



# ITCAM for Application: mySAP Agent Best Practice

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## REVISION HISTORY

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Date	Version	Revised By	Comments
2010-08-01	0.1	Guo Qing Wang	Initialize the draft
2010-08-02	0.2	Shen Gang	Review and revise
2010-09-10	0.3	Guo Qing Wang	Edit and Add some content of Performance tuning
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2010-10-15	0.6	Shen Gang	Add Installation and configuration part
2010-10-20	0.7	Shen Gang	Add FAQs and trouble shootings part
2010-12-28	1.0	Shen Gang	Final review and revise

# 1 Preparation

## 1.1 Platform and SAP system support matrix

### 1.1.1 mySAP agent version 6.2

Please refer to the mySAP agent 6.2 InfoCenter link for detailed support matrixes about platforms and SAP Systems supported by mySAP agent version 6.2

[http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itmfa.doc/main\\_r311.htm#requirements](http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/topic/com.ibm.itmfa.doc/main_r311.htm#requirements)

This link lists all the OS Platform Types and version, SAP System version and business components supported by mySAP agent version 6.2.

It also lists requirements of mySAP agent runtime, remote installation and remote configuration

### 1.1.2 mySAP agent version 6.1

Please refer to the mySAP agent 6.1 InfoCenter link for detailed support matrixes about platforms and SAP Systems supported by mySAP agent version 6.1

[http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itmfa.doc\\_6.1/main\\_r318.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itmfa.doc_6.1/main_r318.htm)

This link lists all the OS Platform Types and version, SAP System version and business components supported by mySAP agent version 6.1.

It also lists requirements of mySAP agent runtime, remote installation and remote configuration



## 1.2 Latest certification information about platform and SAP System

For more platforms and SAP Systems supported by mySAP agent version that announced by Certification Testing, please refer to the http link and click the “Tivoli Support Matrix” hotspot to check them.

[http://www-01.ibm.com/software/sysmgmt/products/support/Tivoli\\_Supported\\_Platforms.html](http://www-01.ibm.com/software/sysmgmt/products/support/Tivoli_Supported_Platforms.html)

## 1.3 Remote or local monitoring

mySAP agent can remotely monitor the SAP System, and provides the same functions as locally monitor SAP System.

In other words, mySAP agent could be installed on another computer, not the computer where SAP System is installed, and monitor it smoothly.

## 2 Installation

mySAP agent includes two parts:

1. ITM mySAP agent parts as other ITM Agents
2. mySAP agent ABAP Transport which is seeded into SAP System to collect the monitoring data.

Because this, SAP Installation includes two major steps,

1. Install the mySAP agent  
User can choose local install or remote install mySAP agent part
2. Import the ABAP transport into SAP System.  
The step is mandatory. If without this steps, the mySAP agent could not collect data from SAP System, because mySAP agent needs call the ABAP function modules packaged in the SAP ABAP transport to collect monitoring data.

## 2.1 Local installation

## 2.2 Remote installation

### 2.2.1 Pre-requisites

Refer to the OS Agent installation guide to install the OS Agent on the computer where mySAP agent will be installed

### 2.2.2 Remote install mySAP agent

User needs to logon the computer of TEMS, and run the **tacmd** command to remote install the mySAP agent

#### 2.2.2.1 Populate the depots of mySAP agent

Run the “tacmd addBundles” to populate the depots files of mySAP agent into TEMS

##### **On UNIX:**

The following example copies every agent bundle, including its prerequisites, into the mySAP agent depot on a UNIX® from the installation media (cd image) located at /mnt/cdrom/:

```
$CANDLE_HOME/bin/tacmd addBundles -i /mnt/cdrom/unix -t sa
```

##### **On Windows:**

The following example copies all agent bundles for the mySAP agent into the agent depot on a Windows® computer from the installation media (cd image) located at D:\WINDOWS\Deploy:

```
%CANDLE_HOME%/bin/tacmd addBundles -i D:\WINDOWS\Deploy -t sa
```

## 2.2.2.2 Remote deploy mySAP agent

### 2.2.2.2.1 Remote deploy mySAP agent using tacmd command

Please user to refer to the “*IBM® Tivoli® Monitoring Command Reference*” for the complete **tacmd addSystem** command.

For remotely deploying mySAP agent by tacmd, please user pay attention to mySAP agent specific setting in the tacmd command.

1. SA as the setting of TYPE  
Use SA as the value of -t | --type parameter to specify the Monitoring Agent for SAP that you are configuring
2. Use the values in the following table for the -p | --properties mandatory parameters to configure mySAP agent.

Values in properties parameter (mandatory)	Values described in Configuring mySAP agent
INSTANCE	System identifier
SAPSETTINGS.sap_hostname	Host name Primary
SAPSETTINGS.sap_systemno	System number Primary
SAPSETTINGS.sap_clientno	Client number
SAPSETTINGS.sap_gwhost	Gateway name Primary
SAPSETTINGS.sap_gwservice	Gateway service Primary
SAPSETTINGS.sap_userid	User ID
SAPSETTINGS.sap_password	Password
SAPSETTINGS.sap_language	Language

Table 1: mandatory parameters to configure mySAP agent

You also can refer to properties listed in the following table for the -p | --properties optional parameters to configure mySAP agent if the mandatory isn't enough for your mySAP agent monitoring solution.

Values in properties parameter (optional)	Values described in Configuring mySAP agent
SAPSETTINGS.sap_hostname2	Host name Alternate 1
SAPSETTINGS.sap_hostname3	Host name Alternate 2
SAPSETTINGS.sap_systemno2	System number Alternate 1
SAPSETTINGS.sap_systemno3	System number Alternate 2
SAPSETTINGS.sap_gwhost2	Gateway name Alternate 1
SAPSETTINGS.sap_gwhost3	Gateway name Alternate 2
SAPSETTINGS.sap_gwservice2	Gateway service Alternate 1
SAPSETTINGS.sap_gwservice3	Gateway service Alternate 2

Table 2: optional parameters to configure mySAP agent

Example:

```
tacmd addSystem -t SA -n Primary:AMSSAPDEMO1:NT -p INSTANCE=QA1
SAPSETTINGS.sap_hostname=amssapdemo1
SAPSETTINGS.sap_systemno=00
SAPSETTINGS.sap_clientno=100
SAPSETTINGS.sap_gwhost=amssapdemo1
SAPSETTINGS.sap_gwservice=3300
SAPSETTINGS.sap_userid=IBMMON_AGENT
SAPSETTINGS.sap_password=agentpw
SAPSETTINGS.sap_language=EN
```

### 2.2.2.2 Remote deploy mySAP agent from Tivoli Enterprise Portal

The detailed steps of deploying mySAP agent from Tivoli Enterprise Portal as below:

**Step 1:** Click the OS Agent monitoring the computer where mySAP agent will be installed on. The Remote deployment Dialog pops up.

Step 2: On mySAP agent Properties tab, complete the properties listed in the following table. For information about these properties, see the descriptions of the values

Properties	Values described in Configuring the Monitoring Agent for mySAP on the TEP GUI Remote Deployment
mySAP System ID	System identifier
mySAP Hostname (Primary)	Host name Primary
mySAP Hostname (Alternate 1)	Host name Alternate 1
mySAP Hostname (Alternate 2)	Host name Alternate 2
mySAP System Number (Primary)	System number Primary
mySAP System Number (Alternate 1)	System number Alternate 1
mySAP System Number (Alternate 2)	System number Alternate 2
mySAP Gateway Name (Primary)	Gateway name Primary
mySAP Gateway Name (Alternate 1)	Gateway name Alternate 1
mySAP Gateway Name (Alternate 2)	Gateway name Alternate 2
mySAP Gateway Service (Primary)	Gateway service Primary
mySAP Gateway Service (Alternate 1)	Gateway service Alternate 1
mySAP Gateway Service (Alternate 2)	Gateway service Alternate 2
mySAP Client Number	Client number
mySAP User ID	User ID
mySAP User Password	Password or Password File
mySAP Language Code	Language

Table 3: completed parameters to configure mySAP agent

**Step 3:** Use the following settings for the Agent tab "Run as" information:

**Agent on Windows:**

Use local system account: Select this setting.

Allow service to interact with desktop: Leave this check box clear.

**Agent on UNIX:**

User Name: (UNIX® only and optional) If the default User ID and password are not to be used (the ones selected when configuring the OS agent), they can be overridden using this field.

Group Name: (UNIX only and optional) If the default group name is not to be used (the one selected when configuring the OS agent), it can be overridden using this field.

## 2.3 Import ABAP transport

### 2.3.1 Transport files information

About the names of ABAP transport files, user can refer to the following table information

#### 2.3.1.1 mySAP agent 6.2 transport files

File Name	Description	Unicode or Non-unicode SAP system
K620_000XXU.ITM	X is digital	Unicode
R620_000XXU.ITM	X is digital	Unicode
K620_000XX.ITM	X is digital,	Non-unicode
R620_000XX.ITM	X is digital	Non-unicode
K620_000XX_DELETE.ITM	X is digital, used to remove the ABAP code of mySAP Agent	Both
R620_000XX_DELETE.ITM	X is digital, used to remove the ABAP code of	Both

	mySAP Agent	
--	-------------	--

Table 4: mySAP agent 6.2 transport files

For example: K620\_00035U.ITM and R620\_00035U.ITM are the mySAP agent 6.2 GA version transport files used to import into Unicode SAP System.

### 2.3.1.2 mySAP agent 6.1 transport files

File Name	Description	Unicode or Non-unicode sap system
K610_00XXXU.ITM	X is digital	Unicode
R610_00XXXU.ITM	X is digital	Unicode
K610_00XXX.ITM	X is digital,	Non-unicode
R610_00XXX.ITM	X is digital	Non-unicode
K610_DELETE.ITM	X is digital, used to remove the ABAP code of mySAP Agent	Both
R610_DELETE.ITM	X is digital, used to remove the ABAP code of mySAP Agent	Both

Table 5: mySAP agent 6.1 transport files

For example: ITMK610\_00135U.ITM and R610\_00135U.ITM are the mySAP agent 6.1 IF0015 version transport files used to import into Unicode SAP System.

