Install Platform Symphony : OVERVIEW

Start Process

Using this document

To learn basic concepts, read the guide:

Platform Symphony Foundations

Read important installation concepts in this document:

Requirements, Recommendations

Workload Execution Mode

Other Cluster Properties

Clusters With Different Account Permissions

Choosing Hosts

Analyze your hosts and make your decisions about the cluster you want to create. You should know:

- Workload execution mode (WEM)
- Failover feature status
- Automatic startup feature status
- Master host and other hosts in cluster
- Database host, database type
- Communication ports
- Cluster name
- Cluster administrator OS account
- Installer OS account
- Installation directory
- Shared directory (for failover)
- Cluster administrator root permissions
- Symphony LIM and PEM execution user OS account (Windows)

Contact Platform Computing and obtain a software license for your cluster.

You cannot install without a valid license file.

Download installation packages and database schema scripts.

To download Platform software and documentation, visit http://my.platform.com/

Install on the master host and all hosts of the same operating system. To add compute hosts of another OS to the cluster, see the cluster management guide.

This process installs a working cluster.
This is an overview process; you are required to complete many sub-processes along the way.

Preparation

Master Host or Management Hosts

Install on the master host

Linux/ UNIX Windows

Log into the Platform Management Console

In the Cluster Health section of the Cluster Health Dashboard, the master host status should be OK.

Will the cluster use failover?

Yes

No

Add a management host

Linux/ UNIX Windows

In a command console, run

egosh resource group ManagementHosts

You should see the host name in the Resource List.

Are all management hosts installed?

No

Yes

Set up master host failover

Compute Hosts

Add a compute host and test

Linux/ UNIX Windows

Log into the Platform Management Console

To the right of **Platform: SOA Workload**, click Run Symping

You should see a green checkmark after symping finishes.

On Solaris, you must use CLI to run symping.

Add a compute host and test

Linux/ UNIX Windows

Are all compute hosts installed?

No

Yes

Database

Will the cluster use an external database?

Yes

No

Set up the external database

In a command console, run

egosh service list

The status of plc and purger services should be STARTED.

End process

What's Next?

After installation, you may open the Knowledge Center and get started with cluster verification.

How to Uninstall on Windows?

From the Windows Control Panel, choose *Add or Remove Programs* and remove two components.

Order is important: first, remove Platform Symphony, then remove Platform EGO.

System Requirements and Recommendations

We suggest that you disable real-time anti-virus software and any defragmentation software.

These tools cause poor performance and instability, especially on management hosts, and create various problems if they lock files while scanning them. Schedule virus scans during cluster downtime.

The master host is a management host.

Hardware Requirements

	MANAGEMENT HOSTS	COMPUTE HOSTS
CPU count:	1 or 2	1
CPU power:	>= 2.4 GHz	>= 2.4 GHz
RAM:	4 GB	512 MB
Disk space (to install):	500 MB	300 MB
Additional disk space: (for applications, logs, etc.)	Can be 30 GB for a large cluster	1 GB*N (slots) + sum of applications service package sizes (including dependencies)

Windows Hosts

- MSI 2.0 or later required
- We suggest that you used fixed IP addresses (Windows hosts can be DHCP clients if the IP address is never lost or changed in a running cluster)

Windows Networks:

- We suggest per-seat licensing to ensure that management hosts have enough Microsoft Windows Client Access Licenses. If the network is licensed per server instead of per seat, you could run out of these licenses, causing Symphony to fail.

Understanding Workload Execution Modes

When you install Symphony, your choice of workload execution mode affects the flexibility and security of your cluster. When you install the cluster, you must choose simplified or advanced WEM.
Although the requirements for using advanced WEM are more restrictive, we recommend choose advanced WEM if you can, because it is not always possible to change the cluster mode after installation.

	SIMPLIFIED WEM	ADVANCED WEM
Description	With simplified workload execution mode, there is no impersonation; on compute hosts, all Symphony applications and Symphony system services execute under the same user account.	With advanced workload execution mode, impersonation is used to run workload; multiple Symphony applications can all execute under different execution accounts. Symphony system services can execute under a different user account from Symphony applications. On Windows, the cluster administrator needs some special permissions.
Permissions required to install:	No special permissions required. - if you do not have OS administrator permissions, simplified WEM is used automatically	OS administrator (root for UNIX, local administrator for Windows hosts)
Permissions required to run:	No special permissions required. - if you cannot have Symphony system services running as LocalSystem on Windows, they can run under the cluster administrator's OS account	OS administrator (root for UNIX, local administrator for Windows hosts)
LIM and PEM run as:	▪ cluster administrator on UNIX ▪ cluster administrator on all Windows management hosts ▪ cluster administrator on Windows compute hosts if you installed without administrator permission ▪ LocalSystem on Windows compute hosts if you installed with administrator permission and accepted the default ▪ cluster administrator on Windows compute hosts if you installed with administrator permission and changed the default	▪ root on UNIX ▪ cluster administrator on all Windows management hosts ▪ LocalSystem on Windows compute hosts if you accepted the default ▪ cluster administrator on Windows compute hosts if you changed the default
Symphony applications run as:	same account used to run Symphony LIM and PEM on the host	Symphony consumer's workload execution account (on UNIX, this cannot be root)
UNIX – Maximum application scalability	1024 SSM connections permitted by default (this is a system setting) OS administrator permission is required if you want to increase scalability to 6400 connections. You need to increase scalability if the number of CPUs used by any one application plus the number of client connections to that same application will exceed 1000.	6400 SSM connections permitted (maximum application scalability)
Restrictions	There is no "sandboxing" of Symphony applications, and Symphony applications can interfere with Symphony system services because they share the same execution account.	"Sandboxing" of Symphony applications is possible, but you must configure it carefully. Applications can interfere with each other if they use the same Symphony consumer, or if their consumers are configured to share the same workload execution account.

Understanding Other Cluster Properties

Cluster administrator

WINDOWS
You may choose a local account as cluster administrator. It must have the same password on all hosts.

WINDOWS
If the cluster administrator has local administrator permissions on all hosts, use the cluster administrator as the installation account. Do not install as cluster administrator if the installation account has admin permisssions but the cluster administrator account does not.

UNIX
If you cannot install with root permissions on all hosts, use the cluster administrator as the installation account.

WINDOWS
If you cannot install with Windows local administrator permissions on all hosts, use the cluster administrator as the installation account.

For this, the cluster administrator requires the permission: Log on as a service

Windows 2003 and Windows 2008 system policies require that you have local administrator permissions to install software. For more information, see the Symphony FAQs.

On Windows 2008, do not install with the Windows local Administrator account if the cluster administrator belongs to the local administrators group \ on the host, but is not the Administrator account.

The cluster administrator account must exist on every host in the cluster. The account must have a password.
It's ideal if the password of this account does not change frequently.

We recommend you create a new domain user account that can be dedicated exclusively to administration and operation of the cluster.

We recommend that you name the account **egoadmin**.

WINDOWS
The cluster administrator password must not include certain characters such as "£" on the French keyboard. Symphony supports passwords containing alphanumeric characters and any of the following special characters:

`` ` - = [ ] \ ; ' , . / ``

WINDOWS
On Vista, if you use a terminal service to connect to the cluster after installation and try to start the local EGO process as cluster administrator, i.e., egosh ego start, you may encounter a denied permission issue. If this happens, log off and log on again to restart EGO.

Installation directory

We recommend you use the default installation directory:
/opt/ego or C:\EGO

On all hosts in the cluster, you must have the same installation directory available.

The installation directory you specify is saved as the environment variable: **EGO_TOP**
When user documentation refers to this environment variable, substitute the full path to the installation directory.

The path to the installation directory must not contain spaces. On Windows, you cannot install under: C:\Program Files\

Ports and Cluster Name

We suggest you use the default base port 7869. Symphony requires seven consecutive ports starting from the base port, for example, 7869-7875.

On all hosts in the cluster, you must have the same set of ports available.

The default cluster name is cluster1. You must customize the installation if you want to specify your own unique cluster name. Do not use a valid host name as the cluster name.

Cluster name is permanent, you cannot make a change after you install.

Startup and management features

Linux/UNIX
We recommend that you enable automatic startup for ease of administration.

You need root to enable this.

Linux/UNIX
We recommend you allow remote host management. This means you can start, stop, and restart other hosts in the cluster from your local host.

To enable this, you need to be able to run rsh or ssh across all hosts in the cluster without having to enter a password; see your operating system documentation for information about configuring rsh or ssh.

Linux/UNIX
If you install as root, we recommend that you grant root permissions to the cluster administrator with egosetsudoers.

With egosetsudoers, the cluster administrator can start a local host in the cluster, and shut down or restart any hosts in the cluster from the local host (with remote host management).

You need root to enable this.

WINDOWS
We recommend you enable remote host startup. This means you can start, stop, and restart other hosts in the cluster from your local host.

To enable this, you need to install with local administrator permissions.

Windows 2003 system policies prevent the use of remote startup on these hosts.

