

HYPERION® ESSBASE® – SYSTEM 9
VERITAS™ CLUSTER SERVER AGENT FOR
HYPERION® ESSBASE®

RELEASE 9.3.1

INSTALLATION AND
CONFIGURATION GUIDE

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Purpose

This document provides instructions on how to install and configure the Oracle's Veritas™ Cluster Server Agent for Hyperion® Essbase®. For information about Veritas Cluster Server, refer to the *Veritas Cluster Server Installation Guide*.

Veritas Agent for Essbase is distributed with the Oracle's Hyperion® Provider Services installation. You must install Provider Services in order to access the Veritas Agent for Essbase components.

Conventions

Symbol	Usage
%	C shell prompt
\$	Bourne/Korn shell prompt
#	Superuser prompt (for all shells)
>	Windows DOS shell prompt

Veritas Agent for Essbase

The Veritas Agent for Essbase monitors Essbase Server and communicates its state to the Veritas Cluster Server engine. The Veritas Agent for Essbase includes type declarations and executables for the Veritas Agent for Essbase. If the Veritas Agent for Essbase detects that the Essbase Server has failed or is not responding, it directs Veritas Cluster Server to migrate the Essbase Server process to another system in the cluster, enabling Essbase Server to remain highly available.

Version Numbers and Operating Systems

The Veritas Agent for Essbase monitors Oracle's Hyperion® Essbase® – System 9 running on operating systems:

- Windows 2000 Server, sp4
- AIX 5.2 ML7 / 5.3 ML3
- HP-UX 11i, v2
- Solaris 9 / 10

Summary of Veritas Agent for Essbase Processes

The Veritas Agent for Essbase processes for the Essbase Server are summarized below.

Description	Brings Essbase Server online, monitors the Essbase application processes, and shuts down the Essbase Server process.
Operations	<p>Online—Starts Essbase Server process.</p> <p>Offline—Stops Essbase Server process.</p> <p>Clean—Stops Essbase Server process and Essbase application processes after unexpected offline detection or an ineffective online time-out.</p> <p>Monitor—Monitors the state of Essbase Server.</p>
Detecting Failure	<p>The Veritas Agent for Essbase monitor script uses a two-step process to detect failure:</p> <ol style="list-style-type: none"> 1. Send an ESSLOGIN request to Essbase Server. 2. If Essbase Server responds, then the Essbase Server process is functioning. Otherwise, the process is declared failed.

Prerequisites

- Install and configure Veritas Cluster Server. Review the *Veritas Cluster Server Installation Guide*.
- Install and configure shared disk if needed.
- Install and configure the Essbase software. You must install and configure the Essbase before installing Veritas Agent for Essbase. Refer to the Essbase documentation for more information.
- Install Provider Services to access the Veritas Agent for Essbase components.

Installing and Configuring Essbase

Note:

If you have not already installed and configured Veritas Cluster Server, install it now. Refer to the *Veritas Cluster Server Installation Guide* for details.

- To install and configure the Essbase software:

1 Install Essbase Server.

Choose a directory in which to install the software; for example, `C:\Hyperion\AnalyticServices` or `/Hyperion/AnalyticServices`. For more information, refer to the Essbase documentation.

2 Install the Essbase Runtime Client on all nodes.

Choose a local directory in which to install the software; for example, `C:\HyperionClient\Essbase` or `/HyperionClient/Essbase`. For more information, refer to the Essbase documentation.

3 Set the ARBORPATH and PATH system environment variables on all nodes.

When installing Essbase on Windows, the ARBORPATH and PATH environment variables are set automatically.

Note:

To start Essbase Server manually, ensure that you have changed ARBORPATH to the Essbase Server installation.

For UNIX platform, edit the Veritas Cluster Server launch file as noted in the following table.

Note:

<Esb_install_location> signifies the Essbase install location; for example, /Hyperion/AnalyticServices.