### 2.3.2 Upload transport files into SAP file system

Before begin to import the transport, user must upload transport files into SAP file system.

Example: Upload the mySAP agent 6.2 GA version ABAP transport files to P7U SAP System which is an Unicode system

1. Copy the K620\_00035U.ITM into /usr/sap/trans/cofiles directory
2. Copy the R620\_00035U.ITM into /usr/sap/trans/data directory

## 2.3.3 Import ABAP transport via STMS transaction code

Please logon the SAP System via SAP GUI with user who has the right to import the transport at first.

### 2.3.3.1 Add transport into the buffer

Step 1: Run STMS transaction code, press F5 , then enter current sap system import queue

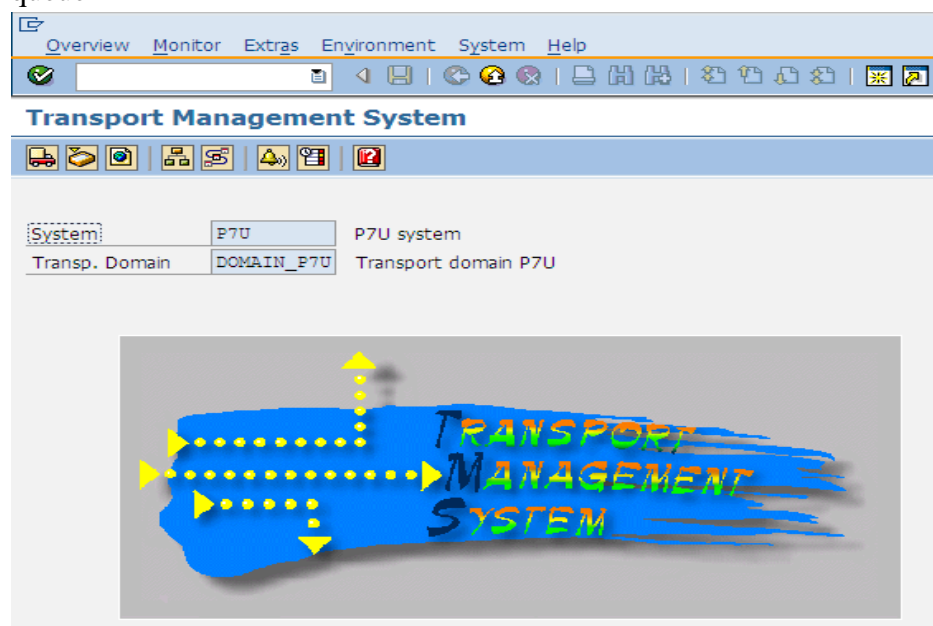


Figure 1: STMS transaction result

Number	Request	Owner	Short Text	St
1	TV2K900230	RCOOKE	ITM Internal Utilities	▲
2	ITMK620_00044U	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Created:07/18/2008-09:27:39	■
3	ITMK620_00035_DELETE	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Delete product objects	▲
4	ITMK620_00045_DELETE	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Delete product objects	■
5	ITMK620_00045U	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Created:15.10.2008-08:09:27	▲
6	ITMK610_DELETE	TIVOLI	ITM for mySAP - Vers:6.1 Rel:0 Delete product objects	▲
7	ITMK620046U	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Created:11/23/2008-20:48:39	■
8	SMIK900028	WANGHF	Download & Upload Change Request	▲
9	TV2K900284	KGUNN	ITIM SAP NW Password functions	▲
10	TV1K900745	KGUNN	ITIM SAP NW Password functions	▲
11	ITMK610_00134	TIVOLI	ITM for mySAP - Vers:6.1 Rel:0 Created:03/19/2009-02:52:56	▲
12	ITMK610_00130U	TIVOLI	ITM for mySAP - Vers:6.1 Rel:0 Created:20.06.2008-04:08:37	▲
13	ITMK620_00047U	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Created:02/03/2009-05:52:47	▲
14	ITMK610_00133U	TIVOLI	ITM for mySAP - Vers:6.1 Rel:0 Created:21.10.2008-05:46:52	▲
15	ITMK620_00048_DELETE	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Delete product objects	▲
16	ITMK620_10337U	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Created:05/28/2009-09:03:03	▲
17	ITMK620_00048U	TIVOLI	ITM for mySAP - Vers:6 Rel:20 Created:05/25/2009-23:39:27	▲

Figure 2: Import Queue of STMS transaction

Step 2: Click menu and sub menus Extras->Other requests->Add

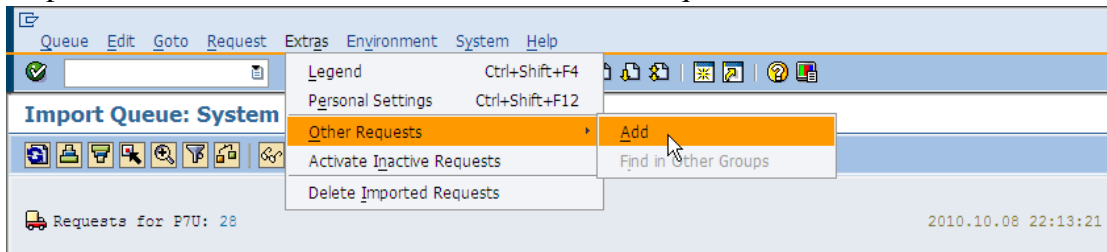


Figure 3: Add extras request

Step 3: Input the transport request (e.g. ITMK620\_00035U as the transport request name), after click the enter button, the transport will be added into the import buffer.

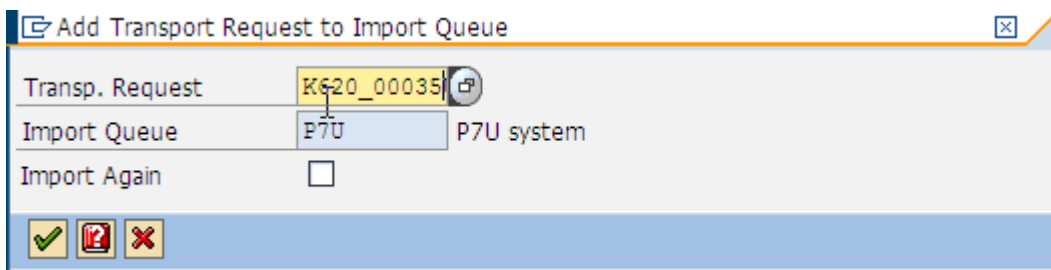


Figure 4: Add transport request to import queue

### 2.3.3.2 Import transport

Step 1: Select the transport request that had been added into the import buffer (e.g. ITMK620\_00048U) as below:



Number	Request	Owner	Short Text	St
1	TV2K900230	RCOOKE	ITM Internal Utilities	▲
2	IIMK620_00044U	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Created:07/18/2008-09:27:39	■
3	IIMK620_00035_DELETE	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Delete product objects	▲
4	IIMK620_00045_DELETE	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Delete product objects	■
5	IIMK620_00045U	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Created:15.10.2008-08:09:27	▲
6	IIMK610_DELETE	TIVOLI	IIM for mySAP - Vers:6.1 Rel:0 Delete product objects	▲
7	IIMK620046U	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Created:11/23/2008-20:48:39	■
8	SM1K900028	WANGHF	Download & Upload Change Request	▲
9	TV2K900284	KGUNN	ITIM SAP NW Password functions	▲
10	TV1K900745	KGUNN	ITIM SAP NW Password functions	▲
11	IIMK610_00134	TIVOLI	IIM for mySAP - Vers:6.1 Rel:0 Created:03/19/2009-02:52:56	▲
12	IIMK610_00130U	TIVOLI	IIM for mySAP - Vers:6.1 Rel:0 Created:20.06.2008-04:08:37	▲
13	IIMK620_00047U	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Created:02/03/2009-05:52:47	▲
14	IIMK610_00133U	TIVOLI	IIM for mySAP - Vers:6.1 Rel:0 Created:21.10.2008-05:46:52	▲
15	IIMK620_00048_DELETE	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Delete product objects	▲
16	IIMK620_10337U	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Created:05/28/2009-09:03:03	▲
17	IIMK620_00048U	TIVOLI	IIM for mySAP - Vers:6 Rel:20 Created:05/25/2009-23:39:27	▲
18	SSAK900958	INAUMOV	ReAL Web Services for CustDev Surveyor 1.6 2007-11-29	▲

Figure 5: Select transport request

Step 2: Click the menu and sub-menus Request->Import

Step 3: Input the client no which the transport is applied to; and select the start date with “Immediate”; Select the execution with “Asynchronous”; Select “Leave the transport Request in queue for later import”, “Import transport again”, “Override original” and “Overwrite objects in unconfirmed repairs”, then click the enter button. The transport will start up to be imported.

