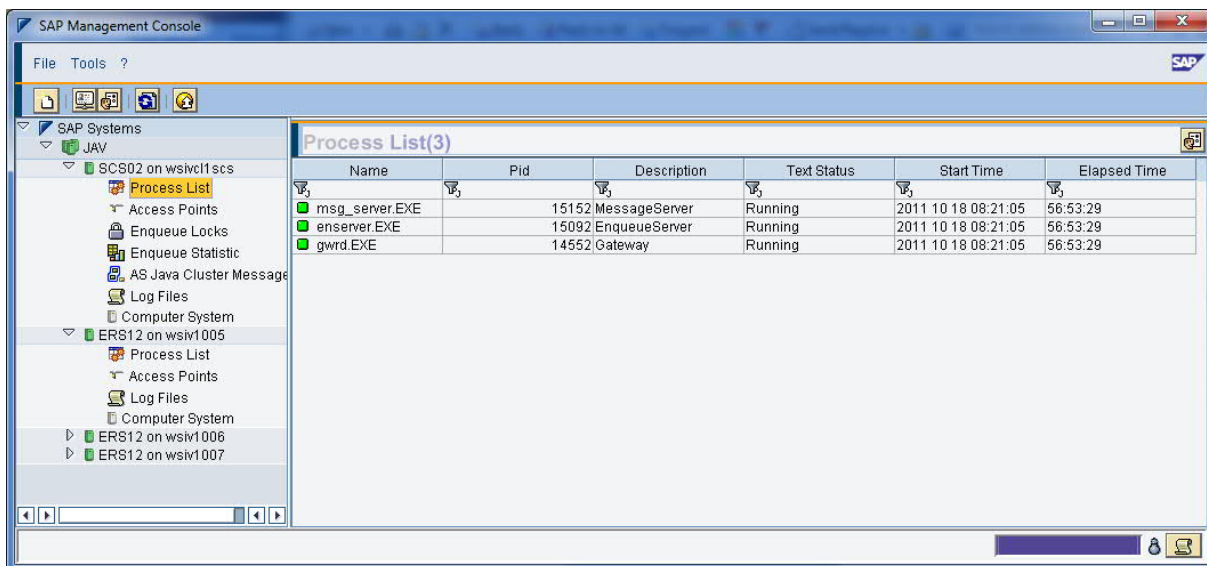


How to test Cluster Integration using SAP HA Interface

This document describes how to test cluster integration using the SAPHA interface.

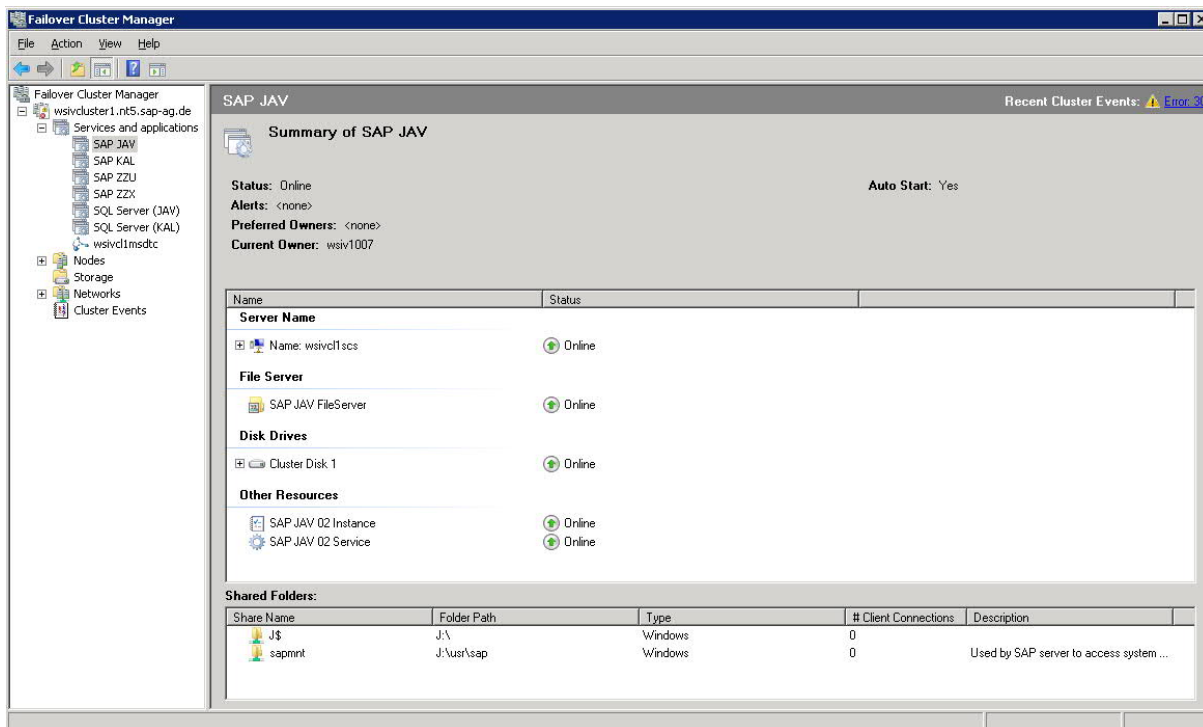
INITIAL STATE (EVERYTHING STARTED)

