

◀ **NiCE Active O365 MP** ▶

Quick Start Guide

NiCE Active O365 Management Pack

Version 01.00

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for use with System Center Operations Manager

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Revisions

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Glossary

Abbreviation	Meaning
MP	Operations Manager Management Pack
OpsMgr	System Center Operations Manager
UR	Operations Manager update rollup
O365	Microsoft Office 365
O365 Collector Server	The system that collects data from O365. Needs full Internet access. This system is either a Management Server or SCOM Gateway Server.

Before you Start

This guide explains how to setup and configure the NiCE Active O365 MP for System Center Operations Manager.

NOTE:

THIS MANAGEMENT PACK CONTAINS ACTIVE PROBING AND MUST BE SETUP WITH CARE. NOTE THAT IT INCLUDE FUNCTIONALITIES, WHICH SENDS TRACE MESSAGES TO RECIPIENTS WITHIN YOUR ORGANIZATION.

Before you start the installation and configuration process, have a look at the information in this section, which covers the following areas:

- Supported Environments
- Limitations
- Prerequisites

Supported Environments

NiCE Active O365 MP supports the following platforms and applications:

- System Center Operations Manager (OpsMgr) 2012 R2 and 2016 have been verified.
- Microsoft Office 365, Exchange 2013, Exchange 2016.
- If other versions or platforms are required, contact the NiCE support team at support@nice.de.
- For additional details, please see the Support Matrix on the NiCE website.

Limitations

This section lists the limitations of the NiCE Active O365 MP including information about the following areas:

- Support for ADFS, AADConnect is not provided in this release
- Support for Office 365 services: Support for Exchange online and hybrid only.
- Multiple O365 Collector Servers are not supported.

Prerequisites

If you want to install and run the NiCE Active O365 MP, bear in mind the specified prerequisites for the following components:

- System Center Operations Manager
- O365 Collector Server
- User Accounts

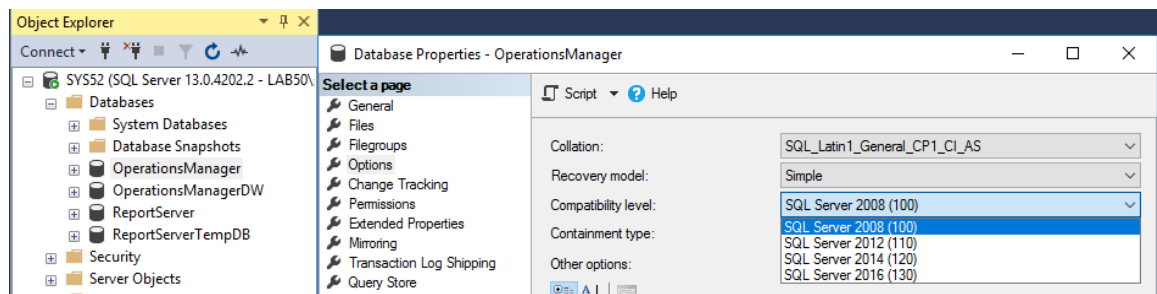
System Center Operations Manager

For more information about the versions of System Center Operations Manager that the NiCE Active O365 MP supports, see "Supported Environments".

It is recommended but not mandatory to use the latest Operations Manager update rollup (UR).

Operations Manager Database and Operations Manager Datawarehouse

The compatibility mode of Operations Manager database and Operations Manager Datawarehouse database needs to be set to 2008. You perform this step on the database, using the Microsoft SQL Server Management Studio as shown in the following example:



O365 Collector Server

The Microsoft Azure Active Directory Module for PowerShell V1 needs to be installed on the O365 Collector Server. You can download Microsoft Azure Active Directory Module from the following Webpage:

<https://connect.microsoft.com/site1164/Downloads/DownloadDetails.aspx?DownloadId=59185>

User Accounts

The NiCE Active O365 MP requires four Microsoft Office O365 user accounts, which are used for monitoring.

