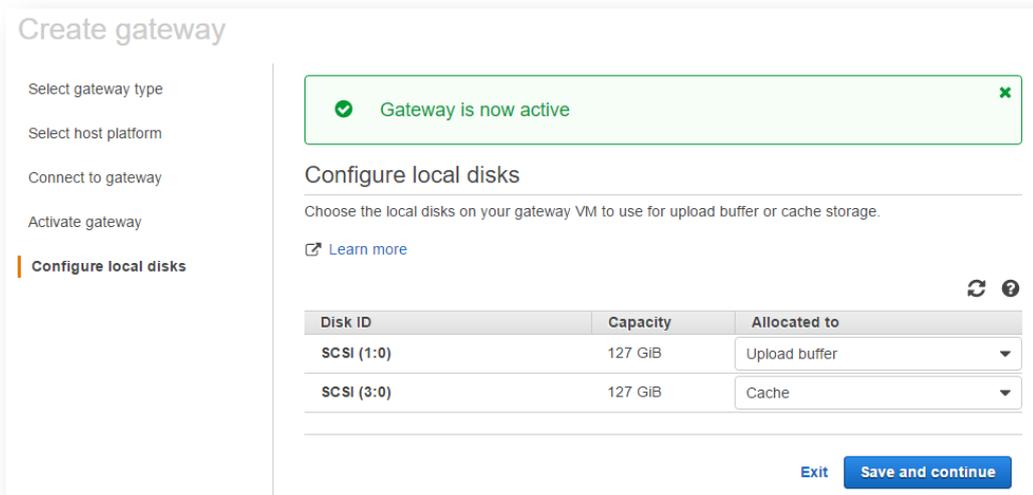


Specify the timezone for the gateway and provide a name:

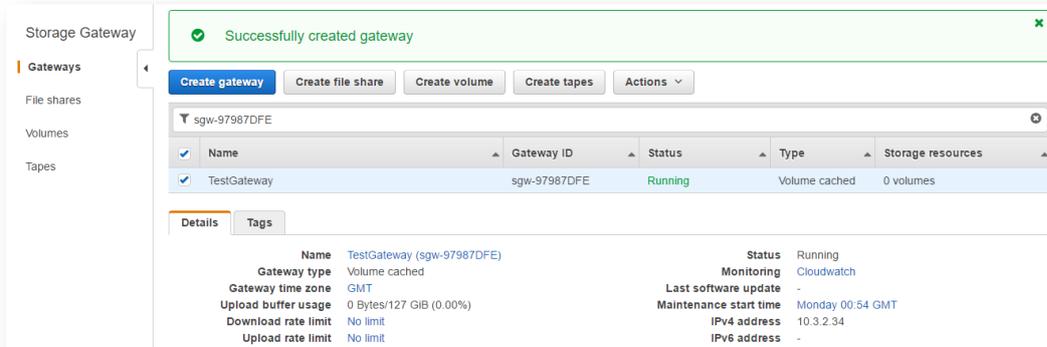
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Once the gateway is activated, we need to specify which disk is the "Upload buffer", and which is the local "Cache":



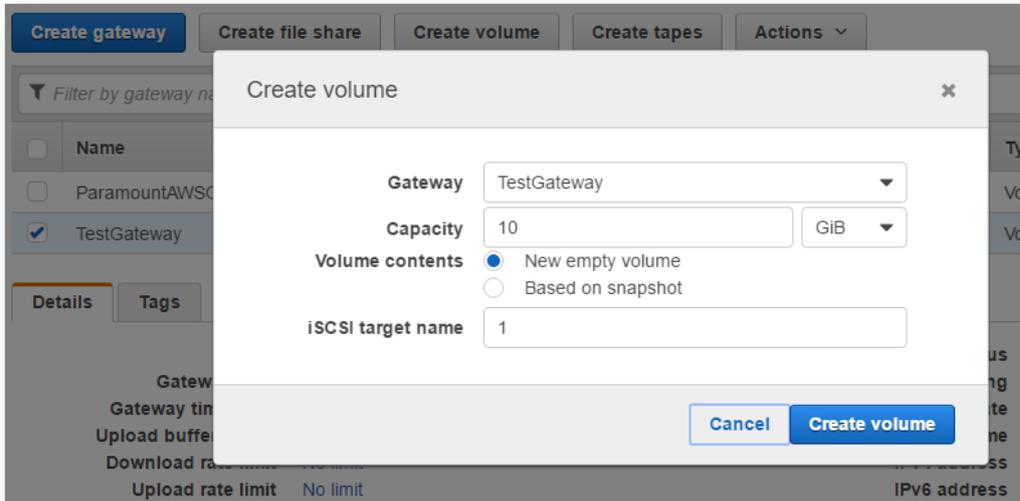
Once the settings are saved, the gateway will be fully created:



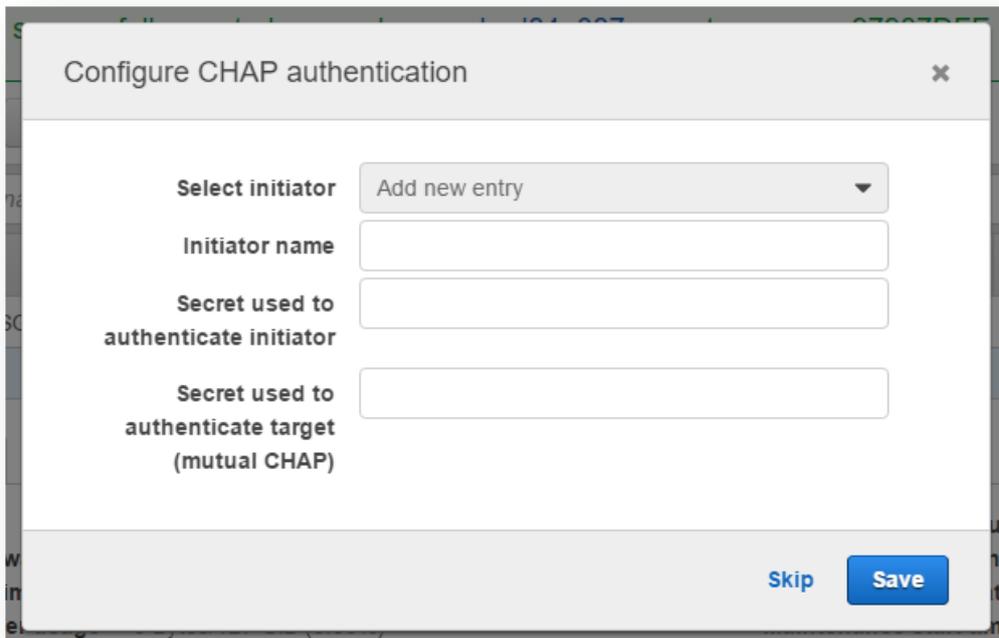
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Create a Volume

Once the gateway is created, we need to add a volume to the gateway by clicking **"Create volume"** button. After selecting the gateway, and specifying the capacity, **click the "Create volume" button**:

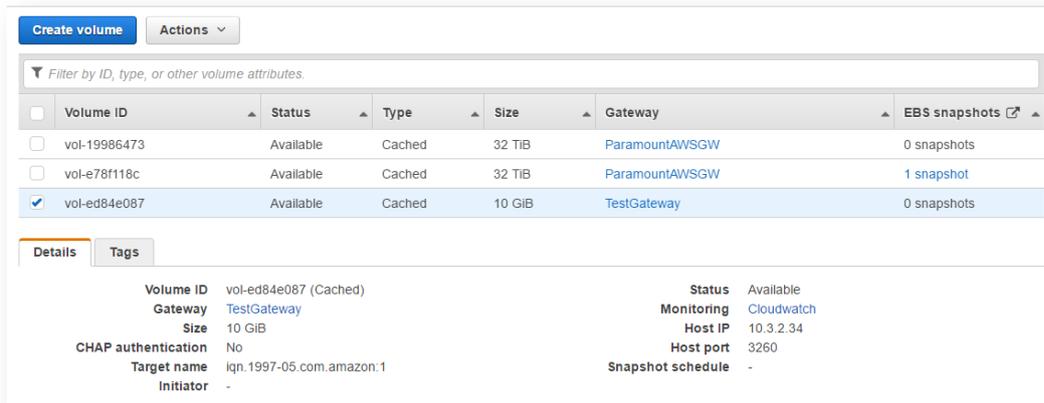


The volume can optionally be authenticated using CHAP, or saved for immediate use:



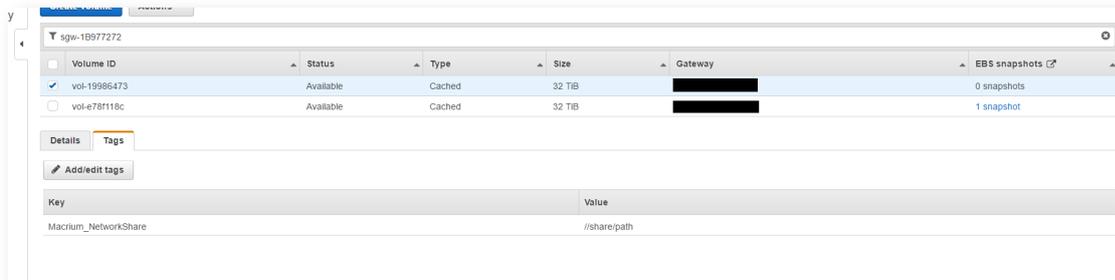
Once you have created a volume on the gateway, you can setup a network share for the volume on the VM and create a Amazon AWS Storage Gateway repository within Site Manager.

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To automatically connect an UNC share to an S3 volume, a Tag has to be created for the S3 volume.

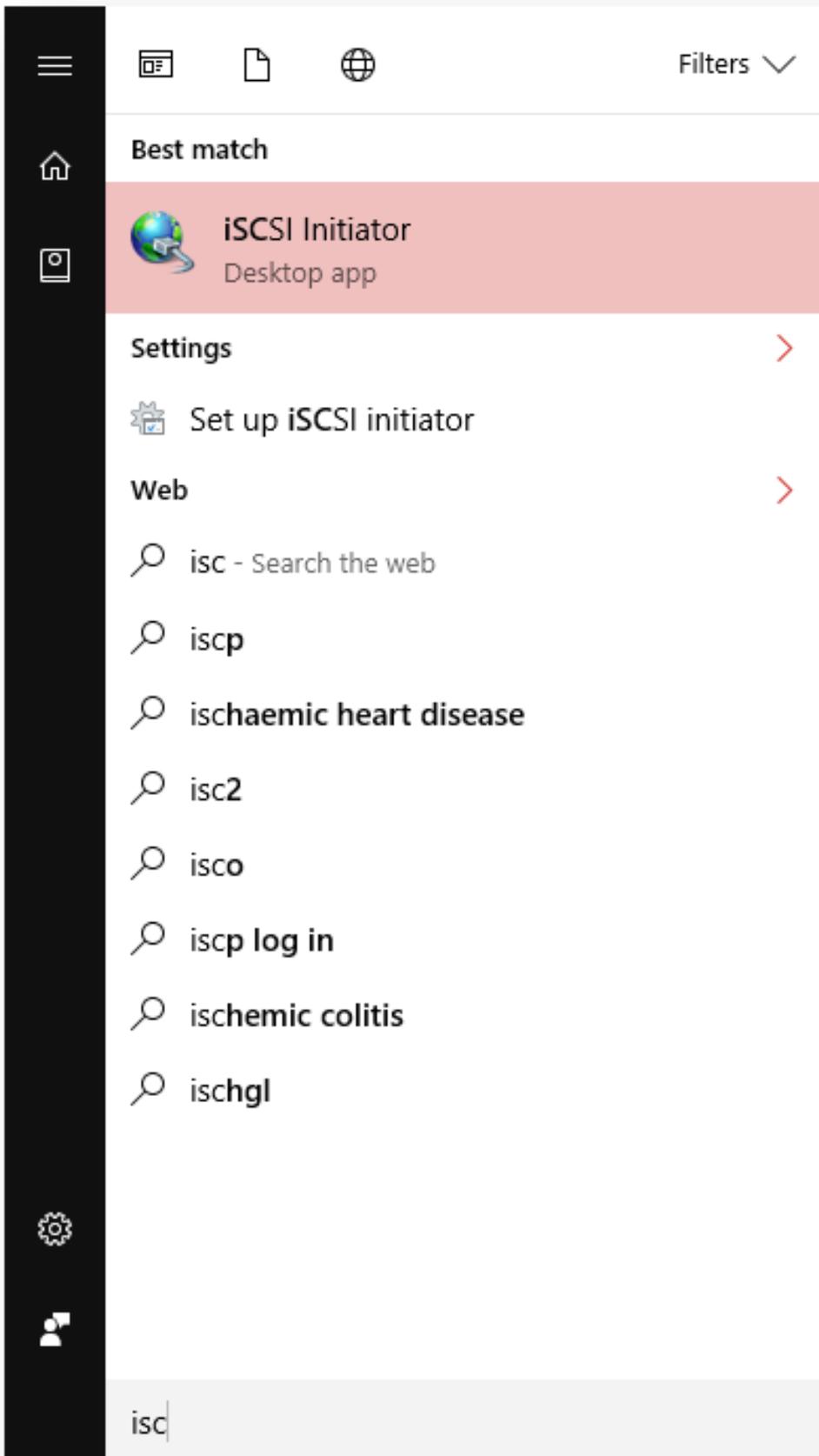
This tag must have key equal to "Macrium_NetworkShare" and back slashes must be replaced with forward slashes.



Creating an iSCSI Initiator

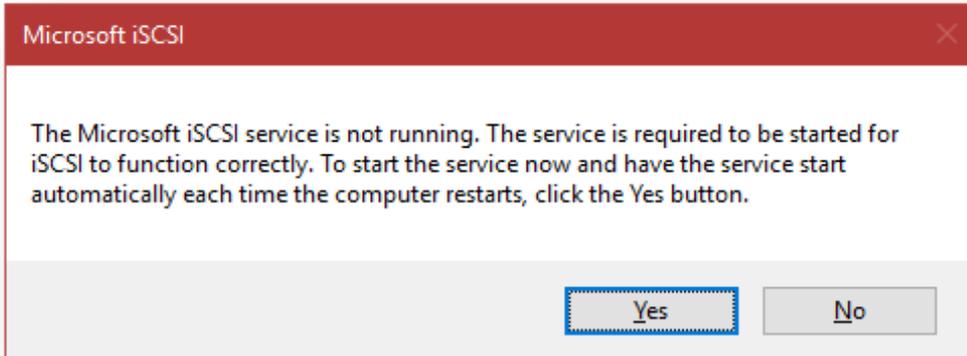
Launch the iSCSI control panel (iscsipl.exe) from the Windows Start menu.

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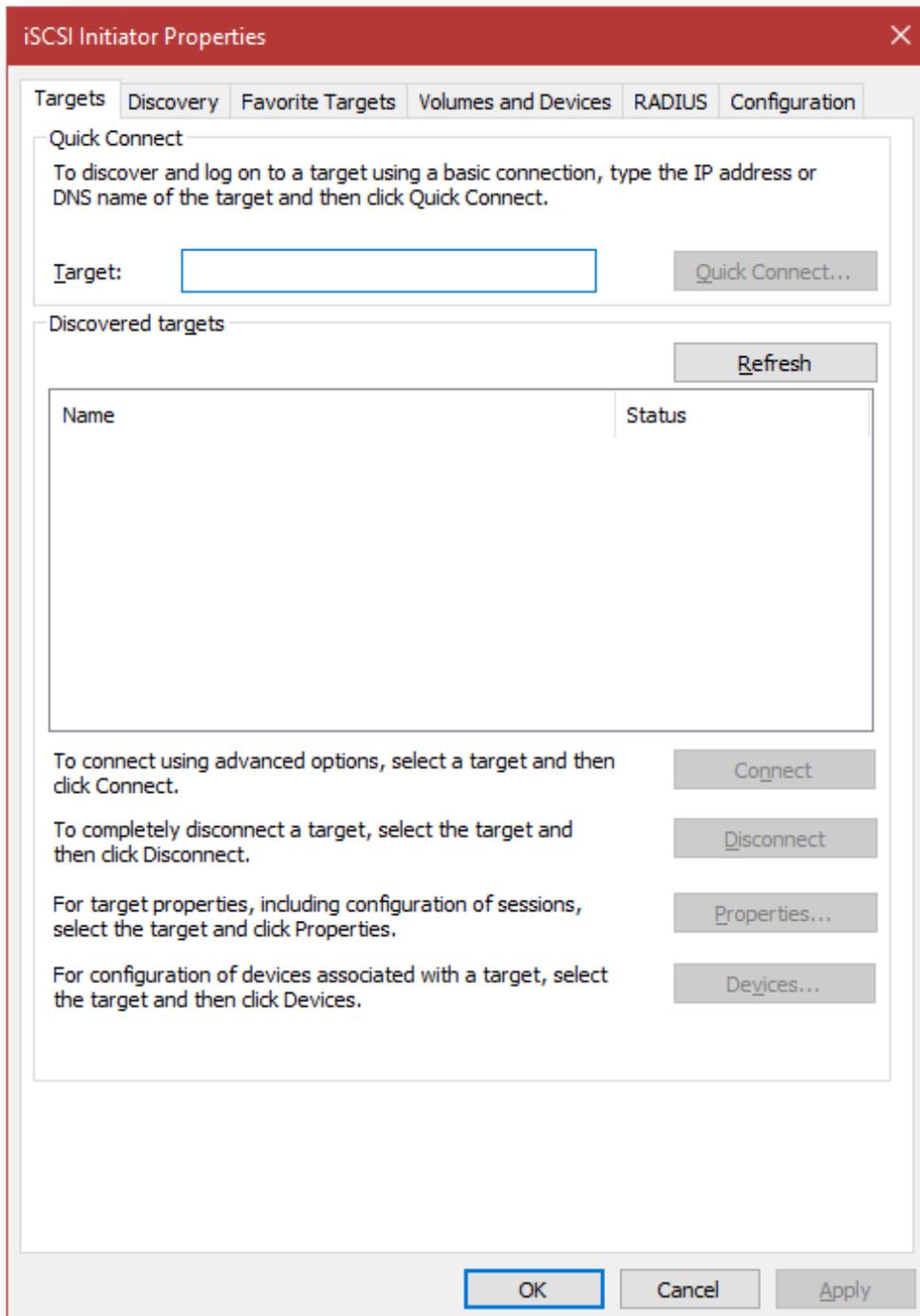
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If the iSCSI service is not running you will be prompted to start the service.