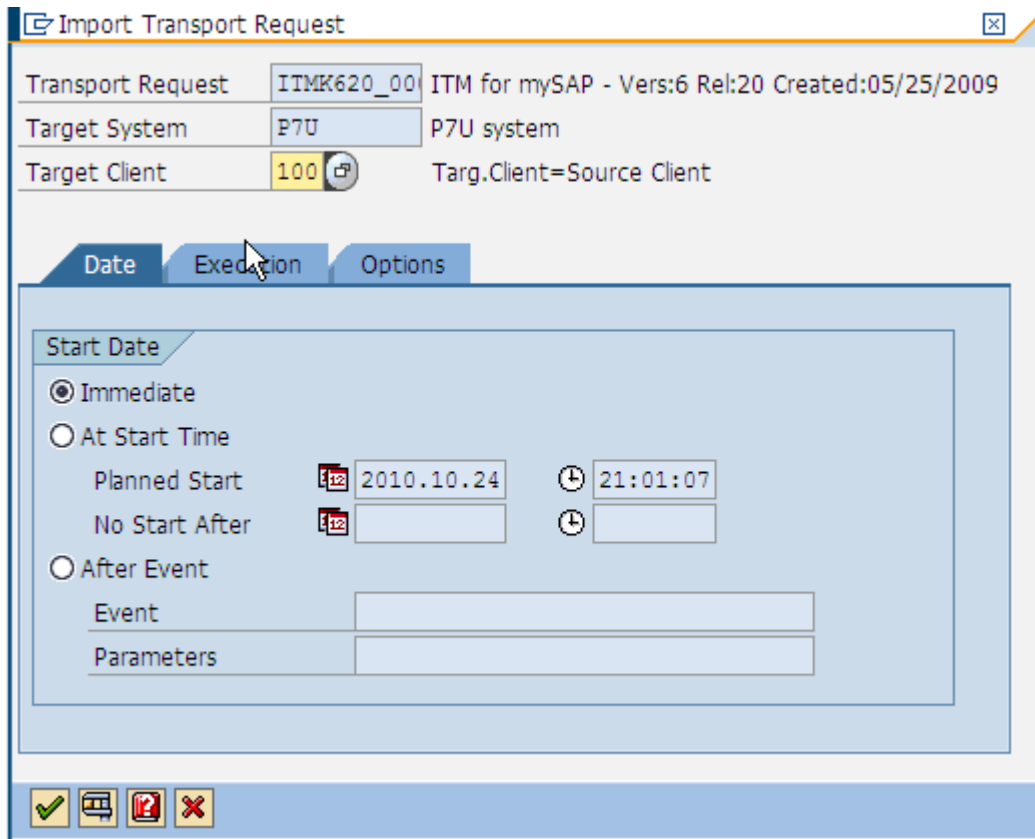


Figure 6: Select 'immediate' option

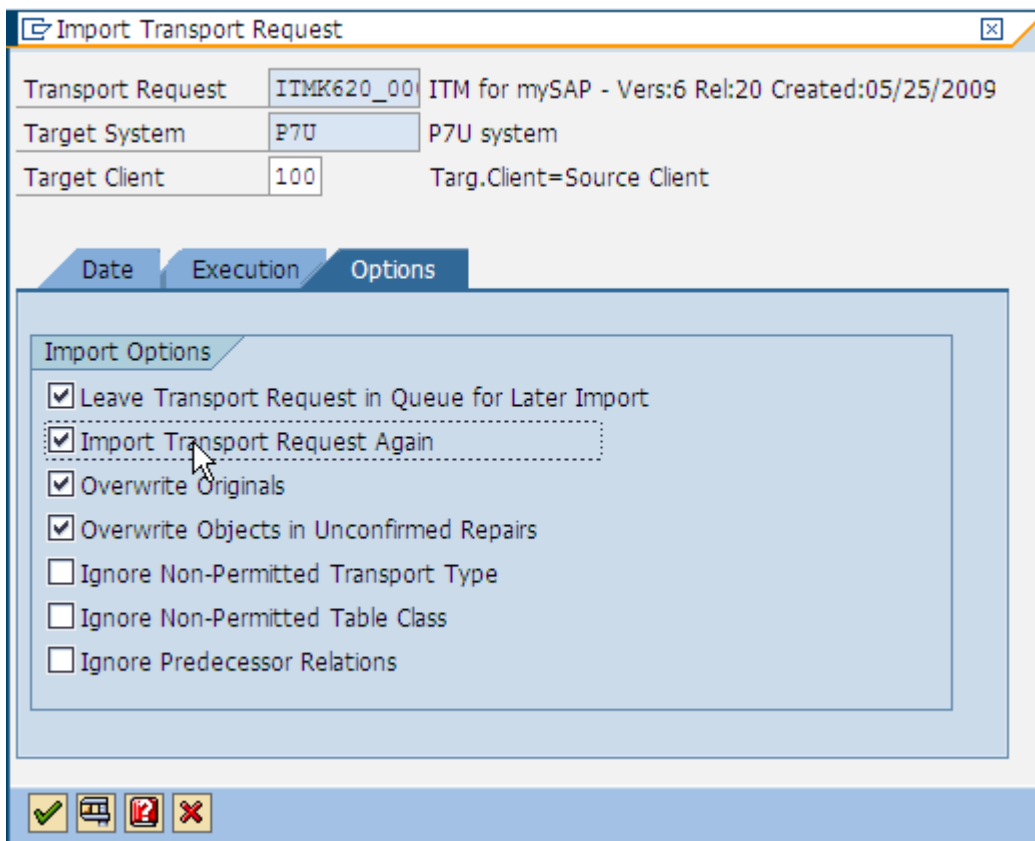


Figure 7: Select import options

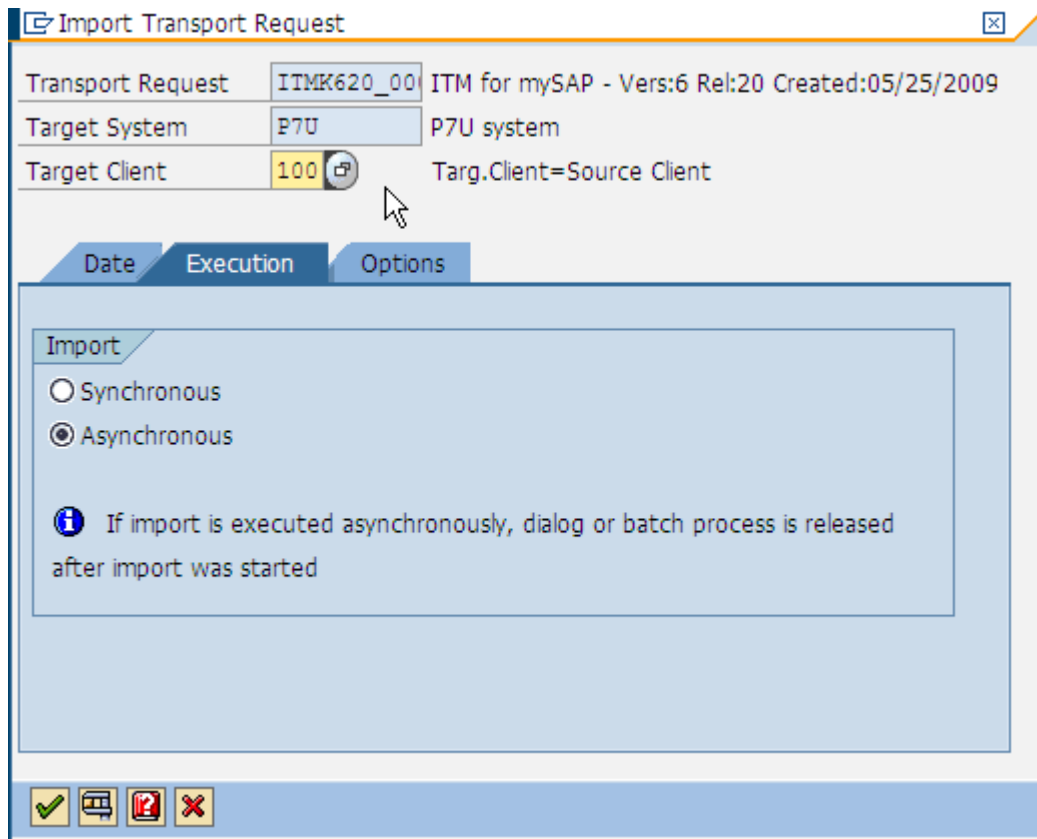


Figure 8: Select 'Asynchronous' option

## 2.3.4 Import ABAP transport via TP command

### 2.3.4.1 Add transport into the buffer

On Windows:

1. Go to the directory “%TRANSDIR%/bin”
2. Execute the “tp import” to import the transport

```
tp import ITMK620_00035U P7U client=100 U16 pf=%TRANSDIR% \bin\TP_DOM  
AIN_P7U.PFL
```

On UNIX:

1. run the command “su - <SID>adm” to switch to admin user of SAP system
2. run the “tp import” to import the transport

```
tp import ITMK620_00035U P7U client=100 U16 pf=%TRANSDIR% \bin\TP_DOM  
AIN_P7U.PFL
```

## 2.3.4.2 Import transport

On Windows:

1. Go to the directory “%TRANSDIR%/bin”
2. Execute the tp import to add the transport into import queue.

```
tp addtobuffer ITMK620_00035U P7U pf=%TRANSDIR% \bin\TP_DOM  
AIN_P7U.PFL
```

On UNIX:

3. run the command “su - <SID>adm” to switch to admin user of SAP system
4. run the “tp addtobuffer to add the transport into import queue

```
tp addtobuffer ITMK620_00035U P7U pf=%TRANSDIR% \bin\TP_DOM  
AIN_P7U.PFL
```

For more detailed information about how to import the transport, please refer to “[Basic installation and configuration of the Monitoring Agent for mySAP](#)” section in the mySAP agent User Guide

## 2.3.5 Some issues during importing transport

Sometimes, the transport failed to be imported. And other times, even though the transport imported successfully, but some ABAP dump runtime error is generated in the SAP System.

When user meets those problems, please refer to [8. Technotes](#) section to find out the solution for those issues

# 3 Configuration

## 3.1 Agent local configuration

### 3.1.1 Silent configuration

Find out the silent\_config.txt under the mySAP agent installed directory (by default, it is under the \$CANDLE\_HOME/samples). Then use the following steps to generate the silent configuration file for configuration.

1. Edit the silent\_config.txt, set the ITM related configuration information. For example: TEMS Host Name, the protocol connecting to TEMS and so on.

2. Append the settings of those specific variables for mySAP agent to connect with SAP R/3 System.

```
SAPSYSTEMNAME=<SID>
SAPCLOSERFC=0
SAPLANGUAGE=E
SAPNOLOGONPARMS=1
SAPTRACE=0
SAPCLIENT=<CLIENT NO>
SAPHOST=<SAP SYSTEM HOSTNAME OR IP>
SAPPASSWORD=<PASSWORD>
SAPSYSTEMNUMBER=<SYSNR>
SAPUSER=<USERNAME>
SAPGATEWAY=<SAP GATEWAY HOSTNAME OR IP>
SAPGATEWAYSERVICE=<SAP GATEWAY SERVICE PORT NUMBER>
```

3. Run the command to silently configure the mySAP agent.  
<CANDLE\_HOME>/bin/CandleConfig -A -o <SID> -p silent\_config.txt sa

### 3.1.2 Advanced configuration

When install a mySAP agent, you could create several instances to monitor different SAP instance. We recommend creating 10 agent instances 8G in a machine which has

8G memory and 4G HZ CPU, while you could create more or less instances properly according to the machine configuration.