A clustered SCS instance (enqueue, message server, gateway) with 3 ERS instances (enqueue replication server), everything running.



Name	Pid	Description	Text Status	Start Time	Elapsed Time
msg_server.EXE	15152	MessageServer	Running	2011 10 18 08:21:05	56:53:29
ensrver.EXE	15092	EnqueueServer	Running	2011 10 18 08:21:05	56:53:29
gwrd.EXE	14552	Gateway	Running	2011 10 18 08:21:05	56:53:29

All corresponding cluster resources are online:



INSTANCE STOP

Start the SAPHA test program, load the shared library, find the resource and take it offline:

```
Z:\bas\720_REL\gen\opt\ntamd64\proj\sapha>saphatest
HA DLL? sapNThalib.dll
SAP HA Trace: SAP Microsoft Cluster library '720, patch 109, changelist 1282908' initialized
```

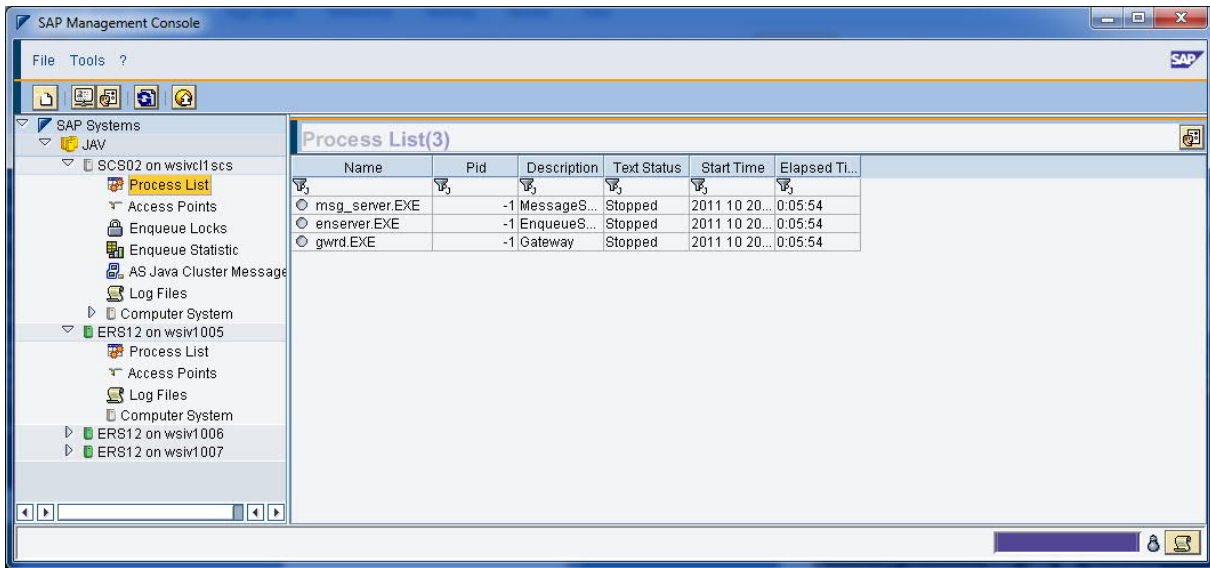
Commands:

```
0:FindSAPInstance
1:FindDB
2:StopCluster
3:StartCluster
4:MoveCluster
5:FailCluster
6:GetClusterNodes
7:exit
? 0
SID? JAV
Nr? 02
SAP HA Trace: FindClusterResource: SAP resource found [sapwinha.cpp, line 341]
SAP HA Trace: SAP_HA_FindSAPInstance returns: SAP_HA_OK [sapwinha.cpp, line 920]
rc: SAP_HA_OK
Group: group=SAP JAV
Resource: resource=SAP JAV 02 Instance
```