Platform	Launch File	Content to be Added
HP-UX	/sbin/init.d/vcs	ARBORPATH=/ <code><Esb_install_location></code> SHLIB_PATH=\$ARBORPATH/bin export ARBORPATH SHLIB_PATH
Solaris	/etc/rc3.d/S99vcs	ARBORPATH=/ <code><Esb_install_location></code> LD_LIBRARY_PATH=\$ARBORPATH/bin export ARBORPATH LD_LIBRARY HOME
AIX	/etc/rc.d/rc2.d/S99vcs	ARBORPATH=/ <code><Esb_install_location></code> LIBPATH=\$ARBORPATH/bin export ARBORPATH LIBPATH

Verifying the Essbase Server Configuration

The Essbase Server process starts by reading the configuration file, `essbase.cfg`, stored in the server directory `$ARBORPATH/bin` (for example, `E:\Hyperion\AnalyticServices` or `/vol/Hyperion/AnalyticServices`). Refer to the *Essbase Technical Reference* for details on customizing `essbase.cfg` to meet your requirements. Before you configure Veritas Agent for Essbase, configure the Essbase software. After installing the software, verify that the configuration is correct. You can try to launch it manually to make sure it works.

Veritas Agent for Essbase Installation and Configuration

Installing the Veritas Agent for Essbase Software

► To install the Veritas Agent for Essbase software:

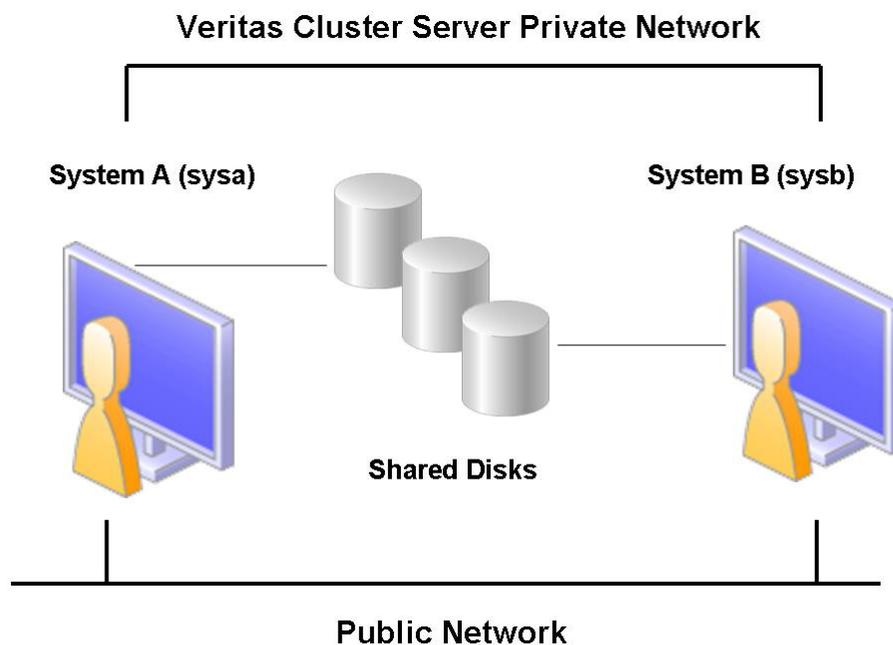
- 1 Log in as domain administrator or root.
- 2 Create a directory named `Essbase` under `C:\Program Files\VERITAS\Cluster Server\bin` or `/opt/VRTSvcs/bin`.
- 3 From the `/bin/redis/vcsagt` directory of your Provider Services installation, copy files as follows:
 - On Windows: copy `Essbase.dll` and `Essbase.xml` into the directory `C:\Program Files\VERITAS\Cluster Server\bin\Essbase`
 - On UNIX, copy `EssbaseAgent` and `Essbase.xml` into `/opt/VRTSvcs/bin/Essbase`
- 4 Copy file `EssbaseGroup.tf` into the directory `C:\Program Files\VERITAS\Cluster Server\conf\Templates` on Windows or `/etc/VRTSvcs/Templates` on UNIX.

Note:

Use this template file only when you are using Veritas Volume Manager.

A Sample Veritas Agent for Essbase Configuration

In the following example, Veritas Cluster Server is configured on a two-system cluster (`sysa` and `sysb`).