Failover

We recommend that you allow master host failover.

To enable this, you must create a shared directory that is fully controlled by the cluster administrator and accessible from all management hosts.

To enable this, you need to dedicate at least two hosts to be used exclusively for cluster management (the master host and at least one other management host). You will also need at least one compute host to execute application workload.

If you choose not to allow failover, the master host can be used to run application workload.

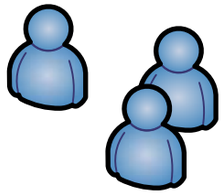
Database choices

We suggest that you use a commercial database to store reporting data.

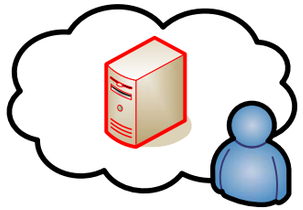
Contact your database administrator and set up the external database as soon as possible after installation.

If you choose to enable the non-production database, you must choose the master host or any management host as the database host.

Clusters With Different Account Permissions

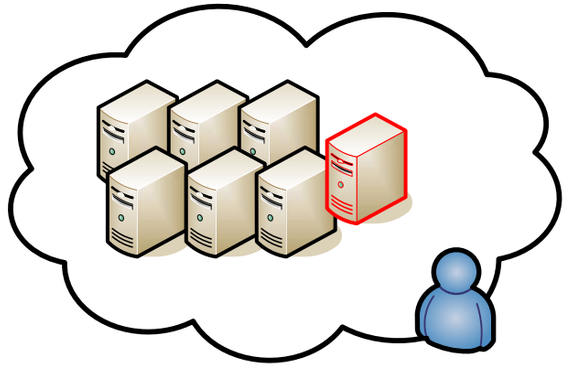
	Case #1	Case #2	Case #3
Your system administrator permissions:	NO special permissions are available. UNIX: no root permission WINDOWS: no local administrator permission	Permission to install as a system administrator, but NOT to run work.	Permission to install AND run work as a system administrator.
To run the installer:	The account you use to install ALWAYS becomes the cluster administrator. You must use the SAME account to install on all hosts in the cluster.	Log on as a system administrator: ▪ UNIX: any account with root permission ▪ WINDOWS: any account with local administrator permission	Same as Case #2
Startup status:	▪ Symphony will NOT start automatically if a host restarts. ▪ You must start Symphony manually on EACH host, as cluster administrator. ▪ WINDOWS: As cluster administrator, always shut down Symphony before you log off the host.	▪ Symphony starts automatically if a host restarts. ▪ You can start remote hosts and start multiple hosts at once. ▪ Symphony keeps running on the host if the cluster administrator logs off.	Same as Case #2
Workload execution mode (WEM):	Simplified WEM: Symphony applications run under ONE user account.	Simplified WEM: Symphony applications run under ONE user account.	Advanced WEM: Symphony applications run under the consumer's workload execution account, which is CONFIGURABLE. Different consumers can have different workload execution accounts.
Execution user accounts: 	LIM and PEM and Symphony applications run as the cluster administrator (the same account used to install the system).	UNIX: LIM and PEM and Symphony applications always run as the cluster administrator. WINDOWS (management hosts): LIM and PEM always run as the cluster administrator. WINDOWS (compute hosts): LIM and PEM and Symphony applications run as LocalSystem by default, but during installation, you can choose cluster administrator instead. WINDOWS: The cluster administrator account must have special permissions: ▪ Log on as a service ▪ Log on as a batch job (required by **Everyone**)	UNIX: LIM and PEM run as ROOT. WINDOWS (management hosts): LIM and PEM always run as the cluster administrator. WINDOWS (compute hosts): LIM and PEM run as LocalSystem by default, or cluster administrator (decided during installation). WINDOWS: The cluster administrator account requires these special permissions: ▪ Log on as a service ▪ Act as part of the operating system ▪ Debug programs ▪ Adjust memory quotas for a process ▪ Replace a process level token ▪ Impersonate a client after authentication ▪ Log on as a batch job (required by **Everyone**)
Restrictions	There is no “sandboxing” of Symphony applications, and Symphony applications can interfere with Symphony system components because they share the same execution account.	Same as Case #1.	“Sandboxing” of Symphony applications is possible, but you must configure it carefully. Applications can interfere with each other if they use the same Symphony consumer, or if their consumers are configured to share the same workload execution account.

Choosing Hosts



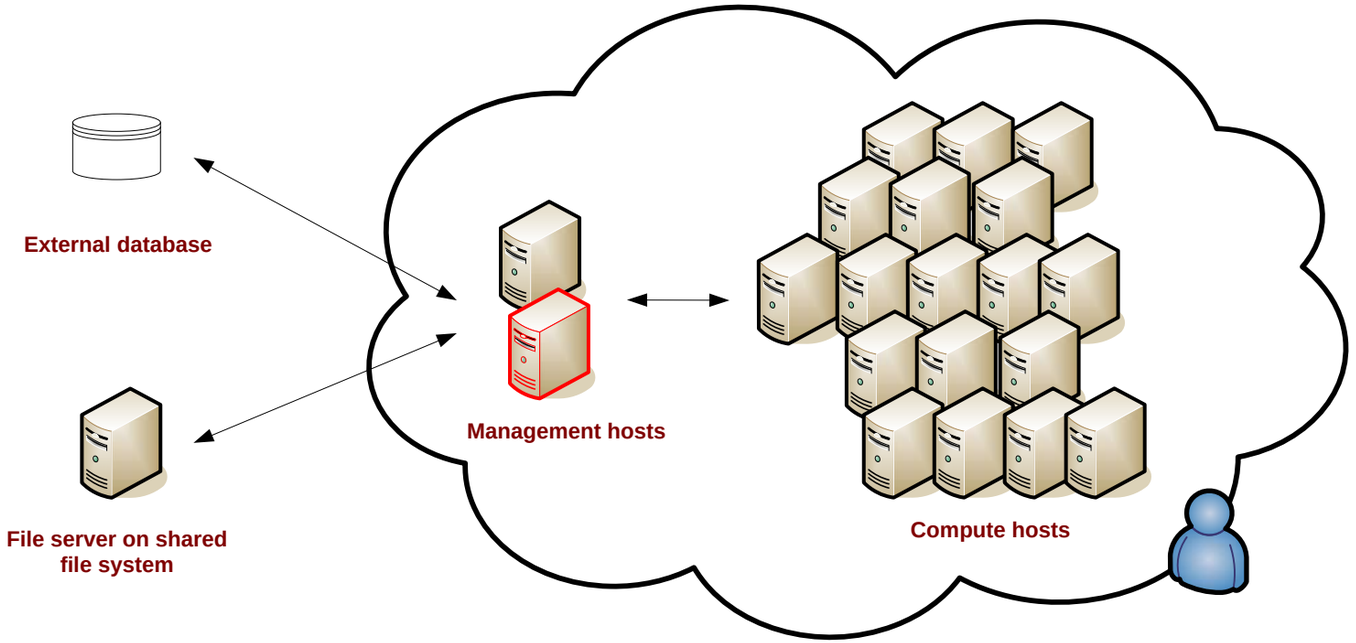
A single-host cluster

- [x] MASTER HOST: _____



A simple cluster with no failover

- [x] MASTER HOST: _____
- [x] ADDITIONAL COMPUTE HOSTS: _____ _____ _____ _____ _____ _____



Complete cluster suitable for large scale production user or small scale applications testing

- [x] MASTER HOST: _____
- [x] ADDITIONAL MANAGEMENT HOSTS: _____ _____
- [x] COMPUTE HOSTS: _____ _____ _____ _____ _____ _____ _____ _____ _____
- [x] FILE SERVER HOST: _____
- [x] DATABASE HOST: _____

Install on the Master Host (part 1 of 2)
*for a cluster with a Linux/UNIX master host

- To define cluster properties as environment variables with sh, ksh, or bash:
  export VARIABLE_NAME=*value*
- To define cluster properties as environment variables with csh or tcsh:
  setenv VARIABLE_NAME *value*
- To define cluster properties in a file, create a simple text file /tmp/install.config and enter each variable on a new line, as shown:
  VARIABLE_NAME=*value*

Any variables set in the environment overwrite the same variables set in the configuration file.

This process installs Symphony on the Linux/ UNIX master host.

To install on the Linux/UNIX master host, you need to know:

- Cluster administrator OS account
- Database host
- Communication ports
- Workload execution mode (WEM)
- Installation directory
- Cluster name

Start Process

If you have not already done so, review the Hardware Checklist for the master host.

Hardware Checklist for the master host

- communication ports are available
- installation directory is available
- cluster administrator account exists on the host
- web server ports 8080, 8005, 8009 are available
- service director port 53 is available
- web service gateway port 9090 is available
- loader controller port 4046 is available
- Derby database port 1527 is available
- host has access to the shared directory (for failover)

Log into the host using the installation user OS account (cluster administrator or root).

Are you using the Derby non-production database?