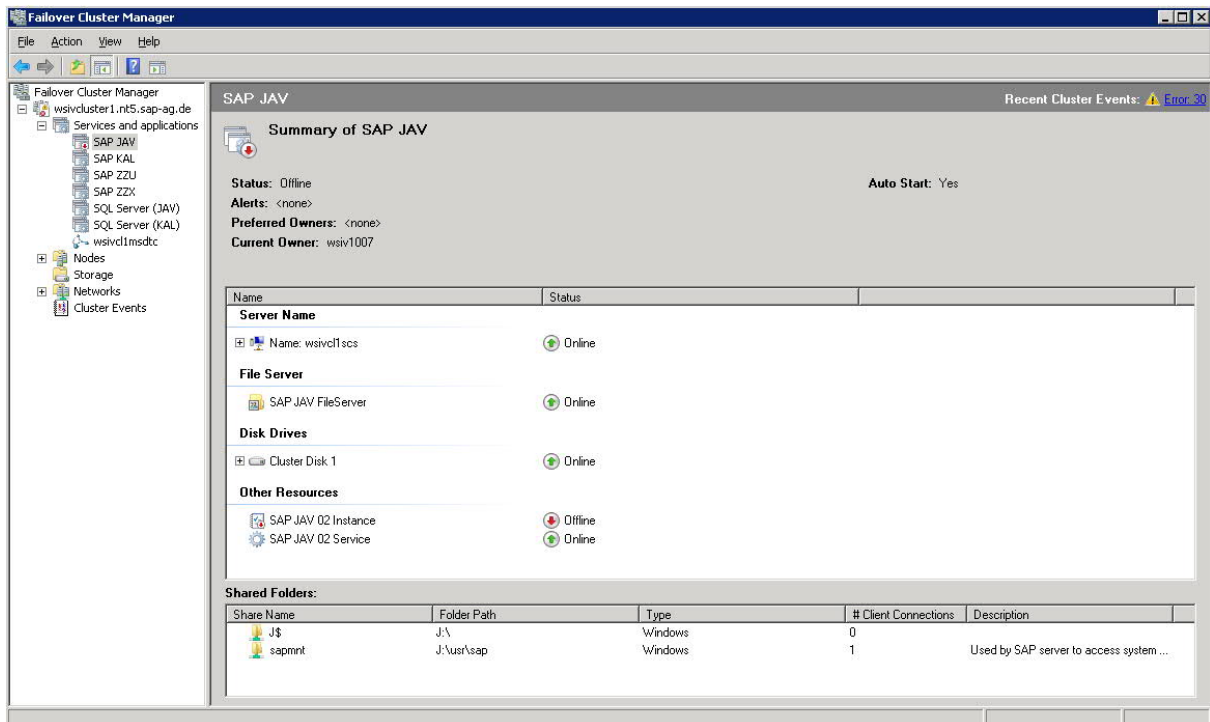
Commands:

```
0:FindSAPInstance
1:FindDB
2:StopCluster
3:StartCluster
4:MoveCluster
5:FailCluster
6:GetClusterNodes
7:exit
? 2
Resource? resource=SAP JAV 02 Instance
Timeout [0:infinite, -1:nowait, or sec]? 0
SAP HA Trace: FindClusterResource: Cluster resource found [sapwinha.cpp, line 253]
SAP HA Trace: WaitCluster: returns SAP_HA_OK [sapwinha.cpp, line 178]
SAP HA Trace: SAP_HA_StopCluster returns: SAP_HA_OK [sapwinha.cpp, line 1066]
rc: SAP_HA_OK
```

The instance gets stopped:



Only SAP instance resource goes offline, all other resources (IP address, filesystem, sapstartsrv Service) remain online. Cluster triggers no failover:



INSTANCE START

Take the resource online again:

Commands:

```
0:FindSAPInstance
1:FindDB
2:StopCluster
3:StartCluster
4:MoveCluster
5:FailCluster
6:GetClusterNodes
7:exit
? 3
```