Configuring the Veritas Agent for Essbase

There are two possible methods for configuring the Veritas Agent for Essbase:

- Use the Veritas Cluster Server graphical user interface, Veritas Cluster Server Cluster Manager, to edit a resource group template for the Veritas Agent for Essbase. See [“Configuring the Veritas Agent for Essbase with Cluster Manager”](#) on page 9.
- Use the Essbase types configuration file and directly edit the sample `main.cf` file supplied with the Veritas Agent for Essbase. See [“Configuring the Veritas Agent for Essbase by Editing the Configuration Files”](#) on page 10. This method requires that Veritas Cluster Server be stopped and restarted before the configuration takes effect.

Before you configure the Veritas Agent for Essbase, review the following tables that describe the Essbase resource type and its attributes. The resource type definition file and the sample `main.cf` configuration are also shown for reference on the following pages.

Veritas Agent for Essbase Resource Type Definitions

The resource type represents the Veritas Cluster Server configuration definition of the Veritas Agent for Essbase and specifies how the Veritas Agent for Essbase is defined in the configuration file, `main.cf`. The Attribute Definitions table explains the attributes associated with the Veritas Agent for Essbase.

Table 1 Resource Attribute Types and Dimension Definitions

Attributes	Type and Dimension Definition
ResourceName	string Unique name of this Essbase instance.
HyperionHome	string Specifies the HYPERION_HOME environment variable that is needed by Essbase.
ArborPath	string Specifies the base directory for Essbase installation. The Veritas Agent for Essbase looks for Essbase binaries and configuration directories relative to ARBORPATH.
EssLang	string Essbase language setting.
Password	string The password used to launch Essbase.
HostName	string The computer host name where Essbase is installed.
PortNo	integer The port number on which Essbase is configured. The default value is 1423. Note: This is the AgentPort parameter in <code>essbase.cfg</code> .

Type Definition (EssbaseTypes.cf)

```
type Essbase (
    static str ArgList[] = { ResourceName, HyperionHome, ArborPath, EssLang,
    Password, HostName, PortNo, Version }
    NameRule = ""
    str ResourceName
    str HyperionHome
    str ArborPath
    str EssLang = "English_UnitedStates.Latin1@Binary"
    str Password
    str HostName = "<Essbase_installation_location>"
    int PortNo = 1423
    str Version = "<Essbase_version>"
)
/**
 * In single node mode, we can set RestartLimit to a big number, for
 * example: 99.
 */
```

Sample Template file: EssbaseGroup.tf

```
group EssbaseGroup (
)

NIC EB_NIC (
    Device = ""
    NetworkType = ""
    NetworkHosts = {}
)

IP EB_IP (
    Device = ""
    Address = ""
    NetMask = ""
    Options = ""
    ArpDelay = 1
    IfconfigTwice = 0
)

Volume EB_Volume (
    Volume = ""
    DiskGroup = ""
)

DiskGroup EB_DiskGroup (
    DiskGroup = ""
    StartVolumes = ""
    StopVolumes = ""
)

Mount EB_Mount (
```

```

MountPoint = ""
BlockDevice = ""
FSType = ""
MountOpt = ""
FsckOpt = ""
)

Essbase EB_Essbase (
  ResourceName = ""
  HyperionHome = ""
  ArborPath = ""
  EssLang = "English_UnitedStates.Latin1@Binary"
  Password = ""
  HostName = "<Essbase_installation_location>"
  PortNo = 1423
  Version = "<Essbase_version>"
)

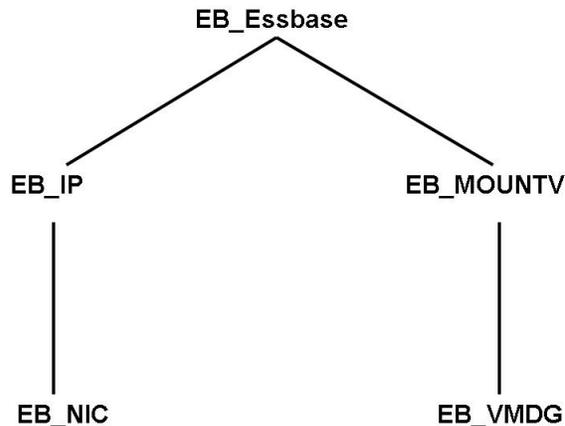
EB_Essbase requires EB_IP
EB_Essbase requires EB_Mount
EB_IP requires EB_NIC
EB_Mount requires EB_Volume
EB_Volume requires EB_DiskGroup