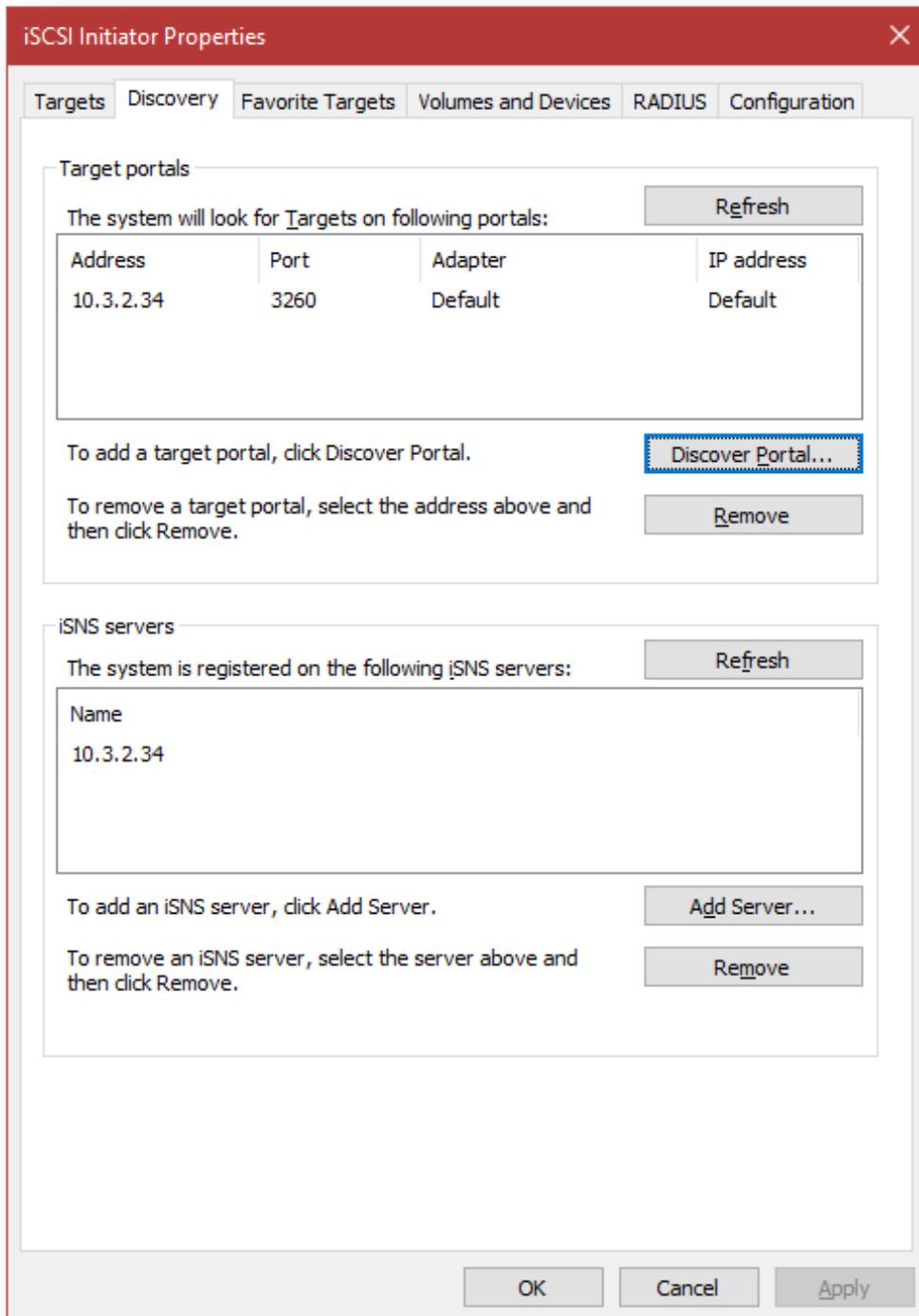


Click on the "Discovery" tab to locate the iSCSI targets.

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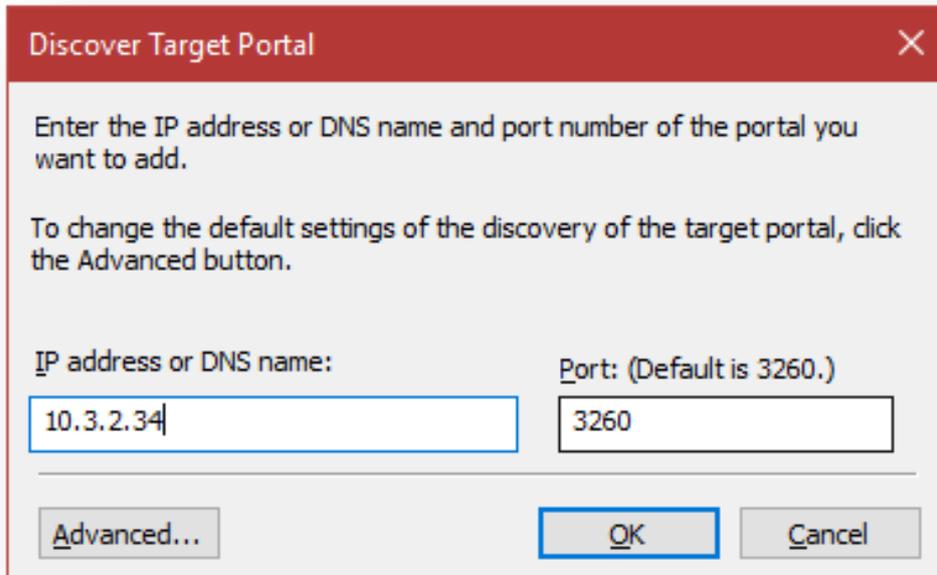


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Specify the IP address of the VM.

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Discover Target Portal

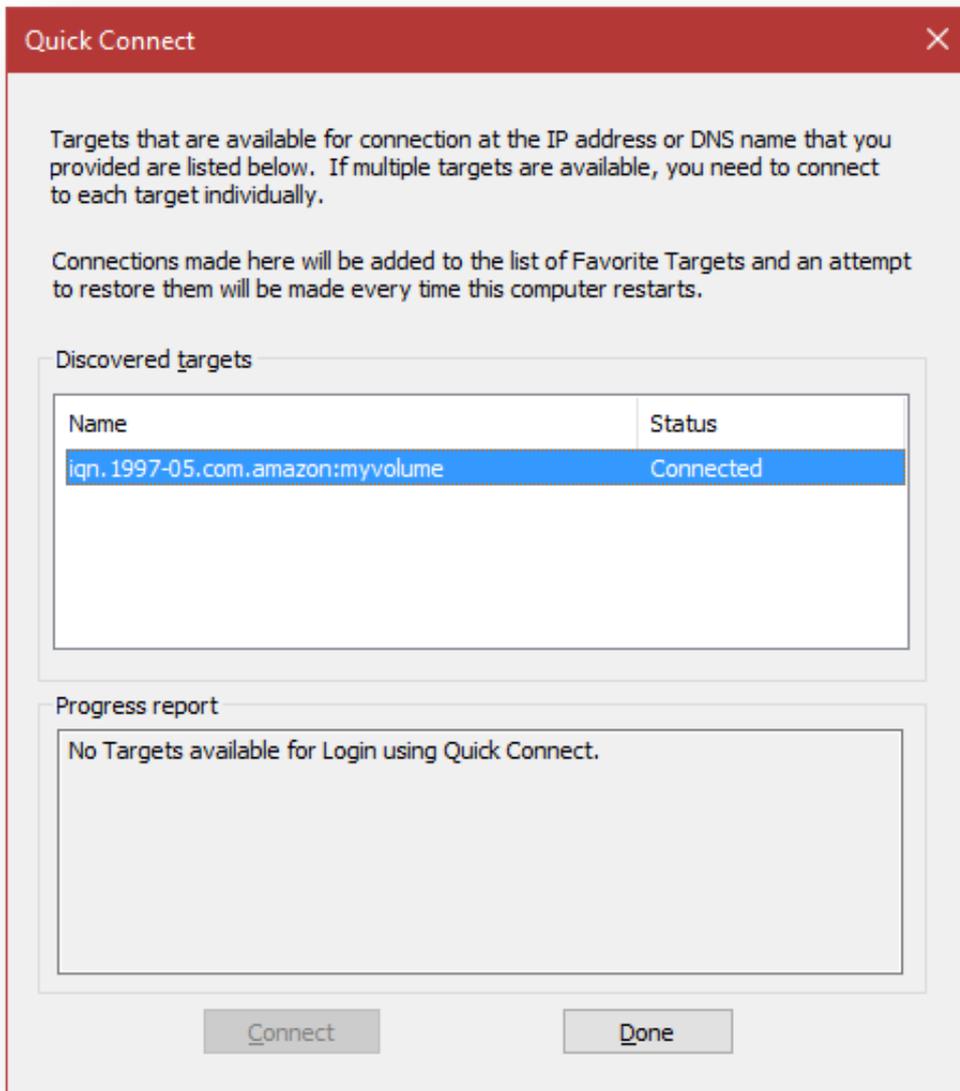
Enter the IP address or DNS name and port number of the portal you want to add.

To change the default settings of the discovery of the target portal, click the Advanced button.

IP address or DNS name: Port: (Default is 3260.)

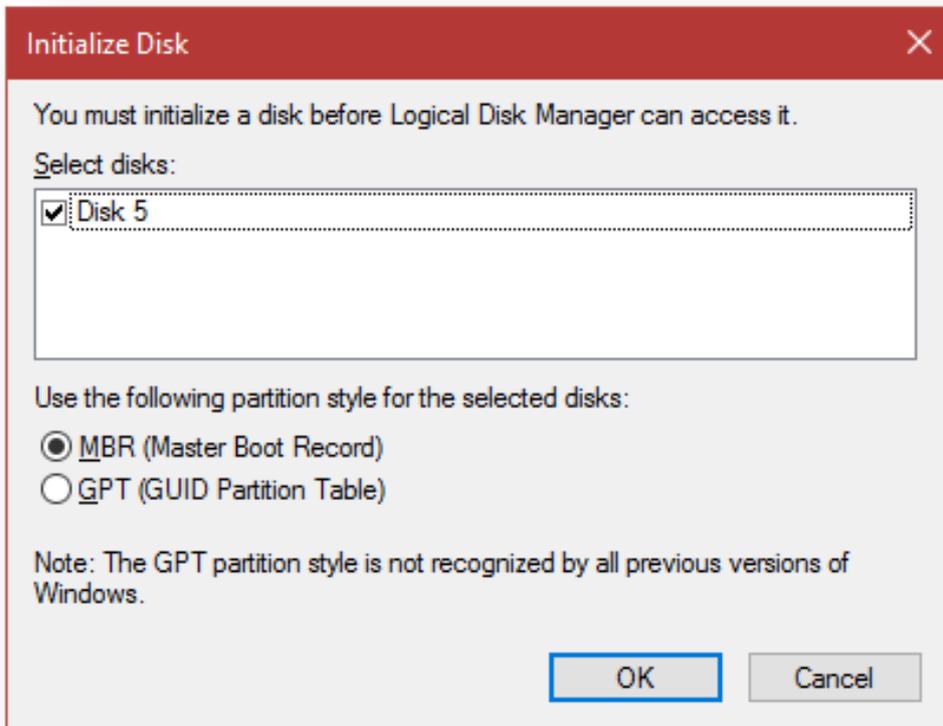
Switch back to the "Targets" tab, and click "Quick Connect". Connect to the iSCSI volume, then click "Done". the iSCSI will now create a iSCSI reference to the Volume gateway volumes and will be visible to the Windows client.

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After you have connected to the iSCSI volume, run "diskmgmt.msc". When Disk Management starts it detects the iSCSI Disk and prompts you to initialise it.

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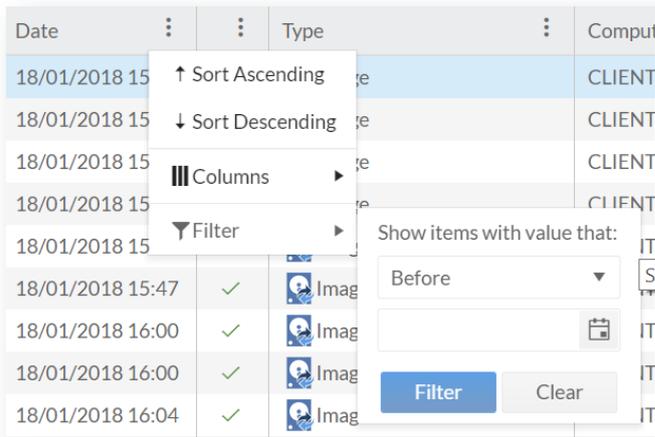
Once the disk is initialised, it can be formatted and assigned a driver letter and shared across the network as a UNC share.

Monitoring and Management Tools

Macrium Site Manager contains a number of tools for monitoring and managing a backup deployment on an ongoing basis. These tools, with notes on how to use and interpret the data provided are documented here. Available tools are:

- [Backup Logs](#) - Detailed logs from all backups of Site Manager are collated in Site Manager so any backups can be examined in detail and any failures diagnosed.
- [Event Logs](#) - Actions in Site Manager are logged in an event log so that they can be audited and reviewed.

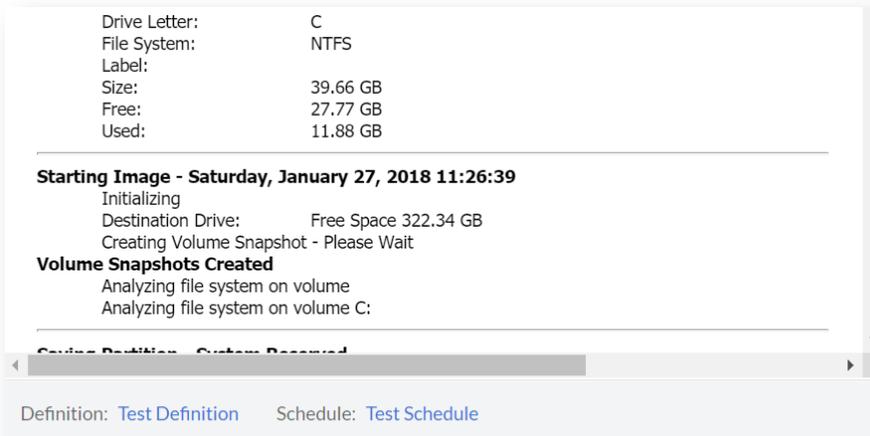
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The 'Date' column can be filtered by logs either before, on or after a given date. Other columns can be filtered by matching computer names or have a selection of types to include in the list.

Filters can be reset using the **Clear Filters** button at the top of the page.

To view a log, click on the row in the table and the log will be loaded into the right hand side of the screen. There is also an expansion button in the top right of the log view for maximizing the log. If the log is from a Site Manager scheduled backup, there will be links to the appropriate definition, schedule and repository at the bottom of the log:



Note that these links may not be present if the Definition, Schedule or Repository has been deleted from Site Manager since the backup occurred.

Exporting Backup Logs

Backup log information may be exported in CSV format in order to help analysis and auditing tools. Clicking the **Export** button will download a CSV file in the browser containing the information from the log list. This data can be imported into any tool which can work with CSV data, such as Excel.

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Reviewing Event Logs

All actions which have been taken by Site Manager or by users in the console are logged in the Event Log. This allows administrators to review activity for auditing, security or reporting purposes.

Viewing Event Logs

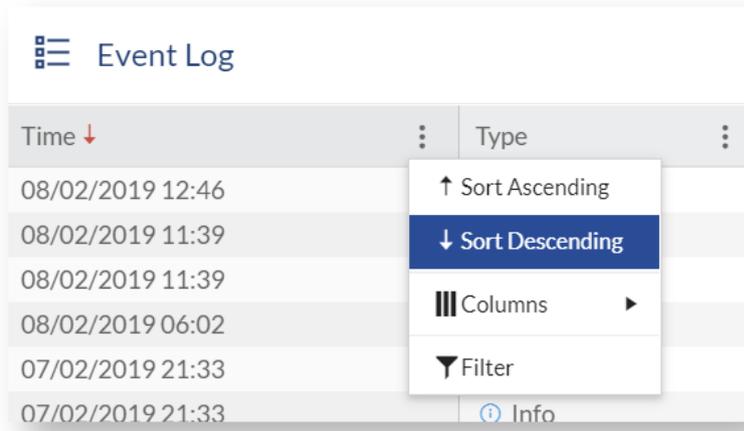
To view the event logs, follow the steps below:

Click **'View Event Logs'** under **'Other Tasks'** on the main Site Manager interface. The Event Log page will be shown as below:

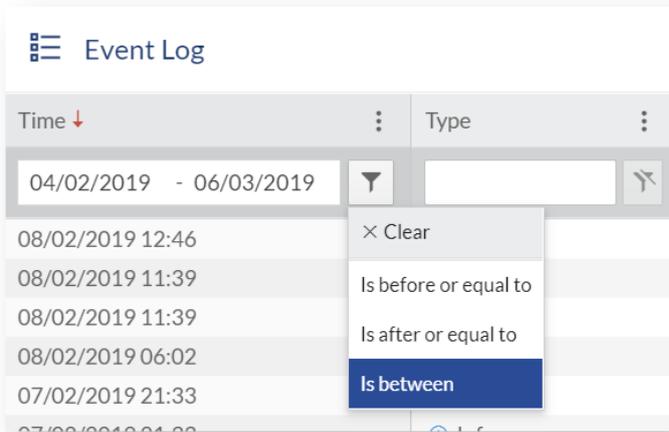
Time	Type	Source	Event	Message
08/02/2019 11:39	Info	System	Session End	Session w/0rmITWpqZk1IE closed from IP 10.0.0.123
08/02/2019 11:39	Info	Logon	User Logout	Administrator logged out
08/02/2019 06:02	Info	System	Session Start	Session HpPLJWnNONA1eUI started from IP 10.0.0.123
07/02/2019 21:33	Info	System	Session End	Session OBHMb0TTGSWbe5PK closed from IP 10.0.0.123
07/02/2019 21:33	Info	Logon	User Logout	Administrator logged out
07/02/2019 17:21	Info	Scheduler	Backup Finished	Backup (Image) completed on CLIENT10 - log file ADCAB4FBE14AE
07/02/2019 16:59	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT10
07/02/2019 16:59	Info	Scheduler	Run Now Backup Triggered	Attempting Run Now Full backup of CLIENT10 on NAS Share using I
07/02/2019 16:41	Info	Computers	Agent Status Changed	Agent on CLIENT10 is now online
07/02/2019 16:39	Info	Computers	Agent Status Changed	Agent on CLIENT10 is now offline
07/02/2019 16:38	Warning	Scheduler	Backup Finished	Backup (Image) failed on CLIENT4 - Operation Cancelled
07/02/2019 16:38	Info	Dashboard	Backup Cancelled	Cancel backup request sent to CLIENT4
07/02/2019 16:38	Info	Dashboard	Backup Paused	Pause backup request sent to CLIENT4
07/02/2019 16:22	Error	Scheduler	Backup Finished	Backup (Image) failed on CLIENT10 - Failure: User - No user - Multip
07/02/2019 16:22	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT10
07/02/2019 16:22	Info	Scheduler	Run Now Backup Triggered	Attempting Run Now Full backup of CLIENT10 on NAS Share using I
07/02/2019 16:06	Info	Scheduler	Scheduled Backup Stopped	Scheduled Backup of Backup Definition "Old OS" on Schedule "test2
07/02/2019 16:06	Info	Scheduler	Scheduled Backup Stopped	Scheduled Backup of Backup Definition "Test Definition" on Schedul
07/02/2019 16:06	Info	Scheduler	Scheduled Backup Stopped	Scheduled Backup of Backup Definition "Test Definition" on Schedul
07/02/2019 16:06	Error	Scheduler	Backup Finished	Backup (Image) failed on CLIENT3 - Backup aborted! - None of the s
07/02/2019 16:05	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT3
07/02/2019 16:05	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT4
07/02/2019 16:05	Info	Scheduler	Scheduled Backup Triggered	Attempting scheduled Incremental backup of CLIENT4 on Backups\
07/02/2019 16:05	Info	Scheduler	Scheduled Backup Triggered	Attempting scheduled Incremental backup of CLIENT3 on D: using C
07/02/2019 16:05	Warning	Scheduler	Backup Finished	Backup (Image) failed on CLIENT3 - Operation Cancelled
07/02/2019 16:05	Info	Dashboard	Backup Cancelled	Cancel backup request sent to CLIENT3
07/02/2019 15:54	Error	Scheduler	Backup Finished	Backup (Image) failed on CLIENT10 - Backup aborted! - None of the
07/02/2019 15:54	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT10
07/02/2019 15:54	Info	Scheduler	Scheduled Backup Triggered	Attempting scheduled Incremental backup of CLIENT10 on D: using C
07/02/2019 15:51	Error	Scheduler	Backup Finished	Backup (Image) failed on CLIENT2 - Backup aborted! - None of the s
07/02/2019 15:51	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT2
07/02/2019 15:51	Info	Scheduler	Scheduled Backup Triggered	Attempting scheduled Incremental backup of CLIENT2 on D: using C
07/02/2019 15:49	Error	Scheduler	Backup Finished	Backup (Image) failed on CLIENT22 - Backup aborted! - None of the
07/02/2019 15:49	Info	Scheduler	Backup Started	Backup (Image) started on CLIENT22

To sort the event log, click on column heading you want to sort by (multiple clicks will cycle through ascending, descending and unsorted) or click the dropdown menu on the right hand side of a column heading and select the appropriate sort option.