Resource? resource=SAP JAV 02 Instance

Timeout [0:infinite, -1:nowait, or sec]? 0

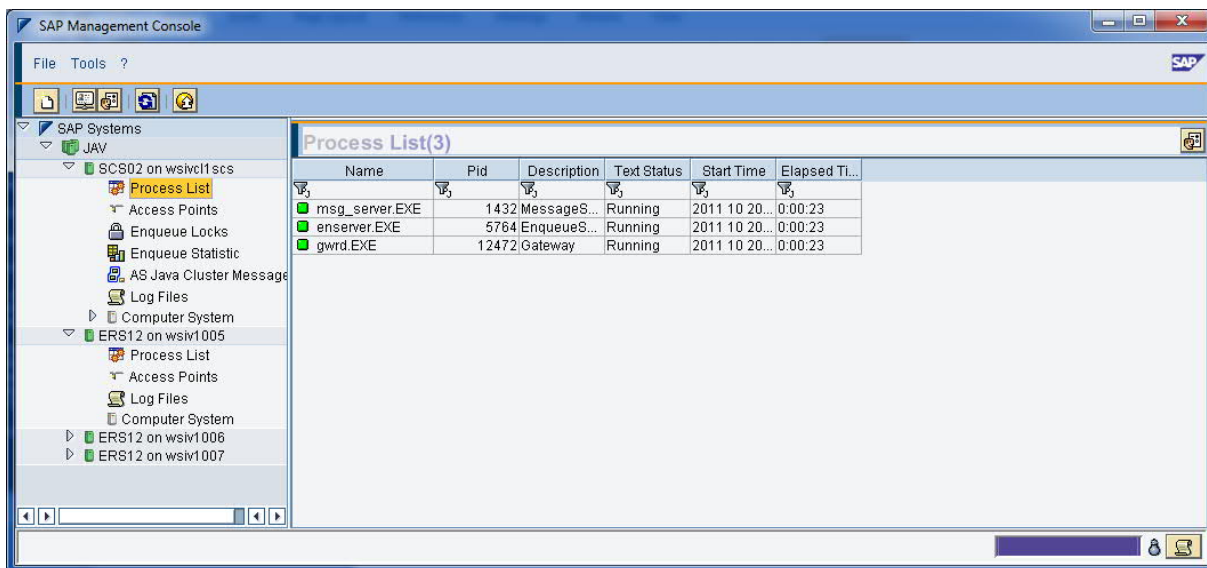
SAP HA Trace: FindClusterResource: Cluster resource found [sapwinha.cpp, line 253]

SAP HA Trace: WaitCluster: returns SAP_HA_OK [sapwinha.cpp, line 178]

SAP HA Trace: SAP_HA_StartCluster returns: SAP_HA_OK [sapwinha.cpp, line 1176]

rc: SAP_HA_OK

Instance gets started:



The screenshot displays the SAP Management Console interface. The left-hand pane shows a tree view of SAP Systems, including SCS02 on wsivc11scs and three ERS12 instances on wsiv1005, wsiv1006, and wsiv1007. The right-hand pane, titled 'Process List(3)', shows a table of running processes for the selected system.

Name	Pid	Description	Text Status	Start Time	Elapsed Ti...
msg_server.EXE	1432	MessageS...	Running	2011 10 20...	0:00:23
enserver.EXE	5764	EnqueueS...	Running	2011 10 20...	0:00:23
gwrld.EXE	12472	Gateway	Running	2011 10 20...	0:00:23

All corresponding cluster resources are online again:

Failover Cluster Manager

File Action View Help

wsivcluster1.nt5.sap-ag.de

Services and applications

- SAP JAV
- SAP KAL
- SAP ZZU
- SAP ZZX
- SQL Server (JAV)
- SQL Server (KAL)
- wsiv1msdtc

Nodes

Storage

Networks

Cluster Events

SAP JAV

Recent Cluster Events: [Error: 30](#)

Summary of SAP JAV

Status: Online **Auto Start: Yes**

Alerts: <none>

Preferred Owners: <none>

Current Owner: wsiv1007

Name	Status
Server Name	
Name: wsivcl1scs	Online
File Server	
SAP JAV FileServer	Online
Disk Drives	
Cluster Disk 1	Online
Other Resources	
SAP JAV 02 Instance	Online
SAP JAV 02 Service	Online

Shared Folders:

Share Name	Folder Path	Type	# Client Connections	Description
J\$	J:\	Windows	0	
sapmnt	J:\usr\sap	Windows	2	Used by SAP server to access system ...

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