One mySAP agent instance could monitor one SAP system including all the SAP instances belonging to this SAP system. You could import the ABAP transport into any SAP instances including central instance and dialog instance, and you can also configure agent to connect to any SAP instances.

In order to better guarantee the connection with monitored SAP system, it's a good idea to configure with alternative SAP setting during agent configuration. Be default, at least one SAP instance information is required in agent configuration, just like below picture

```
mySAP Primary Host name(Default is: 9.123.122.83):
mySAP Primary System number(Default is: 10):
Alternate 1 Host name(Default is: '):
Alternate 1 System number(Default is: 00):
Alternate 2 Host name(Default is: '):
Alternate 2 System number(Default is: 00):
mySAP Primary Gateway name(Default is: 9.123.122.83):
mySAP Primary Gateway service(Default is: 3310):
Alternate 1 Gateway name(Default is: '):
Alternate 1 Gateway service(Default is: 3300):
Alternate 2 Gateway name(Default is: '):
Alternate 2 Gateway service(Default is: 3300):
mySAP Client Number(Default is: 100):
mySAP User ID(Default is: sapagent):
mySAP Password(Default is: *****):
```

*Figure 9: Default configuration*

Customer could configure agent with alternative SAP instances, in this case, if agent fails to connect to primary SAP instance, then it will try to connect to alternative system 1 and then system 2. So it could better guarantee the connection between agent and SAP systems. Here is an example:

```
mySAP Primary Host name(Default is: 9.123.122.83):
mySAP Primary System number(Default is: 10):
Alternate 1 Host name(Default is: 9.123.122.84):
Alternate 1 System number(Default is: 01):
Alternate 2 Host name(Default is: 9.123.122.85):
Alternate 2 System number(Default is: 02):
mySAP Primary Gateway name(Default is: 9.123.122.83):
mySAP Primary Gateway service(Default is: 3310):
Alternate 1 Gateway name(Default is: 9.123.122.84):
Alternate 1 Gateway service(Default is: 3301):
Alternate 2 Gateway name(Default is: 9.123.122.85):
Alternate 2 Gateway service(Default is: 3302):
mySAP Client Number(Default is: 100):
mySAP User ID(Default is: sapagent):
mySAP Password(Default is: *****):
```

*Figure 10: Configuration with alternative options*

## 3.2 ABAP configuration

Parameter	Char value	Int value	Default value	Descriptions
SYSLOG_HEARTBEAT_MESSAGE	YES/NO		NO	Avoid to output “still connected to <SID> with normal heartbeat” message into the system log (SM21) of sap system
STATFILE_SYSLOG	YES/NO		NO	Avoid to output the “(R70) no data found” message into system log (SM21) of sap system
STATFILE_DUMPS	YES/NO		YES	Avoid to generate the raise_exception ABAP dump message in the system log (SM21) and generate raise_exception ABAP dump in the ST22
SEARCH_MONITOR_TREE_FOR_CLOSE	YES/NO		NO	When closing an alerts, disable to search the alert from all monitor sets and monitor names and check if it still exists
DISABLE_LOGON_IP	YES/NO		NO	Disable to search the IP address of terminal when requesting the data of User Summary workspace
AGENT_ABAPINFO_SYSLOG	YES/NO		NO	Disable to output the transport version information into system log (SM21) of sap system
MAXIMUM_CCMS_MONITORS		Integer value	3	The maximum monitoring set and monitor names which sap agent could monitor.
CCMS_WAIT		Integer value	120	The waiting times when calling /IBMMON/ITM_CCMS_ALERTS function module to retrieve the CCMS alerts, default value is 120s
CCMS_RETRY		Integer value	1800	The setting is after how long time, then to retry to call /IBMMON/ITM_CCMS_ALERTS to retrieve the CCMS alert again. Default value is 1800s

Table 6: mySAP agent ABAP configurations

For other detailed configurations, please refer ‘Optional advanced configuration in SAP’ section in agent user guide.

## 4 Upgrade

In this section, we use the 6.2.0 mySAP agent IF0008 as the example to instruct how to upgrade mySAP agent.

## 4.1 Upgrade mySAP agent support files

1. Transfer the appropriate archive file (6.2.0-TIV-ITM\_SAP-IF0008.tar or .zip) to the Tivoli Enterprise Monitoring Servers, Tivoli Enterprise Portal Servers or Tivoli Enterprise Portal Desktops.
2. Expand the archive file using the tar command on UNIX systems or an unzip utility on Windows systems. This creates a directory structure that contains fixes for all of the supported platforms.
3. Expand the archive file (ksa\_tems\_teps\_tepd\_if0008.tar or .zip) that contains the updates for the Tivoli Enterprise Monitoring Server, Tivoli Enterprise Portal Server, and Tivoli Enterprise Portal Desktop using the tar command on UNIX systems or an unzip utility on Windows systems. This creates a directory structure that includes a subdirectory called CD-ROM, with the necessary updates.
4. Start the Application Support Installer GUI to install the fix. The GUI install can be started by using one of the following commands from within the CD-ROM directory where setup.jar is located:

On UNIX systems, GUI install:

```
> ./itmasi.sh
```

On a Windows system, GUI install:

```
> < itmasi
```

For a GUI install, when prompted by the Application Support Installer for the installable media directory, select the CD-ROM directory, not the component directory. The installer can install updates for multiple components at the same time.

5. For a GUI install, the next panel presented by the Application Support Installer asks for the selection of which Tivoli Monitoring components you would like to add application support to. For this fix, the check boxes must be as follows:

checked/unchecked - Tivoli Enterprise Monitoring Server (TEMS)

checked/unchecked - Tivoli Enterprise Portal Server (TEPS)

checked/unchecked - Tivoli Enterprise Desktop Client (TEPD)

Continue through the remaining GUI panels selecting the mySAP Agent - 06.20.00.08 support to complete the installation.

6. If the Tivoli Enterprise Portal Desktop or Tivoli Enterprise Portal Browser was running when the update was installed, it must be restarted.

## 4.2 Upgrade mySAP agent

This section describes how to upgrade sap agent with IFix images. The mySAP agent



upgrade includes: upgrade mySAP agent binary and upgrade the transport ABAP code of mySAP agent. Upgrade mySAP agent binary has two modes, one is local upgrade, and another is remote upgrade. For more detailed information, please refer to the following 3 sub sections to upgrade the mySAP agent.

## 4.2.1 Local upgrade mySAP agent

1. Transfer the appropriate archive file (6.2.0-TIV-ITM\_SAP-IF0008.tar or .zip) to a temporary directory on the system that contains the agent code to be updated. For the purpose of this README, the symbol <TEMP> represents the fully qualified path to this directory.

**Note: On Windows, this includes the drive letter.**

2. Expand the archive file using the tar command on UNIX systems or an unzip utility on Windows systems. This creates a directory structure that contains fixes for all of the supported platforms.
3. Use the **itmpatch** command to install the fix for the operating system of that agent.

On UNIX systems, if the fix was expanded to

<TEMP>/6.2.0-TIV-ITM\_SAP-IF0008, the install command would be:

```
>itmpatch -h <CANDLEHOME> -i <TEMP>/6.2.0-TIV-ITM_SAP-IF0008/ksa_XXXXXX_tema_IF0008.tar
```

Where:

- XXXXXX corresponds to the value in the first column returned by the ./cinfo -i command.

- YYYY is the ifix number, for example YYYY = 0008 if the the ifix is IF0008

In the following example, the file would be ksa\_li6243\_tema\_if0008.tar.

```
>./cinfo -i
```

```
Monitoring Agent for mySAP agent
```

```
li6243 Version: 06.20.00.08
```

On a Windows system, if the fix was expanded to

<TEMP>/6.2.0-TIV-ITM\_SAP-IF0008, the install command would be:

```
> itmpatch -h <CANDLEHOME> -i <TEMP>\6.2.0-TIV-ITM_SAP-IF0008\ksa_winnt_tema_IF0008.cab
```

## 4.2.2 Remote upgrade mySAP agent

1. Transfer the appropriate archive file (6.2.0-TIV-ITM\_SAP-IF0008.tar or .zip) to a temporary directory on the IBM Tivoli Enterprise Monitoring Server system. For the purpose of this README, the symbol <TEMP> represents the fully qualified path to this directory.

**Note: On Windows, this includes the drive letter.**

2. Expand the archive file using the tar command on UNIX systems or an unzip utility on Windows systems. This creates a directory structure that contains fixes for all of the supported platforms.
3. To add the agent fix bundles into the remote deploy depot, use the **tacmd addBundles** command found in \$CANDLEHOME/bin on UNIX systems or in %CANDLE\_HOME%\bin on Windows systems. For more information on the **tacmd addBundles** command, see the IBM Tivoli Monitoring Administrator's Guide.

**On UNIX systems:**

```
If the fix was the 6.2 mySAP agent IF0008 and was expanded to <TEMP>/6.2.0-TIV-ITM_SAP-IF0008
>$CANDLEHOME/bin/tacmd addBundles -n -i <TEMP>/6.2.0-TIV-ITM_SAP-IF0008
```

**On a Windows system:**

```
If the fix was the 6.2 mySAP agent IF0008 and was expanded to <TEMP>\6.2.0-TIV-ITM_SAP-IF0008
>%CANDLE_HOME%\bin\tacmd addBundles -n -i <TEMP>\6.2.0-TIV-ITM_SAP-IF0008
```

Where:

-n indicates that prerequisite bundles are not automatically added. The -n parameter must be used because the fix directory does not contain any prerequisites that the fix might require. Please see Section 3.1 for the prerequisites for this fix.

-i is the directory that contains the deployment bundles to be added to the depot.

4. After "**tacmd addBundles**" from step 3 above, control files on the Tivoli Enterprise Monitoring Server (TEMS) and the Tivoli Enterprise Portal Server (TEPS) must be updated. These updates must be done manually. The following instructions are with upgrading 6.2.0 mySAP agent IF0008 as the examples

a. Tivoli Enterprise Monitoring Server update

The sa\_dd\_062000008.xml and sa\_dd.properties files have to be copied from the <TEMP>/6.2.0-TIV-ITM\_SAP-IF0008 directory to the 062000000 version of the Tivoli Enterprise Monitoring Services depot.