The following accounts and corresponding permissions are required:

Type	Location	Permission	Mailbox	O365 license
OnPremiseTestUserAccount	Exchange Server / Active Directory	Member of "Domain Users"	yes	no
RemotePowerShellOnPremiseUserAccount	Active Directory	Member of "Organization Management"	no	no
CloudTestUserAccount	Exchange Admin Portal	Member of "Domain Users"	yes	yes
RemotePowerShellCloudUserAccount	Azure Active Directory	Member of "Organization Management"	no	no

Recommendation:

The accounts, which have a mailbox assigned, will send test/probe emails to recipients within your organization. Hence, we recommend creating alias names,

which are understandable for the recipient in case they find a test email in their inbox.

Example: **“Office 365 MP Probe Account”**

To only allow sending of messages between defined mailboxes; please see **“Disable sending of test messages to user mailboxes”**

Functionality Scope

The NiCE Active O365 MP provides a data-collection and probing utility that you need to monitor your Microsoft Office 365 environment.

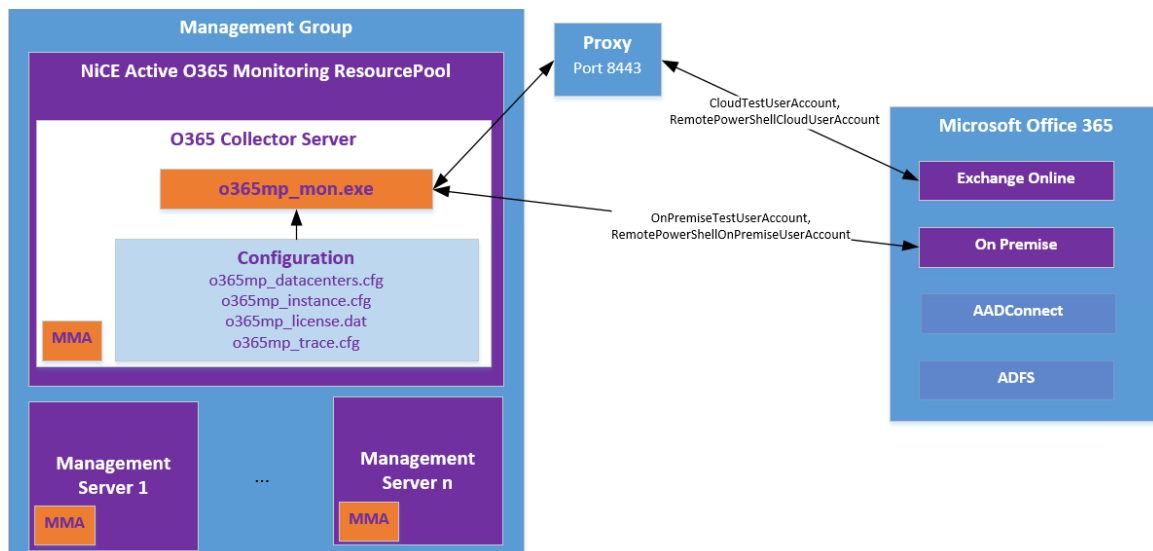
The NiCE Active O365 MP includes features and functionality that enable the comprehensive monitoring and management of the OnPremise and Exchange Online modules of your Microsoft Office 365 environment. In the next release monitoring of additional Office 365 Service will be added.

For a detailed list of all OpsMgr Monitors and Rules, see the "*NiCE Active O365 MP Reference Guide*".

Architecture

Architecture Overview

The following diagram illustrates the architecture of the NiCE Active O365 MP. Note that the O365 Collector Server can be either a SCOM Gateway Server or a Management Server.



NiCE Active O365 MP – Architecture Overview

Installation Instructions

To complete the installation process for the NiCE Active O365 MP, you must perform the steps listed in the following table.

Action	Location/Tool
Install the NiCE MP Setup Package	OpsMgr or Console System and the O365 Collector Server
Prepare the O365 Collector Server	O365 Collector Server
Import Management Packs	Administrator Console
Assign O365 Collector Server to the O365 Resource Pool	Administrator Console
O365 Discovery	Monitoring Console

As indicated in the steps table above, some of the installation steps must be executed on the Operations Management server or console system while other steps must be executed on the system hosting the O365 Collector Server.

