Logical Agent

Installation Guide

Revision History

Revision No.	Date Shipped	Description
1st issue	08.2017	Newly released

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Chapter 1　　Introduction

This document describes the procedure to install logical system agents.

1.1 <u>Overview of Logical System Agent</u>

The logical system agent is a function that monitors statuses of resources that are switched in conjunction with a cluster package or system operation. What the agent monitors per se are the same as those (such as performance or the statuses of whether processes are dead or alive) to be monitored by normal monitor systems, but it monitors a running server because resources on the cluster will be switched in conjunction with the package.

When monitoring servers in a cluster environment with normal agents, the standby server will always take on the status of being unknown. In addition, as the operation management in a cluster environment must monitor a running server, it must always keep track of which server is active to monitor the running one when using the normal agents. As the logical system agents monitor the information on an active server, however, the management can monitor the running server without knowing which server is active.

The logical system agent is exclusive use for active-standby cluster environment, which is the cluster environment that only one server become active at most.

The function provides the following features:
- This function can monitor the package with cluster configuration without being aware of the operating host.
- The icon displayed in the topology view is specific to the logical system.
- The logical system agent can be built in line with the application monitored with the application monitoring function.

When using the logical system agent function, you are advised to pay attention to the following:
(1) Installation

Normal agents of corresponding products must be installed besides logical system agents.

Both normal agents and logical system agents must be installed to all servers that constitute the cluster regardless of the server is active or standby. The installed normal agents must be running all the time.

(2) System requirements

System requirements and supported platform of the logical system agent are the same as those of normal agent.

(3) Self hostnames of logical agents

All the own host names of the logical system agents must be the same within the same cluster package and must be different from that of each normal agent. (A name unique to a manager must be specified.)

(4) License

The logical system agents are counted as one to the maximum under one node (OS environment). The normal agents are counted under each agent.

(5) Setting a cluster package

The logical system agents must be switched in conjunction with the cluster package, but as any

product enabled for MasterScope Framework does not perform this control, you are advised to set any which is necessary such as creating scenarios by following the instructions of your cluster software.

(6) Functional differences
The configuration information, event logs and syslog monitoring functions cannot be used for the logical system agent.

1.2 Installation Environment for Logical System Agents

The following shows an example of a configuration when installing logical system agents:
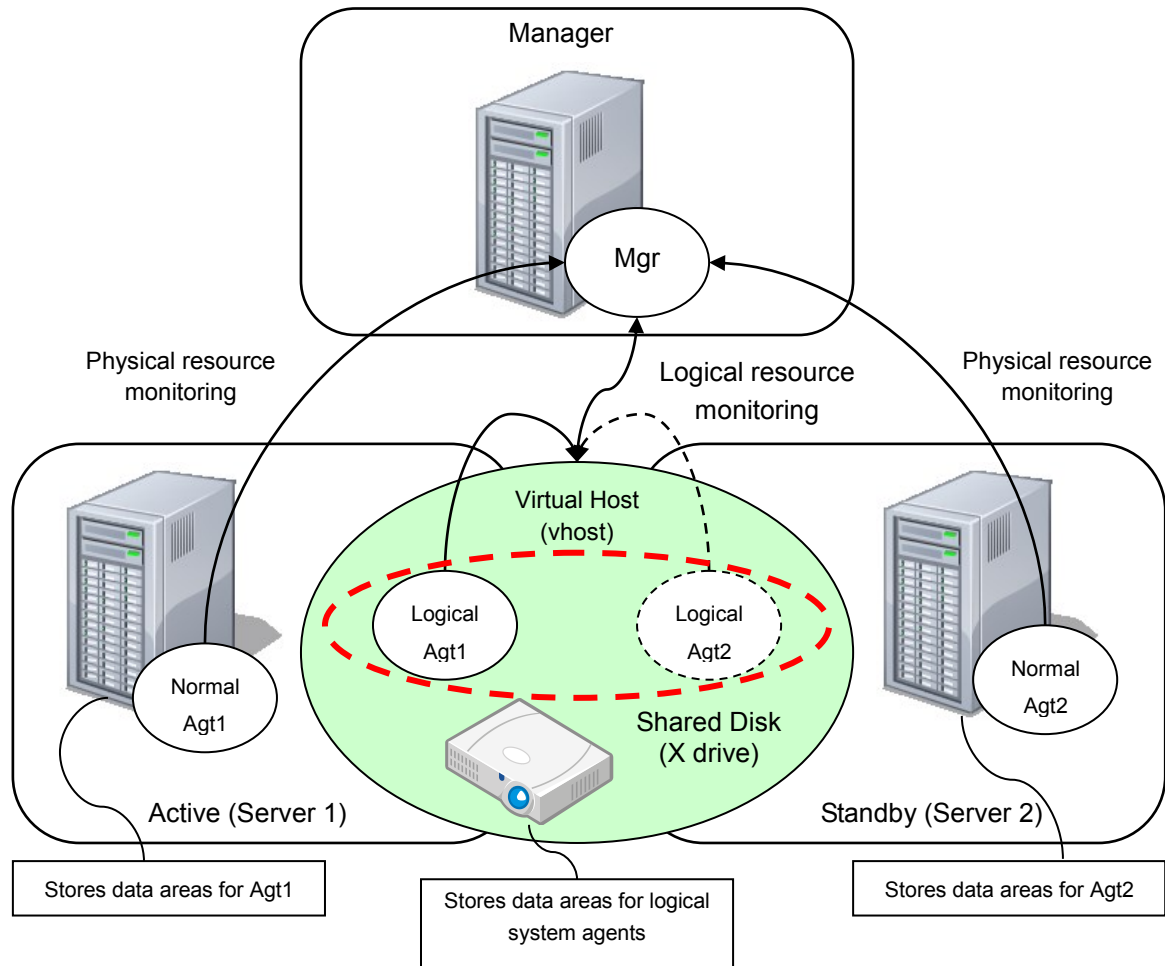