Two scripts are provided to make these copies and are located in the fix <TEMP>/6.2.0-TIV-ITM\_SAP-IF0008 directory after the expansion of the tar or zip file:

ksa\_patchdepot.bat - Windows

ksa\_patchdepot.sh - UNIX

From the <TEMP>/6.2.0-TIV-ITM\_SAP-IF0008 directory run the appropriate script based on the operating system. The script output details the copies being made.

b. Tivoli Enterprise Portal Server update Resource files have to be copied from the <TEMP>/6.2.0-TIV-ITM\_SAP-IF0008 directory to the Tivoli Enterprise Monitoring Portal directory.

Two scripts are provided to make these copies and are located in the fix <TEMP>/6.2.0-TIV-ITM\_SAP-IF0008 directory after the expansion of the tar or zip file:

ksa\_patch\_resource\_teps.bat - Windows

ksa\_patch\_resource\_teps.sh - UNIX

From the <TEMP>/6.2.0-TIV-ITM\_SAP-IF0008 directory run the appropriate script based on the operating system. The script output details the copies being made.

5. To log in to the Tivoli Enterprise Monitoring Server, and deploy the fix to the appropriate nodes where the agent is running, use the following **tacmd** commands. For more information on the **tacmd login** and **updateAgent** commands, see the "IBM Tivoli Monitoring Administrator's Guide."

**On UNIX systems:**

```
> $CANDLEHOME/bin/tacmd login -s <server> -u <itmuser> -p <password>
```

```
> $CANDLEHOME/bin/tacmd listSystems
```

The output shows the Managed System Name for the OS agent on the remote system to be updated.

Use this value as the target of the tacmd updateAgent command.

```
> $CANDLEHOME/bin/tacmd updateAgent -t sa -n <Managed system name>
-v 062000008
```

**On a Windows system:**

```
> %CANDLE_HOME%\bin\tacmd login -s <server> -u <itmuser> -p <password>
```

```
> %CANDLE_HOME%\bin\tacmd listSystems
```

The output shows the Managed System Name for the OS agent on the remote system to be updated.

Use this value as the target of the tacmd updateAgent command.

```
> %CANDLE_HOME%\bin\tacmd updateAgent -t sa -n <Managed system name>
-v 062000008
```

**Note:**

- The component (-t) for the updateAgent command is specified as two characters (sa), NOT three characters (ksa).

- The node (-n) for the updateAgent command is the managed system name of the operating system (OS) agent to be updated. The target node for an updateAgent command is always an OS agent.

## 4.2.3 Upgrade SAP transport

1. Run SE16 transaction code via SAP GUI, input the /IBMMON/ITM\_CNFG as the table name
2. Backup customized settings in the table input by SAP Admin manually

3. Go to the ABAP directory in the location where you expanded the fix archive file. You will find new ABAP transport files
4. Refer [section 2.3](#) to upgrade the ABAP transport
5. Restore customized settings in the /IBMMON/ITM\_CNFG input by SAP Admin manually.

## 5 Performance tuning

ITCAM for Application: mySAP agent provides monitoring for end-to-end SAP environment. It monitors whole SAP system including all the central instance and dialog instances of this system. To have better performance in heavy workload SAP systems especially the SAP Systems having multiple instances, this document describes the best practices on mySAP agent performance tuning. There are four general ways to tune the performance of mySAP agent.

1. Disable ABAP function modules if they are needless according to customer's key performance indicator or they consume lots of resources (CPU/Memory/Disk IO).
2. Decrease the default sample period in 'Maintain Default Sample Periods' in '/n/ibmmon/itm\_config' transaction code.
3. Stop the corresponding situations or increase the situation interval.
4. Stop the corresponding historical collection or increase the collection interval.

### 5.1 ABAP tuning

#### 5.1.1 Disable function modules

mySAP agent calls ABAP function modules to retrieve data from SAP system for each attribute group. For example, it calls '/IBMMON/ITM\_ALERTS' function module via RFC from R/3 Alerts attribute group. mySAP agent provides capacity of disabling corresponding function modules if the attribute groups' data are needless or they consume lots of resources (CPU/Memory/Disk IO). Based on PMR analysis, the most problematic function modules are '/IBMMON/ITM\_ALERTS' and '/IBMMON/ITM\_READ\_STATFILE'

You can view the relationships between attribute groups and ABAP function modules by referring to the [Useful Links](#) section

### 5.1.1.1 CCMS alert monitoring

By default, 'Entire System' monitor is selected as the default monitor, which means that mySAP agent monitors alerts from all SAP instances of entire SAP system. In large and heavy workload SAP systems, especially SAP Systems having multiple instances, it may take long time and consume lots of memory and Disk IO to collect huge alerts data. If CCMS alerts monitoring is needed, select specific monitor according to business requirements instead of using 'Entire System' monitor by default, otherwise, disable the function module.

The following two sub sections describe how to change monitors and disable CCMS alerts monitoring.

#### 5.1.1.1.1 Change monitor names and monitor sets

Step 1: Logon SAP system via SAP GUI.

Step 2: Run '/n/ibmmon/itm\_config' Transaction code and you will get below configuration window.

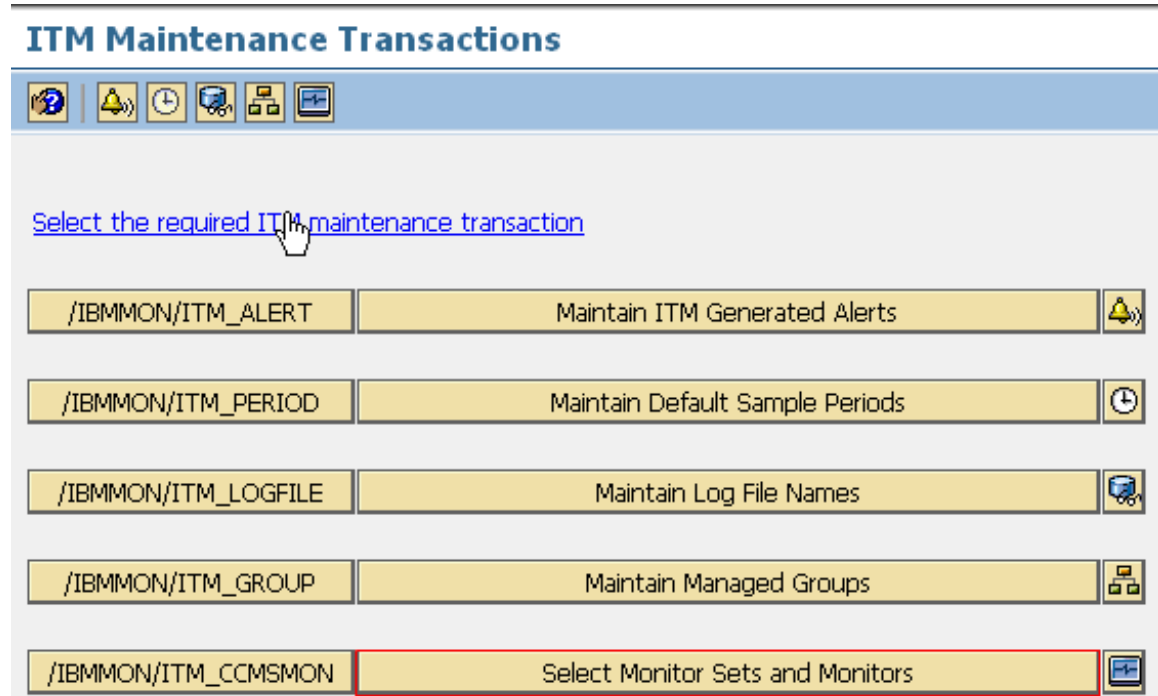


Figure 11: /ibmmon/itm\_config configuration panel

Step 3: Click on 'Select Monitor Sets and Monitors' button.

Step 4: By default, one monitor 'Entire System' is selected like picture 2 and then all alerts in this SAP system will be collected by mySAP agent and that's why there are so many alerts. Then check off the option like figure 3

The screenshot shows the 'Specify parameters for all Alerts' section with the following settings:

- Number of occurrences per alert to retrieve: 10
- Close older occurrences:  Retrieve duplicate alerts:
- Close more severe alerts than current state:

Below this, the 'All available CCMS Monitors' section shows a list of monitors. The 'Entire System' monitor is selected, indicated by a checked checkbox and a red box around the row.

Monitor Set	Monitor
<input type="checkbox"/> SAP CCMS Monitor Templates	<input type="checkbox"/> Enqueue
	<input checked="" type="checkbox"/> Entire System
	<input type="checkbox"/> Exchange Infrastructure
	<input type="checkbox"/> Filesystems
	<input type="checkbox"/> J2EE Applications
	<input type="checkbox"/> J2EE Engine
	<input type="checkbox"/> Operating System
	<input type="checkbox"/> Performance Overview

Figure 12: entire system is selected by default

The screenshot shows the 'Specify parameters for all Alerts' section with the following settings:

- Number of occurrences per alert to retrieve: 10
- Close older occurrences:  Retrieve duplicate alerts:
- Close more severe alerts than current state:

Below this, the 'All available CCMS Monitors' section shows a list of monitors. The 'Entire System' monitor is deselected, indicated by an unchecked checkbox and a red box around the row.

Monitor Set	Monitor
<input type="checkbox"/> SAP CCMS Monitor Templates	<input type="checkbox"/> Enqueue
	<input type="checkbox"/> Entire System
	<input type="checkbox"/> Exchange Infrastructure
	<input type="checkbox"/> Filesystems
	<input type="checkbox"/> J2EE Applications
	<input type="checkbox"/> J2EE Engine
	<input type="checkbox"/> Operating System
	<input type="checkbox"/> Performance Overview
	<input type="checkbox"/> Remote Databases

Figure 13: check off entire system monitor

Step 5: Check on other monitors according to monitoring requirements. You can select not more than 3 monitors.

Step 6: Click 'Save' button to apply the changes.

Step 7: Restart mySAP agent.