Please make sure you are logged on to the appropriate server with the appropriate privileges when you perform the installation steps.

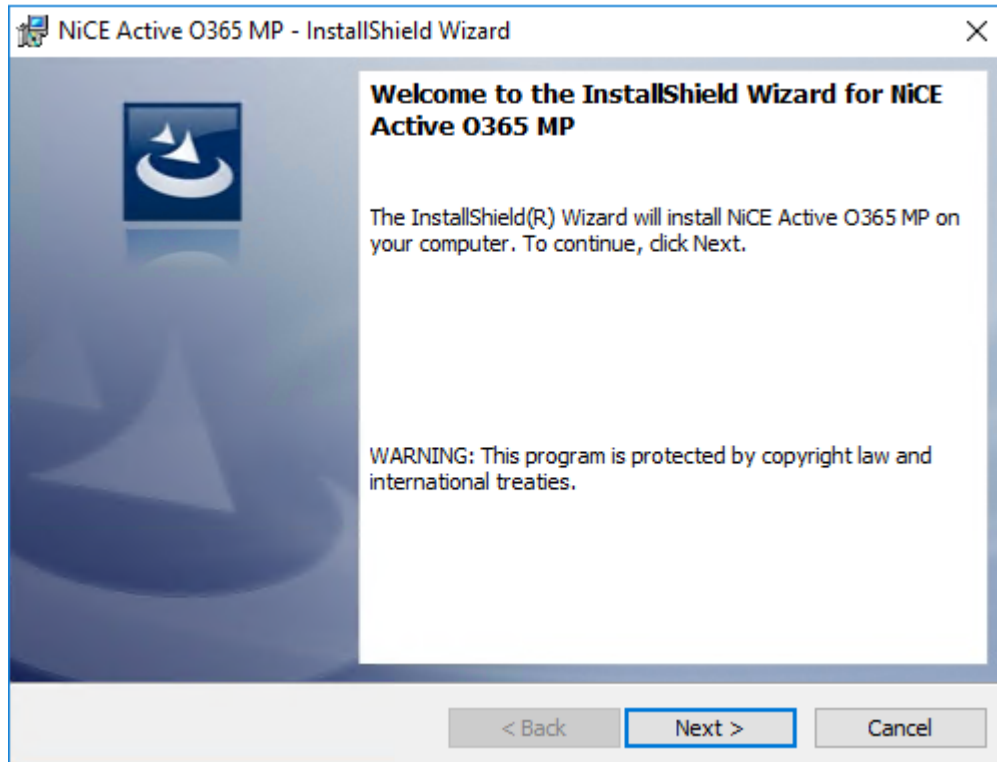
Install the NiCE MP Setup Package

The Microsoft Installer (MSI) package `NiCE_ActiveO365MP_01.00.msi` contains all the management packs and instrumentation you need to monitor your O365 Environment with the NiCE Active O365 MP.

The installer must be executed only on the **O365 Collector Server**. This can be an OpsMgr Management Server or OpsMgr Gateway Server .

1. Copy the Microsoft installation package for the O365 MP (`NiCE_ActiveO365MP_01.00.msi`) to a temporary location on either the OpsMgr Server or Gateway Server.
2. Double-click the file `NiCE_ActiveO365MP_01.00.msi` to start the installation process.
3. Follow the instructions displayed in the setup screens and dialogs.

During installation it is recommended, but not required, to use the default installation directory to install the Active O365 MP and the collector.



NiCE Active O365 MP – Installation Wizard Dialog

Prepare the O365 Collector Server

It is necessary to configure the O365 Collector Server using the following configuration files provided by NiCE:

1. o365mp_datacenter.cfg
2. o365mp_instance.cfg

These files are created during the installation process in the NiCE Installation Directory, which by default is

C:\Program Files\NiCE\o365mp\

You need to adapt the o365mp_instance.cfg and o365mp_datacenters.cfg files to suit your monitoring environment.