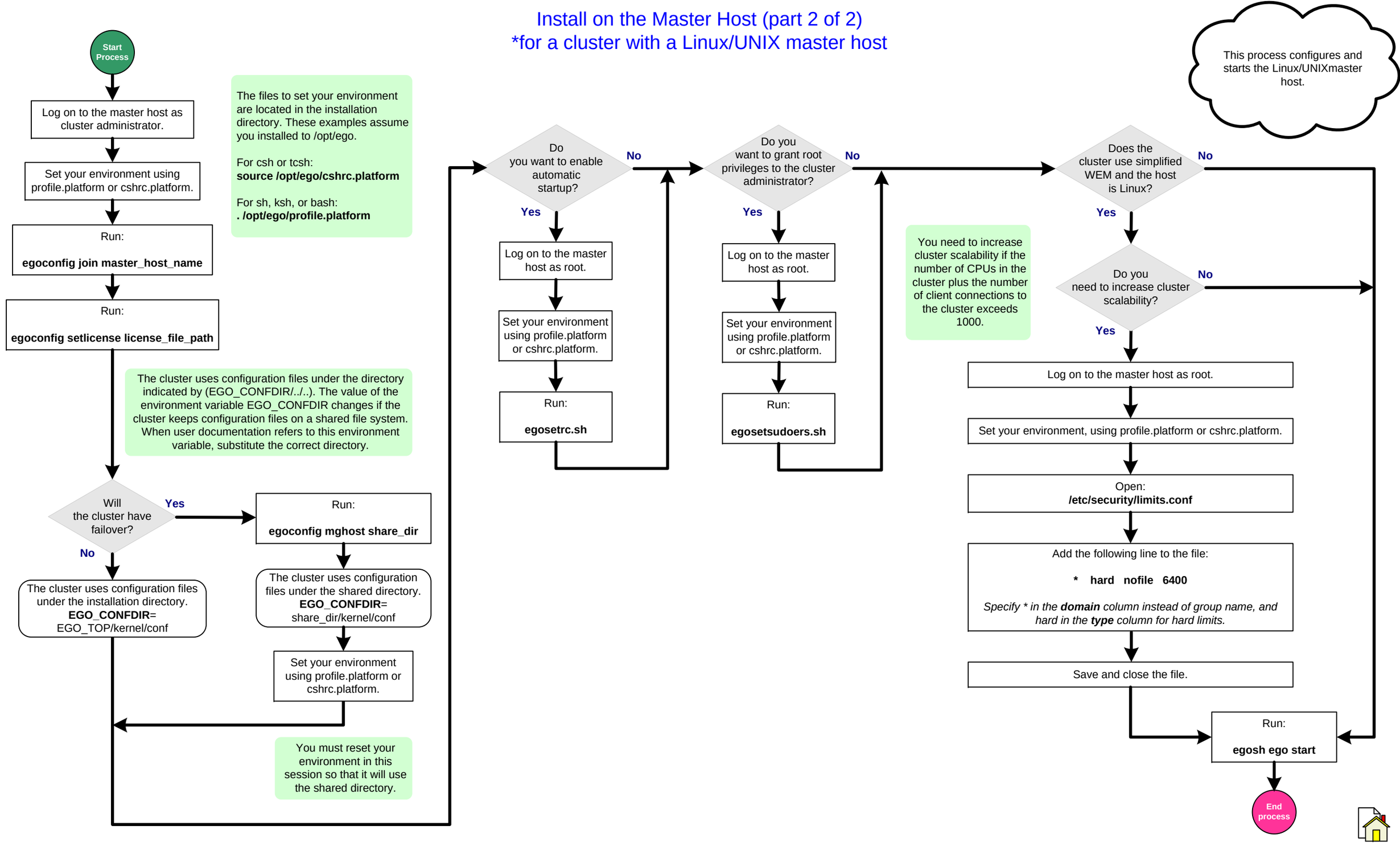
- Yes → Define the cluster property: **DERBY_DB_HOST** (give host name)
- No → Are you customizing ports or cluster name?
  - Yes → Define custom cluster properties : **CLUSTERNAME** (give cluster name) **BASEPORT** (give port number)
  - No → Are you doing a multi-head installation?
    - No → Define: **OVERWRITE_EGO_CONFIGURATION** (specify **Yes**)
    - Yes → Are you installing as root?
      - No → Define the cluster property: **CLUSTERADMIN** (give user name)
      - Yes → Are you using advanced WEM?
        - Yes → Define the cluster property: **SIMPLIFIEDWEM** (specify **N**)
        - No → Are you customizing the installation directory?
          - No → Run the installer : ***./symphony_package*.bin**
            If you must use RPM packages instead of .bin, install the EGO package first:
            rpm -ivh *ego_package*.rpm
            rpm -ivh *soam_package*.rpm
            → End process
          - Yes → Set environment variable **RPM_INSTALL_PREFIX** (specify install directory)
            → Is the host Linux with RPM version earlier than 4.2.x?
            - No → Run the installer:
              ./symphony_package*.bin --prefix *install_directory
              If you must use RPM packages instead of .bin, install the EGO package first:
              rpm -ivh --prefix *install_directory ego_package*.rpm
              rpm -ivh --prefix *install_directory soam_package*.rpm
              → End process
            - Yes → Set environment variable **RPM_INSTALL_PREFIX** (specify install directory)
              → Run the installer :
              ***./symphony_package*.bin**
              If you must use RPM packages instead of .bin, install the EGO package first:
              rpm -ivh *ego_package*.rpm
              rpm -ivh *soam_package*.rpm
              → End process
      - Yes → Are you customizing the installation directory?
        - No → For Solaris, run the installer:
          ***./symphony_package*.bin**
          For Linux, run the installer and specify dbpath:
          ./symphony_package*.bin –dbpath *db_directory
          If you must use RPM packages instead of .bin, install the EGO package first:
          rpm -ivh --dbpath *db_directory ego_package*.rpm
          rpm -ivh --dbpath *db_directory soam_package*.rpm
          → End process
        - Yes → Set environment variable **RPM_INSTALL_PREFIX** (specify install directory)
          → Is the host Linux with RPM version earlier than 4.2.x?
          - No → For Solaris, run the installer, specify installation directory:
            ./symphony_package*.bin --prefix *install_directory
            For Linux, run the installer, specify installation directory and dbpath:
            ./symphony_package*.bin --dbpath *db_directory* --prefix *install_directory
            If you must use RPM packages instead of .bin, install the EGO package first:
            rpm -ivh --dbpath *db_directory* --prefix *install_directory ego_package*.rpm
            rpm -ivh --dbpath *db_directory* --prefix *install_directory soam_package*.rpm
            → End process
          - Yes → Set environment variable **RPM_INSTALL_PREFIX** (specify install directory)
            → Is the host Linux with RPM version earlier than 4.2.x?

OVERWRITE_EGO_CONFIGURATION :

If this parameter is set to "Yes", (default = "No"), Symphony will use the Symphony default configuration to overwrite the EGO configuration. For example, it will overwrite EGO ConsumerTrees.xml, add sd.xml in EGO service conf directory, overwrite EGO Derby DB data files, etc.

Proceed to Part 2

Install on the Master Host (part 2 of 2)
*for a cluster with a Linux/UNIX master host



Add a Management Host (part 1 or 2)
*for a cluster with a Linux/UNIX master host

This process installs Symphony on a Linux/ UNIX management host.

To add a Linux/UNIX management host, you need to know:

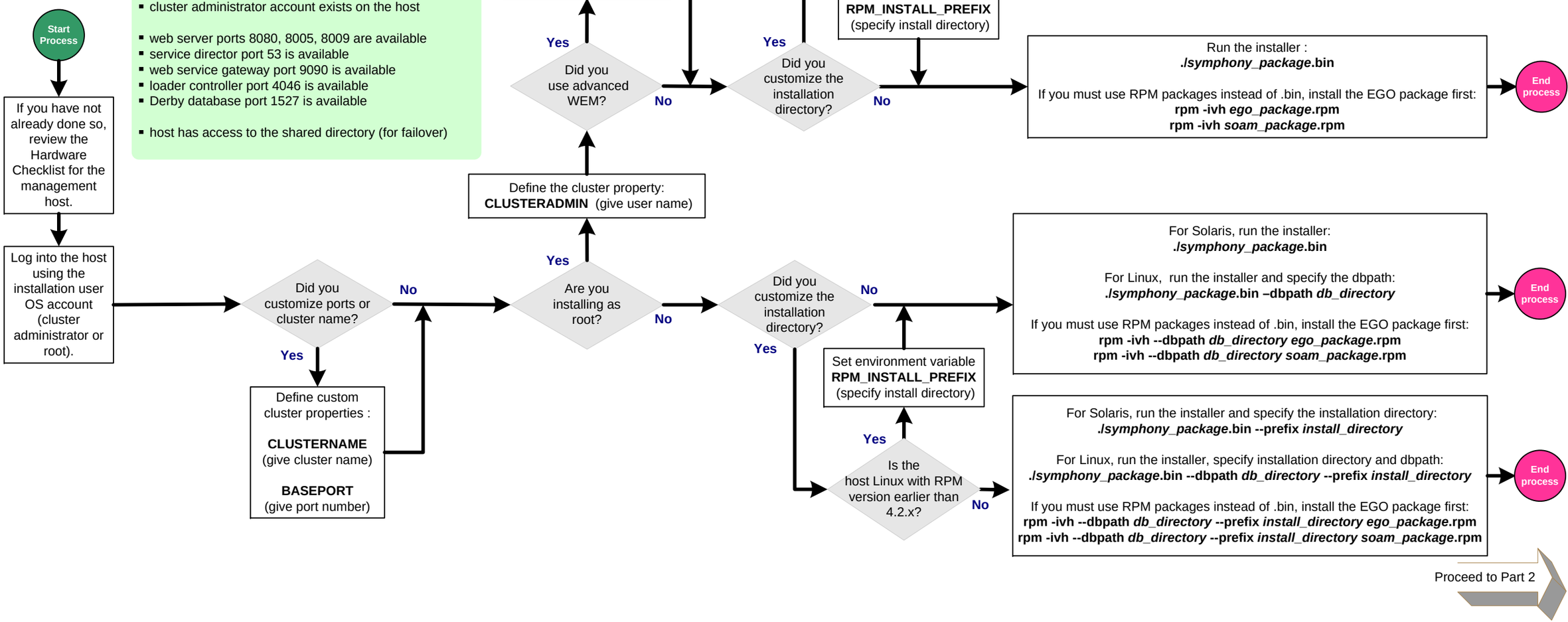
- Cluster administrator OS account
- Communication ports
- Workload execution mode (WEM)
- Installation directory
- Cluster name

- To define cluster properties as environment variables with sh, ksh, or bash:
  export VARIABLE_NAME=*value*
- To define cluster properties as environment variables with csh or tcsh:
  setenv VARIABLE_NAME *value*
- To define cluster properties in a file, create a simple text file /tmp/install.config and enter each variable on a new line, as shown:
  VARIABLE_NAME=*value*

Any variables set in the environment overwrite the same variables set in the configuration file.

Hardware Checklist for the management host

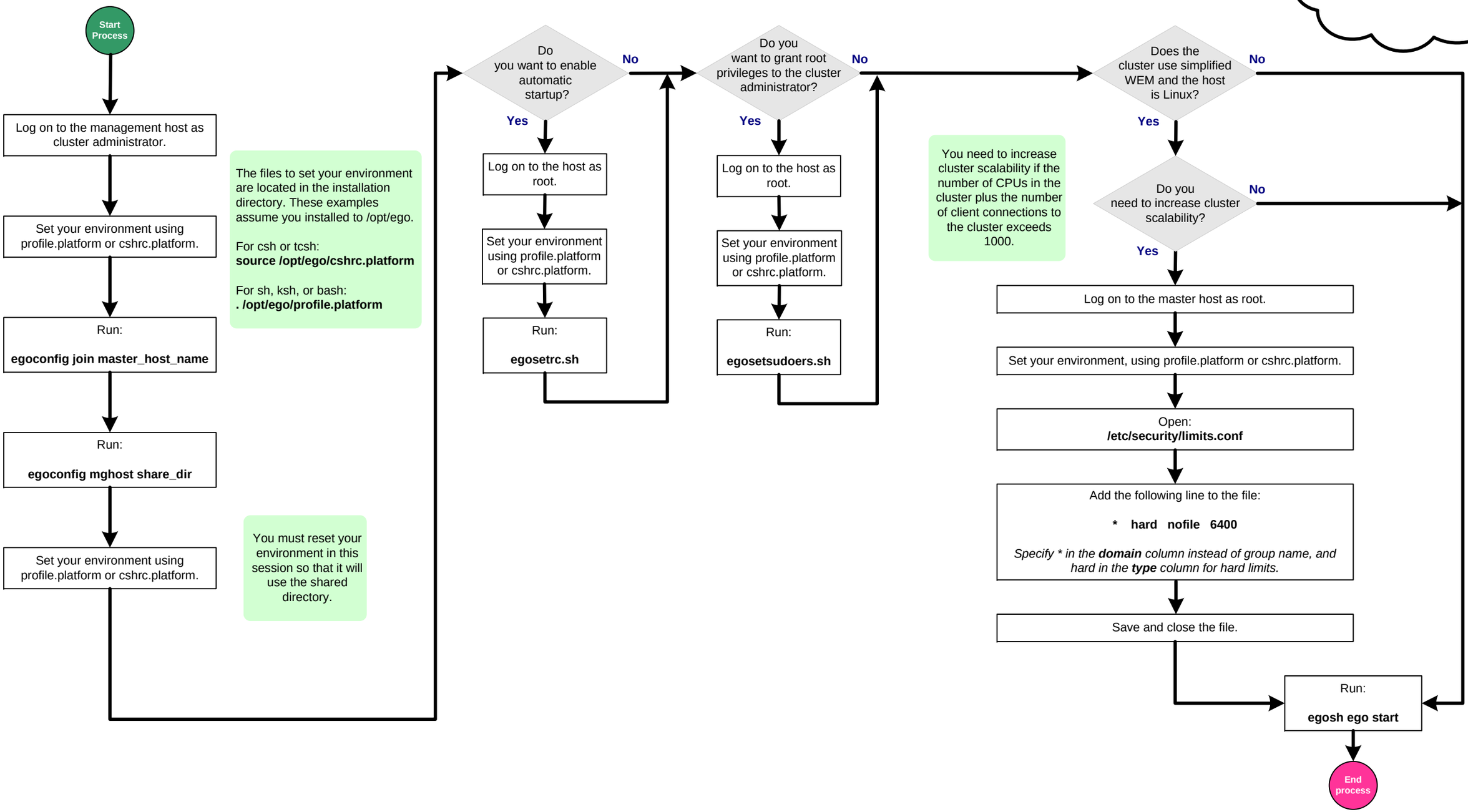
- communication ports are available
- installation directory is available
- cluster administrator account exists on the host
- web server ports 8080, 8005, 8009 are available
- service director port 53 is available
- web service gateway port 9090 is available
- loader controller port 4046 is available
- Derby database port 1527 is available
- host has access to the shared directory (for failover)



Proceed to Part 2

Add a Management Host (part 2 of 2)
*for a cluster with a Linux/UNIX master host

This process configures and starts a Linux/UNIX management host.



Add a Compute Host and Test (part 1 of 2)
*Linux/UNIX host

- To define cluster properties as environment variables with sh, ksh, or bash:
  export VARIABLE_NAME=*value*
- To define cluster properties as environment variables with csh or tcsh:
  setenv VARIABLE_NAME *value*
- To define cluster properties in a file, create a simple text file /tmp/install.config and enter each variable on a new line, as shown:
  VARIABLE_NAME=*value*

Any variables set in the environment overwrite the same variables set in the configuration file.