### 5.1.1.1.2 Disable CCMS alerts monitoring

Step 1: Logon SAP system via SAP GUI.

Step 2: Run '/n/ibmmon/itm\_config' Transaction code and you will get below configuration window

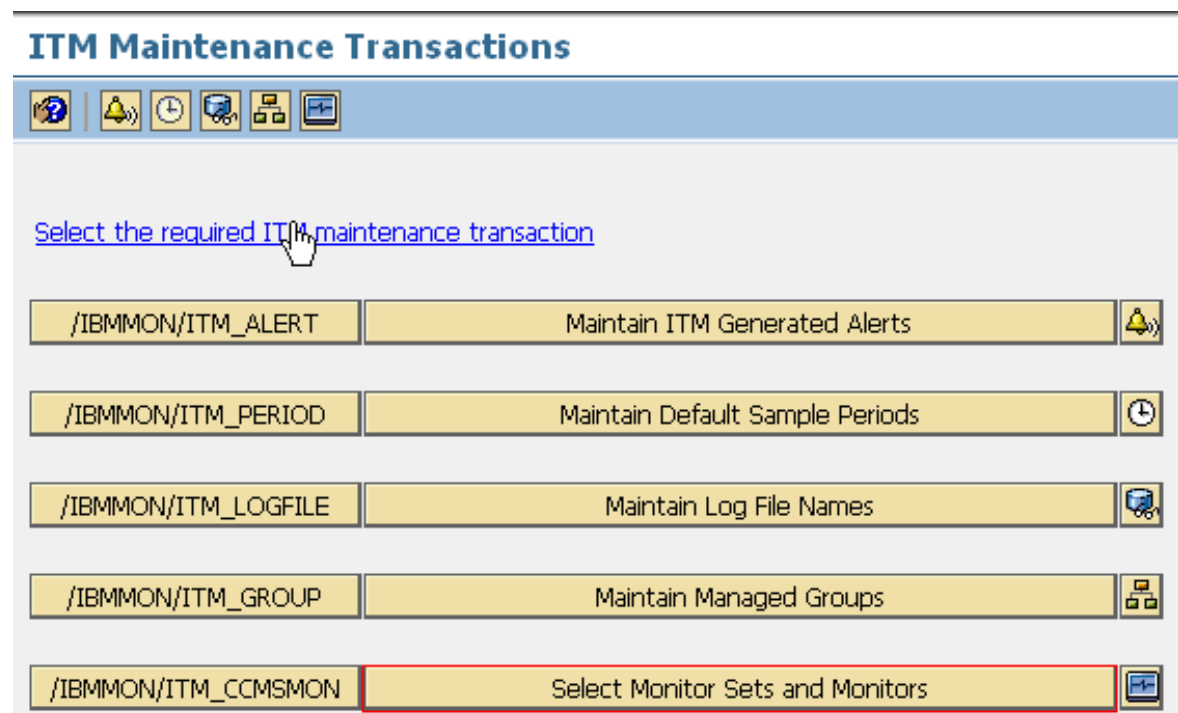


Figure 14: /ibmmon/itm\_config configuration panel

Step 3: Click on 'Select Monitor Sets and Monitors' button.

Step 4: Deselect all the monitors by checking off the options. By default, one monitor 'Entire System' is selected like Figure 5, then all alerts in SAP system will be collected by mySAP agent and that's why there are so many alerts. Then check off the option like figure 6.

Specify parameters for all Alerts

Number of occurrences per alert to retrieve

Close older occurrences  Retrieve duplicate alerts

Close more severe alerts than current state

All available CCMS Monitors Monitors  to  of

Monitor Set	Monitor
<input type="checkbox"/> SAP CCMS Monitor Templates	<input type="checkbox"/> Enqueue
	<input checked="" type="checkbox"/> Entire System
	<input type="checkbox"/> Exchange Infrastructure
	<input type="checkbox"/> Filesystems
	<input type="checkbox"/> J2EE Applications
	<input type="checkbox"/> J2EE Engine
	<input type="checkbox"/> Operating System
	<input type="checkbox"/> Performance Overview

Figure 15: entire system is selected by default

### Select CCMS Monitors Sets and Monitors

Specify parameters for all Alerts

Number of occurrences per alert to retrieve

Close older occurrences  Retrieve duplicate alerts

Close more severe alerts than current state

All available CCMS Monitors Monitors  to  of

Monitor Set	Monitor
<input type="checkbox"/> SAP CCMS Monitor Templates	<input type="checkbox"/> Enqueue
	<input type="checkbox"/> Entire System
	<input type="checkbox"/> Exchange Infrastructure
	<input type="checkbox"/> Filesystems
	<input type="checkbox"/> J2EE Applications
	<input type="checkbox"/> J2EE Engine
	<input type="checkbox"/> Operating System
	<input type="checkbox"/> Performance Overview
	<input type="checkbox"/> Remote Databases

Figure 16: check off entire system monitor

Step 5: Repeat step 4 and step 5 to deselect the other monitors.



Step 6: Click the 'save button' to apply the changes.

Step 7: Restart mySAP agent.

## **5.1.1.2 Disable /IBMMON/ITM\_READ\_STATFILE function module**

### **5.1.1.2.1 Disable /IBMMON/ITM\_RESP\_TIME**

/IBMMON/ITM\_READ\_STATFILE function module reads performance statistical data, and it is called by below function modules.

/IBMMON/ITM\_RESP\_TIME

/IBMMON/ITM\_TRAN\_PERF

/IBMMON/ITM\_LOGON\_INFORMATION

/IBMMON/ITM\_HOSTS

In multiple SAP instances environment, /IBMMON/ITM\_READ\_STATFILE function module may consume lots of memory. Therefore it's a good idea to disable these function modules to get better performance if they are needless.

/IBMMON/ITM\_READ\_STATFILE is called by above four function modules, so to disable /IBMMON/ITM\_READ\_STATFILE function module, it has to disable the calling function modules. Currently above four function modules except /IBMMON/ITM\_HOSTS could be disabled thoroughly. /IBMMON/ITM\_HOSTS reads SAP instances status and update them periodically, so it can not be disabled.

In summary, /IBMMON/ITM\_READ\_STATFILE could not be disabled thoroughly currently because /IBMMON/ITM\_HOSTS could not be disabled, although its interval could be increased.

### **5.1.1.2.2 Disable /IBMMON/ITM\_TRAN\_PERF**

Same steps with [4.1.1.2.1](#)

### 5.1.1.2.3 Disable /IBMMON/ITM\_LOGON\_INFORMATION

Same steps with [4.1.1.2.1](#)

### 5.1.1.2.4 Increase heart beat interval of /IBMMON/ITM\_HOSTS

By default, the heart beat is 10 minutes, if increasing the heart beat to 30 minutes, the sub-node of SAP instances on TEP will become offline in 30 minutes after the corresponding SAP instance becomes active from inactive.

#### UNIX & Linux:

1. Logon to mySAP agent machine
2. Run command 'cd <itm\_home>/config'
3. Append one line CTIRA\_HEARTBEAT=30 into sa.ini file (30 means that the interval of call '/IBMMON/ITM\_HOSTS' is 30 minutes, you can increase correspondingly the value)
4. Save the change and restart mySAP agent.

#### Windows:

1. Logon to mySAP agent machine
2. Open Windows Registry by running command 'regedit'.
3. Navigate: KEY\_LOCAL\_MACHINE->SOFTWARE->Candle->KSA->U06->Environment, create a new 'String Value' named CTIRA\_HEARTBEAT with value 30

Restart mySAP agent

### 5.1.1.3 Disable other function modules

To make mySAP agent have better performance, some function modules could be disabled if the corresponding attribute groups are needless according to monitoring requirements. Please refer [section 6](#) for the relationships between ABAP function modules and attribute groups and refer [section 4.1.1.2.1](#) for how to disable ABAP function modules.

- Step 1: Logon SAP system via SAP GUI
- Step 2: Run 'SE16' transaction code
- Step 3: Input '/IBMMON/ITM\_CNFG' as the table name
- Step 4: Press 'F5' button to create a new entry
- Step 5: Input '/IBMMON/ITM\_RESP\_TIME' in the 'PARM NAME' field and 'NO' in the 'VALUE CHAR' field, Click 'save' button to apply the changes
- Step 6: Restart mySAP agent

## 5.1.2 Decrease default sample period

Some attribute groups have an implicit date and time for each record in the group. For example, the R/3\_Abap\_Dumps attribute group reports the create time for the dump, and the R/3\_System\_Log attribute group reports the create time for the log entry. Because these records have a date and time field, you can obtain a report for a short history of the table instead of just the most recent information. This time interval is the time span for data collection and is used as the real-time interval when collecting data. The /IBMMON/ITM\_PERIOD transaction defines a default sample period (time span for real-time reporting) for each of these attribute groups. The sample period identifies the length of the data sample period starting from the current time and working back in time.

Correspondingly decreasing default sample period is beneficial to mySAP agent performance. Please use '/IBMMON/ITM\_PERIOD' transaction code to decrease the period.

## 5.2 Agent tuning

### 5.2.1 Situation tuning

There are three guidelines to tune performance:

1. Stop needless situations
2. Increase sampling interval correspondingly
3. Distributing situation to limited managed systems but not \*SAP\_R/3 in multiple SAP instances environment with below steps:

Step 1: Open situation editor

Step 2: Click the situation need to edit and then select distribution tab.