Office 365 Tenant configuration

This section describes how to configure one or more tenants of your Office 365 subscription.

Copy the `o365mp_instance.cfg` to the following folder:

`C:\ProgramData\NiCE\conf\o365mp\`

Edit the file `o365mp_instance.cfg` to set the correct values for the following components:

- EXCHANGEWEBSERVICESURL
- POWERSHELLURL
- EXCHANGESERVER
- EWSTRACING
- USERS (all)
- TENANT / TENANTSUFFIX

Example:

`o365mp_instance.cfg`:

```
<?xml version="1.0" encoding="utf-8"?>
<CONFIGURATION>
  <TENANTS>
    <TENANT>
      <NAME>lab50.nicelab.de</NAME>
      <TENANTSUFFIX>lab50nicelabde</TENANTSUFFIX>
      <EXCHANGEONPREMISE>
        <EXCHANGEWEBSERVICESURL>https://ex1.contoso.com/EWS/Exchange.
asmx</EXCHANGEWEBSERVICESURL>
        <POWERSHELLURL>https://ex1.contoso.com/powershell
</POWERSHELLURL>
        <EXCHANGESERVER>ex1.constoso.com</EXCHANGESERVER>
      </EXCHANGEONPREMISE>
      <EWSTRACING>
        <EWSTRACINGENABLED>0</EWSTRACINGENABLED>
      <EWTRACEFILEPATH>C:\ProgramData\NiCE\log\O365MP</EWTRACEFILEPATH>
    </EWSTRACING>
    <USERS>
      <USER>
        <USERNAME>CloudTest@lab50.nicelab.de</USERNAME>
        <PASSWORD>*****</PASSWORD>
        <TYPE>CloudTestUserAccount</TYPE>
      </USER>
    </USERS>
  </TENANTS>
</CONFIGURATION>
```

```

<USER>

<USERNAME>OnPremiseTest@lab50.nicelab.de</USERNAME>
    <PASSWORD>*****</PASSWORD>
    <TYPE>OnPremiseTestUserAccount</TYPE>
</USER>
<USER>
    <USERNAME>RemotePowerShellOnPremise@lab5
0.nicelab.de</USERNAME>
    <PASSWORD>*****</PASSWORD>

    <TYPE>RemotePowerShellOnPremiseUserAccount</TYPE>
</USER>
<USER>
    <USERNAME>RemotePowerShellCloud@lab50.nicelab.
de</USERNAME>
    <PASSWORD>*****</PASSWORD>
    <TYPE>RemotePowerShellCloudUserAccount</TYPE>
</USER>
</USERS>
</TENANT>
</TENANTS>

<PROXIES>
    <PROXY>
        <NAME>West Europe</NAME>
    </PROXY>
</PROXIES>
</CONFIGURATION>

```

Note that when you specify the password for the four user accounts in the `o365mp_instance.cfg` file, it has to be in **encrypted format** only. In order to help you with that, Active O365 MP provides a tool to encrypt the password. You can find the tool called `NiCEEncrypt.exe` in the folder

`C:\Program Files\NiCE\o365mp\`

You can run this tool in the following way to encrypt the individual passwords and then copy them to the `o365mp_instance.cfg` file:

```

c:\Program Files\NiCE\O365MP>NiCEEncrypt.exe

NiCE Encrypt Tool (c) 2017

Please enter a string to encrypt:

password

Your encrypted string reads: 6DIAAOt2AAA=-J0Zevx3Mxzg=-

Do you want to encrypt another string (Y/N)?

n

Thank you and goodbye

```


Datacenter Discovery Configuration

This section describes how to configure data-centers of your Office 365 subscription.

Copy the `o365mp_datacenters.cfg` file to the following folder:

```
C:\ProgramData\NiCE\conf\o365mp\
```

In the data-center configuration file `o365mp_datacenters.cfg` you need to set the correct value for the following components of your on-premise datacenter:

- TENANT
- GEOLOCATIONS
- COORDINATES
- REGION
- SERVERIDENTIFICATION

Note! Do not modify the data center's name.