```

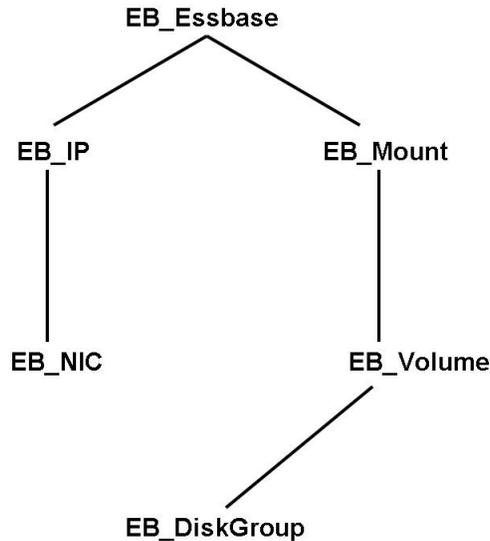
Dependencies in the Essbase Resource Group

The following illustrations show the dependency graph for an Essbase resource group using Veritas Volume Manager on Windows and UNIX platforms.

Windows



UNIX



Configuring the Veritas Agent for Essbase with Cluster Manager

A template for the Essbase resource groups was automatically installed when you installed the Veritas Agent for Essbase. Using the Veritas Cluster Server Cluster Manager, you can view the template, which displays the Essbase service group, its resources and their attributes. You can dynamically modify the attributes' values as necessary for your configuration.

Importing the Essbase Types File

- ▶ To use the Essbase template, import the Essbase types file, `EssbaseTypes.cf`, to the Veritas Cluster Server engine by using Cluster Manager:

- 1 Start Cluster Manager.
- 2 In the **Login** dialog box, connect to your cluster (add it if necessary).
- 3 In the **Cluster Explorer**, select **File > Open Configuration**.
- 4 Select **File > Import Types**.
- 5 In **Import Types**, locate and select the Essbase types file, `EssbaseTypes.cf`.

`EssbaseTypes.cf` is located in the `redist\vcragt` directory of your Oracle's Hyperion® Provider Services installation.

- 6 Click **Import**.
- 7 Select **File > Save Configuration**.

At this point, the Essbase types have been imported to the Veritas Cluster Server engine. The Veritas Agent for Essbase can be configured without interrupting or stopping Veritas Cluster Server.

For detailed information about using the Veritas Cluster Server Cluster Manager, refer to “Configuring the Veritas Agent for Essbase with Cluster Manager” on page 9.

Adding the Essbase Service Group Using the Wizard

If you have imported the `EssbaseTypes.cf` file, you can add the `EssbaseGroup` template to your configuration by starting the Service Group Configuration Wizard in Cluster Manager.

- To add the Essbase service group:
 - 1 In Cluster Manager, click the service group configuration wizard icon on the toolbar.
 - 2 Click **Next** on the wizard **Welcome** window.
 - 3 Specify the service group and the system list.
 - a. Enter the service group name.
In this instance, enter `Hyperion`.
 - b. Select the systems on which the service group will run.
 - c. Select **Service Group Type** as **Failover**.
 - 4 Confirm that you are basing the service group on a predefined template. Click **Next**.
 - 5 Select the Essbase template (`EssbaseGroup`) from the list of templates. Click **Next**.
 - 6 The wizard prompts you with alternate names in case the names in the template clash with existing names. Make corrections as necessary and click **Next**.
 - 7 When the wizard indicates that it is ready to create the service group, click **Next**. The service group is dynamically created based on the Essbase template.
 - 8 Review the service group's resources attributes and modify the default values in accord with your specific configuration.

Configuring the Veritas Agent for Essbase by Editing the Configuration Files

The Veritas Agent for Essbase comes with a sample configuration file that can be used as reference to directly modify your present configuration file. When you use this method, you must restart Veritas Cluster Server to implement the configuration.