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To filter, select any column heading and click **Filter**. This will display the filter bar below the headings:



To apply a filter, click the edit box under the column to be filtered and select the appropriate option. The filter button to the right of the edit box allows clearing the filter or selecting between different filter types where available.

Event Log Columns

The Event Log table has columns as follows:

Column Name	Description
Time	The date and time when the event was logged.
Type	The 'Type' column indicates the severity of the event. The types are: <ul style="list-style-type: none">• Info - A normal event in the operation of the Management Console• Warning - Something unusual which may indicate a problem or unusual operation

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Column Name	Description
	<ul style="list-style-type: none"> Error - A failure of some sort which may require investigation
Source	There are a number of different sources for each event. These sources show which part of the system the event originated from and filtering on source may be useful to show related events from the same area
Event	The event which has occurred. A full list is available below
Computer	If the event is associated with a computer, the NetBIOS name of the computer will be shown here.
User	If the event was initiated by a user, the user's login name will be shown here.
Message	This contains the message detail for the event. The message can vary depending on whether the event is a success or failure event. For example, a 'Backup End' event may show additional error information for a failed backup over a successful one.

Event Log Sources

The available Event Log sources are listed below:

Event Log Source Name	Description
System	Events from the server which is running Site Manager such as startup and shutdown events from the Windows service running Site Manager.
Logon	Events relating to user login/logout of sessions
Settings	Changes to any of the items in Site Manager settings
Update	Notifications of new Site Manager software versions
Licenses	Upgrade, Addition and removal of Macrium Agent License keys, warnings for problems with client licensing
Computers	Additional and removal of managed computers, online/offline status notifications
Backup Definitions	Changes to Backup Definitions

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Event Log Source Name	Description
Schedules	Changes to Schedules
Repository	Changes to Repositories
Scheduler	Events from the internal scheduling of backups by repositories including backup scheduling, start and end.
Reflect	Backup and restore events initiated from an individual computer's installation of Macrium Reflect rather than centrally
Dashboard	Events triggered from user interaction with the Dashboard page
Restore	Events from Site Manager triggered restore operations
Agent	Errors and notifications from Agents running on managed computers
Backup	Events from Site Manager triggered backup operations
Verification	Events from Site Manager triggered verification operations
Image File Browser	Events triggered by browsing image files in the repository page

Event Log Events

The list of possible events and useful information that may be logged is shown below. Note that if relevant, all events will contain a username and/or computer NetBIOS:

Event Log Event	Description	Data available
Startup	The Site Manager service has started up	Site Manager version
Shutdown	The Site Manager service has been requested to stop	
User Login	A user has logged in.	Username, IP address

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Event Log Event	Description	Data available
User Logout	A user has logged out	Username
Security Settings Changed	The security settings were changed by a user	
Slack Settings Changed	The Slack settings were changed by a user	
Notification Settings Changed	The Notification settings were changed by a user	
Update Available	An update to the Management console is available	New Software Version
Update Installed	The Site Manager has started with a new version	Old and new software version numbers
License Key Added	A License Key has been added as a Client Access License	License key and number of seats
License Key Removed	A License Key has been removed	License key
Unlicensed Computers	One or more computers cannot be accessed by Site Manager due to licensing issues	Number of affected computers
Computer Added	A computer has been added to Site Manager	Computer NetBIOS
Computer Removed	A computer has been removed from Site Manager	Computer NetBIOS
Agent Remotely Installed	Site Manager has attempted remote installation of an Agent	Computer NetBIOS affected, install success, error messages

Macrium Site Manager User Guide

Event Log Event	Description	Data available
Agent Patched	The automatic Agent patching has pushed a patch to a remote Agent	Computer NetBIOS, patch name
Repeat Last Backup	The Repeat Last Backup function has been used to trigger a backup	Computer NetBIOS
Set Passphrase	The Passphrase for a computer has been changed on the server	Computer NetBIOS, passphrase
Agent Updated	A remote Agent is now running a new version of the Agent software	Old and new versions
Backup Definition Created	A new Backup Definition was created	Backup Definition name
Backup Definition Removed	A Backup Definition was removed	Backup Definition name
Backup Definition Updated	A Backup Definition was edited and updated	Backup Definition name
Schedule Created	A new Schedule was created	Schedule name
Schedule Removed	A Schedule was removed	Schedule name
Schedule Updated	A Schedule was edited and updated	Schedule name
Repository Created	A new Repository was created	Repository path
Repository Removed	A Repository was removed	Repository path
	A Repository was edited and updated	Repository path

Macrium Site Manager User Guide

Event Log Event	Description	Data available
Repository Updated		
Repository Offline	The server lost contact with a Repository	Repository path
Scheduled Backup Added	Backups have been scheduled in a Repository	Repository path, Backup Definition name, Schedule name
Scheduled Backup Removed	Scheduled backups have been removed from a Repository	Repository path, Backup Definition name, Schedule name
Scheduled Backup Active	A scheduled backup has been set as active on a Repository	Repository path, Backup Definition name, Schedule name
Scheduled Backup Stopped	A scheduled backup has been stopped on a Repository	Repository path, Backup Definition name, Schedule name
Scheduled Backup Triggered	Scheduled backups have triggered a backup to start on a managed computer	Computer NetBIOS, Repository path, Backup Definition name, Schedule name
Backup Started	A backup has started or failed to start on a managed computer	Computer NetBIOS, error information
Backup Finished	A backup has finished or failed on a managed computer	Computer NetBIOS, error information, log file name
Restore Started	A restore has started or failed to start on a managed computer	Computer NetBIOS, error information

Macrium Site Manager User Guide

Event Log Event	Description	Data available
Restore Finished	A restore has finished or failed on a managed computer	Computer NetBIOS, error information, log file name
Clone Started	A clone operation has started or failed to start on a managed computer	Computer NetBIOS, error information
Clone Finished	A clone operation has finished or failed on a managed computer	Computer NetBIOS, error information, log file name
Backup Paused	A backup has been paused from the Site Manager interface	Computer NetBIOS
Backup Cancelled	A backup has been cancelled from the Site Manager interface	Computer NetBIOS
Session Start	A web session to Site Manager has been started	IP Address
Session End	<p>A web session to Site Manager has closed.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;">  The session will be closed by the server some time after the user has closed their web browser. This can be up to 10 minutes </div>	
Restore Requested	A restore operation has been requested through Site Manager	Computer NetBIOS, image file name
Message Response	A request to an Agent has failed.	Computer NetBIOS, message type, error
Agent Status Changed	A managed computer has changed online status	Computer NetBIOS, Online or offline
Backup Requested	A backup operation has been requested through Site Manager	Computer NetBIOS
Verification Started	A backup file verification operation has started	Backup file name and path

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Event Log Event	Description	Data available
Verification Finished	A backup file verification operation has finished	Backup file name and path, success, error
Home Edition Agent Limit Reached	The number of Home Edition standalone licensed clients has exceeded the limit (4).	Number of Home Edition clients, whether excess clients are using MALs
Email Settings Changed	The Email settings were changed by a user	
System Settings Changed	The System settings were changed by a user	
Agent Settings Changed	Agent section of the settings page has been changed	
Email Notification	An email notification has been sent or failed to send	Email recipient, authentication type, error
Agent Passphrase Remote Update	The secure passphrase on a remote agent has been updated. This occurs when advanced agent security is set in settings and an agent has been connected for the first time or the global passphrase has been set on the Site Manager server	Computer NetBIOS
Remote Management Settings Changed	The Remote Management settings were changed by a user	
Macrium Agent License Key Upgraded	A MAL has been upgraded. This may occur when a version 6 key is upgraded to version 7 when added to Site Manager.	Old and new keys
Standalone Reflect License Key Upgraded		Computer NetBIOS, old and new license keys

Macrium Site Manager User Guide

Event Log Event	Description	Data available
	A client computer with a standalone Macrium Reflect install has had the Reflect license key upgraded by the Site Manager. This occurs when the user requests an upgrade from a Reflect version 6 to a Reflect version 7 key.	
File Downloaded	A file has been downloaded by opening an image file in the Repository browser and downloaded	Image file, Downloaded file
Remote Synchronization Started	A Repository has started to sync to a remote server	Repository, remote server
Remote Synchronization Completed	A Repository has completed a sync to a remote server	Repository, remote server, error if appropriate
Run Now Remote Synchronization Triggered	A user has requested that a manual remote synchronization should be started	Repository, remote server
Remote Synchronization Reinitialized	A user has reinitialized a remote server so that it can be used as a target for remote synchronization	Repository, remote server
Remote Synchronization Cancelled	User has cancelled a running remote synchronization through the Site Manager user interface	Repository, remote server
Configuration Import	A configuration backup has been imported into Site Manager through the settings page Load Configuration option	
Event Log Cleared	The Event Log was cleared by a user	
Provider Deleted	A Login Provider has been deleted by a user	Provider name
Provider Created	A Login Provider has been created by a user	Provider name

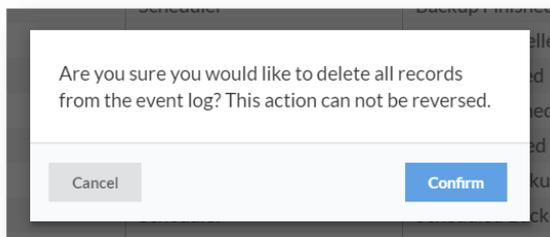
Macrium Site Manager User Guide

Event Log Event	Description	Data available
Provider Configured	A Login Provider has been edited by a user	Provider name, success or failure
Permissions Modified	Login Provider permissions have been changed by a user	Provider name, success or failure
Agent Migration Start	A migration of an Agent from this Site Manager to another has started	Agent name, destination Site Manager details
Agent Migration End	A migration of an Agent from this Site Manager to another has completed	Agent name, success or failure
Server Connection Settings Changed	The network configuration of the Site Manager server connection has been changed	New configuration details
Agent Manual Upgrade	An Agent has been queued for upgrade by a user	Agent name

Clearing the Event Log

To remove any unwanted log entries such as from early testing of a deployment before going live, the Event Log can be cleared. This will remove all entries. Once the Event Log has been cleared, a single **Event Log Cleared** event is logged.

To clear the Event Log, press the **Clear** button above the top right of the Event Log table:



Exporting the Event Log

The Event Log can be exported as a CSV file to allow analysis or archiving off the Site Manager Server. To export the Event Log, press the **Export** button above the top right of the Event Log table. A CSV will be downloaded which can be imported into other systems:

Macrium Site Manager User Guide

	A	B	C	D	E	
1	Event Time	Event Source	Event Type	Event	User	Comput
2	08/02/2019 12:46	Logon	Info	User Login	Administrator	
3	08/02/2019 11:39	System	Info	Session End	Administrator	
4	08/02/2019 11:39	Logon	Info	User Logout	Administrator	
5	08/02/2019 06:02	System	Info	Session Start		
6	07/02/2019 21:33	System	Info	Session End	Administrator	
7	07/02/2019 21:33	Logon	Info	User Logout	Administrator	
8	07/02/2019 17:21	Scheduler	Info	Backup Finished		CLIENT1
9	07/02/2019 16:59	Scheduler	Info	Backup Started		CLIENT1
10	07/02/2019 16:59	Scheduler	Info	Run Now Backup Triggered		CLIENT1
11	07/02/2019 16:41	Computers	Info	Agent Status Changed		CLIENT1
12	07/02/2019 16:39	Computers	Info	Agent Status Changed		CLIENT1
13	07/02/2019 16:38	Scheduler	Warning	Backup Finished		CLIENT4
14	07/02/2019 16:38	Dashboard	Info	Backup Cancelled	Administrator	CLIENT4
15	07/02/2019 16:38	Dashboard	Info	Backup Paused	Administrator	CLIENT4
16	07/02/2019 16:22	Scheduler	Error	Backup Finished		CLIENT1

Managing and Restoring Backups

Once backups have been created and stored in a repository, Site Manager provides tools to manipulate these backups and restore them. The options available are:

- [Restoring an Image through Site Manager](#) - How to use the restore functionality of Site Manager to remotely restore an image
- [Restoring an Image Through Macrium Reflect](#) - How to open images in standalone Macrium Reflect or the Site Manager Agent and how to decode the repository file structure
- [Verifying Images](#) - How to verify the integrity of image files in a repository
- [Synchronizing a Repository with a Remote Server](#) - How to set up automatic remote synchronization between a Site Manager Repository and a remote server

Macrium Site Manager User Guide

Restoring an Image through Site Manager

- Introduction
- Advanced Restores
- Restoring an Image using Site Manager
 - Selecting a Computer
 - Selecting an Image File to Restore
 - Selecting Restore Options
 - Reviewing the Restore and Finishing
 - Viewing a Restore Progress

Introduction

Site Manager allows image backups to be restored to the managed computer they were taken from without leaving the Site Manager interface. This process is designed for simple restore activity with the following features:

- Non system partitions will be restored without restarting the client computer.
- System partitions will be restored by restarting the client computer in Windows RE (if available) or Windows PE.
Note: If required, the Windows PE Component files will first be automatically copied to the client PC and the recovery boot menu added. The restore will then automatically be continued in the PE rescue environment.
- Full progress of the restore is shown in the dashboard 'Activity' widget. This includes restorations running in Windows PE.
- A configurable restoration alert message dialog can optionally be shown on the client computer.
- Users logged on to the client computer can optionally cancel the restore operation.

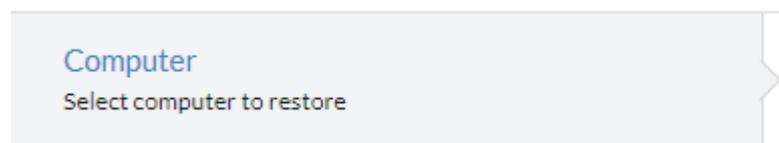
Advanced Restores

To restore a computer which is not online in Site Manager or requires options not available in the Site Manager restore, see the Restoring an Image Through Macrium Reflect.

Restoring an Image using Site Manager

The Site Manager restore process is a wizard driven process with a number of stages. These are:

Selecting a Computer

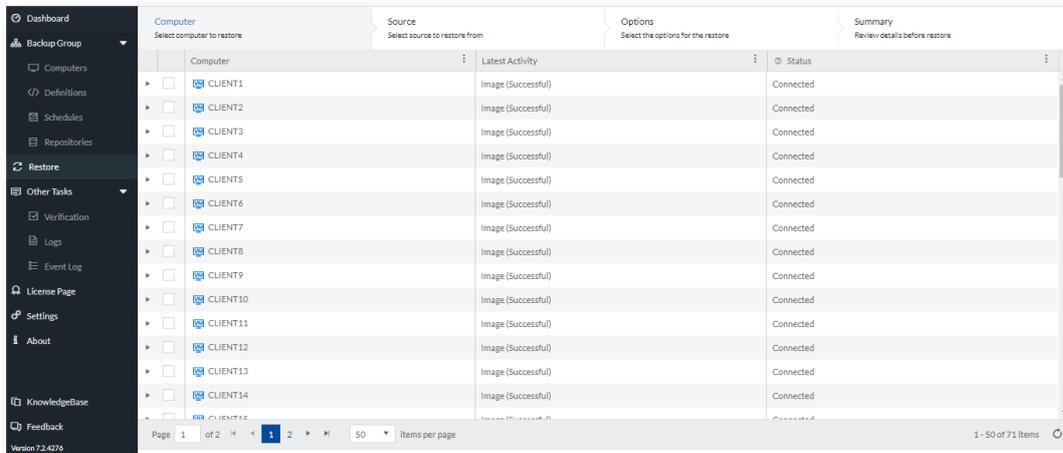


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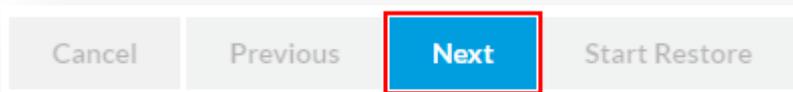
Select the 'Restore' side menu and select a computer to restore.



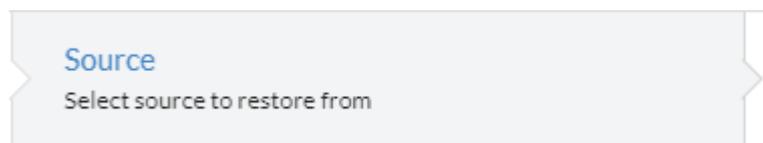
Note: Only one PC can be restored at a time



Click 'Next' to display a list of images found in repositories for the selected computer. Selecting an image file will display the Disk(s) and Partition(s) in the image file.



Selecting an Image File to Restore



Note: You can only restore one disk at a time, but you can select one or many partitions on each disk.

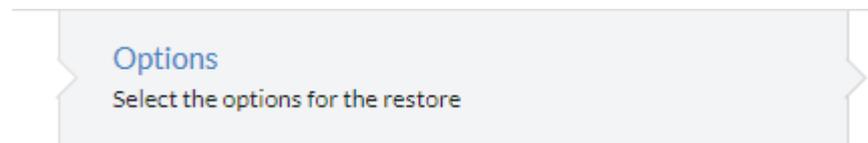
Macrium Site Manager User Guide

Computer Select computer to restore		Source Select source to restore from		Options Select the options for the restore		Summary Review details before restore																					
CLIENT2 Refresh																											
Filename	Repository	Schedule	Definition	Type	Backup Date	Size	Encryption	Compression																			
<input type="checkbox"/> C2042968E263	Backups	Test Schedule	Test Definition	Incremental	18/12/2018 10:33	6.73 MB	Not Encrypted	Medium																			
<input type="checkbox"/> C2042968E263	\\Server2016-DC\Backups	Test Schedule	Test Definition	Incremental	18/12/2018 10:33	6.73 MB	Not Encrypted	Medium																			
<input checked="" type="checkbox"/> C2042968E263	Backups	Test Schedule	Test Definition	Incremental	18/12/2018 09:30	7.08 MB	Not Encrypted	Medium																			
<input checked="" type="checkbox"/> MBR Disk 1 - Virtual HD 1.1.0 <39.99 GB>																											
<table border="1"><thead><tr><th>#</th><th>Volume</th><th>Type</th><th>FS</th><th>Used</th><th>Total</th></tr></thead><tbody><tr><td><input checked="" type="checkbox"/></td><td>1 System Reserved (NONE)</td><td>Active</td><td>NTFS</td><td>308.0 MB</td><td>549.0 MB</td></tr><tr><td><input checked="" type="checkbox"/></td><td>2 (C)</td><td>Primary</td><td>NTFS</td><td>11.82 GB</td><td>39.46 GB</td></tr></tbody></table>										#	Volume	Type	FS	Used	Total	<input checked="" type="checkbox"/>	1 System Reserved (NONE)	Active	NTFS	308.0 MB	549.0 MB	<input checked="" type="checkbox"/>	2 (C)	Primary	NTFS	11.82 GB	39.46 GB
#	Volume	Type	FS	Used	Total																						
<input checked="" type="checkbox"/>	1 System Reserved (NONE)	Active	NTFS	308.0 MB	549.0 MB																						
<input checked="" type="checkbox"/>	2 (C)	Primary	NTFS	11.82 GB	39.46 GB																						
<input type="checkbox"/> C2042968E263	\\Server2016-DC\Backups	Test Schedule	Test Definition	Incremental	18/12/2018 09:30	7.08 MB	Not Encrypted	Medium																			
<input type="checkbox"/> C2042968E263	Backups	Test Schedule	Test Definition	Incremental	18/12/2018 07:07	3.35 GB	Not Encrypted	Medium																			
<input type="checkbox"/> C2042968E263	\\Server2016-DC\Backups	Test Schedule	Test Definition	Incremental	18/12/2018 07:07	3.35 GB	Not Encrypted	Medium																			
<input type="checkbox"/> C2042968E263	Backups	Test Schedule	Test Definition	Full	18/01/2018 15:30	5.8 GB	Not Encrypted	Medium																			
<input type="checkbox"/> C2042968E263	\\Server2016-DC\Backups	Test Schedule	Test Definition	Full	18/01/2018 15:30	5.8 GB	Not Encrypted	Medium																			

Select the partition(s) to restore and **click Next**.