Figure 1: Diagram of Configuring Logical System Agents

The normal agents store their respective data areas in a local disk of Server 1 and that of Server 2 and monitor their respective resources on Server 1 and Server 2.

Although the logical system agent is installed in Servers 1 and 2, the data area is stored in the shared disk. The logical system agent starts and shuts down interlocking with the cluster package. Therefore, the resources in the operating server (resources in the virtual host) are monitored.

The console displays Server 1, Server 2, and the virtual host. Server 1 and Server 2 are the hosts monitored by the normal agents, and the virtual host is the host monitored by the logical system agents. As the logical system agents display as a virtual host (vhost) the information on resources of the server started by either of them as a service, users can monitor the resource information without being aware of which server is active or standby.

Chapter 2   Installation Procedure

You can install a logical system agent to a single server by following the same procedure as that for the normal agents.
This chapter describes the procedure to install logical system agents in a cluster environment.

2.1 Setting up a Cluster Environment

It is assumed that an appropriate cluster environment has been set up.

2.2 Setting up Logical System Agents

Both normal agents of corresponding products and logical system agents must be installed to all servers that constitute the cluster regardless of the server is active or standby. The following table shows the product for the logical system agents and the one for the normal agents.

Product Name	Type	Comment
MasterScope MISSION CRITICAL OPERATIONS	Agent	Normal agent
MasterScope MISSION CRITICAL OPERATIONS Logical Agent	Agent	Logical agent
MasterScope SystemManager	Agent	Normal agent
MasterScope SystemManager Logical Agent	Agent	Logical agent
MasterScope Application Navigator	Agent	Normal agent
MasterScope Application Navigator Logical Agent	Agent	Logical agent

The following pages describe the flow of the installation process on a Windows platform and an example of configuring each item to be set in the installation setting window. For information on the installation method, refer to appropriate MasterScope Media release memos and appropriate release memos attached to the product.
This explanation also assumes the following to be the shared resources for cluster:
•Virtual hostname: vhost
•Shared disk: X drive

Notes:
* After a logical system agent has been installed to the active system, proceed with installing the other agent to the standby system.
* When installing a logical system agent to the active system node, the shared disk must have been made referenceable.
* Set the self host name of each logical system agent on the active and standby systems to be the same.*Use the same drive name and same folder name for the installation locations for them.
* The virtual hostname and the shared disk must be reread where appropriate to your environment.
* As the values of the items set in the example are those on Windows platforms, reread them in UNIX where appropriate.

The installation procedure is as follows:

First, install a logical system agent to the active system node.

Specify as follows each item to be set in the installation setting window in the active system node.

Note that you may refer to an appropriate MasterScope Media release memo for the meaning of each setting item.

[Logical System Agent]

(Note) Although "Self hostname" is described as optional, ensure that you will specify the virtual hostname for it. For [Data area folder], specify any path to the shared disk.

(*1) Specify the same values as those for the normal agents.

(*2) Specify the different values for those from the normal agents.

Name of Item to Be Set	Setting	Remarks
Installation folder	C:\Program Files\NEC\UMF\OperationsLogical (*2)	Path (any) to a local disk
Self hostname (optional)	vhost	Virtual hostname
Manager hostname	Manager (*1)	(Any)
Communication port to manager	12520 (*1)	(Any)
Is data area set in separate folder?	Yes	(Fixed)
Data area folder	X:\MasterScope_Share	Path (any) to the shared disk
Is initial data populated?	Yes	(Fixed)
Service identifier	Logical (*2)	Service identifier (any)
Agent internal communication port	12571 (*2)	(Any)

"\Agent\sg" will automatically be added under the data area folder and the setup information that should be shared will be stored there. When the installation process has been completed, ensure that "\Agent\sg" is created under the data area folder.