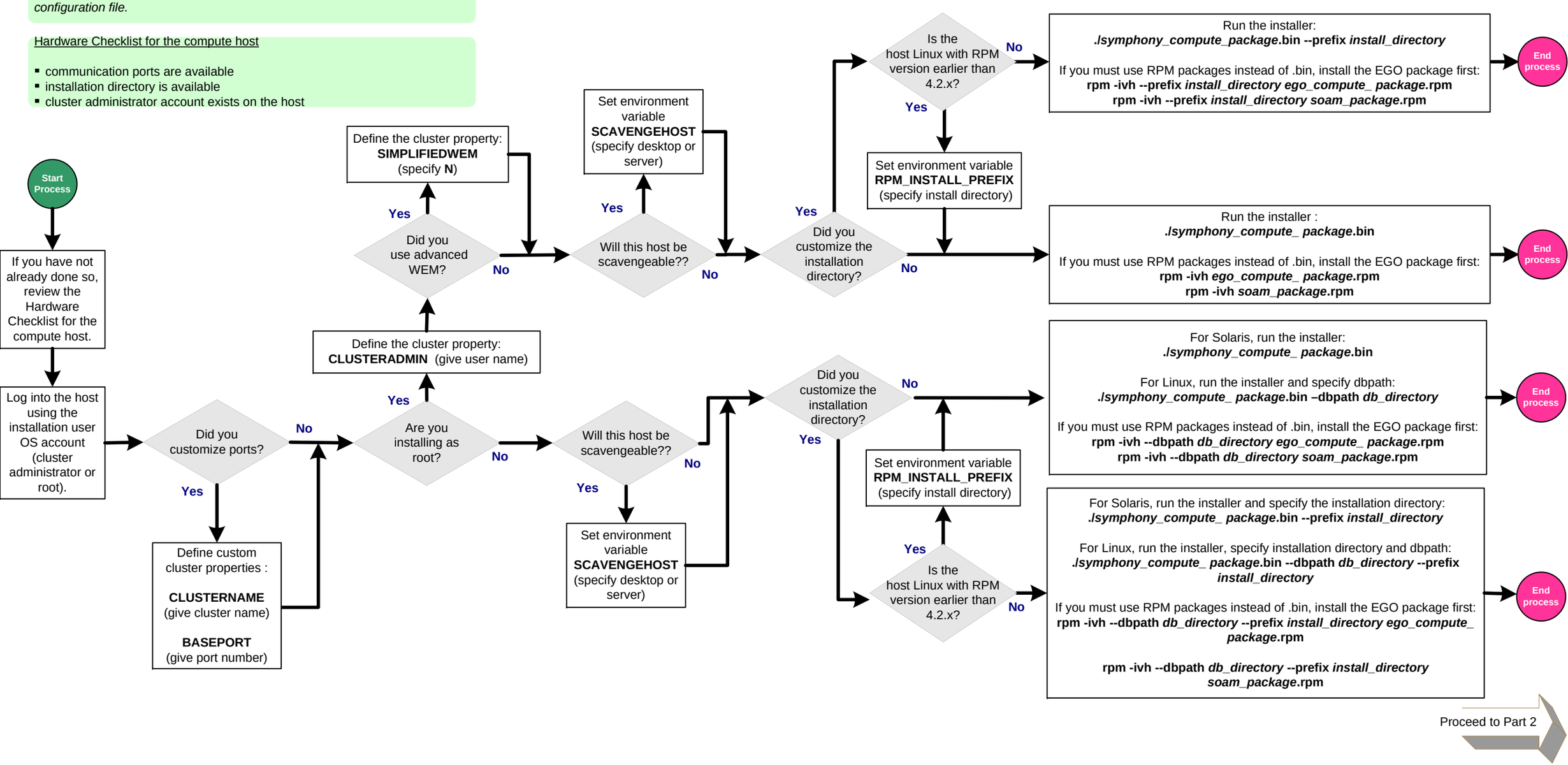
Hardware Checklist for the compute host

- communication ports are available
- installation directory is available
- cluster administrator account exists on the host

To add a Linux/UNIX compute host, you need to know:

- Cluster administrator OS account
- Communication ports
- Workload execution mode (WEM)
- Installation directory
- Cluster name

This process installs Symphony on a Linux/ UNIX compute host.



Proceed to Part 2

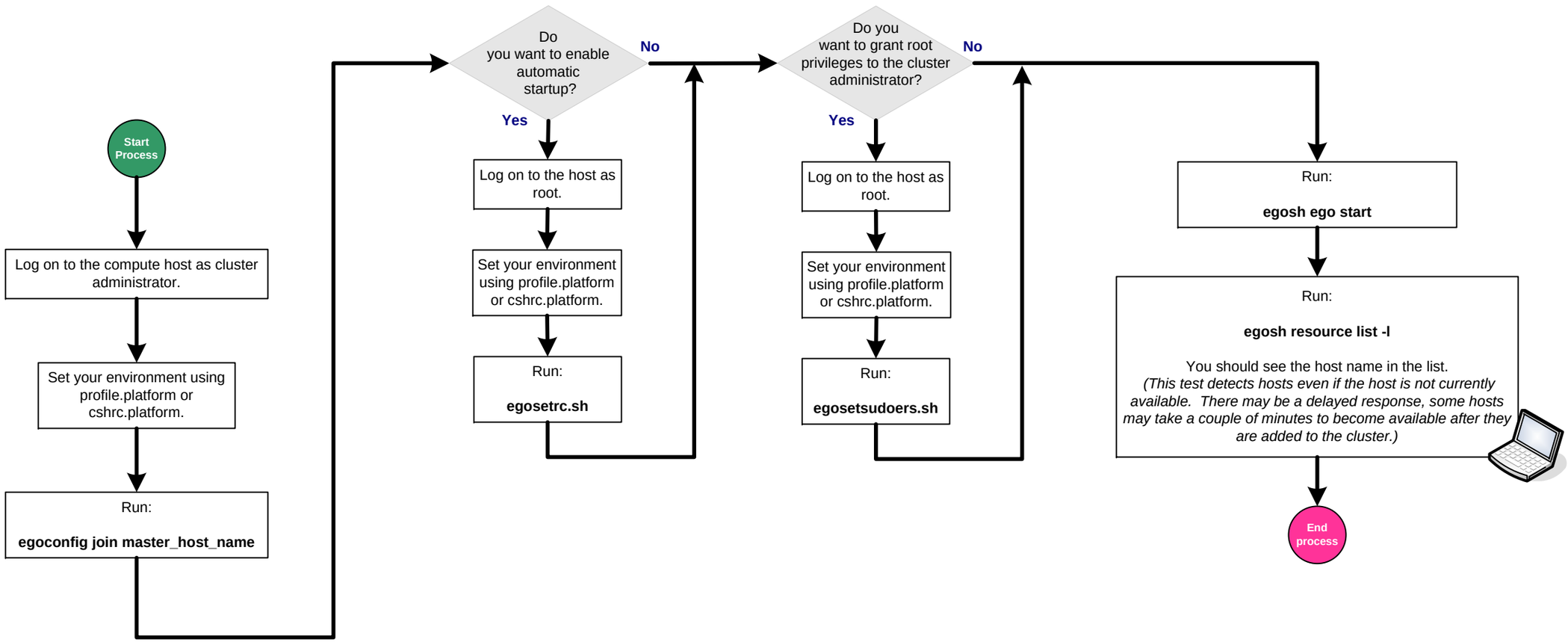
Add a Compute Host and Test (part 2 of 2)
*Linux/UNIX host

The files to set your environment are located in the installation directory. These examples assume you installed to /opt/ego.

For csh or tcsh:
source /opt/ego/cshrc.platform

For sh, ksh, or bash:
. /opt/ego/profile.platform

This process configures and starts a Linux/UNIX compute host.



Install on the Master Host
*for a cluster with a Windows master host
[recommended method]

This process installs Symphony on the Windows master host using .exe package.

To install on the Windows master host, you may need to input:

- License file location
- Cluster administrator OS account
- Failover feature status
- Database host
- Communication ports
- Cluster name
- Workload execution mode (WEM)
- Database type
- Installation directory
- Master host
- Shared directory

Start Process

If you have not already done so, review the Hardware Checklist for the master host.

Log into the host using the installation user OS account.

Install and start the host.
Run the installer:

Symphony Setup*nnn*_win32.exe
or
Symphony Setup*nnn*_win-x64.exe

If you must use MSI files to install, refer to the alternate procedure.

MSI installation is only supported if the cluster uses advanced WEM.

Hardware Checklist for the Master Host

- Communication ports are available
- Installation directory is available
- Cluster administrator account exists on the host

- Web server ports 8080, 8005, 8009 are available
- Service director port 53 is available
- Web service gateway port 9090 is available
- Loader controller port 4046 is available
- Derby database port 1527 is available

- Host has access to the shared directory (for failover)

During installation, it is normal for the progress bar to cycle multiple times; continuous movement indicates progress. The bar is not intended to indicate time remaining.

In addition to installing Symphony on the master host, the installer generates the following files under the installation directory:

- *InstallSummary.txt (installation summary)*
- *SymManagement.iss (response file for installing management hosts)*
- *SymCompute.iss (response file for installing compute hosts)*
- *SymInstallManagement.bat (installer file for installing management hosts)*
- *SymInstallCompute.bat (installer file for installing compute hosts)*

Will the system service execution user OS account on compute hosts be the cluster administrator?

Yes

Edit the file *SymCompute.iss*, find the line starting with **MSIPARAMETERS=** and add two more parameters to the end of that line:
SERVICEUSERNAME=*user_name* SERVICEPASSWORD=*password*

Input the actual cluster administrator name and password, for example:
SERVICEUSERNAME=DOMAIN\egoadmin SERVICEPASSWORD=mypassword

No

End process

EGO_CONFDIR

The cluster uses configuration files under the directory indicated by (EGO_CONFDIR\..\..). When user documentation refers to this environment variable, substitute the correct directory.

Without failover:
The cluster uses configuration files under the installation directory.
EGO_CONFDIR=EGO_TOP/kernel/conf

With failover and a shared directory:
The cluster uses configuration files under the shared directory.
EGO_CONFDIR=share_dir/kernel/conf

Add a Management Host
*for a cluster with a Windows master host
[recommended method]

To add a Windows management host, you may need to know:

- Cluster administrator OS account name and password
- Installation directory
- Master host
- Shared directory
- Communication ports

This process installs Symphony on a Windows management host using .exe package.

Hardware Checklist for the Management Host

- Communication ports are available
- Installation directory is available
- Cluster administrator account exists on the host

- Web server ports 8080, 8005, 8009 are available
- Service director port 53 is available
- Web service gateway port 9090 is available
- Loader controller port 4046 is available
- Derby database port 1527 is available

- Host has access to the shared directory (for failover)

Start Process

If you have not already done so, review the Hardware Checklist for management hosts.