Selecting Restore Options

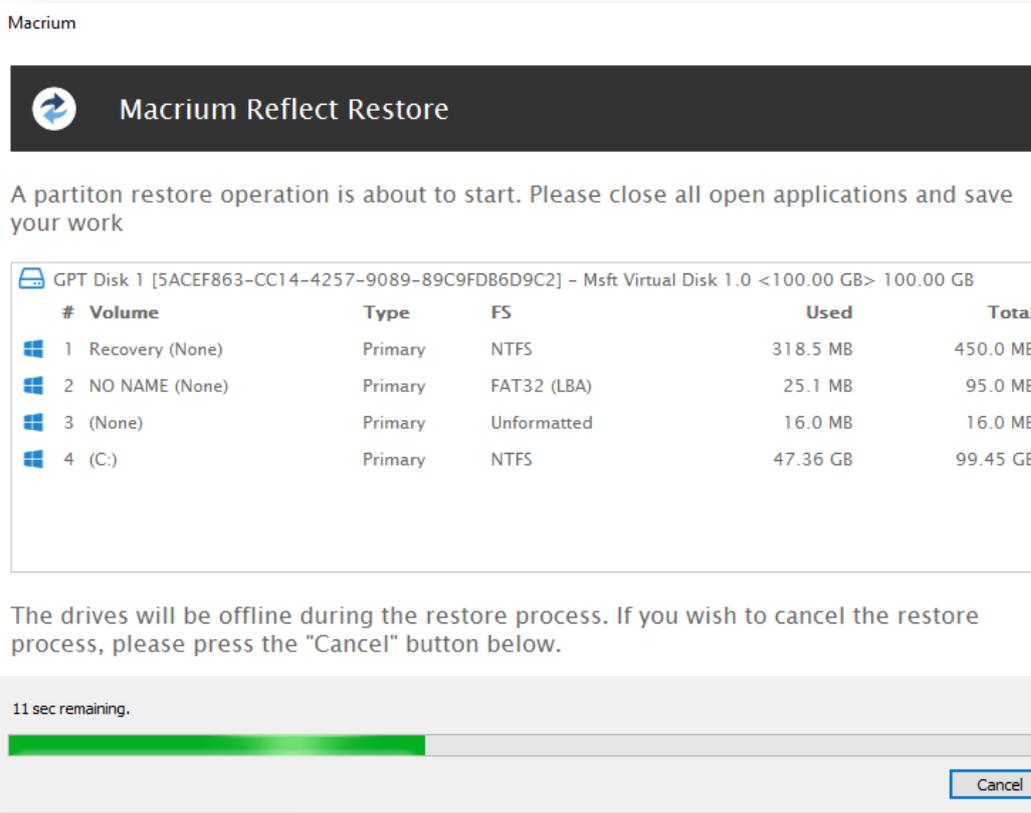


Macrium Site Manager User Guide

<p>Restore Options</p> <p><input checked="" type="checkbox"/> Rapid Delta Restore</p> <p><input checked="" type="checkbox"/> SSD TRIM</p> <p><input type="checkbox"/> Verify Image before Restore</p>	<p>Network Share Authentication</p> <p>User Name: administrator</p> <p>Password:</p> <p>Domain: CONTOSO</p>
<p>Client Notifications</p> <p><input checked="" type="checkbox"/> Display message</p> <p><input checked="" type="checkbox"/> Allow user to cancel</p> <p>Message to display: A partition restore operation is about to start. Please close all open applications and save your work</p> <p>Time to display: * 20 seconds</p>	

Option	Description
Rapid Delta restore	Only changed blocks are restored and the restore completes much faster with this option selected.
SSD TRIM	<p>Affects restore operations to SSD only.</p> <p>Reflect can flag all unused blocks using the TRIM operation. Writing to an unused block is much quicker as it avoids both the slow erase operation and the read-modify-write cycle. This results in an increased lifetime and the performance of the device.</p> <p>It is effective for all Windows operating systems, even those that support SSD trim as the file system blocks on de-allocation; it cannot TRIM blocks written by another process. It is also effective for USB</p>
Verify image before restore	<p>Perform a full image verification prior to starting the restore process. If any corruption is found in the image then the restore will be aborted.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p> Note: Selecting this option will increase the restore time considerably.</p> </div>
	Enter any authentication details to enable the computer being restored to access the image file network share. The details will be pre-populated with the authentication information saved in the repository configuration.

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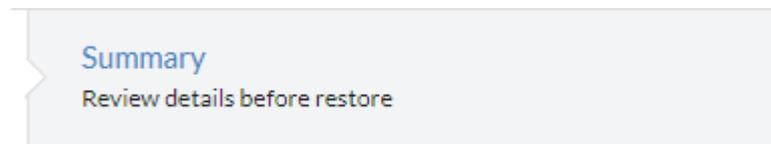
Option	Description
Network Share Authentication	
Display Message	<p>When enabled, a message dialog is displayed to inform the client user(s) that a restore operation is dialog includes a list of the partitions being restored together with custom message text.</p> <p>Example restore message dialog...</p> 
Allow user to cancel	When enabled, the restore can be cancelled by the client logged in user.
Message to display	The text to be display in the message dialog.
Seconds to display	The number of seconds to display the client message dialog.

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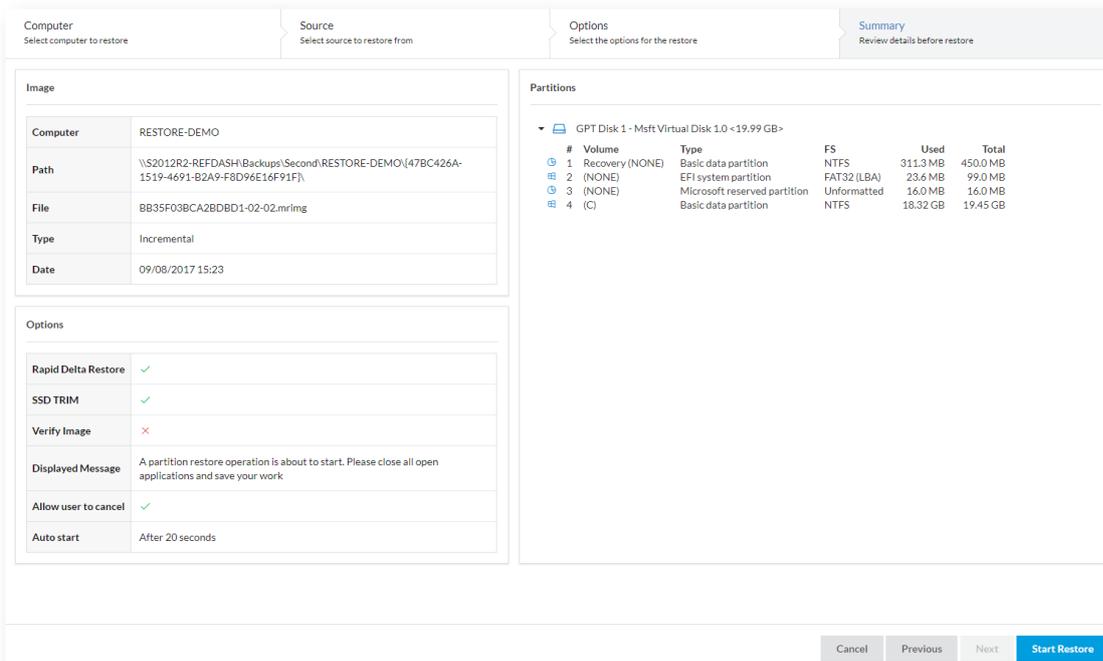
Enter/Select the restore options and **click Next**



Reviewing the Restore and Finishing



A summary of the restore selections and options is displayed. Confirm everything is OK and **click 'Start Restore'**



The screenshot displays the 'Options' tab of the Macrium Site Manager restore wizard. It is divided into several sections:

- Image:** A table showing the selected image details.

Computer	RESTORE-DEMO
Path	\\S2012R2-REFDASH\Backups\Second\RESTORE-DEMO\{47BC426A-1519-4691-B2A9-F8D96E16F91F}
File	BB35F03BCA2BDBD1-02-02.mrimg
Type	Incremental
Date	09/08/2017 15:23
- Options:** A list of restore options with checkboxes and status indicators.

Rapid Delta Restore	<input checked="" type="checkbox"/>
SSD TRIM	<input checked="" type="checkbox"/>
Verify Image	<input type="checkbox"/>
Displayed Message	A partition restore operation is about to start. Please close all open applications and save your work.
Allow user to cancel	<input checked="" type="checkbox"/>
Auto start	After 20 seconds
- Partitions:** A table showing the disk layout for 'GPT Disk 1 - Msft Virtual Disk 1.0 <19.99 GB>'.

#	Volume	Type	FS	Used	Total
1	Recovery (NONE)	Basic data partition	NTFS	311.3 MB	450.0 MB
2	(NONE)	EFI system partition	FAT32 (LBA)	23.6 MB	99.0 MB
3	(NONE)	Microsoft reserved partition	Unformatted	16.0 MB	16.0 MB
4	(C)	Basic data partition	NTFS	18.32 GB	19.45 GB

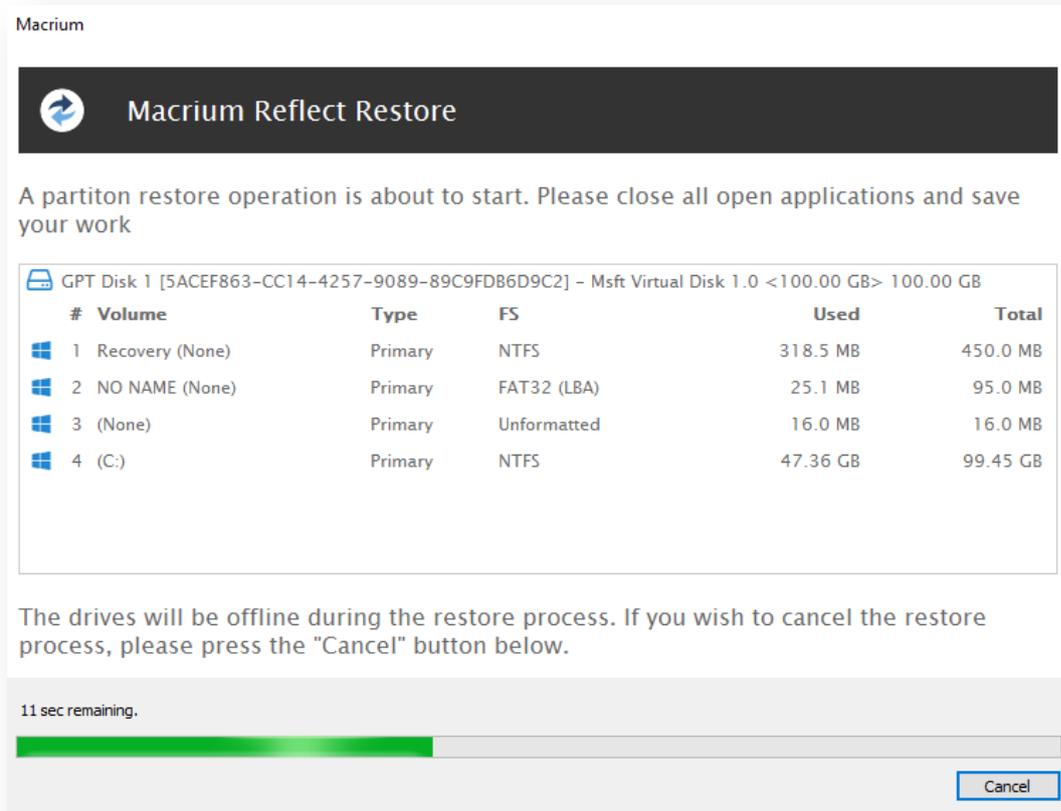
At the bottom right, there are navigation buttons: Cancel, Previous, Next, and Start Restore. The 'Start Restore' button is highlighted with a blue background and a red border.



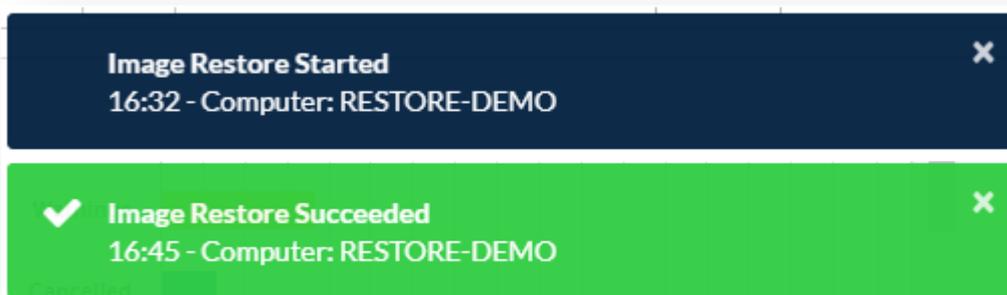
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Viewing a Restore Progress

The Restore starts and a message dialog is displayed on the client computer (if the **Allow user to cancel** option has been selected)



In Site Manager, notifications indicate the success of the restore request and initialization.



The message countdown and restore can be monitored in the dashboard **Activity** widget.

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Manual Restore Options

A restore within Macrium Site Manager performs a simple restore of data in the image file with few advanced options. This is good for performing a quick restore, but if more complex restore operations are required, the image files created by Macrium Site Manager can be viewed and restored by either a standalone installation of Macrium Reflect or by the Macrium Agent itself.

Opening images in this way allows the following:

- Restore to dissimilar hardware
- Restore by rescue media
- Browsing image files for file-level access
- Creating VHD files or VMs

See [Macrium Reflect - Restoring and Browsing Images](#) for more details.

Finding Images in a Repository

The repository folder structure is automatically created as needed. It follows this pattern:

```
<Repository root path>\<Computer name>\<Definition ID>\ImageFile.mring
```

Where **Computer Name** is the NetBIOS name of a computer in Site Manager and **Definition ID** is an ID number corresponding to a Backup Definition. Inside that folder are image files. All image files created for a computer using a backup definition go in the same folder, even if they were performed with a different schedule or using a **Run Now** backup.

To translate the backup definition ID into a backup definition name, the Site Manager creates an information file in the top level of the repository. This file is called **Macrium Repository Information.txt**

```
Macrium Repository - v1
This file lists folder names associated with Backup Definitions - Centrally
scheduled backups are stored in <NETBIOS>\<BACKUP DEFINITION ID> folders.
{A7D12C32-10DD-48D1-BE06-EF0E9412480A} - Sales Team
{96D60D41-B0D9-4FF4-B562-BBF11F4290F8} - Support Team
{8A25D491-5DE7-41AE-9E91-AEDD51304A42} - Server Backups
{8CABEE54-267F-481D-BD18-55ECA7E1E80F} - this office
{8E6FB6D3-F8B7-432E-BBBC-1D188702D23A} - Servers
```

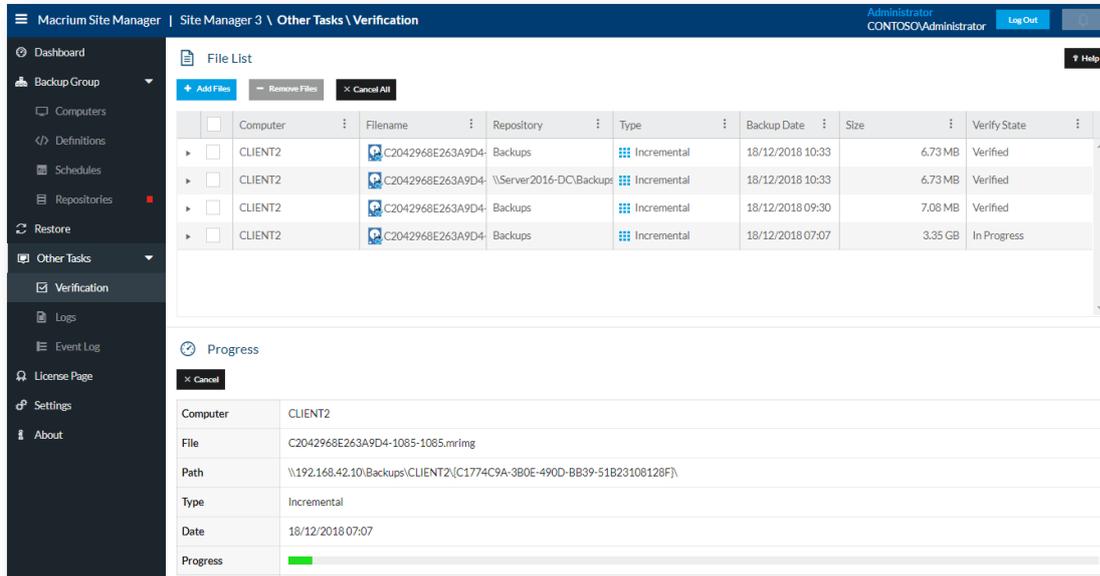
This lists all backup definition IDs and links them to the name of backup definitions. The reason this is done is so that changing a backup definition name doesn't cause the repository layout to change or a backup set to break because it's stored in a different folder



If a backup definition has been deleted, it will be removed from the information file but the folders and image files will remain in the repository. If you find a backup definition ID without a name in the information file, this is most likely a deleted definition

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Verifying Images



The Verification page allows image files which have been backed up to any of the repositories to be checked to ensure file integrity and detect any data errors which may have occurred in storage.

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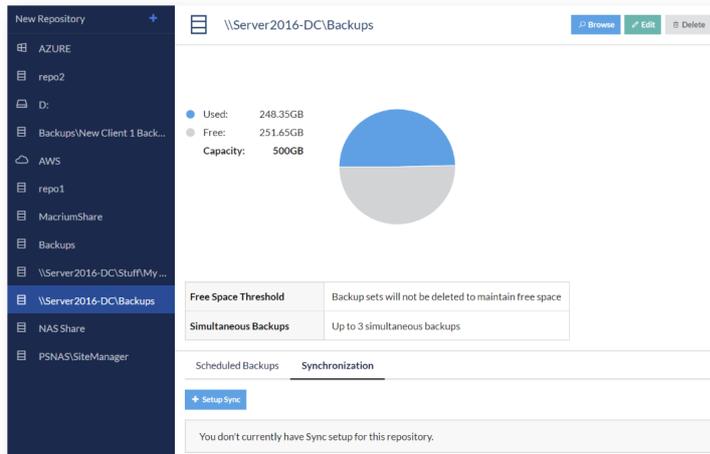
Synchronizing a Repository with a Remote Server

- Overview
- Configuring Remote Synchronization
 - Stage 1 - Synchronization Type
 - Stage 2 - Network/Local/Server Path
 - Stage 3 - Configuration
 - Finishing the Wizard
- Viewing Remote Synchronization Status
 - Current Server Status
 - Last Synchronization Results
- Viewing a Synchronization in Progress
- Common Issues and Fixes
 - Synchronization Failures
 - Full Backup Files are Synchronized When Creating Incremental Backups
 - Remote Server ID mismatch

Overview

Site Manager can automatically synchronize all backups stored in a Repository to a remote server or disk on a daily basis. This can be used to efficiently ensure that offsite replication of backup data is performed. The Site Manager server will manage stopping backups on the server and ensuring that the synchronization process has a consistent view of the Repository. The synchronization process will also manage failed and partially uploaded files and ensure the remote copy of the Repository is always in a consistent state.