- To configure the Veritas Agent for Essbase using the sample configuration file:
 - 1 Log in to `sysa` as `domain administrator` or `root`.
 - 2 Make a backup copy of the `main.cf` file under `$VCS_CONF/config` (`C:\Program Files\VERITAS\Cluster Server\conf` on Windows or `/etc/VRTSvcs/conf/config` on UNIX).

3 Edit the main.cf file:

- a. Add an “include” line for the ESSBASETypes.cf file:

```
include 'ESSBASETypes.cf'
```

- b. Create the Essbase resources. For examples see “[Veritas Agent for Essbase Resource Type Definitions](#)” on page 6.
- c. Edit the default attributes to match the parameters in your configuration. See [Table 1](#) for a description of the attributes.
- d. Assign dependencies to the newly created resources.

For more detail, refer to the appended example files.

See the *Veritas Cluster Server Installation Guide* for more information on assigning dependencies.

4 Save and close the file.

5 Copy the Essbase types configuration file (ESSBASETypes.cf) into place: \$VCS_CONF/config.

6 Verify the syntax of the file \$VCS_CONF/config/main.cf:

```
> hacf --verify config
```

7 Start Veritas Cluster Server on sysa:

```
> hastart
```

8 Verify that all Essbase service group resources are brought online:

```
> hagr -display
```

9 Take the service group offline and verify that all resources are stopped:

```
> hagr --offline Hyperion -sys sysa
```

```
> hagr --display
```

10 Bring the service group online again and verify that all resources are available:

```
> hagr --online Hyperion -sys sysa
```

```
> hagr --display
```

11 Start Veritas Cluster Server on sysb:

```
> hastart
```

12 Switch the Essbase service group to sysb:

```
> hagr --switch Hyperion -to sysb
```

13 Verify that all Essbase service group resources are brought online on sysb:

```
> hagr --display
```

You now have a highly available Essbase application.

Disabling the Veritas Agent for Essbase

To disable the Veritas Agent for Essbase, you must first change the Oracle's Hyperion® Essbase® – System 9 service group to an OFFLINE state. You can stop the application completely or switch the application to another system.

► To disable the Veritas Agent for Essbase:

1 Check if the service group is online to remove a system from the service group's SystemList.

```
> hagrp -state Hyperion -sys sysa
```

2 If the service group is online, take it offline. Use one of the following commands:

a. To take the service group offline on one node and put it online on another node, use the `-switch` option:

```
> hagrp -switch Hyperion -to sysb
```

b. To take the service group offline without onlining elsewhere in the cluster, use:

```
> hagrp -offline Hyperion -sys sysb
```

3 Stop the Veritas Agent for Essbase on the system by entering:

```
> hagent -stop Essbase
```

4 Confirm that the Veritas Agent for Essbase has stopped when you get the message "Please look for message in the log file" by checking the file "C:\Program Files\VERITAS\Cluster Server\log\engine_A.txt" on Windows, or "/var/VRTSvcs/log/engine_A.log" on UNIX.

You can also use the task manager or command "ps" to confirm that the Oracle's Veritas™ Cluster Server Agent for Hyperion® Essbase® has stopped.

5 Remove the service group, the resource type, or both from the Veritas Cluster Server configuration.

See the chapter on configuring Veritas Cluster Server from the command line in the *Veritas Cluster Server Installation Guide* for more information.

Appendices – Sample Files

Appendix A

Configuration File `EssbaseTypes.cf`:

```
type Essbase (  
    static int RestartLimit = 1  
    static str ArgList[] = { ResourceName, HyperionHome, ArborPath,  
        EssLang, PassWord, HostName, PortNo, Version }  
    NameRule = Essbase_ + resource.ResourceName  
    str ResourceName  
    str HyperionHome  
    str ArborPath
```

```

str EssLang = "English_UnitedStates.Latin@Binary"
str Password
str HostName = "<Essbase_installation_location>"
int PortNo = 1423
Version = "<Essbase_version>"
)