Next, proceed with installing the other logical system agent to the standby system node.

Specify as follows each item to be set in the installation setting window in the standby system node.

[Logical System Agent]

(Note)   Specify the same values for the items as those in the active system, except that of the "Is initial data populated?" item. Specify "NO (only for cluster standby)" for [Is initial data populated?].

Name of Item to Be Set	Setting	Remarks
Installation folder	C:\Program Files\NEC\UMF\OperationsLogical	Path to a local disk
Self hostname (optional)	vhost	Virtual hostname
Manager hostname	Manager	
Communication port to manager	12520	
Is data area set in separate folder?	Yes	
Data area folder	X:\MasterScope_Share	Path to the shared disk
Is initial data populated?	NO (only for cluster standby)	
Service identifier	Logical	Service identifier
Agent internal communication port	12571	

When the installation process has been completed, change the startup type of the service both in the active node and in the standby one.

Click [Start] -> [Administrative Tool] -> [Service] and stop the service "MasterScope UMF Operations Logical Agent__<Service identifier>_N" (N is "Logical" in this example. For information on N, refer to

"3.1.3. Default values for each product" in the MasterScope Media Release Memo) and change the type of the startup from "Auto" to "Manual" in [Properties].

When using UNIX environment, go through following configuration not to run or stop service automatically.

A) Linux
In the OS whose system is controlled by init, run the following command.
When init is used, the process name (the second field) in /proc/1/stat is init.
chkconfig --del UMFOperationsLogicalAgent__<identifier>_N

In the OS whose system is controlled by systemd (for example, Red Hat Enterprise Linux 7.1), run the following command.
When systemd is used, the process name (the second field) in /proc/1/stat is systemd.
systemctl disable UMFOperationsLogicalAgent__<identifier>_N

B) HP-UX
Rename from
/sbin/rc2.d/S900UMFOperationsLogicalAgent__<identifier>_N   to
/sbin/rc2.d/s900UMFOperationsLogicalAgent__<identifier>_N

Rename from
/sbin/rc1.d/K10UMFOperationsLogicalAgent__<identifier>_N   to
/sbin/rc1.d/k10UMFOperationsLogicalAgent__<identifier>_N

C) Solaris
Rename from
/etc/rc2.d/S90UMFOperationsLogicalAgent--<identifier>_N   to
/etc/rc2.d/s90UMFOperationsLogicalAgent--<identifier>_N

Rename from
/etc/rc.d/rc0.d/K10UMFOperationsLogicalAgent--<identifier>_N   to
/etc/rc.d/rc0.d/k10UMFOperationsLogicalAgent--<identifier>_N

D) AIX
Rename from
/etc/rc.d/rc2.d/S90UMFOperationsLogicalAgent__<identifier>_N   to
/etc/rc.d/rc2.d/s90UMFOperationsLogicalAgent__<identifier>_N

Rename from
/etc/rc.d/rc2.d/K10UMFOperationsLogicalAgent__<identifier>_N   to
/etc/rc.d/rc2.d/k10UMFOperationsLogicalAgent__<identifier>_N

2.3   Duplicating the Logical System Agent Service

Set your cluster software by following its procedure manual so that the logical system agent service may be duplicated.
Control cluster software so that the systems operate as following.

- Mount common disk which specified at installation of logical system agents before executing startup script of the logical system agents.
- Be network available before executing startup script of the logical system agents.
- Unmount common disk which specified at installation of logical system agents after executing stop script of the logical system agents.
- Be network unavailable after executing stop script of the logical system agents.

You have now completed the logical system agent installation process.

Chapter 3   Uninstallation Procedure

3.1 Removing Settings for Duplication

Remove the duplicate settings configured in "Duplicating the Logical System Agent Service".
Before proceeding with the removal process, ensure that you stop the logical system agent services.

3.2 Uninstalling the Logical System Agents

Uninstall the logical system agents by following the instructions described in the release memo for the product.

3.3 Removing Files

After the logical system agents have been uninstalled, the files and directories will still remain on the shared disk. Manually remove from the shared disk the directories you specified in the installation process.

Chapter 4   Other Notes

4.1 Upgrade from Application Navigator

If the cluster environment is built manually correcting the SysMonAgt.ini file in the environment where Application Navigator Ver3.0.2 or earlier is used, upgrade it to SystemManager G and manually update it again. Shut down the agent before starting upgrade.