This feature can be accessed through the Repository page and is configured on a per-Repository basis:



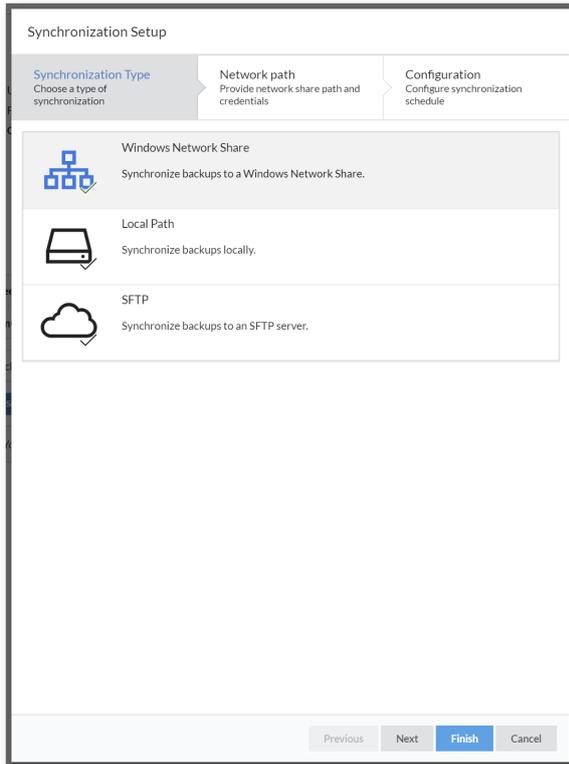
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Configuring Remote Synchronization

Viewing a repository and selecting the **Synchronization** tab will either display information on the remote synchronization configuration or offer the option of creating a new remote synchronization. Clicking **Setup Sync** will display the Synchronization Setup wizard. The steps of this wizard are described below:

Stage 1 - Synchronization Type

In the first stage of configuration, the type of remote sync is chosen. The types available are



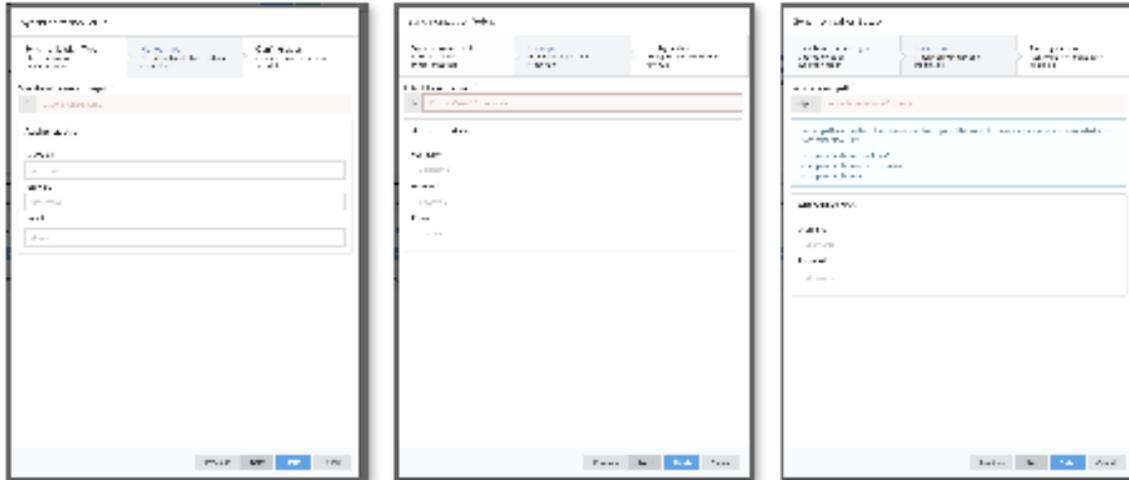
Synchronization Type	Description
Windows Network Share	Synchronization to any remote server which can communicate as a SMB/CIFS share of the form \\servername\share
Local Path	Synchronization with any file path local to the Site Manager server. This might be a folder, a local USB disk or any other path which can be read and written to as a folder
SFTP	Synchronization to a server running SFTP (such as a Linux server running OpenSSH)

The second step will change depending on which synchronization type is chosen.

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Stage 2 - Network/Local/Server Path

The second stage of configuration includes all the options specific to configuration type. This includes the path to the remote server or folder and any authentication details. The different remote synchronization types take the following details:



Synchronization Type	Available Options
Windows Network Share	Network share path in UNC format (\\server\share\folder, backslash separated), username, password and domain. If a domain is entered as part of the username (in DOMAIN\User or user@domain.dns form), the domain field is disabled.
Local Path	Local path in Windows path format (Backslash separated) with optional username, password and domain. If these are omitted, the path is accessed using the SYSTEM account of the Site Manager server.
SFTP	<p>Path to the SFTP server in URI format (sftp://example.com/home/backups/macrium, omitting the leading sftp:// and using forward slash separators), username and password for the remote server.</p> <div style="border: 1px solid #ccc; padding: 10px; margin-top: 10px;"> <p>i SFTP Paths</p> <p>When configuring an SFTP server, include the full path to the folder to sync to in the server path, NOT the path relative to the user's home folder. For example, when connecting to a server as user, to sync to the user's home folder the full path must be specified e.g. example.com/home/user/macrium not example.com/macrium</p> </div>

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Stage 3 - Configuration

The final stage configures options which apply to all synchronization types. The options are as follows:



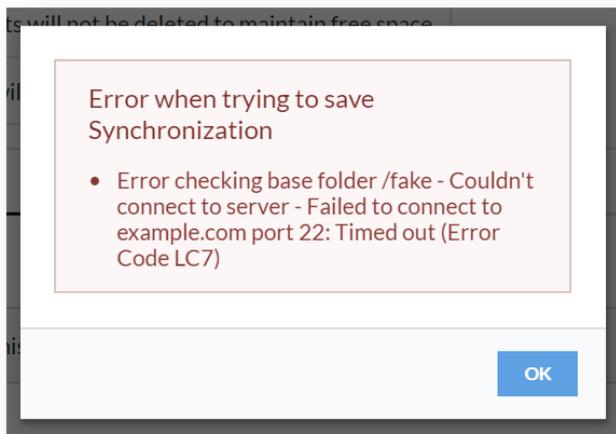
Option	Description
<p>Custom Name</p>	<p>The custom name is shown in the UI to identify the sync. If left blank, the server/local path of the sync will be used instead</p>
<p>Folder Name</p>	<p>The folder name set here will be created on the server/remote path to store the synchronized backups</p> <div data-bbox="422 1198 1428 1556" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p> The path configured as part of the network or server path must exist on the remote server or the sync process will generate an error, however Site Manager will create the folder set as the Folder Name if it does not already exist.</p> <p>For example, if remote sync is configured with a server of sftp://192.168.0.1/home/backups and a folder name of SiteManager1, the sync process will store image files in /home/backups/SiteManager1, creating the SiteManager1 folder if necessary.</p> </div> <p>Multiple repositories can sync to the same server/network path so long as the folder name is different for each one.</p>
<p>Synchronization Window - Times</p>	<p>The synchronization window controls what time of day the sync will run. When the start time is reached, Site Manager will stop scheduling backups on the repository, wait for any existing backups to finish then run the sync. After the sync has finished, backups resume. If the sync can't be started before the sync end time is reached, the sync attempt is abandoned until the following day. This option allows some control over when high internet bandwidth options like sync get run.</p>

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Option	Description
Synchronization Window - Frequency	The sync process can be limited to only happening on some days of the week by selecting the desired days here.

Finishing the Wizard

When finishing the wizard, a connection test is performed by the server and any errors are highlighted to be fixed:



Viewing Remote Synchronization Status

Current Server Status

Once Remote Synchronization has been configured, the Synchronization tab on the Repositories page will show the following:



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This includes a top section with the current server status - this is periodically updated by Site Manager so that if a Remote Synchronization server goes offline it will be noted and the error shown here. The configuration is also shown here for reference and can be edited.

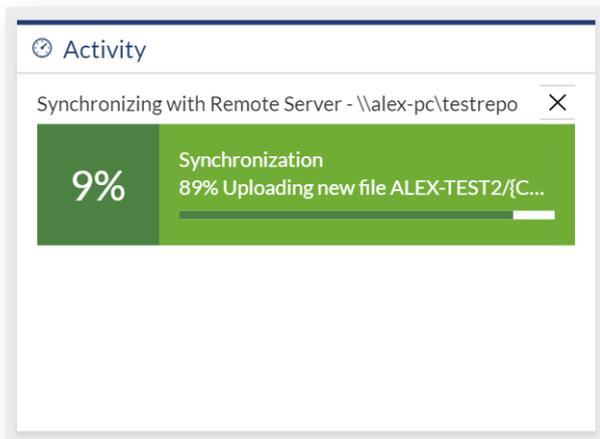
The **Run Now** option allows a sync to be started manually. This manually started sync will wait for any active backups in the Repository to finish before starting and will prevent any backups from starting until the sync is completed.

Last Synchronization Results

This section shows the results of the last sync which ran, including whether it succeeded, any error messages, the amount of data uploaded and which files were affected.

Viewing a Synchronization in Progress

Upcoming syncs are shown in the forecast of the Repository and active syncs are shown in the Activity widget on the Dashboard page just as for backups



Common Issues and Fixes

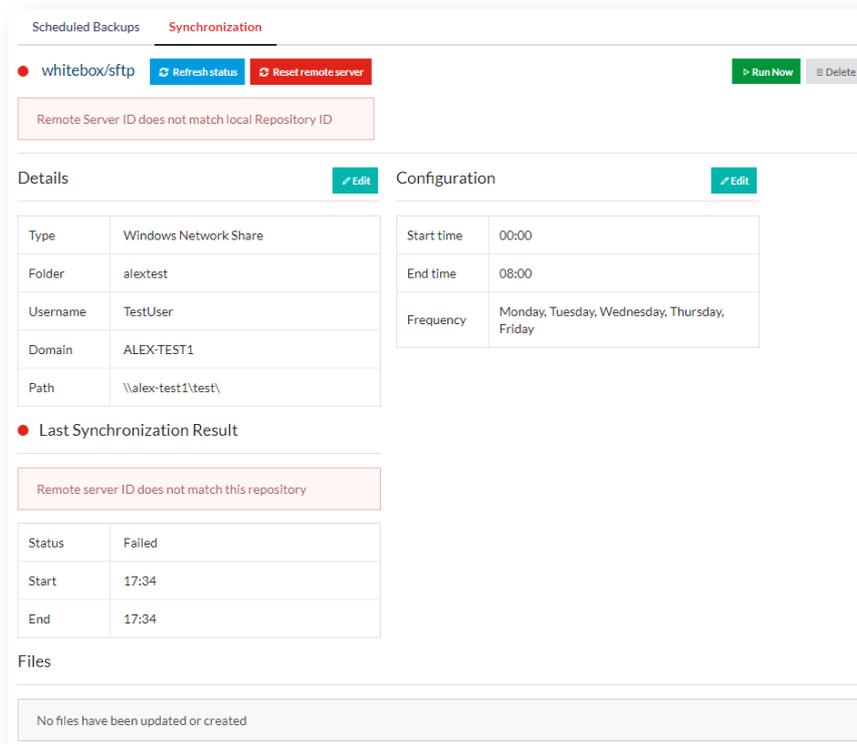
Synchronization Failures

If a sync fails part way through the upload process, the next sync will roll the remote server back to its previous state before starting - there is no need to do anything to repair the remote sync repository state, this will happen automatically on the next sync.

Full Backup Files are Synchronized When Creating Incremental Backups

The remote synchronization process uploads any new or changed backups. As this works at a file level, a change to a full backup caused by the **Create Synthetic Fulls** option in the a backup schedule will cause the full image file to be re-uploaded. It is recommended to avoid this option if the amount of data uploaded is a problem.

Remote Server ID mismatch



Sometimes a remote sync attempt will fail with the error **Remote server ID does not match this repository**. This error means that the local repository's unique ID does not match the one recorded on the server for this sync. This can have many causes:

- **An error on the Repository** - If the ID file is deleted from the repository, a new ID will be generated. If this happens the remote sync is stopped to prevent local repository data with errors from overwriting the remote copy
- **Multiple Repositories syncing to the same server** - if multiple repositories sync to the same server and path, the one which connects first and writes their unique ID file to the server will own it and sync to it. The other repository will generate an error instead. This prevents multiple repositories from overwriting each others data.
- **Server space is being reused for a different Repository** - If a Site Manager server is moved or the remote sync destination has old Site Manager sync data, there may be an ID error generated because the remote sync server still has the ID from the old Repository set.

If the ID mismatch has been caused by old data or is otherwise not relevant, the Repository can write a new ID file to the remote server and take it over by using the **Reset remote server** option. This will update the ID file and allow the remote sync to proceed.

Troubleshooting and Advanced Guides

This section contains a number of guides for advanced topics including troubleshooting and integration with other areas of technology.

- Troubleshooting Agent Communications
 - Legacy MSMQ Network and Name Resolution Issues
 - Troubleshooting Legacy MSMQ Agents
- Deploying Site Manager Agents Using SCCM
- Migrating Site Manager to a new Computer
- MultiSite Integration
- Agent User Scripting
- Site Manager Agent Communications Changes
- Site Manager Advanced Communications Logging

Troubleshooting Agent Communications

This section contains technical details of what technologies, firewall rules or other prerequisites are required to enable a Macrium Agent to communicate with the Site Manager server. This includes both normal communication and requirements for remote installation of the Agent.

Legacy Agents

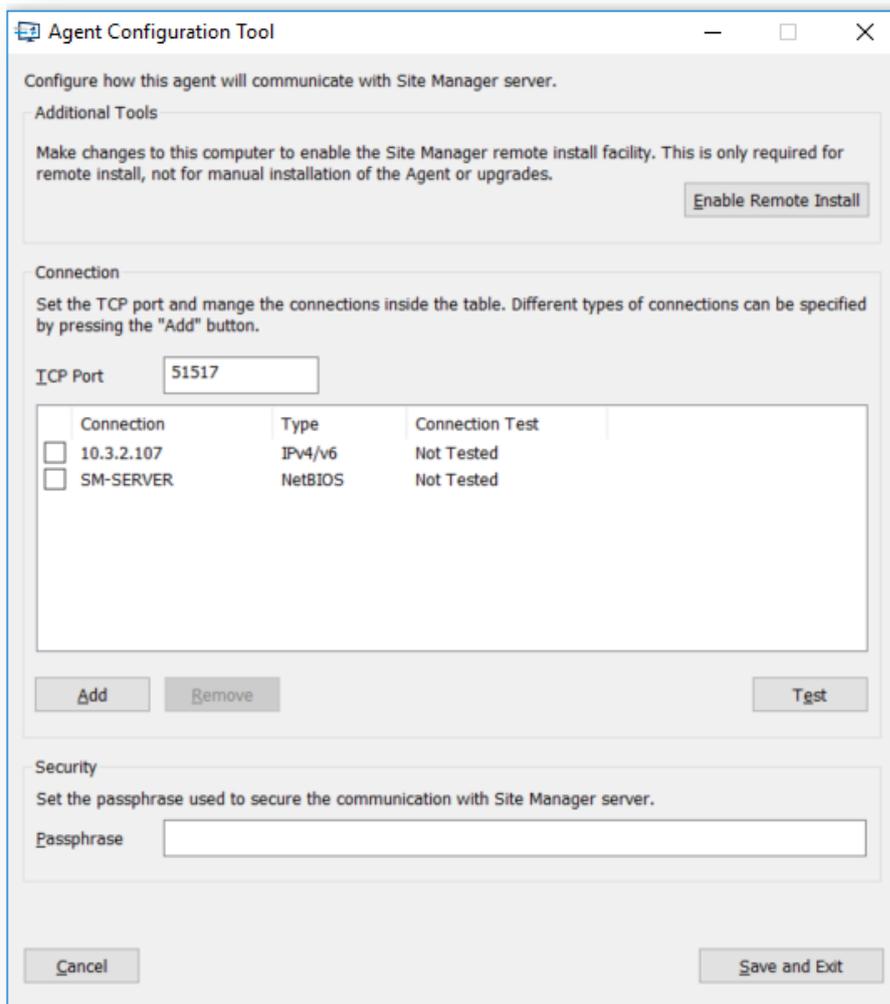
This section is intended for Agents running the latest Site Manager version. For Agents running version 7.2.4091 or earlier, see [Troubleshooting Legacy MSMQ Agents](#)

-
- Agent Configuration Tool
 - Enable Remote Install
 - Connections
 - TCP Port
 - Connection Methods
 - Test the Connection
 - Agent Configuration Tool is not able to Connect
 - Incorrect Port
 - Failed Lookups
 - The firewall is blocking the connection
 - Site Manager
 - Site Manager Agent
 - Enabling Remote Installation of the Agent on client computers
 - Computers connected to a domain
 - Firewall Configuration
 - Computers not connected to a domain
 - Firewall Configuration
 - Enable File Sharing
 - Enabling Remote Management Users
-

Agent Configuration Tool

The Agent Configuration Tool is installed with the Macrium Site Manager server and remote agent.

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Enable Remote Install

If *Enable Remote Install* is clicked, the tool will open firewall settings for File & Printer Sharing and WMI as well as enable local account token filter policy, which are described in the section below: [Enabling Remote Installation](#).

It is possible to enable the remote install via command line:

```
"C:\Program Files\Macrium\Agent\AgentConfigTool.exe" -SILENT_SETTING=YES -  
ENABLE_REMOTE_INSTALL=YES
```

Connections

Site Manager and the agent use a TCP/IP connection in order to communicate.

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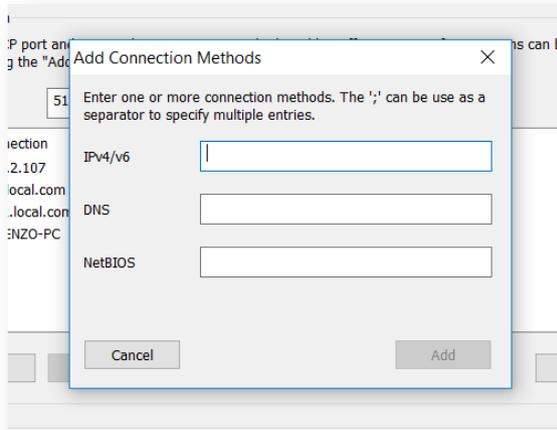
TCP Port

This is the port used by Site Manager in order to accept an incoming TCP connection. This can be checked in the Site Manager settings page under Agent/Server Connection Details. Site Manager uses 51515 as default port.

Connection Methods

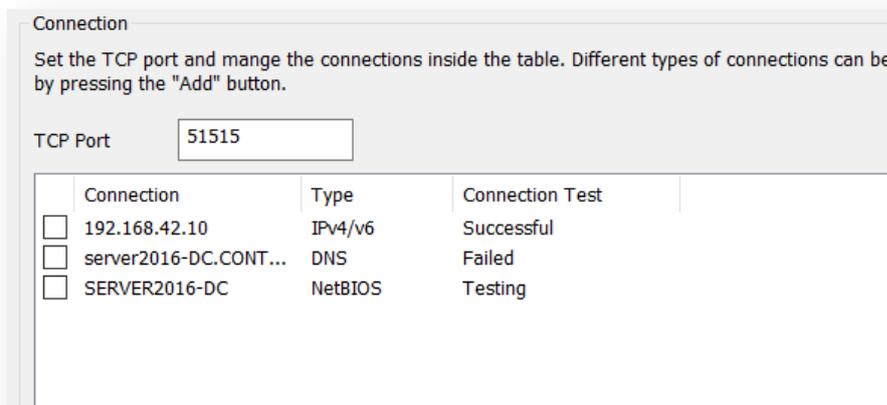
The agent needs the IP (v4 or v6) of the machine that is running Site Manager. Alternatively, the agent will try to resolve to IP DNS names or the NetBIOS of the machine.

Click the *Add* button in order to add entries in the table.



Test the Connection

By clicking the *Test* button the tool will attempt to connect to Site Manager with all the specified connection methods. The results of the test will be reported in the table.



If at least one test in the table is reported as *Successful* the agent will be able to connect to Site Manager.

If all the tests in the table are reported as *Failed* check the section below.

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Agent Configuration Tool is not able to Connect

If the connection tests in the table are reported as **Failed**, this may be due to a number of reasons:

Incorrect Port

By default, Site Manager uses TCP port **51515** for communications. This can be changed in the Settings of Site Manager. Confirm that the TCP Port in both the test tool and the Site Manager server match.

Failed Lookups

To connect DNS or NetBIOS names, the Configuration Tool/Agent performs name lookups to resolve the name to an IP address. This uses both DNS and Broadcast (LLMNR) lookups. To confirm that the lookups are working correctly, check the logs in **C:\ProgramData\Macrium\SiteManager\AgentConfigTool.log** or attempt to ping the names directly on a Windows command line.