Step 3: Remove \*SAP\_R3 from assigned system list by clicking button in red

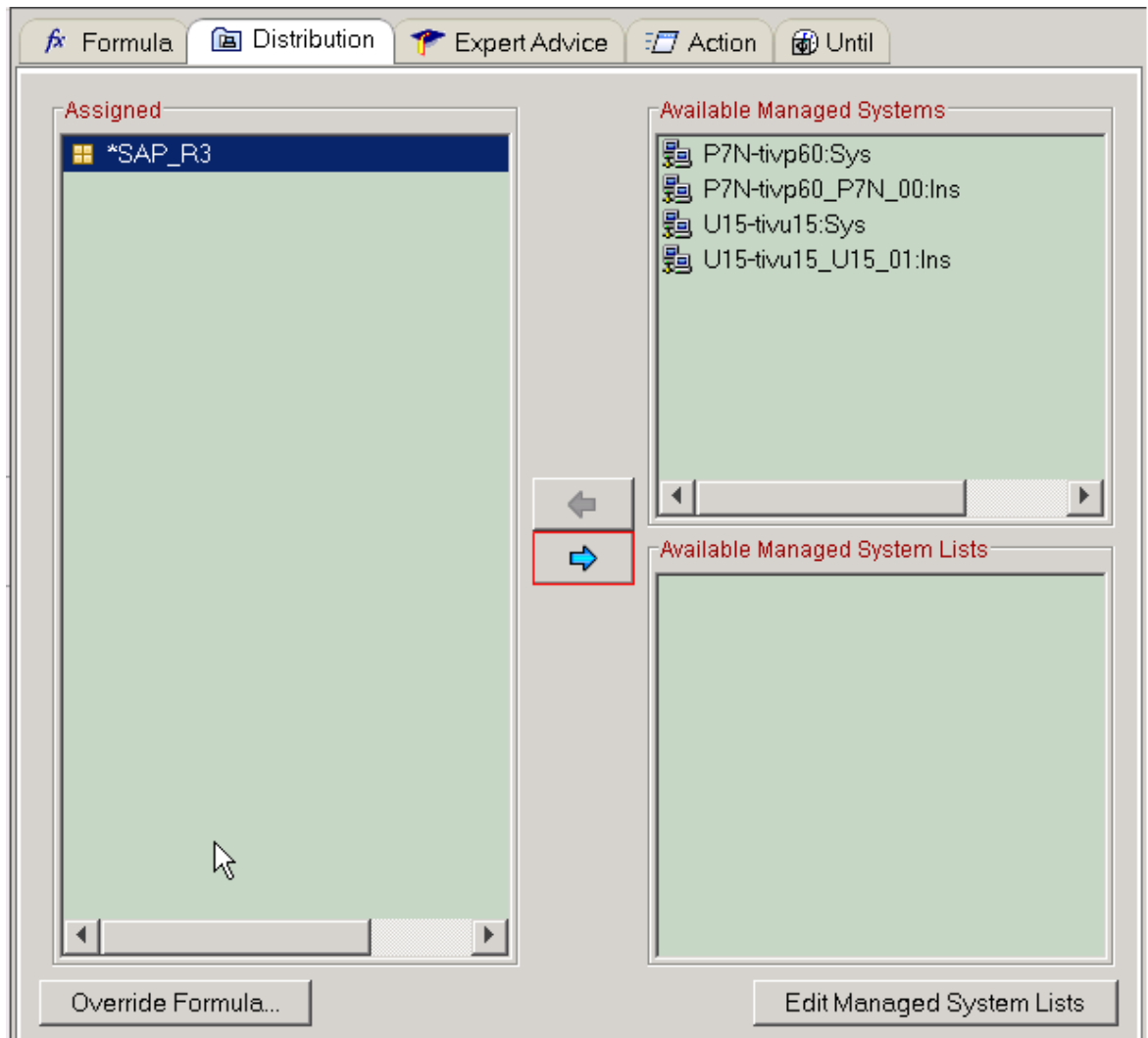


Figure 17: remove \*SAP\_R3 from managed system list

Step 4: Assign specific managed system from 'Available Managed System' list by click button in red.

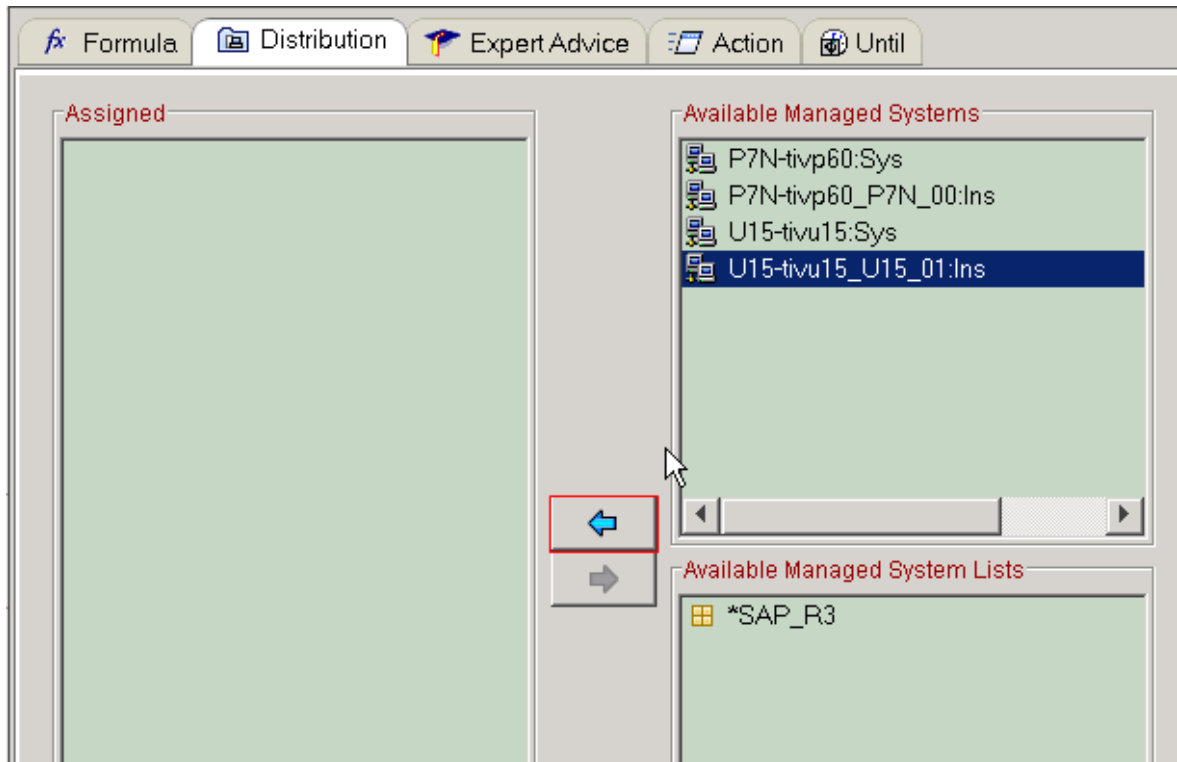


Figure 18: assign specific managed system from 'Available Managed Systems'

Step 5: Save the changes

## 5.2.2 Historical data collection tuning

1. Stop needless historical data collection
2. Increase historical data collection interval correspondingly

# 6 mySAP agent images

## 6.1 mySAP agent 6.1

## 6.1.1 GA

Download from IBM Xtreme software download site to download the GA Image

Part Number	Product Name
C91N2ML	IBM Tivoli Monitoring for Applications V6.1: Language Support for mySAP agent on Windows Platforms Multilingual
C90TTML	IBM Tivoli Monitoring for Applications V6.1: Language Support for mySAP agent on Unix Platforms, Multilingual
C973AIE	IBM Tivoli Monitoring for Applications V6.1 mySAP agent AIX, Solaris, English International
C93QZIE	IBM Tivoli Monitoring for Applications mySAP agent V6.1 Windows Platforms, International English

Table 7: mySAP agent images

## 6.1.2 Latest IFix

The latest ifix for sap agent 6.1 is [6.1.0-TIV-ITM\\_SAP-IF0015](#)

## 6.2 mySAP agent 6.2

### 6.2.1 GA

Part Number	Product Name
C17LHIE	IBM Tivoli Monitoring for Applications V6.2 Base, Multiplatform, English
C17LIML	BM Tivoli Monitoring for Applications V6.2 Language Support, Multiplatform, Multilingual

Table 8: mySAP agent 6.2 GA images

### 6.2.2 Latest IFix

The latest ifix for sap agent 6.2 is: [6.2.0-TIV-ITM\\_SAP-IF0008](#)

The 6.2.0-TIV-ITM\_SAP-LA0009 is for mySAP agent full image to tolerantly support Linux x86-64 platform.

It can be downloaded with your intranet id and password from this link  
<https://supporttools.tivlab.austin.ibm.com/sendlifix/SendFixCustSignIn.jsp>

## 7 Useful links

1. The Info Center User Guide of ITCAM for Application: mySAP agent  
[http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/index.jsp?topic=/com.ibm.itcama.doc\\_6.2/welcome.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v24r1/index.jsp?topic=/com.ibm.itcama.doc_6.2/welcome.htm)
2. Data collected by ITCAM for Application: mySAP agent  
<http://www-01.ibm.com/support/docview.wss?uid=swg21290247>
3. Developworks wikis about ITCAM for Application: mySAP agent  
Troubleshooting  
<https://www.ibm.com/developerworks/wikis/display/tivolimonitoring/SAP+Agent>

## 8 FAQs

**Question 1:** Does mySAP agent really support the SAP applications and components listed in user guide?

**Answer:** 'Applications and components supported' section in mySAP agent user guide page 6 lists the supported applications and components including PI/XI and solution manager, but customer may find that there are no specific workspaces for these applications and components, so the question comes: does mySAP agent really support the applications and components described in user guide?

Currently mySAP agent provides the monitoring for ABAP application servers but does not provide specific monitoring for applications or components running on these servers. The supported applications and components in 'Applications and components supported' section means that mySAP agent provide monitoring for the ABAP application server which they are running on but not the specific applications and businesses, therefore there are no specific workspaces for these applications and components. What's more, mySAP agent only provides support for ABAP stack server and does not provide support for Java stack server.

**Question 2:** Does mySAP agent work in cluster environment?

**Answer:** No, currently it can not work in cluster.

**Question 3:** Why there are so many mySAP agent userid connections to SAP instances and any way to decrease?

**Answer:** mySAP agent connect to SAP system via RFC connection and call agent function modules to retrieve data from SAP system and all the instances that belongs to the SAP system. So there is only one RFC connection from machine where mySAP agent is installed to SAP system. When run agent function module to retrieve data from SAP instances, SAP system will create an internal RFC connection to each instance. At the same time, when run the agent function module on one instance, it calls SAP provided function modules which may need create internal RFC connections to other SAP instances to get data, that's why many agent userid connections to each SAP instances. After consulting with SAP service, get below confirmation about how RFC connection works:

"On the R/3 side the connections are kept for the total time where the client transaction is active.