The file also contains further datacenter and names. In case the datacenter for your region is not contain, please contact support@nice.de for details.

Import Management Packs

You perform this operation on the Operations Console.

1. Log on to the OpsMgr Operations Console.
2. Import the following management pack files:

- a. `NiCE.Library.W.mpb`
- b. `NiCE.Active.O365.MP.Library.mpb`
- c. `NiCE.Active.O365.MP.Discovery.mpb`
- d. `NiCE.Active.O365.MP.Monitoring.mpb`

By default, the files are located in the following directory on the system where the setup MSI package was installed during the step “*Install the NiCE MP Setup Package*”:

```
C:\Program Files (x86)\NiCE\ActiveO365MP\MP
```


Install Active O365MP License

Active O365MP requires a valid license for discovery and monitoring the O365 environment.

Evaluation key are provided by your NiCE contact. For questions, please reach out to solutions@nice.de

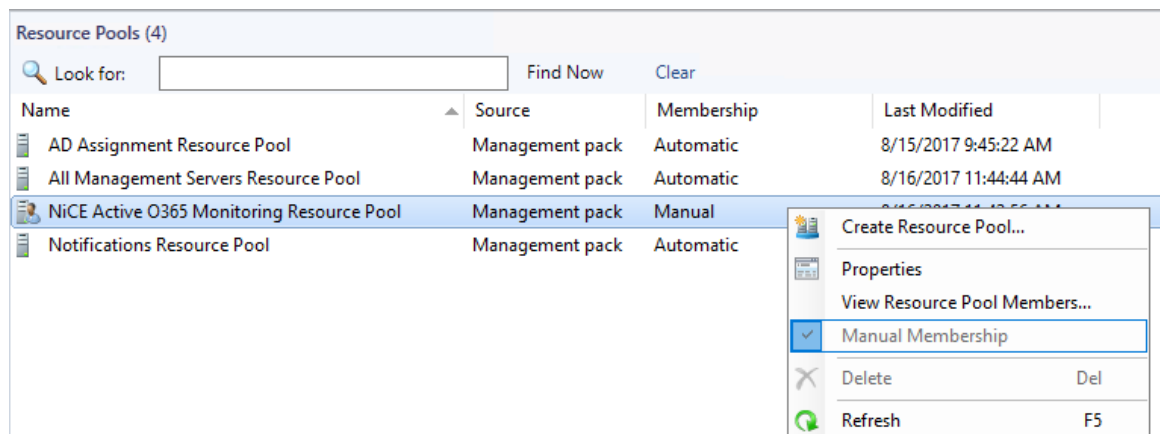
Permanent license keys are provided by means of the NiCE Customer Portal (www.nice.de) that you can access using your registered account. Download the Active O365MP License keys from the portal and copy the file to the following folder in the O365 Collector Server

C:\ProgramData\NiCE\conf\o365mp\

Assign O365 Collector Server to the O365 Resource Pool

To enable monitoring, add the O365 Collector Server to the O365 Resource Pool.

1. In the **Administration** pane open the **Resource Pools** pane.
2. Select **NiCE Active O365 Monitoring Resource Pool** and set **Membership** to **Manual** is illustrated in the following screenshot.



3. Add the O365 Collection Server to the Resource Pool. The O365 Collection Server is the server where the Collector was configured in the step "*Prepare the O365 Collector Server*".

NiCE Active O365 Monitoring ResourcePool Properties

Choose members for this Resource Pool

General Properties
Pool Membership
 Summary
 Completion

Resource pool members

Choose the resources that you want in this pool. Two or more members are required for high availability.

+ Add... - Remove

Pool members:

Name	Type
SY953.lab50.nicelab.de	Management Server

? More about adding resources to a pool

< Previous Next > Save Cancel

4. Save the settings.

O365 Discovery

By default, the O365 Discovery runs every four hours. The discovered instance will be visible in the **O365 Resource Pool** diagram view in the folder **NiCE Active O365**.