The firewall is blocking the connection

Site Manager

The firewall of the machine hosting Site Manager must allow incoming TCP connections on the port specified in Site Manager setting under Agent/Server Connection Details. Site Manager uses 51515 as default port.

Site Manager Agent

The firewall must allow outbound TCP traffic.

Enabling Remote Installation of the Agent on client computers

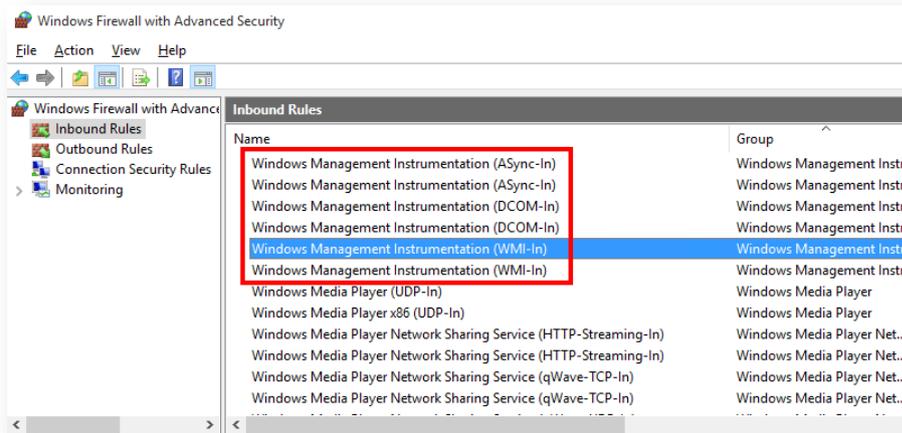
Computers connected to a domain

To enable remote installation of the Macrium Agent using domain user account credentials, the firewall on the client computer must be configured to allow appropriate inbound traffic. Since standard technologies are used for this communication, the built-in Windows Firewall has predefined rules for all necessary traffic.

Firewall Configuration

Any installed firewall (including the built-in Windows Firewall) needs to be configured to allow remote WMI (Windows Management Instrumentation). This is achieved by enabling the predefined inbound rules "Windows Management Instrumentation (WMI-In)", "Windows Management Instrumentation (DCOM-In)" and "Windows Management Instrumentation (Async-In)" for the active profile as shown below:

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The above can also be achieved by running the command below from an [elevated command prompt](#)

Windows XP and Server 2003

```
netsh firewall set service RemoteAdmin enable
```

Windows Vista and Later

```
netsh advfirewall firewall set rule group="Windows Management Instrumentation (WMI)" new enable=yes
```

Note that the predefined rules in the Windows Firewall apply only to 'Private' and 'Domain' network connections, not 'Public' ones.

Computers not connected to a domain

Non-domain networks require additional steps to enable the appropriate services and functions required to remote install the Macrium Agent. Each client computer must be configured with the steps below to allow remote installation.

These additional steps are only required for remote agent installation. If the agent is installed manually, these steps are not required.

Note that these steps are not required to manually install the Macrium Agent.

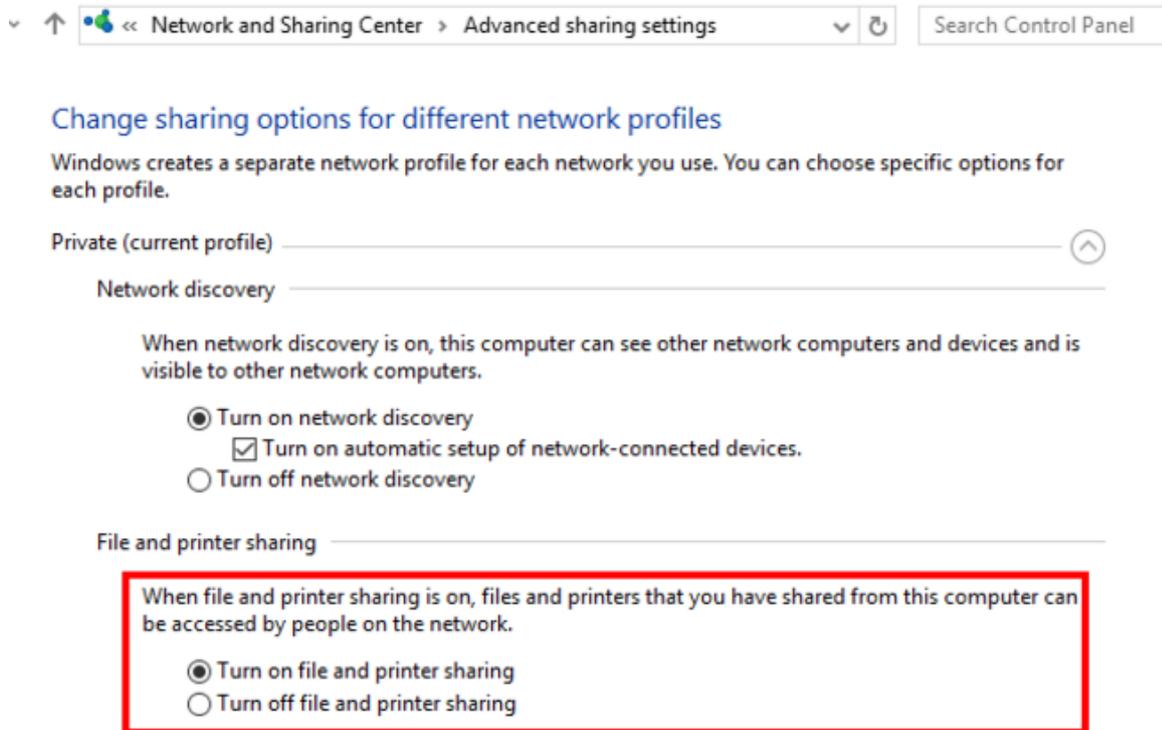
Firewall Configuration

The firewall must be configured to allow Windows Management Instrumentation (WMI) traffic. See the domain computer configuration section above for details.

Enable File Sharing

In order to perform the install, file and printer sharing must be turned on. This is found in the Network and Sharing Center -> Advanced sharing settings as shown below.

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Enabling Remote Management Users

Outside a domain, users connecting to a computer remotely have reduced privileges. This is part of built-in Windows security measures. The reduced privileges mean that Local Administrator accounts do not have sufficient privileges to install the Macrium Agent when connecting remotely.

To allow remote users to connect with their full Administrator privileges, the following registry entry must be set on the client computer:

Key	HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System
Name	LocalAccountTokenFilterPolicy
Type	DWORD
Value	1

See <https://support.microsoft.com/en-us/kb/951016> for more information on this registry setting.

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Legacy MSMQ Network and Name Resolution Issues

Site Manager Agent Version

This content only applies to Site Manager Agents which are running version 7.2.4091 or earlier.
Later versions of the Agent do not use MSMQ and do not require the same ports to be open.

Macrium Site Manager uses Microsoft Message Queue (MSMQ) for message delivery. MSMQ requires that NetBIOS names can be resolved to IP addresses for message sending.

Please see the following sections for troubleshooting IP and networking connectivity issues.

IP and Name Resolution

Incorrect IP configuration is a common cause for message delivery failure, both from server to client and vice-versa.

These steps should be performed on the server as well as the client to diagnose addressing issues:

- Use [ping](#) confirm IP4 address of the remote computer. Ping both the NETBIOS and IP4 address to confirm correct IP mapping. A difference in IP could mean that the wrong computer is receiving the messages from the server.
- DNS lookup of the computer can be performed with [nslookup](#) (or similar tools).
- [LLMNR](#) resolution should be performed using tools such as [nbtstat](#). This step ensures that any DHCP IP4 mapping is correct by having the remote computer respond to a broadcast lookup, rather than having DNS respond to what is configured as a name entry.

Firewall Ports

MSMQ uses a number of ports, this [Microsoft KB](#) lists all ports that should remain open. Ensure Windows/third party firewall software as well as AV software is not blocking access to the ports listed in the KB.

Typically only TCP port 1801 is required for successful communications, but this is down to MSMQ implementation.

Protocol	Port
TCP	1801
RPC	135, 2101, 2103, 2105
UDP	3527, 1801

See [here](#) for full details

MSMQ Configuration

You should ensure that the following are true:

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- MSMQ is installed on the server and remote computer. Macrium installers will add this as a features but post install operation may tamper with the installation.
- MSMQ service is running on the server and remote computer. Again, Macrium installers will ensure this service is running but post install operations may interfere with this service.
- MSMQ on the server and remote computer are bound to the correct socket. When MSMQ starts it will bind to the current IP, MSMQ will not dynamically respond to IP changes. MSMQ service must be restarted if the computer IP configuration changes.

Tools

A PowerShell script is available which will perform some of the above diagnostics. Download and follow these instructions:

- Modify the \$RemoteIP variable to be the remote computer IP to be tested.
- Modify the \$RemoteComputer variable to be the NETBIOS of the remote computer to be tested.
- \$RemoteIP and \$RemoteComputer must both relate to the remote computer to be tested.
- Run this script on both server and remote computer to check connectivity.
- A text file report will be generated called AgentStatus.txt in the same folder as the script. Should you need to raise a support case, this text file will aid us greatly.

Sample output text file (summarised)

Socket Connection Check

TCP Socket Connection to JDP-PC:135 was successful

TCP Socket Connection to JDP-PC:189 failed

TCP Socket Connection to JDP-PC:1801 was successful

Local Computer IP Table

ifIndex	IPAddress	PrefixLength	PrefixOrigin	SuffixOrigin	Address
1	:::1	128	WellKnown	WellKnown	Prefer
2	fe80::5efe:10.9.100.2 %2	128	WellKnown	Link	Deprec
3	10.9.100.2	9	Dhcp	Dhcp	Prefer
1	127.0.0.1	8	WellKnown	WellKnown	Prefer

Service Status

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```
Status  Name  DisplayName
-----  ----  -----
Running MSMQ Message Queuing
```

TCP Port State

```
ComputerName : DESKTOP-GH5NLOP
Protocol : TCP
LocalAddress : 0.0.0.0
LocalPort : 135
RemoteAddress : 0.0.0.0
RemotePort : 0
State : LISTENING
ProcessName : svchost
PID : 892
```

```
ComputerName : DESKTOP-GH5NLOP
Protocol : TCP
LocalAddress : 0.0.0.0
LocalPort : 445
RemoteAddress : 0.0.0.0
RemotePort : 0
State : LISTENING
ProcessName : System
PID : 4
```

```
ComputerName : DESKTOP-GH5NLOP
Protocol : TCP
LocalAddress : 0.0.0.0
LocalPort : 1801
RemoteAddress : 0.0.0.0
RemotePort : 0
State : LISTENING
ProcessName : mqsvc
PID : 2140
```

.....

```
ComputerName : DESKTOP-GH5NLOP
Protocol : TCP
LocalAddress : 10.9.100.2
LocalPort : 1801
```

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RemoteAddress : 10.3.2.15
RemotePort : 49891
State : ESTABLISHED
ProcessName : mqsvc
PID : 2140

ComputerName : DESKTOP-GH5NLOP
Protocol : TCP
LocalAddress : 10.9.100.2
LocalPort : 1801
RemoteAddress : 10.6.0.1
RemotePort : 6002
State : ESTABLISHED
ProcessName : mqsvc
PID : 2140

ComputerName : DESKTOP-GH5NLOP
Protocol : TCP
LocalAddress : 10.9.100.2
LocalPort : 1801
RemoteAddress : 10.9.119.119
RemotePort : 51101
State : ESTABLISHED
ProcessName : mqsvc
PID : 2140

.....

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Troubleshooting Legacy MSMQ Agents

Legacy Agents

This section applies to Agents running legacy version of Site Manager - version 7.2.4091 or earlier. For newer Agents, see the [Troubleshooting Agent Communications](#) section

Agent Computer Preparation

The Remote Agent install includes a GUI tool, Site Manager Environment Check. This will test remote computer connectivity and provide fixes for errors. See below for assistance.

In the case of a standalone installation of Macrium Reflect, there is a command-line AgentPreInstall tool available. This tool will open firewall settings for File & Printer Sharing and WMI as well as enable local account token filter policy, which are described below.

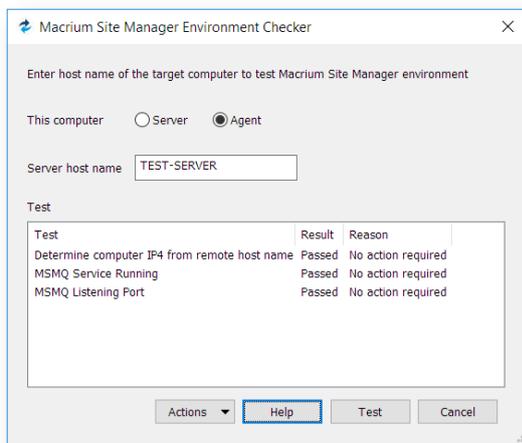
 [AgentPreInstall.exe](#).

Environment Check Tool

The Environment Check tool is installed with the Macrium Site Manager server and remote agent. It can check network and environment configuration. The tool is installed to C:\Program Files\Macrium\Common\SiteManagerEnvironmentCheck.exe

To use the tool, select the role of the computer the tool is being run on, enter NETBIOS name of a remote client or server machine (depending on the role selected) and click the Test button. A summary of results will be shown in the UI. The **Actions** button brings up a menu allowing access to detailed log results.

Since communications are bidirectional between Site Manager and the Agent, it is recommended that you run the Environment Check tool on both server and client if you have problems.



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If there are any errors, the **Actions** button menu has some tools to assist in fixing the issues listed under the **Fixes** option. The options are:

Fix	Description
Restart MSMQ Service	The MSMQ service can incorrectly bind to the wrong IP address. If the Environment Check tool warns that this has happened, restarting the service will fix it. See the MSDN article for more information.
Enable WMI Firewall	This option will enable WMI traffic through the Windows Firewall on this computer. This is only required for remote agent installation, not for normal operation of Site Manager.
Enable File & Printer Sharing Firewall	This option will enable File & Printer Sharing traffic through the Windows Firewall on this computer. This is only required for remote agent installation, not for normal operation of Site Manager.
Update Account Token Filter	For non-domain computers this option is required to enable remote installation of agents. See Enabling Remote Management Users below for more information. It is not required for normal operation of Site Manager

Installing on a Computer with an Existing Macrium Reflect Install

Having Macrium Reflect installed is not a requirement to manage, backup or restore a computer with the Macrium Site Manager Agent installed. If Macrium Reflect is installed, there are some notes which may affect Site Manager

- The Macrium Reflect installation key may exempt the computer from requiring a Macrium Agent License in Site Manager. See [Licensing](#) for more details
- Updating Macrium Reflect will not update the Agent or vice-versa. However if possible, Reflect should be kept up to date with the Agent to reduce the possibility of problems
- The Site Manager scheduled backups will use the Agent Reflect engine to perform backups, not the standalone Reflect install.

Enabling Communication with Agents - Automatic Steps

A command-line tool is available which performs all of the steps listed in the manual section below. To use it, it must be run on the client machine with administrative privileges.

The tool is available for download [here](#).

Enabling Communication with Agents - Manual Steps

The Macrium Agent uses standard Microsoft Message Queuing (MSMQ) technology to communicate with Site Manager. Any firewalls must be configured to allow inbound Message Queuing traffic to each client computer. This is typically done automatically by Windows when the Message Queuing feature is enabled, but may require manual intervention when running under domain-managed firewall rules or when using a third-party firewall.

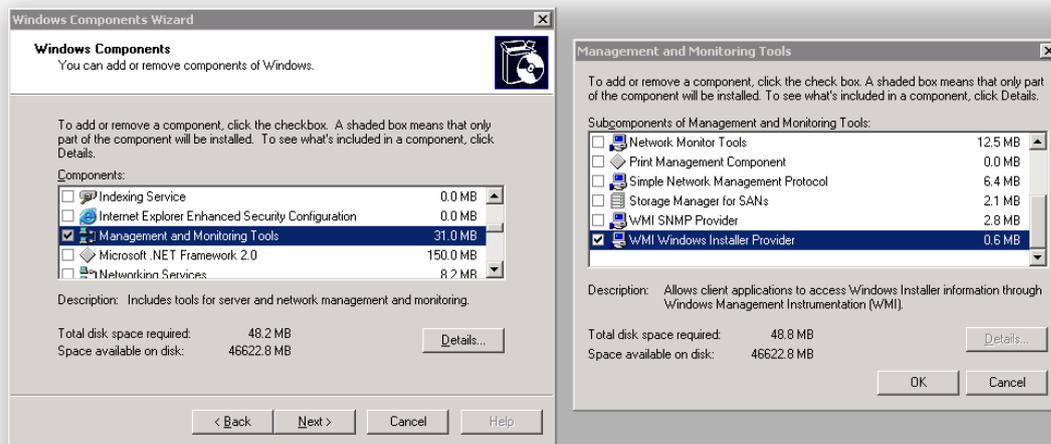
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Windows XP and Server 2003 Specific Steps

 The Macrium Agent can be remotely installed on Windows XP and Windows Server 2003 with the exception of Windows XP Home Edition. **MSMQ is not available for Windows XP Home.**

Windows XP and Server 2003 do not install the remote management feature for Windows Installer by default. When this component is missing, Site Manager will display the following error message when attempting to remotely install the Macrium Agent - **"Install Failed: Remote Install Not Available"**

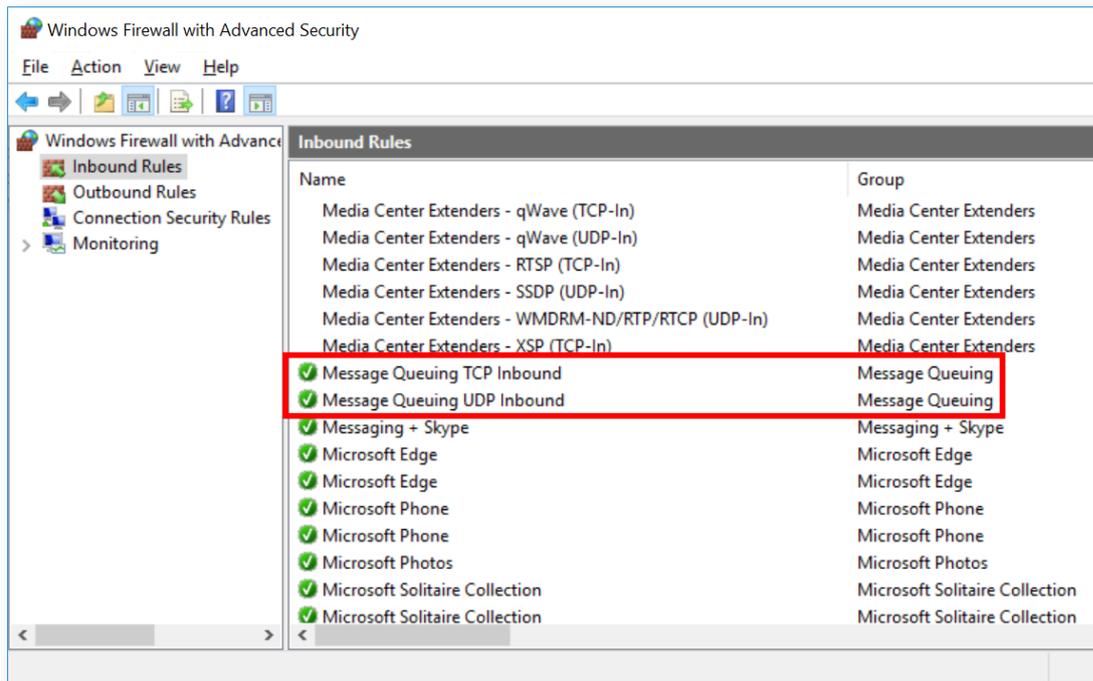
To enable remote installation, the "WMI Windows Installer Provider" Windows Component must be installed through the " Add or Remove Programs " Control Panel application. The component is found by selecting " Add/Remove Windows Components", selecting the "Management and Monitoring Tools" category, pressing the Details Button then ensuring the **"WMI Windows Installer Provider"** box is checked as shown below.



Windows Firewall

The built-in Windows Firewall has rules for Message Queuing as part of a 'Message Queuing' group. This group may be enabled by Group Policy on domains, or set manually in the UI as shown below:

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The above can also be achieved by running the command below from an [elevated command prompt](#)