Log into the host using the installation user OS account.

Copy the response file and the special script to the host, along with the installer file:

- *SymManagement.iss*
- *SymInstallManagement.bat*
- *SymphonySetupnnn_win32.exe or SymphonySetupnnn_win-x64.exe*

If you must use MSI files to install, refer to the alternate procedure.

MSI installation is only supported if the cluster uses advanced WEM.

Run the installer:
SymInstallManagement.bat

Let the host start automatically after installation.

Restart the master host to make the cluster recognize the new management host.
On the master host, run:

egosh ego restart

End process

Add a Compute Host and Test
* Windows host
[recommended method]

This process installs Symphony on a Windows compute host using .exe package, and verifies the installation is successful.

To add a Windows compute host, you may need to know:

- Cluster administrator OS account
- System service execution user OS account
- Installation directory
- Master host
- Communication ports
- Workload execution mode (WEM)

Hardware Checklist for the Compute Host

- Communication ports are available
- Installation directory is available
- Cluster administrator account exists on the host

Start Process

If you have not already done so, review the Hardware Checklist for compute hosts.

Log into the host using the installation user OS account.

Will you use the customized .bat file to install?

Yes

Is the system service account the cluster administrator?

Yes

You must use the modified response file. For information, see "Install on the Master Host (Windows)".

No

Copy the response file and the customized script to the host, along with the installer file:

- *SymCompute.iss*
- *SymInstallCompute.bat*
- *SymphonySetupnnn_win32.exe*

or

SymphonySetupnnn_win-x64.exe

Run the installer:

SymInstallCompute.bat

Let the host start automatically after installation.

Run:

egosh resource list -l

You should see the host name in the list.
(This test detects hosts even if the host is not currently available. There may be a delayed response, some hosts may take a couple of minutes to become available after they are added to the cluster.)

End process

No

Run the installer:

SymphonySetup*nnn*_win32.exe
or
SymphonySetup*nnn*_win-x64.exe

Let the host start automatically after installation.

If you must use MSI files to install, refer to the alternate procedure.

MSI installation is only supported if the cluster uses advanced WEM.

Select custom installation. Configure the type of scavenging host.

Yes

Will this host be scavengeable?

No

Install on the Master Host (part 1 of 2)
*for a cluster with a Windows master host
[alternate method]

This process installs Symphony on the Windows master host using .msi packages.

This procedure is for MSI packages only. You should use .exe format packages instead of MSI.

MSI installation is only supported if the cluster uses advanced WEM.

Hardware Checklist for the Master Host

- Communication ports are available
- Installation directory is available
- Cluster administrator account exists on the host

- Web server ports 8080, 8005, 8009 are available
- Service director port 53 is available
- Web service gateway port 9090 is available
- Loader controller port 4046 is available
- Derby database port 1527 is available

- Host has access to the shared directory (for failover)

To install on the Windows master host, you may need to input:

- License file location
- Cluster administrator OS account
- Failover feature status
- Database host
- Communication ports
- Cluster name
- Workload execution mode (WEM)
- Database type
- Installation directory
- Master host
- Shared directory

Start Process

If you have not already done so, review the Hardware Checklist for the master host.

Log into the host using the installation user OS account.

Will you install interactively?

No

Install the EGO MSI package **ego***.msi with the following parameters:

- INSTALLDIR: path to the installation directory, by default, C:\EGO
- MASTERHOST: name of the master host (this host)
- HOSTTYPE: **Management**
- LICENSEFILE: path to your license file, for example, C:\Temp\license.dat
- CLUSTERNAME: cluster name, by default, cluster1
- CLUSTERADMIN: cluster administrator OS user account name, by default, your installation account
- ADMINPASSWD: cluster administrator OS user account password, for example, mypassword (the installer cannot verify the password, be careful to input it correctly)
- BASEPORT: the connection base port for the cluster, default 7869
- DBHOST: omit this parameter to use an external database. Specify the name of a management host if you will use the non-production database.
- STARTUP: specify **No** to prevent services from starting automatically (by default, Yes)

Install the Symphony MSI package **symphony***.msi with the following parameter:

- INSTALLDIR: path to the installation directory, by default, C:\EGO
- STARTUP: Specify No to prevent services from starting automatically (by default, Yes)
- OVERWRITE_EGO_CONFIGURATION: Specify Yes (default = No) for Symphony to use the default configuration to overwrite the EGO configuration. For example, it will overwrite EGO ConsumerTrees.xml, add sd.xml in EGO service conf directory, overwrite EGO Derby DB data files, etc.

End process

Yes

Will you use an external database?

No

Run the EGO installer:

ego*.msi

- ***Derby DB Host***: *specify a management host to run the database*
- ***Startup***: *clear the check box, do not start automatically*

Yes

Run the EGO installer:

ego*.msi

- ***Derby DB Host***: *clear the field, do not set up this database*
- ***Startup***: *clear the check box, do not start automatically*

Run the Symphony installer:

symphony*.msi

- ***Installation Directory***: *specify the same path as the previous package*
- ***Symphony Base Port***: *do NOT specify the same base port as the previous package. To find the Symphony base port, add 5 to the communication base port for the cluster. For example, if you specified 7869 for the EGO package, specify 7874 for the Symphony package.*
- ***Startup***: *clear the check box, do not start automatically*

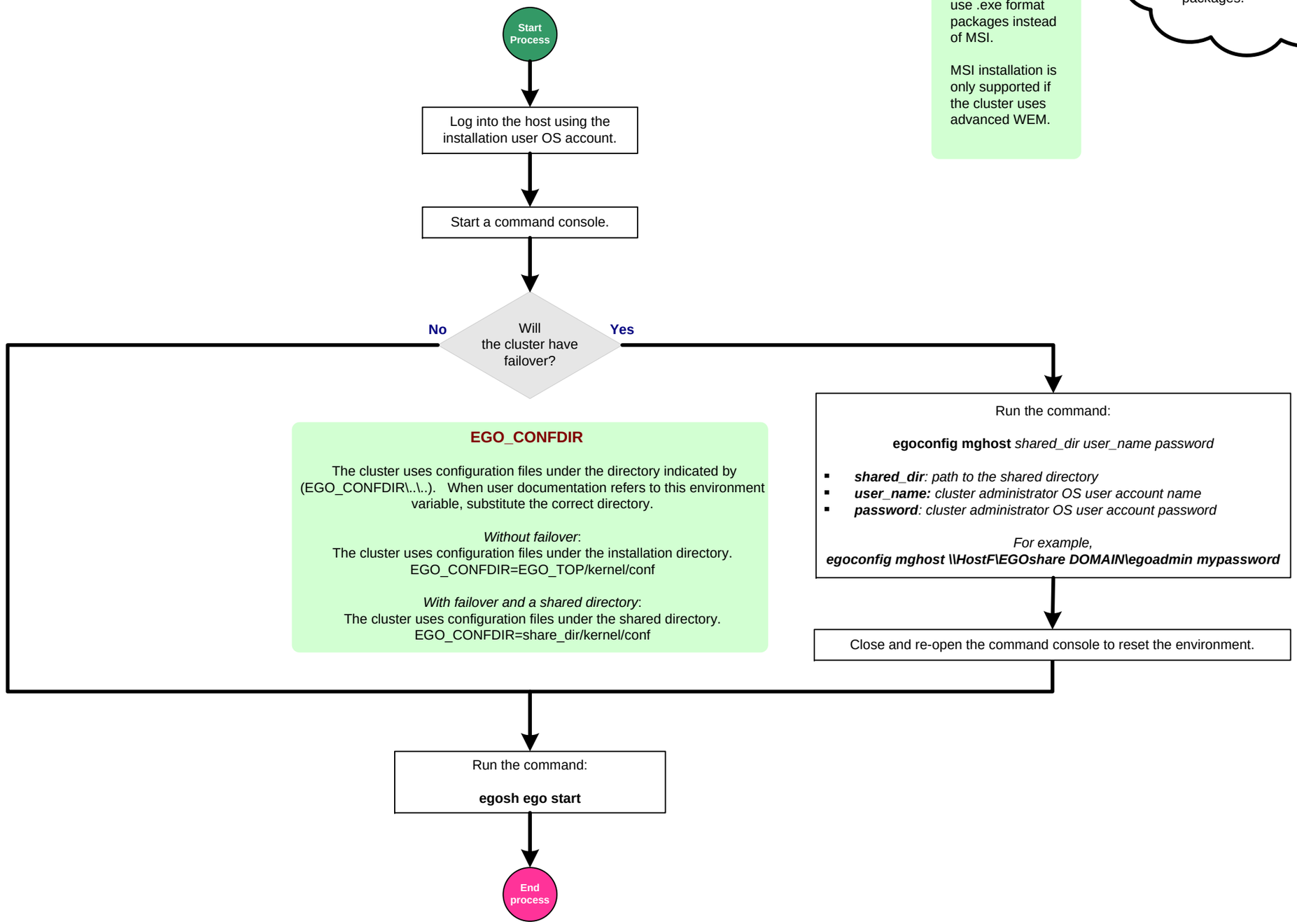
Proceed to Part 2

Install on the Master Host (part 2 of 2)
*for a cluster with a Windows master host
[alternate method]

This procedure is for MSI packages only. You should use .exe format packages instead of MSI.