If desired, you can override the “*Interval/Seconds*” parameter for the **NiCE Active O365 Discovery** and the **Active O365 Exchange Online: Discover on Cloud Components** discovery rules and it will quicken the discovery process.

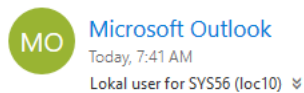
Troubleshooting and Advanced Configuration

Test Mailbox Sweeping

The NiCE Active O365 MP uses two or more test mailboxes. For active monitoring trace-mail are sent which are visible in the Inbox of the accounts.

Those have the following format (Example):

777416b0-b297-4e0b-a40b-4a2f1ef85ab5



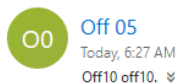
Your message has been delivered to the following recipients:

[Lokal user for SYS56 \(loc10\) \(loc10@lab50.nicelab.de\)](mailto:loc10@lab50.nicelab.de)

Subject: 777416b0-b297-4e0b-a40b-4a2f1ef85ab5

Auto Generated Trace message

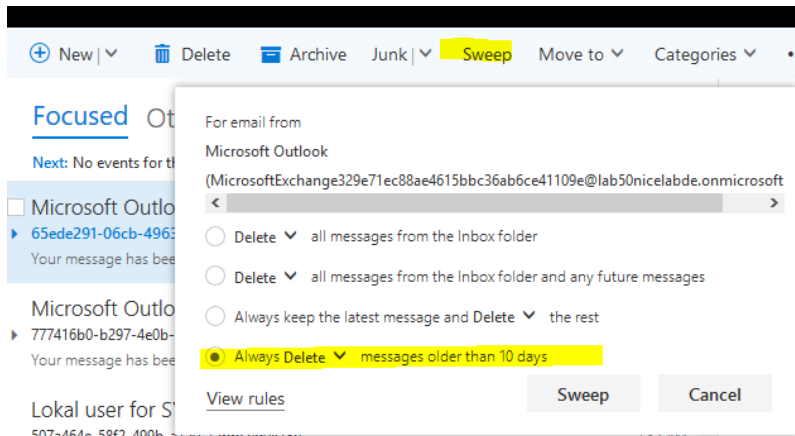
aff514ff-1c2c-4b74-94cb-0db63532c14b



Autogenerated tracing message. Please do not delete.

Trace message generated by an probe user

We recommend using the Outlook Online “Sweep” feature to delete message after 24 hours more longer hours:



Disable sending of test messages to user mailboxes

The Active O365 MP includes the monitor

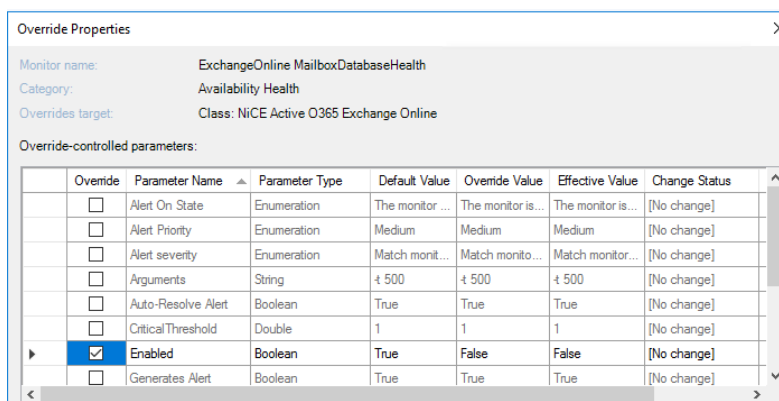
“ExchangeOnline MailboxDatabaseHealth”. This active probe monitor is sending trace messages to various recipients in the organization. While the number is limited, users still may see the following message in their Inbox:

From: <Your Test Users defined during Configuration>

Subject: <GUID>

Body Text: Autogenerated tracing message. Please do not delete.

To prevent these email, please disable the Monitor “ExchangeOnline MailboxDatabaseHealth” using an override:



Messages can be safely deleted after 24 hours.