```

Appendix B

Template file for single node mode, EssbaseGroup.tf:

```

group EssbaseGroup ()

  Essbase EB_Essbase (
    ResourceName = ""
    HyperionHome = ""
    ArborPath = ""
    EssLang = "English_UnitedStates.Latin1@Binary"
    Password = ""
    HostName = "<Essbase_installation_location>"
    PortNo = 1423
    Version = "<Essbase_version>"
  )

```

Appendix C

Template file for multi node mode on Windows with Veritas Volume Manager, EssbaseGroup.win.tf:

```

group EssbaseGroup ()

  IP EB_IP (
    Address = ""
    SubNetMask = ""
    MACAddress = ""
  )

  NIC EB_NIC (
    MACAddress = ""
    PingTimeoutMseconds = 10000
    MaxTxErrorPercentage = 50
    MaxTxErrInterval = 10
    UseConnectionStatus = 1
    PingHostList={}
  )

  VMDg EB_VMDG (
    DiskGroupName = ""
    ForceDeport = 0
    ListMountedVolumes = 0
    ListApplications = 0
  )

  MountV EB_MOUNTV (

```

```

MountPath = ""
VolumeName = ""
VMDGResName = EB_VMDG
ForceUnmount = 0
ListApplications = 0
AutoFSClean = 0
)

Essbase EB_Essbase (
  ResourceName = ""
  HyperionHome = ""
  ArborPath = ""
  EssLang = "English_UnitedStates.Latin1@Binary"
  Password = ""
  HostName = "<Essbase_installation_location>"
  PortNo = 1423
  Version = "<Essbase_version>"
)

```

EB_Essbase requires EB_IP

EB_Essbase requires EB_MOUNTV

EB_IP requires EB_NIC

EB_MOUNTV requires EB_VMDG

Appendix D

Template file for multi node mode on UNIX with Veritas Volume Manager,
EssbaseGroup.unix.tf:

```

group EssbaseGroup ()

  NIC EB_NIC (
    Device = ""
    NetworkType = ""
    NetworkHosts = {}
  )

  IP EB_IP (
    Device = ""
    Address = ""
    NetMask = ""
    Options = ""
    ArpDelay = 1
    IfconfigTwice = 0
  )

  Volume EB_Volume (
    Volume = ""
    DiskGroup = ""
  )

  DiskGroup EB_DiskGroup (
    DiskGroup = ""
  )

```

```

        StartVolumes = ""
        StopVolumes = ""
    )

    Mount EB_Mount (
        MountPoint = ""
        BlockDevice = ""
        FSType = ""
        MountOpt = ""
        FsckOpt = ""
    )

    Essbase EB_Essbase (
        ResourceName = ""
        HyperionHome = ""
        ArborPath = ""
        EssLang = "English_UnitedStates.Latin1@Binary"
        Password = ""
        HostName = "<Essbase_installation_location>"
        PortNo = 1423
        Version = "<Essbase_version>"
    )

```

EB_Essbase requires EB_IP

EB_Essbase requires EB_Mount

EB_IP requires EB_NIC

EB_Mount requires EB_Volume

EB_Volume requires EB_DiskGroup

Appendix E

Template file for multi node mode on AIX without Veritas Volume Manager,
EssbaseGroup.aix.tf:

```

group EssbaseGroup ()

    NIC EB_NIC (
        Device = ""
        NetworkType = ""
        PingOptimize = 1
        NetworkHosts = {}
    )

    IP EB_IP (
        Device = ""
        Address = ""
        NetMask = ""
        Options = ""
    )

    LVMVG EB_Volume (
        VolumeGroup = ""
    )

```

```
Mount EB_Mount (  
    MountPoint = ""  
    BlockDevice = ""  
    FSType = ""  
    MountOpt = ""  
    FsockOpt = ""  
)  
  
Essbase EB_Essbase (  
    ResourceName = ""  
    HyperionHome = ""  
    ArborPath = ""  
    EssLang = "English_UnitedStates.Latin1@Binary"  
    Password = ""  
    HostName = "<Essbase_installation_location>"  
    PortNo = 1423  
    Version = "<Essbase_version>"  
)
```

EB_Essbase requires EB_IP

EB_Essbase requires EB_Mount

EB_IP requires EB_NIC

EB_Mount requires EB_Volume

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