MSI installation is only supported if the cluster uses advanced WEM.

This process installs Symphony on the Windows master host using .msi packages.



Add a Management Host (part 1 of 2)
*for a cluster with a Windows master host
[alternate method]

This process installs Symphony on a Windows management host using .msi packages.

Start Process

If you have not already done so, review the Hardware Checklist for the master host.

Log into the host using the installation user OS account.

Hardware Checklist for the Management Host

- Communication ports are available
- Installation directory is available
- Cluster administrator account exists on the host

- Web server ports 8080, 8005, 8009 are available
- Service director port 53 is available
- Web service gateway port 9090 is available
- Loader controller port 4046 is available
- Derby database port 1527 is available

- Host has access to the shared directory (for failover)

To add a Windows management host, you may need to know:

- Cluster administrator OS account name and password
- Installation directory
- Master host
- Shared directory
- Communication ports

This procedure is for MSI packages only. You should use .exe format packages instead of MSI.

MSI installation is only supported if the cluster uses advanced WEM.

Will you install interactively?

No

Install the EGO MSI package **ego***.msi with the following parameters:

- INSTALLDIR: path to the installation directory, by default, C:\EGO
- MASTERHOST: name of the master host
- HOSTTYPE: **Management**
- CLUSTERNAME: cluster name, by default, cluster1
- CLUSTERADMIN: cluster administrator OS user account name, by default, your installation account
- BASEPORT: the connection base port for the cluster, default 7869
- STARTUP: Specify No to prevent services from starting automatically (by default, Yes)

Install the Symphony MSI package **symphony***.msi** with the following parameter:

- INSTALLDIR: path to the installation directory, by default, C:\EGO
- STARTUP: Specify No to prevent services from starting automatically (by default, Yes)

Yes

Run the EGO installer:

ego*.msi**

- ***Install Type****: specify Full Installation*
- ***Startup****: clear the check box, do not start automatically*

Run the Symphony installer:

symphony*.msi**

- ***Installation Directory****: specify the same path as the previous package*
- ***Symphony Base Port****: do NOT specify the same base port as the previous package. To find the Symphony base port, add 5 to the communication base port for the cluster. For example, if you specified 7869 for the EGO package, specify 7874 for the Symphony package.*
- ***Startup****: clear the check box, do not start automatically*

End process

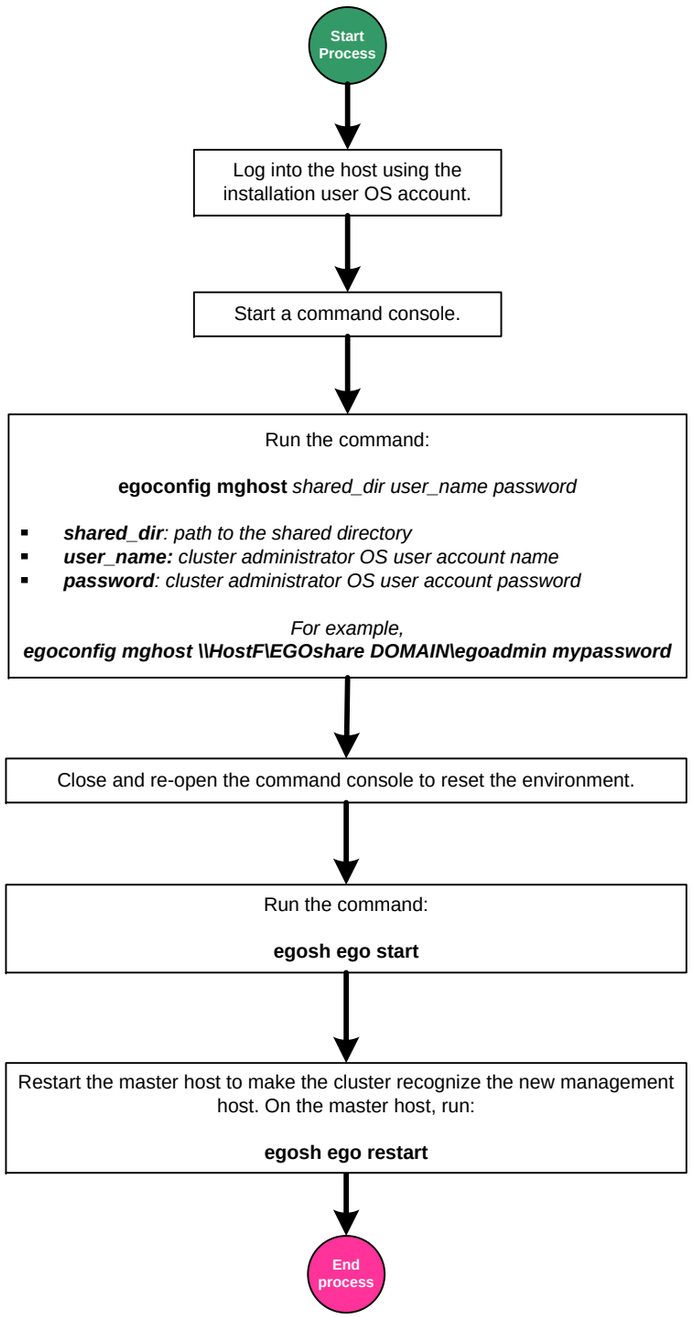
Proceed to Part 2

Add a Management Host (part 2 of 2)
*for a cluster with a Windows master host
[alternate method]

This procedure is for MSI packages only. You should use .exe format packages instead of MSI.

MSI installation is only supported if the cluster uses advanced WEM.

This process installs Symphony on a Windows management host using .msi packages.



Add a Compute Host and Test
* Windows host
[alternate method]

This process installs Symphony on a Windows compute host using .msi packages.

Hardware Checklist for the Compute Host

- Communication ports are available
- Installation directory is available
- Cluster administrator account exists on the host

To add a Windows compute host, you may need to know:

- Cluster administrator OS account
- System service execution user OS account
- Installation directory
- Master host
- Communication ports
- Workload execution mode (WEM)

This procedure is for MSI packages only. You should use .exe format packages instead of MSI.

MSI installation is only supported if the cluster uses advanced WEM.

Start Process

If you have not already done so, review the Hardware Checklist for compute hosts.

Log into the host using the installation user OS account.

Will you install interactively?

No

Install the EGO MSI package **ego***.msi with the following parameters:

- INSTALLDIR: path to the installation directory, by default, C:\EGO
- MASTERHOST: name of the master host
- HOSTTYPE: **Compute**
- CLUSTERADMIN: cluster administrator OS user account name, by default, your installation account
- BASEPORT: the connection base port for the cluster, default 7869
- STARTUP: **Yes**

Install the Symphony MSI package **symphony***.msi** with the following parameter:

- INSTALLDIR: path to the installation directory, by default, C:\EGO
- STARTUP: **Yes**

Yes

Run the EGO installer:

ego*.msi**

- ***Install Type****: specify Compute host only*
- ***Startup****: yes, start automatically*

Run the Symphony installer:

symphony*.msi**

- ***Installation Directory****: specify the same path as the previous package*
- ***Symphony Base Port****: do NOT specify the same base port as the previous package. To find the Symphony base port, add 5 to the communication base port for the cluster. For example, if you specified 7869 for the EGO package, specify 7874 for the Symphony package.*
- ***Startup****: yes, start automatically*