Data Collection Troubleshooting

In the event of a data-collection failure, make sure that your monitoring environment is configured properly:

Note: Ensure the prerequisites for the OpsMgr DB and DWH are set! See: Operations Manager Database and Operations Manager Datawarehouse

1.) Gateway usage only:

On the management server, the System Center libraries (*.dll) are placed in your Microsoft System Center installation directory, for example:

```
C:\Program Files\Microsoft System Center 2016\Operations  
Manager\Server
```

The System Center libraries must be available on the Gateway server in the `Gateway` subfolder of the Microsoft System Center installation directory, for example:

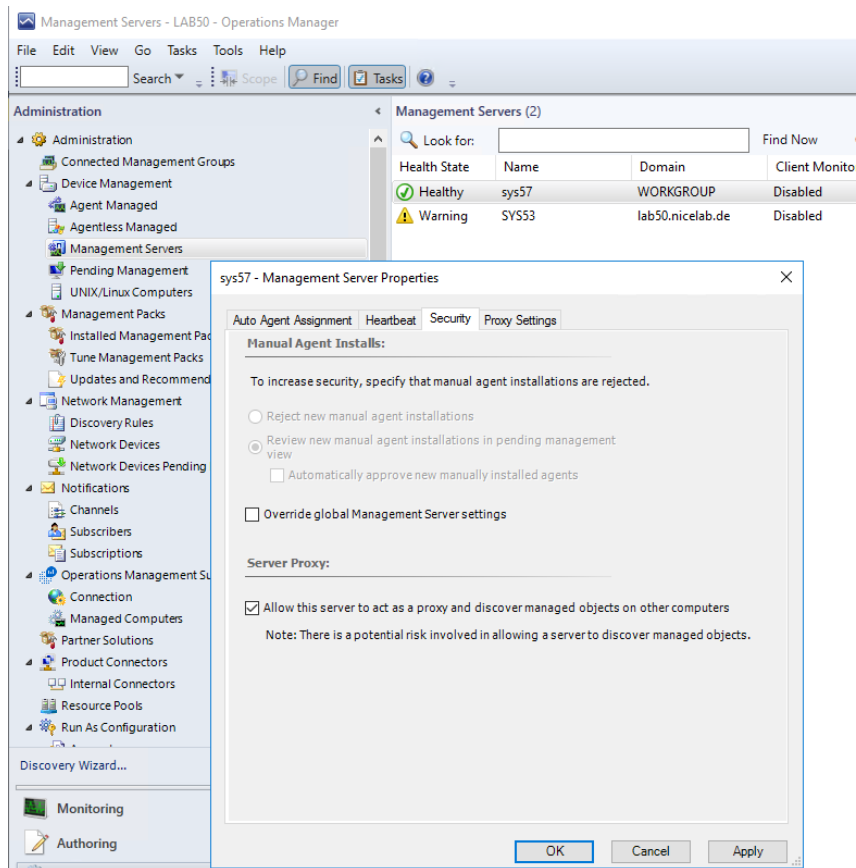
```
C:\Program Files\System Center Operations  
Manager\Gateway
```

If the files are not placed in the `Gateway` folder during installation, you can copy them to this location manually from the management server.

2.) Gateway usage only:

Ensure that proxy settings are enabled for the Gateway Server. You perform this configuration step in the Operations Manager Console.

Navigate to: **Administration > Device Management > Management Servers** and change the security properties of your Gateway Server. Select **Allow this server to act as a proxy and discover managed objects on other computers** as illustrated in the following screenshot:



3.) Restart the Microsoft Management Agent on the O365 Collector Server.

NiCE Active O365 MP Logging

O365 MP Collector, Discovery and Provider Log

Important internal status notifications and messages from the collector are written to the following log files on the O365 Collector Server (default locations):

- C:\ProgramData\NiCE\log\O365MP\o365mp_spi.log

The log file size is monitored by the logging library DLL.

Further information from the discovery scripts or the NiCE Windows Provider is logged in the Operations Manager Event Log.