```
netsh advfirewall firewall set rule group="Message Queuing" new enable=yes
```

Other Firewalls

For third-party firewalls, if a built-in rule is not available the following ports may be used for inbound Message Queuing traffic.

Protocol	Port
TCP:	1801, 380
RPC:	135, 2101, 2103, 2105
UDP:	3527, 1801

Please see the following Microsoft Article for further information on MSMQ port requirements: <https://support.microsoft.com/en-us/kb/178517>

In general, the communication modes of MSMQ which Site Manager uses are limited to port 1801 - this may be all which is required to enable communications.

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Discoverability

To successfully communicate, both Site Manager and the Agent must be able to resolve each other's NetBIOS names to an IP address. To test whether a client and server can successfully resolve each other's name, use the Windows **nslookup** command to check that the correct IP address is returned for the agent computer from the server and vice-versa.

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Deploying Site Manager Agents Using SCCM

Deploying the Macrium Site Manager Agent service to manage your networked computers is easily performed using Site Manager's remote installation feature, however, for some organisations, Microsoft System Center is the preferred method for deploying MSI files. This guide will walk you through the process of deploying the Agent MSI using the Microsoft System Center Configuration Manager.



The Agent .msi is available in two different architectures.:

32 Bit	macrium_agent_x86.msi
64 Bit	macrium_agent_x64.msi

A separate deployment is required for each architecture.

Command Line Switches

There are command line switches that can be passed to install the Agent MSI files.

SILENT_SETTINGS=YES	If not specified or if not equal <i>YES</i> , launch the Agent Configuration Tool after the install
ENABLE_REMOTE_INSTALL=YES	If specified and equal <i>YES</i> enable remote install, see Enabling Remote Installation
NOSHORTCUT=YES	If specified and equal <i>YES</i> the installer will not create a shortcut
ACCESSTOKEN=<i>passphrase</i>	If specified the installer will set the passphrase
SET_ALL=YES	If specified and equal <i>YES</i> , override IP, DNS and NetBIOS if they are empty
SERVER_IP= 192.168.10.42; 192.168.10.43	If specified and not empty set Site Manager IP in the agent. If SET_ALL=YES and an empty IP is provided, the empty IP will override the current IP
SERVER_DNS=sitemanger1. contoso.local;sitemanger2. contoso.local	If specified and not empty set Site Manager DNS name in the agent. If SET_ALL=YES and an empty DNS is provided, the empty DNS will override the current DNS

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**SERVER_NETBIOS=SERVER-
NETBIOS**

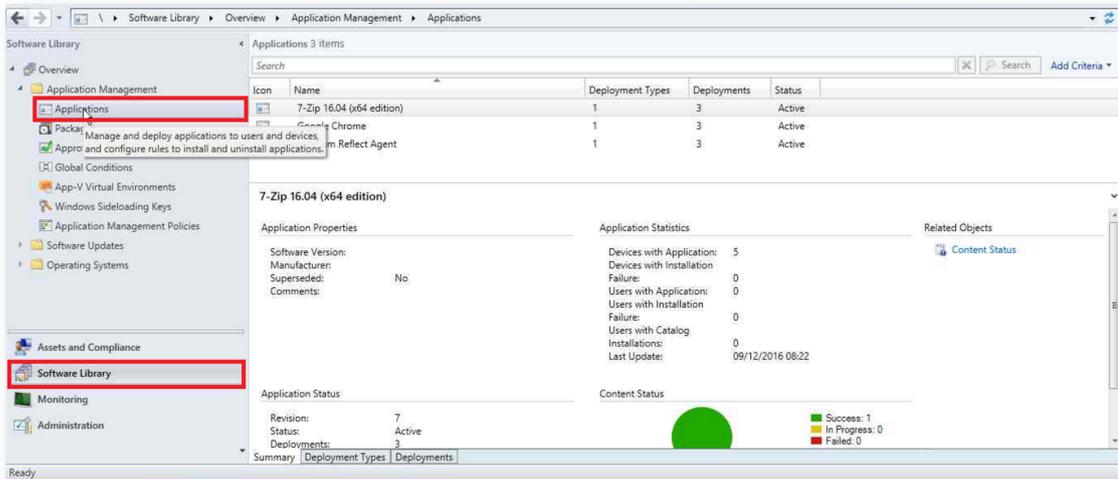
If specified and not empty set Site Manager NetBIOS name in the agent. If SET_ALL=YES and an empty NetBIOS is provided, the empty NetBIOS will override the current NetBIOS

Licensing

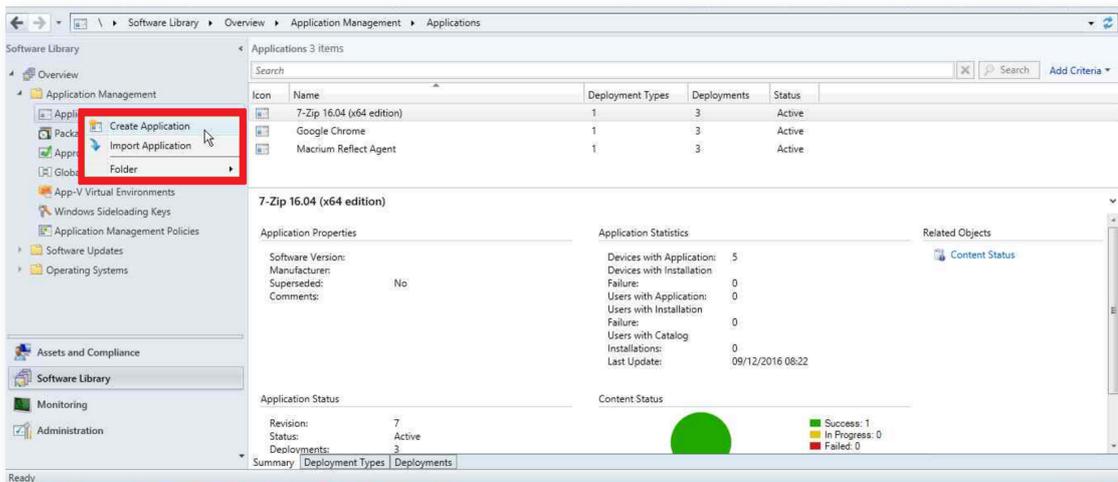
Licenses for connected computers are automatically applied when the computer is added to Site Manager. There are no licensing requirements when the Macrium Agent is deployed.

Before you begin: Microsoft System Center Configuration Manager must previously have been installed on Windows Server.

1. Open SCCM and navigate to '**Software Library**' > '**Applications**' menu on the left hand pane.

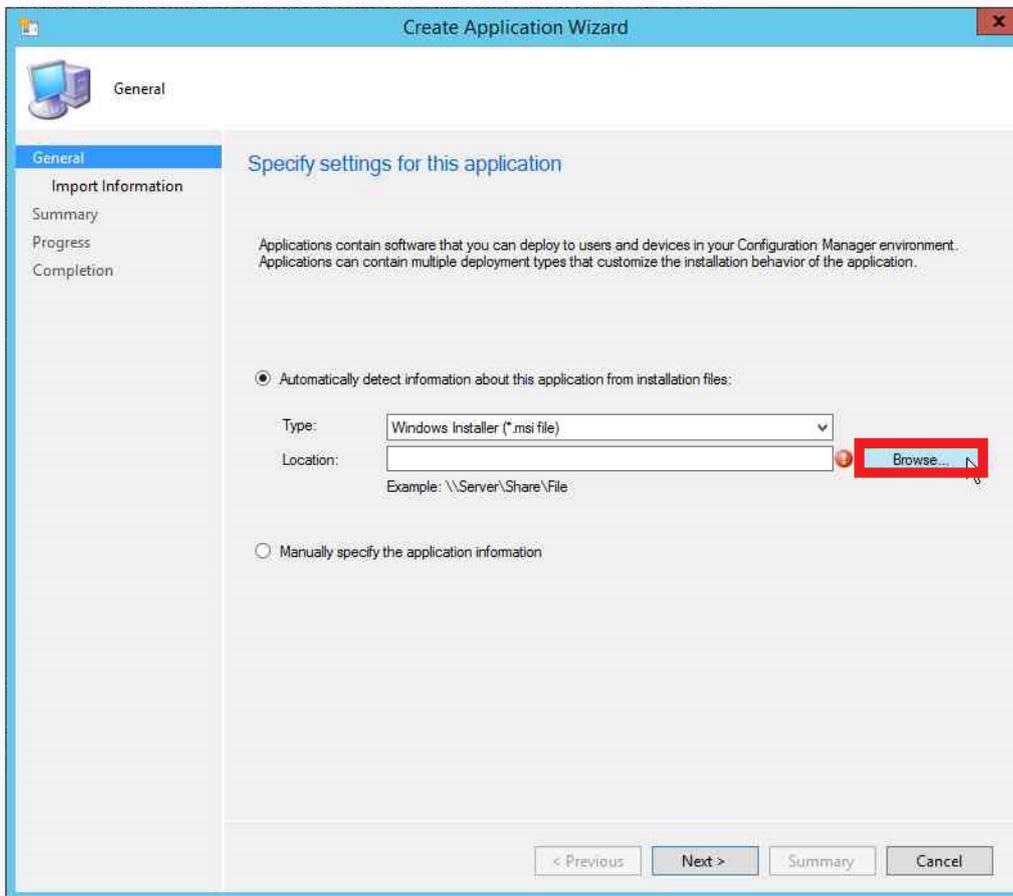


2. Right click the 'Applications' menu and select 'Create Application'.



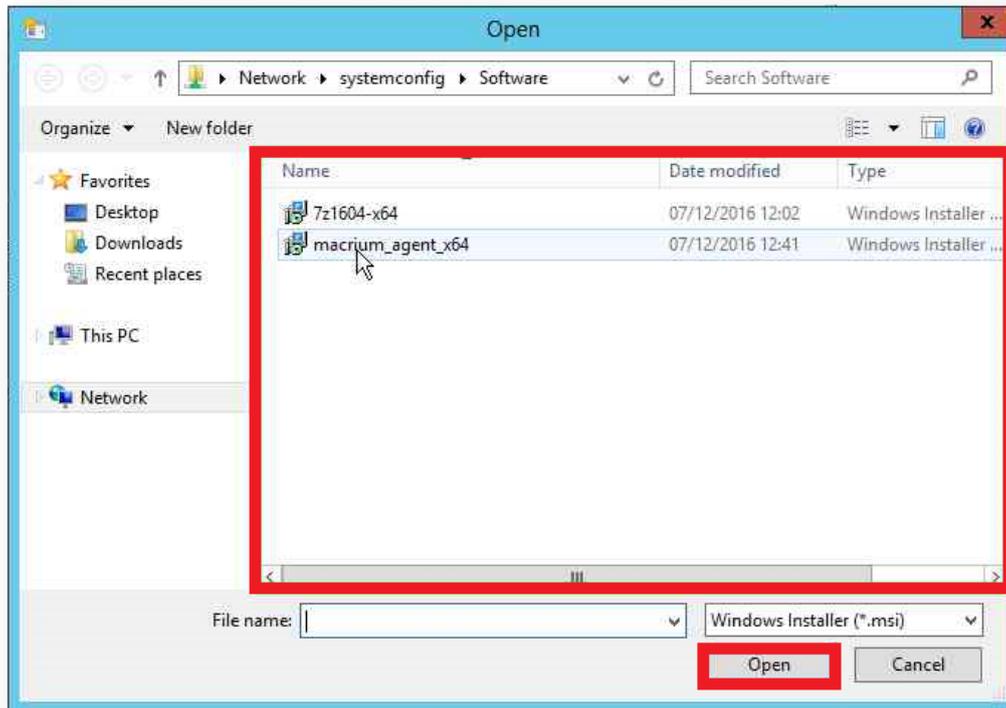
3. In the newly opened wizard click the '**Browse...**' button to add the **Macrium Agent** to the wizard.

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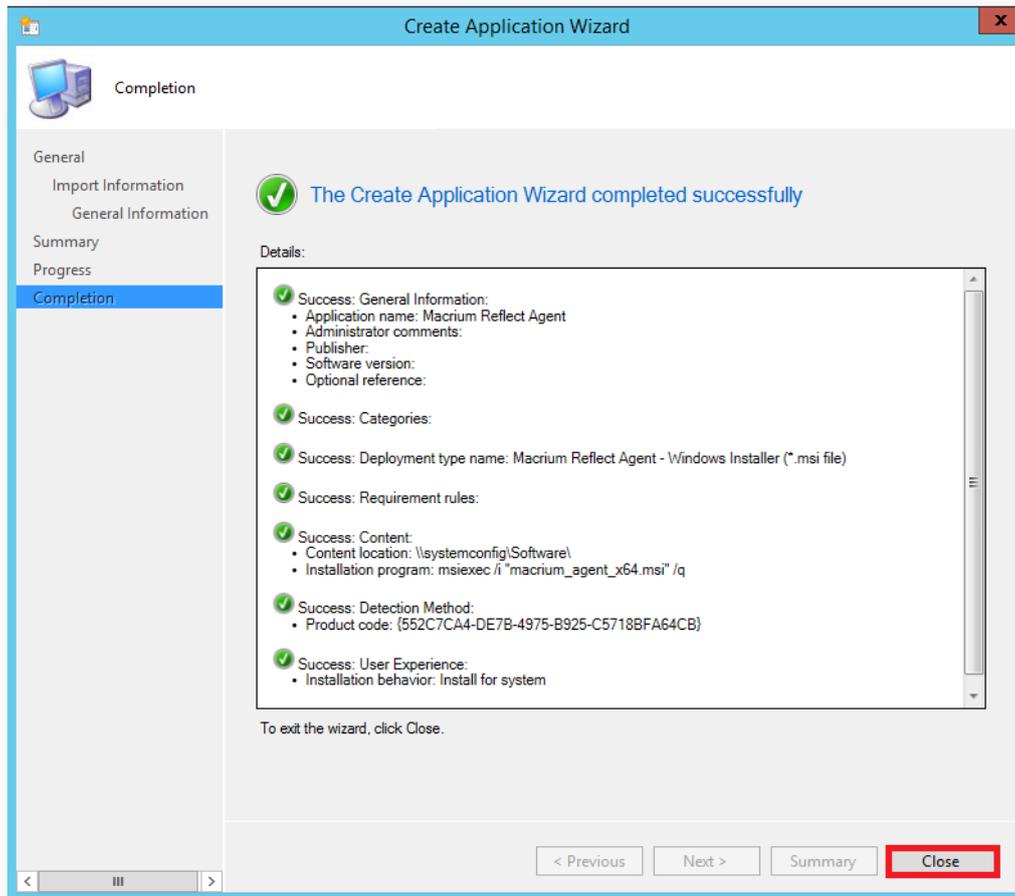
4. Find and select the **Macrium Agent** on your network or local disk then **click 'Open'**.

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5. Click 'Next' a few more times leaving the fields on each page as **default** until you see the page shown below and click 'Close'.

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6. Once the '**Close**' button is **clicked**, you can start deploying the **Macrium Agent** as per your companies SCCM deployment protocol.

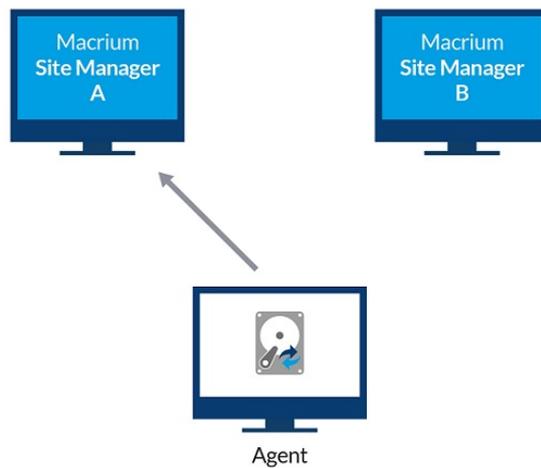
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Migrating Site Manager to a new Computer

- Overview
 - Automated Agent Migration
 - Export and Import Site Manager Configuration
 - Manually Migration Migrate a Fully Configured Site Manager
-

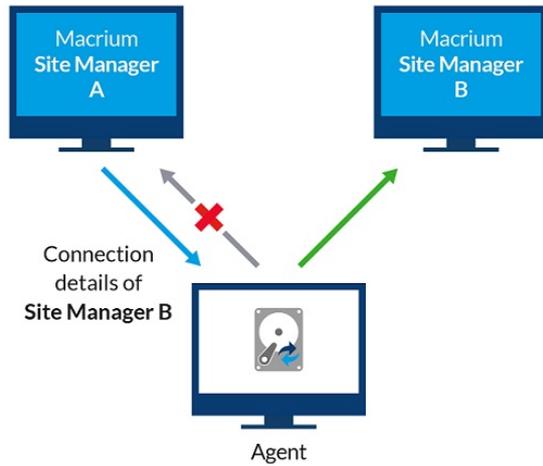
Overview

Site Manager Agents initiate the connection to the Site Manager server which manages them. To move a Site Manager Agent to a new server, the settings in the Agent can be changed on the Agent, or performed using one of the processes listed in this article.

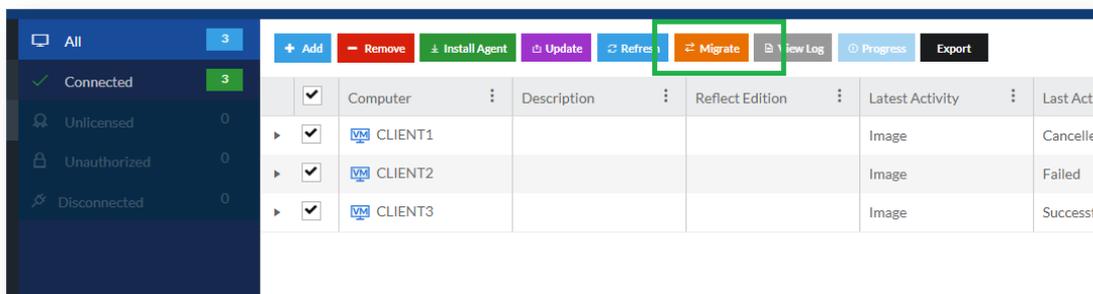


Site Manager A can automate the process of migrating Agents by passing the connection details of Site Manager B to a number of Agents.

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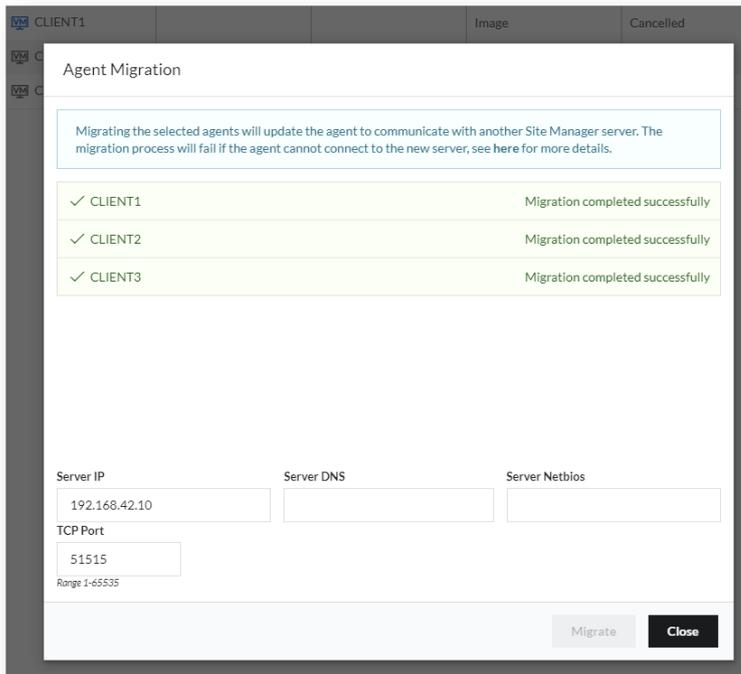


Automated Agent Migration



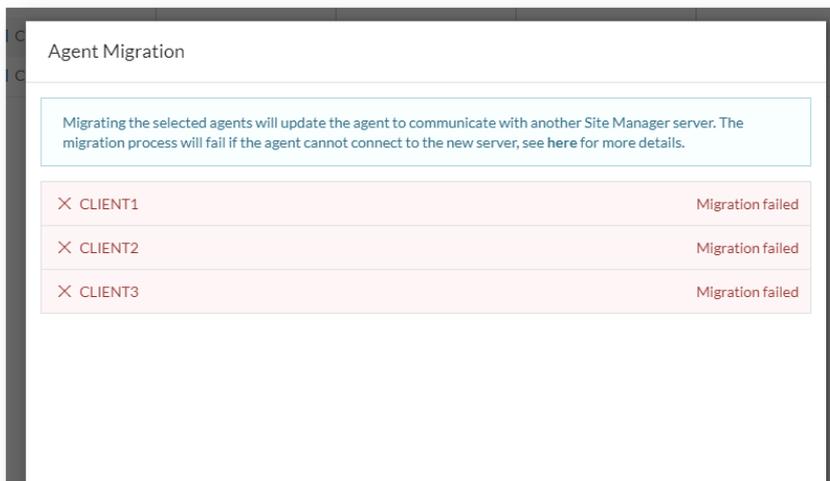
1. In order to migrate an agent from Site Manager A to Site Manager B
2. Go to the *Computers* page of Site Manager A
3. Select the agent to migrate
4. Click the *Migrate* button
5. Add the connection details for Site Manager B
6. Click the *Migrate* button and wait for the results

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If the agent is able to connect to site Manager B, it will report the success and connect to site manager B (the agent will disconnect form Site manager A).

If the agent can't connect to site Manager B, it will report failure. In this case the agent wasn't able to connect to site Manager B.



Export and Import Site Manager Configuration

Site Manager 7.2 has a configuration import and export function. This should be used instead of the below manual procedure. To use the new mechanism, see [Configuration and Security](#)

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This article should only be used in cases where an older Site Manager installation is involved or in the case of manual recovery if the Site Manager server hardware can no longer run.

Manually Migration Migrate a Fully Configured Site Manager

1. **Install Site Manager** on a new computer; the download links can be found by [clicking here](#) or in trial/license purchase emails. Both the old and new Site Manager installation should be the same version
2. **Remove** any license keys from the old Site Manager installation. The keys must be added to the new Site Manager to register them with the new hardware
3. **Stop** the '**Macrium Remote Management Service**' on the new computer from the **Services** snapin. Or run the following command from an elevated command prompt:

```
sc stop MacriumRemoteManagementService
```

4. If the **Macrium Agent** is installed on the new server, it should be stopped too. This can be done in the Services UI or by command line:

```
sc stop MacriumAgentService
```

5. From your old installation, **copy** the **SiteManager** folder located at '**C:\ProgramData\Macrium**' to the new computer, overwriting the existing folder.
6. If you are using an SSL certificate to provide an HTTPS interface, ensure that the certificate files are copied to the same path on the new computer. The default self-signed certificates supplied with Site Manager are installed in the ProgramData\SiteManager folder.
7. **Start** the '**Macrium Remote Management Service**' on the new computer from the **Services** snapin. Or run the following command from an elevated command prompt

```
sc start MacriumRemoteManagementService
```

8. If the **Macrium Agent** is installed, it should be restarted too as above or by using the following command line:

```
sc start MacriumAgentService
```

9. Once the service starts, the new Site Manager installation should begin taking over the computers from the old server. The old server should be stopped before this happens. If an agent is in the "Managed by Another Server" state, it may be necessary to manually refresh the agent using the **Refresh** button.
10. If licenses were removed from the old server, add them to the new server.



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Dashboard layout and table layouts are stored on a per-user basis. If the new computer uses different local administrator account names to the old, these layout customisations may be lost

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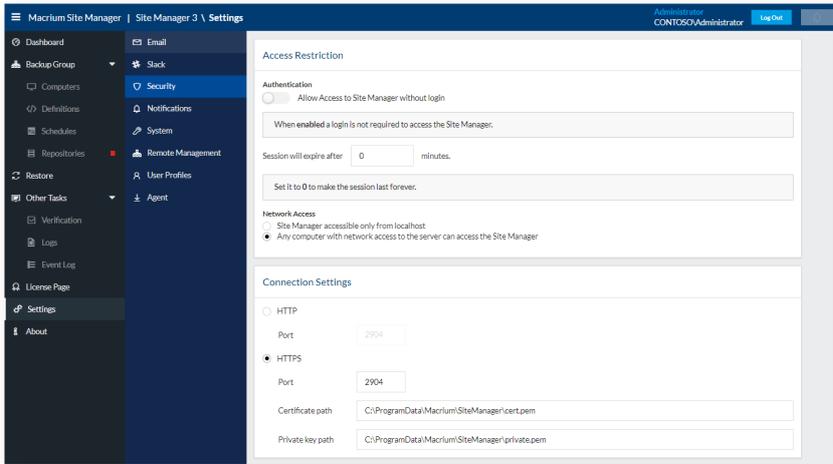
MultiSite Integration

Macrium MultiSite allows multiple Site Manager installations to be monitored and managed from a single online portal. To find out more, visit our website at <https://www.macrium.com/multisite>

To configure Site Manager for MultiSite integration, the following steps must be followed.

Security Configuration

To ensure that no security issues can arise as a result of enabling MultiSite Integration, the following security options must be set in the **Settings** page under **Security**:

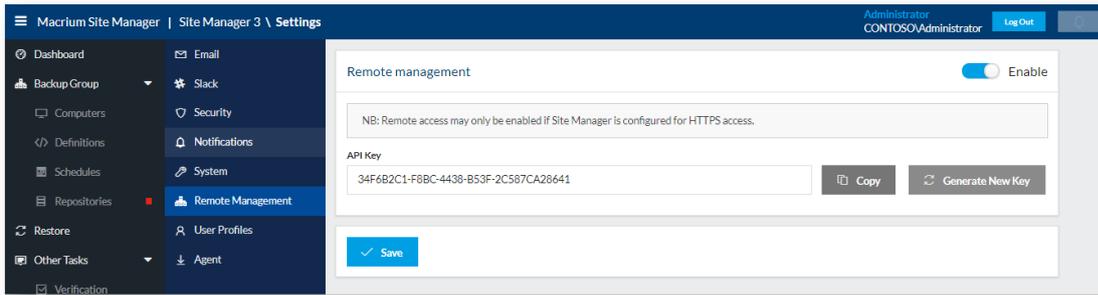


Name	Required Setting
Access Restriction - Allow Access to Site Manager without login	Off - user login must be enabled
Access Restriction - Network Access	Any computer with network access to the server can access Site Manager
Connection Settings	HTTPS communication must be enabled
Connection Settings - Port	Any port may be used

Remote Management

Remote management of Site Manager must be enabled in the **Remote Management** section of **Settings**.

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The options available are:

Option	Description
Enable	Toggles Remote Management access on and off
API Key	Security key required by MultiSite to access Site Manager remotely. If this key is changed, MultiSite access will fail until MultiSite is updated with the new key
Copy	Copies the API key to the clipboard
Generate New Key	Generates a new random key. The key is not in effect until Save is pressed

Port Redirection

Finally, the interface port of Site Manager must be accessible to the internet for incoming connections so that MultiSite can connect to it. This can be on any port of an internet accessible IP address or domain name.

For example, if Site Manager is running on an internal host called sm-server running on the default port of 2904, your internal network can be configured to route incoming connections on sm.yourdomain.com on port 44853 to the internal server sm-server port 2904. MultiSite can then be configured to manage this Site Manager using the externally configured address, port and the API key.



All communications between MultiSite and Site Manager use HTTPS using the certificate configured in **Settings Security**. No unencrypted data is transferred.

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Agent User Scripting

- Overview
- Setting Up Scripting
 - Running the Script
 - Script output
- Viewing Script Results
- Security

Overview

As of version 7.1.3268, a user script may be placed on the agent which the agent will run periodically. This script can produce a user description which is displayed in the computers table of Site Manager and can be used to disable scheduled backups in Site Manager.

The intended use for this script is to provide a mechanism for user scripting to display useful information to the server such as asset IDs and other nonstandard information specific to each computer and to provide a mechanism for the Site Manager administrator to disable backups based on installation specific details. An example of this would be a script which detects that a laptop is connected to the network via a VPN and disables backups until the computer is back in the office.

Setting Up Scripting

The Agent will look for a script at the path **C:\Program Files\Macrium\Agent\Scripts\script.cmd**

This script is executed as a Windows batch file/command script. Powershell scripts, executable files or any other sort of script may be called from this **script.cmd** file.

Running the Script

The Agent will run the script and send the results to the Site Manager server under the following conditions:

- When the Macrium Agent service starts up
- When any file in the **C:\Program Files\Macrium\Agent\Scripts** folder changes
- When any value is written to the **HKEY_LOCAL_MACHINE\SOFTWARE\Macrium\CMCAgent\UserScripts** registry key
- Every 30 minutes

Script activity is logged in the **c:\programdata\Macrium\SiteManager\AgentUserScript.log** file

Script output

The script should produce the following output:

- User description - any text outputted to standard out (e.g. with the 'echo' command) will be shown in Site Manager in the "User Description" column of the Computers table

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- Operating Mode - the return code of the script determines the user-set operating mode of the agent. The following

Script Return Value	Operating Mode	Description
0	Normal	The Agent is running normally and all scheduled backups are being run
-1	Ignoring scheduled backups	<p>The Agent should not run backups. When this error code is returned, Site Manager will defer all scheduled backups for the agent until the user script starts returned normal status again.</p> <p>When the agent returns to normal status, any missed backups will be executed immediately as if the computer had been offline and Defer Missed Backups was set in the Site Manager schedule.</p> <p>This can be used for computers which move between networks and should not perform backups if they're connected over VPN or WiFi</p>
Any other value	Normal	Any other value is assumed to be an error code in the user script and the script execution is ignored

Viewing Script Results

For debugging purposes, script activity is logged in **c:\programdata\Macrium\SiteManager\AgentUserScript.log** on the agent computer.

The results of the script execution can be shown in the Computers table in Site Manager by enabling the "User Description" and "Operating Mode" columns which are hidden by default:

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The screenshot shows a table with columns: Computer, Last Activity Result, Last Activity Time, and Agent ... The table lists 21 clients from CLIENT1 to CLIENT21. A context menu is open over the table, showing options: Sort Ascending, Sort Descending, Columns, and Filter. The 'Columns' menu is expanded, showing a list of columns with checkboxes: Computer, Description, Reflect Edition, Latest Activity, Last Activity Result, Last Activity Time, Agent Version, Windows Version, Domain, Active Directory Group, Status, User description, and Operating mode. The 'User description' and 'Operating mode' checkboxes are highlighted with a red box.

These columns will show the script results:

User Description	Operating Mode
Example Custom Agent Status	Ignoring scheduled backups
	Normal

This output was produced from the user script below:

```
script.cmd

@echo off
echo Example Custom Agent Status
exit -1
```

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Security

For security reasons, scripts must be placed in the **C:\Program Files\Macrium\Agent\Scripts** folder. This folder has write access to **Administrator** users only by default. If the permissions on this folder are manually changed by a system administrator, non-privileged users may be able to set or modify the script being run.

The Agent service runs the script as a non-privileged process using the **Network Service** account, regardless of what user the Agent service is configured to run as. This is to prevent any possibility of a user script being executed with Administrator privileges.

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Site Manager Agent Communications Changes

Upgrading from Site Manager v7.2.4091

The latest release of Site Manager makes some important changes to how the Site Manager Server and Agent communicate. Site Manager version 7.2.4091 and earlier use MSMQ (Microsoft Message Queuing) for communication with the Site Manager Agent, this has been changed. See the [Changes](#) section below for details.

Because of this, the TCP/IP ports used in communication have changed, please see below for the network rules required for the server and Agent.



Firewall Changes

The changes below should be reviewed before the upgrade is started - if a firewall change is required and not implemented before upgrade, it will cause upgraded Agents to be unable to connect to the Site Manager server until the change is made

Site Manager Server Networking

The following network ports are used for Site Manager communications. Firewall rules may need to be configured for the incoming traffic sections. Typically outgoing connections will not require firewall rules unless very restrictive firewall configurations are in place.

Site Manager Server - Incoming Traffic

These are ports which the Site Manager listens for TCP connections on. They will likely need firewall rules to be configured to allow access to them.

Port	Type	Purpose	Notes
51515	TCP	Agent communications	This port is the main listen port for Agent communications. Agent communications will fail if an Agent cannot connect to this port on the Site Manager server. The default port of 51515 can be changed to a different port by following the instructions here
2904	TCP /UDP	Site Manager Web Interface	This is the default port for the Site Manager web interface. If this port is blocked by firewall, the web interface can only be accessed locally on the Site Manager server. See Configuration and Security for instructions on how to change this port.
1801	TCP /UDP		

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Port	Type	Purpose	Notes
		MSMQ communications for legacy agents	This port is used by MSMQ for communications. Older (7.2.4091) Agents will attempt to connect to this port. If all agents have been upgraded, then this port will not be used and can be blocked without affecting Site Manager

Site Manager Server - Outgoing Traffic

In general, outgoing connections will not need firewall rules, but the types of traffic generated by Site Manager are:

- **Site Manager Update and License Checks** - HTTPS traffic to **updates.macrium.com** and **api.macrium.com**
- **MultiSite Integration** - If Remote Management is enabled, Site Manager will make HTTPS requests to **tunnel.msadmin.macrium.com**
- **Legacy Agent MSMQ** - If older agents are still connecting to Site Manager, MSMQ traffic will be generated (usually to port 1801 of the Agent, but this is part of MSMQ configuration)
- **Domain Login** - Logging in to the Site Manager web interface using an Active Directory domain account will cause LDAP traffic to be generated on ports 389 or 636.

Other outgoing connections may be made depending on user configuration of Site Manager - e.g. if mail notifications are enabled, SMTP traffic on the configured port will be generated.

Site Manager Agent - Incoming Traffic

The old Agent (version 7.2.4091 or earlier) required ports to be open for MSMQ traffic on each Agent. For the new Agent, no incoming ports are required.

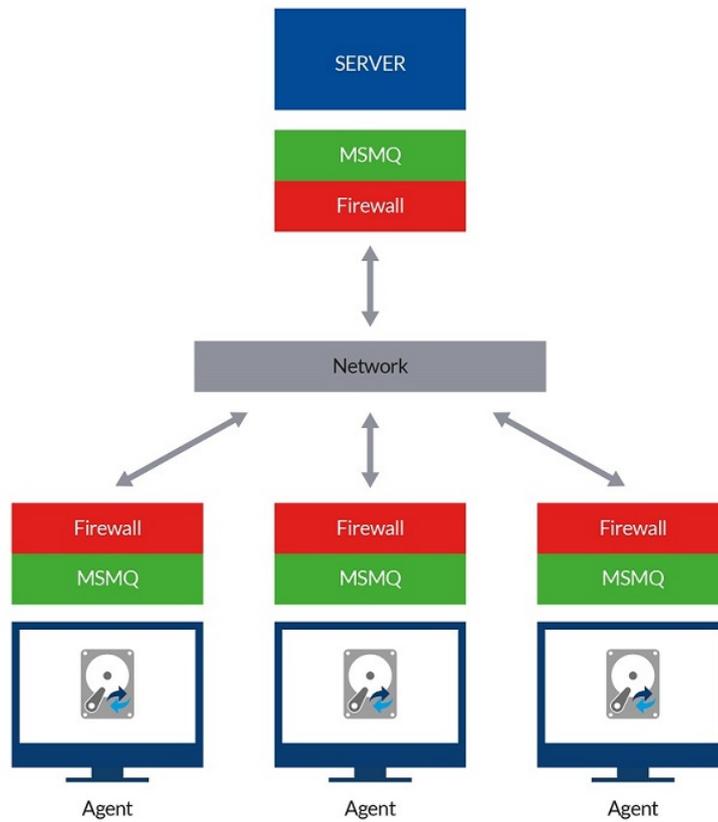
Site Manager Agent - Outgoing Traffic

The new Agent will connect to port **51515** of the Site Manager server, or an alternate port if configured with one. It will also connect directly with the Repository it is backing up to using Windows File Sharing / SMB.

Overview of Changes

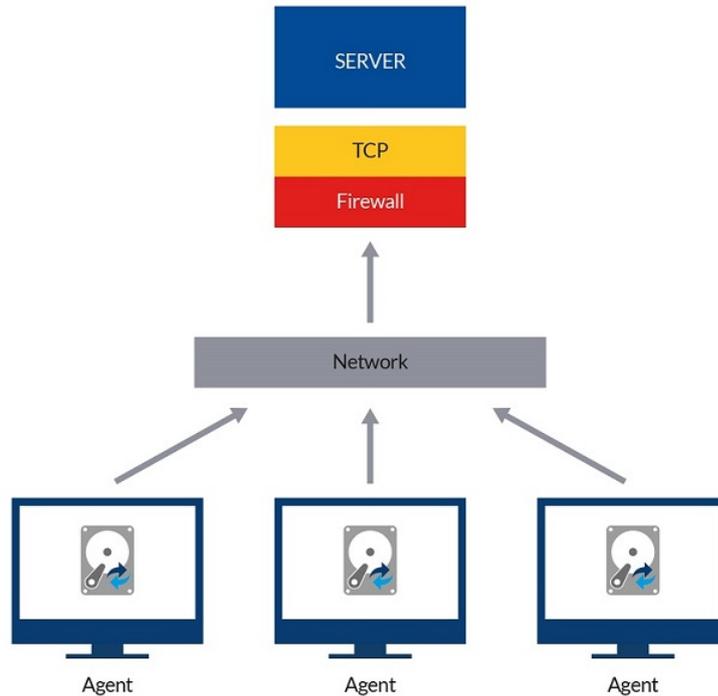
The old Site Manager release used Microsoft Message Queuing (MSMQ) to communicate with Agents. After v7.2.4091, the dependency on MSMQ has been dropped. This is to improve the flexibility of the Site Manager Agents on unusual network configurations and support future development.

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Using MSMQ, firewall configuration had to be performed on both Agent and Server machines plus name lookup had to be performed in both directions.

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Without MSMQ, the communication is all initiated from the Agent computer - this means that firewall configuration only needs to be done on the server end and the Agent can connect more flexibly, via NetBIOS name, DNS name or IP address.

Since the Site Manager server is no longer using the well-known port for MSMQ communications, it will need a new firewall rule to allow Agent traffic. See below for details.

Using a Different Port for Site Manager Traffic

The Site Manager server requires a new port to be open for incoming traffic. This should be set before the upgrade is started to minimize downtime during the upgrade. By default, the new communications for Site Manager requires incoming TCP traffic on port **51515**.

If this port is acceptable, no further configuration is required. To use a different port, follow the procedure below before upgrade:

1. Launch *regedit* as administrator;
2. Go to "Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Macrium\Site Manager";
3. Add a new DWORD value;
4. Rename it to *TCPCommPort*;
5. Modify the value to the port number you want to use (be sure the base is set to "Decimal");

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The port can be changed after the upgrade is complete via the Site Manager UI, but this may cause disruption as port changes have to be propagated to each agent connected

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Site Manager Advanced Communications Logging

Advance logging for agents can be enabled for Site Manager by adding the following registry key values.



This should be done only under the direction of Macrium Support.

This can affect performances as the Site Manager will be logging any interaction with the specified agents.

Remember to remove the added values once done.

1. Run *regedit*;
2. Go to *Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Macrium\Site Manager*;
3. Add a string (REG_SZ) value;
4. Rename it to *AgentsToLog*;
5. Set the value to the NetBIOS of the agents separated by ';' e.g. "NETBIOS1;NETBIOS2; NETBIOS3";
6. Add a DWORD value;
7. Rename it to *LogLevel*;
8. Set the value to 3;
9. Restart Site Manager service;