In a command console, run

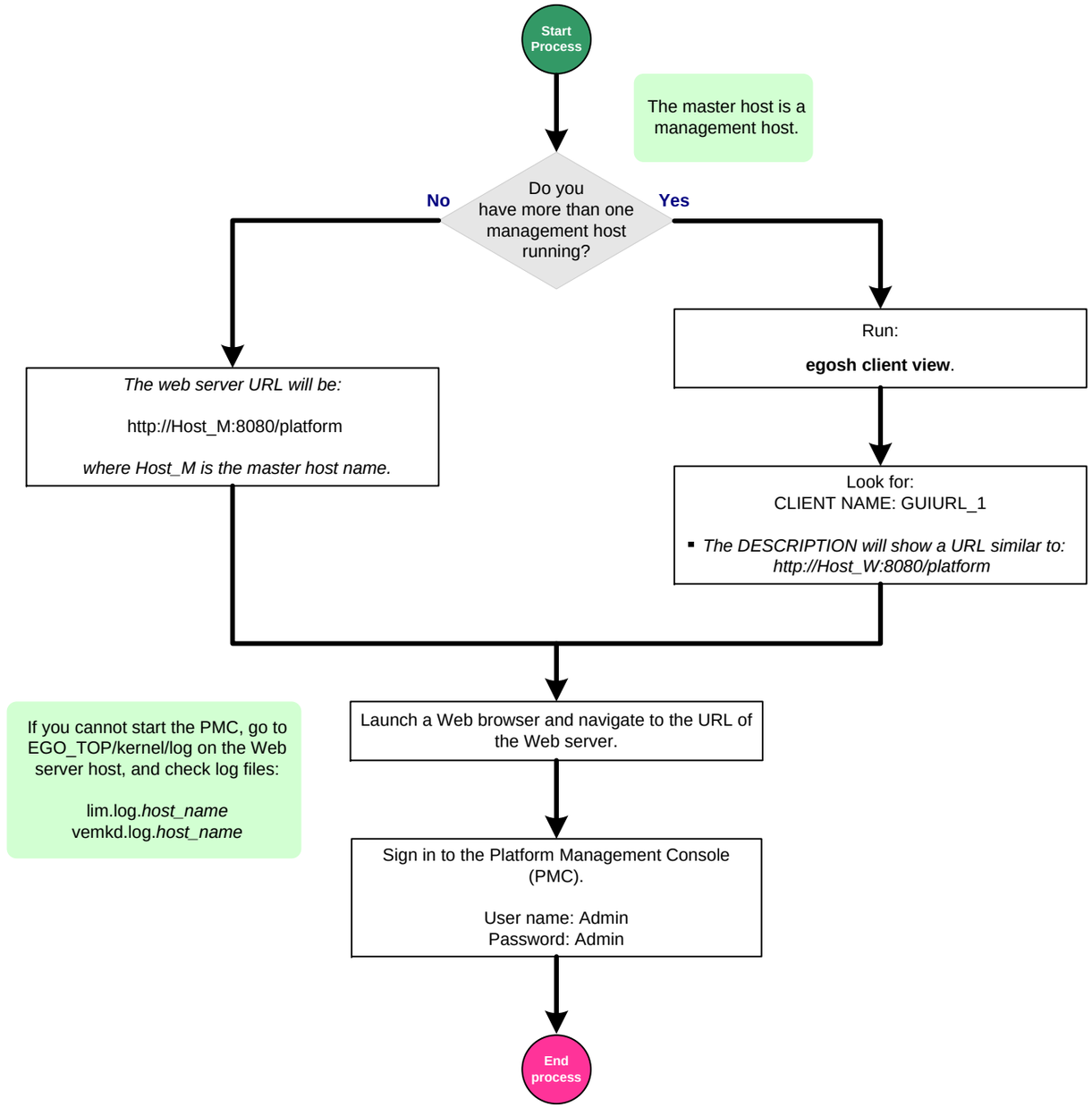
egosh resource list -l

You should see the host name in the list. *(This test detects hosts even if the host is not currently available. There may be a delayed response; some hosts may take a couple of minutes to become available after they are added to the cluster.)*

End process

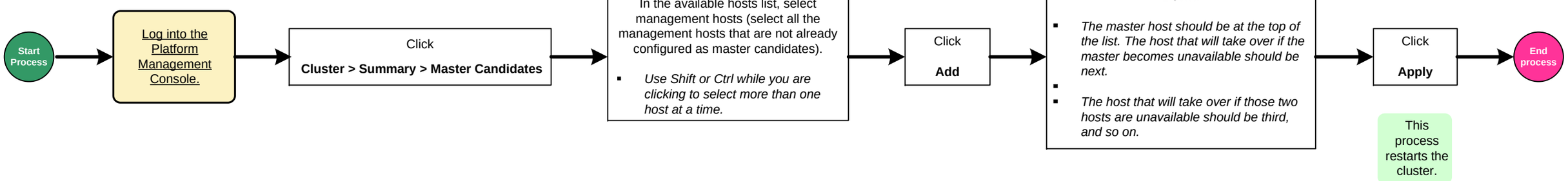
Log into the Platform Management Console

This process opens the Platform Management Console.



Set up Master Host Failover

This process enables failover and determines the failover order.



This process restarts the cluster.

Set Up the External Database

PREREQUISITE:

You must install Symphony on the master host before you can set up the external database.

PREREQUISITE:

A compatible third-party database is properly configured and running, and has space to store all your Symphony data.

PREREQUISITE:

The database server account has access to create triggers, sequences, tables, and stored procedures.

For your convenience, the database schema scripts installed with the product are also available as a separate download.

- *user_name* is the user name on the database server.
- *password* is the password for this user name on the database server.
- *connect_string* is the named SQLNet connection for this database.
- *data_tablespace* is the name of the tablespace where you intend to store the table schema.
- *index_tablespace* is the name of the tablespace where you intend to store the index.
- For SQL, *db_name* is the name of the reporting database; *update_script* is the script

This process:

- installs the database driver.
- configures the database connection.
- sets up the database schema.
- disables Derby if required.

Start Process

Navigate to the database schema directories on the master host. For example, for Oracle:

EGO_TOP/perf/ego/nn/DBschema/Oracle
EGO_TOP/perf/soam/nn/DBschema/Oracle
or
C:\EGO\perf\ego\nn\DBschema\Oracle
C:\EGO\perf\soam\nn\DBschema\Oracle

To create the database schema, run the scripts. For Oracle:

sqlplus *user_name*/*password*@*connect_string* @egodata.sql *data_tablespace index_tablespace*
sqlplus *user_name*/*password*@*connect_string* @soamdata.sql *data_tablespace index_tablespace*

For SQL Server, the syntax for each script is:

osql -U *user_name* -P *password* -d *db_name* -i @update_script

Is your cluster already using the non-production Derby database?

Yes

To disable Derby, use the Platform Management Console to stop the services:

- WEBGUI
- derbydb
- plc
- purger

To prevent Derby from restarting, disable automatic startup of the service:

- derbydb

No

Download the latest JDBC driver for your commercial database.

- *Oracle: ojdbc14.jar or newer. Download from: http://www.oracle.com/technology/software/tech/java/sqlj_jdbc/index.html*
- *SQL Server: jdbc-sqlserver.jar or newer. Download from: http://msdn2.microsoft.com/en-us/data/aa937724.aspx*

Copy the JDBC driver into the PERF and GUI library directories on all management hosts, including the master host.

For example, copy the Oracle JDBC driver to the following directories:

- *EGO_TOP/perf/nn/lib or C:\EGO\perf\nn\lib*
- *EGO_TOP/gui/nn/tomcat/common/lib or C:\EGO\gui\nn\tomcat\common\lib*

To launch the database configuration tool, run:

dbconfig.sh

The file is under EGO_TOP/perf/*nn*/bin

In the User ID and Password fields, specify the user account name and password with which to connect to the database and to create your database tablespaces.

- *This user account must have been defined in your database application, and must have read and write access to the database tables. In general, this is the name you used to create your tablespaces.*

In the JDBC driver field, select the driver for your commercial database.

In the JDBC URL field, enter the URL for your database.

- *This should be similar to the format given in Example URL format.*

In the Maximum connections field, specify the maximum allowed number of concurrent connections to the database server.

- *This is the maximum number of users who can produce reports at the same time.*

On UNIX, the database script runs with X-Windows only.

PREREQUISITE:

To configure, you need information to access the database host:

- user name
- password
- database URL

Was your cluster using the non-production Derby database at the start of this process?

Yes

Restart the services:

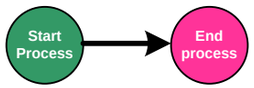
- WEBGUI
- plc
- purger

No

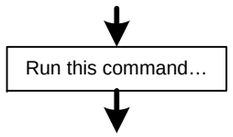
End process

Using This Document

Begin each process from the green Start symbol, follow the arrows to the red Stop symbol.

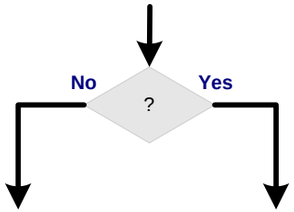


The heart of each process is the series of steps you must work through. If a task is given, you must complete the task before you proceed to the next step.

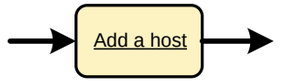


In the flow charts, you may come to various decision points along the way, and the next steps depend on your choice.

At each question, answer Yes or No and follow steps for only one path, ignore any steps that belong to the other path.



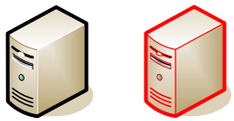
When you must perform a subprocess, there is more detailed information on a different diagram. Find and complete the whole subprocess before you continue to the next step.



To finish your task, continue to another page and peform more steps:

Return to the home page:

Hosts or master host:



A user:

Remember this important information:

Be aware of a serious issue:

Information related to steps in the process:

The requirements are...

Dotted lines are a visual aid to group related information:

Learn the purpose of a process:

Testing steps:

HTML navigation

Some browsers allow you to pan and zoom into parts of this document from the sidebar, to search for keywords, and to jump to book-marked pages. Other browsers require you to use scroll bars to move around the pages. You can take advantage of the built-in navigation links provided in this document, or you can use those on your browser navigation bar.

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