O365 MP Tracing (Provider, Collector)

The NiCE Active O365 MP provides the following types of tracing facilities which are generic to all NiCE Active O365 MPs:

- Tracing the O365 MP Provider
- Tracing the O365 Collector

The information written to the trace files is designed to help the NiCE support team to pinpoint and solve problems as quickly and efficiently as possible.

Tracing the O365 MP Provider

NOTE:

Tracing of the NiCE Windows Provider can produce large amounts of data in the trace file, and there is no file-size limitation for this feature. For this reason, use tracing only if the support team requests you to do so. If you do enable tracing, remember to disable it again after the events you want to trace have been triggered and finished.

Enable Tracing

To enable tracing of the NiCE Windows Provider, perform the following steps:

1. In the **Management Console** select the **Authoring** pane.
2. Select the workflow (monitor, rule, or discovery) you want to trace.
3. Override the workflow property **Tracing** by setting it to “**true**”.
4. The trace file will be written to the following default location:
C:\ProgramData\NiCE\log\o365mp\WindowsProvider_Trace.log

Disable Tracing

To disable tracing of the Cluster MP Provider, perform the following steps:

1. In the **Management Console** select the **Authoring** pane.
2. Select the workflow (monitor, rule, or discovery) you which to trace.
3. Override the workflow property **Tracing** to “**false**”.

Tracing the O365 Collector

Enable Tracing

To enable tracing for the O365 Collector, perform the following steps:

1. In the O365 Collector Server, open the file `o365mp_trace.cfg` which is located by default in the folder `C:\ProgramData\NiCE\conf\o365mp`.
2. Change the following line:
`<TracerConfigs IsTracingEnabled="false">`
to
`<TracerConfigs IsTracingEnabled="true">`
3. Save the file.
4. The trace file is saved in the following default location:
`C:\ProgramData\NiCE\log\o365mp\o365mp_trace.log`

Disable Tracing

To disable tracing for the O365 Collector, perform the following steps:

1. In the O365 Collector Server, open the file `o365mp_trace.cfg` which is located by default in the folder `C:\ProgramData\NiCE\conf\o365mp`.
2. Change the line:
`<TracerConfigs IsTracingEnabled="true">`
to
`<TracerConfigs IsTracingEnabled="false">`
3. Save the file.

Tracing File Limitation

Note:

The size of the log file `o365mp_trace.log` is limited to 1 MB. If the file size limit is reached, the trace file will be rolled over twice. For example, the file `o365mp_trace.log` is rolled over to a file named `o365mp_trace_01.log`. If `o365mp_trace_01.log` already exists, it will be rolled over to a file named `o365mp_trace_02.log`. If `o365mp_trace_02.log` already exists, then its contents will be overwritten. The previous contents of `o365mp_trace_02.log` are lost.

Removing the NiCE Active O365 MP

To remove the NiCE Active O365 MP, perform the following steps in the order specified:

- Delete the Management Packs
- Remove the O365 MP Installation Package

Some of the uninstallation steps must be executed on the Operations Management Server or console system while other steps should be executed on both the Operations Manager Server and the O365 Collector Server. Make sure you are logged on to the appropriate server with the required privileges when you perform the uninstallation steps.

Delete the Management Packs

This operation must be performed on the **OpsMgr Operations Console**.

1. Log on to the OpsMgr Server.
2. Delete the following Management packs from the OpsMgr Server in the Operations Console:
 - a. `NiCE.Library.W.mpb`
 - b. `NiCE.Active.O365.MP.Library.mpb`
 - c. `NiCE.Active.O365.MP.Discovery.mpb`
 - d. `NiCE.Active.O365.MP.Monitoring.mpb`

Remove the O365 MP Installation Package

This operation must be performed on the **OpsMgr server** and on the **O365 Collector Server**.

1. Un-install the package `NiCE_ActiveO365MP_01.00.msi` by double-clicking the package.
2. Follow the on-screen instructions.
3. Alternatively, uninstall the "NiCE Active O365 MP" from "Programs -> Programs and Features" in the Windows Control Panel.