Most applications choose not to do any special handling and so the system defaults to keeping the RFC connection open as long as the context (ie. transaction) is active to avoid re-authentication and session establishment.

Thus, RFC connections are held until a transaction is finished. This is the way that RFC connections were designed to work. The RFC connection does not close until the transaction is exited.

This is because of performance issues, since setting up a connection and its server side session is time/space consuming.

For external RFC clients, such as C- or visual basic programs, the programmer has to close the connection via RfcClose function. If the client side opens then connection it is also up to them to close the connection."

By default, mySAP agent does not close RFC connection after calling function modules each time to avoid performance problem just as SAP mentioned above. While it provides an option to close RFC connection after calling function module each time automatically and re-connect for the next time, as a result, large numbers of agent userid connections on each SAP instance will disappeared. But customer MUST be aware of the potential performance issues for both SAP system and mySAP agent because of frequent external and internal RFC connection.



Here are detailed steps to enable closing RFC connection each time.

### Unix & Linux:

1. `cd $ITM_HOME/config/.ConfigData`
2. Modify `ksaenv` and change below line.  
Original  
`U15|SAPCLOSERFC|0|`  
Modified  
`U15|SAPCLOSERFC|1|`
3. `cd $ITM_HOME/config`
4. Modify `sa_U15.config` and change below line.  
Original  
`SAPCLOSERFC='0'`  
Modified  
`SAPCLOSERFC='1'`  
Notes: U15 is the SID mySAP agent monitored
5. Restart mySAP agent.

### Windows:

1. Open Windows Registry by running command 'regedit'.
2. Navigate: `KEY_LOCAL_MACHINE->SOFTWARE->Candle->KSA->U06->Environment` and create a new 'String Value' as below picture

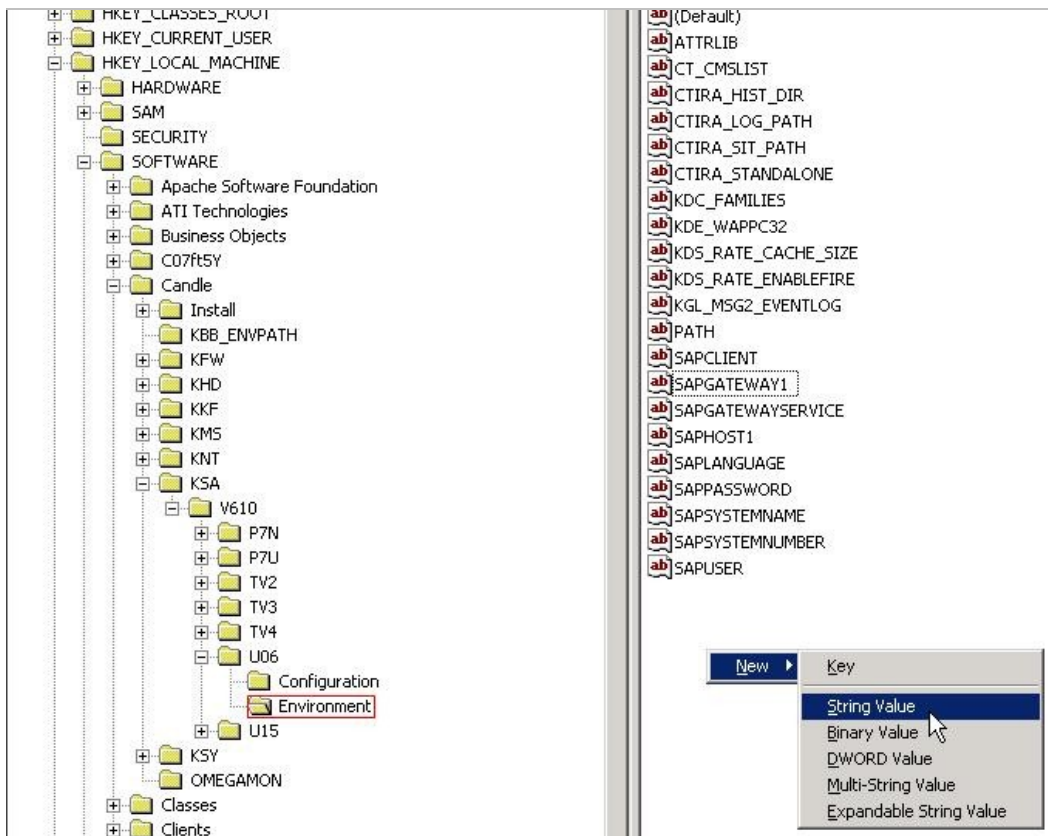


Figure 19: Agent configuration in Windows registry

3. Input 'SAPCLOSERFC' as the name of the new 'String Value'
4. Double click on 'SAPCLOSERFC' item and input 1 as the value in the next window as below picture

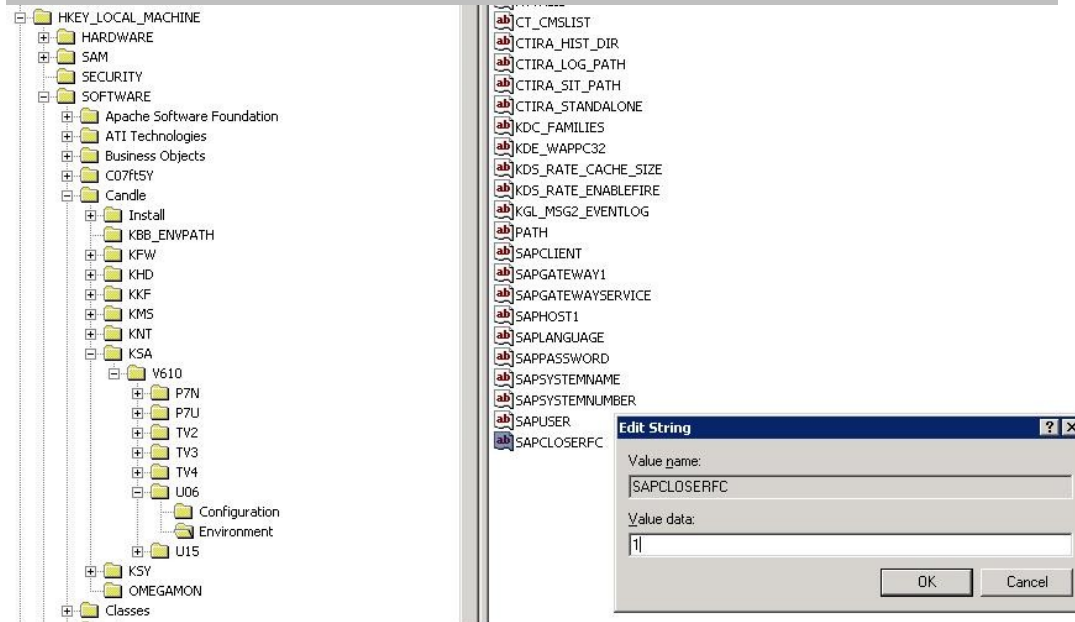


Figure 20: Add SAPCLOSERFC option

5. Save the change.

## 6. Restart mySAP agent.

**Question 4:** Does IBM Tivoli Monitoring for Application: mySAP agent support SAP NetWeaver Process Integration (PI) monitoring?

**Answer:** Currently IBM Tivoli Monitoring for Application: SAP does not support PI monitoring, but there is a solution as below to monitor PI alerts with IBM Tivoli Monitoring for Application: mySAP agent. This solution is only limited to PI alerts monitoring.

<http://www-01.ibm.com/support/docview.wss?uid=swg21402740>

**Question 5:** How to disable ITM\_RSPO1043 job in SAP system scheduled by mySAP agent?

**Answer:** ITM\_RSPO1043 job in SAP system is scheduled by mySAP agent ABAP code to run the spool consistency check. It could be disabled in '/n/ibmmon/itm\_alert' transaction code in SAP system if spool consistency check is not needed. Please follow below steps to disable it.

1. Logon to SAP system via SAP GUI.
2. Run '/n/ibmmon/itm\_alert' transaction code.
3. Check off the 'Enabled' option of 'Spool consistency check failed'.
4. Save the changes.
5. Restart mySAP agent.

**Question 5:** What are the detailed descriptions about "Special alerts generated by the Monitoring Agent for SAP" in the infocenter of IBM Tivoli Monitoring for Applications: mySAP agent?

**Answer:** In addition to reporting alerts from CCMS, this workspace also reports internal alerts raised by the agent itself. These predefined agent alerts are listed in the following table.

Alert Number	Alert Severity	Alert Class	Alert Message	Description
9900	Critical	System	Lost connection to SAP system SSS SSS = SID	mySAP agent can not connect to SAP System with configured parameters. Please check if configured parameters are correct and SAP System is running
9901	Critical	Update	Updates not active	mySAP agent generates this alert if any update tasks are not active
9902	Critical	Update	Terminated updates	Some update tasks are terminated
9903	Warning ( <i>nn</i> > 0) Critical ( <i>nn</i> => 10)	Update	<i>nn</i> updates pending  <i>nn</i> = number	The count of pending update tasks exceeds the threshold
9904	Warning ( <i>nn</i> => 5) Critical ( <i>nn</i> => 10)	Printer	<i>nn</i> output requests pending for printer <i>PPPP</i>  <i>nn</i> = number <i>PPPP</i> = printer	Some printers are pending, please check printer status.
9905	Critical	System	Logon not possible	The RFC client can not logon the SAP instance.
9906	Critical	System	Spool consistency check failed	Trigger mySAP agent job RSPO1043 to check the Spool consistency. If check failed, the alert will be generated by mySAP agent into alerts workspace. Customer can cancel this job via referring to the section <b>Maintain ITM generated alerts</b> in the link : <a href="http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itmfa.doc/main_r314.htm?resultof=%22%2f%69%62%6d%6d%6f%6e%2f%69%74%6d%5f%63%6f%6e%66%69%67%22%20">http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itmfa.doc/main_r314.htm?resultof=%22%2f%69%62%6d%6d%6f%6e%2f%69%74%6d%5f%63%6f%6e%66%69%67%22%20</a>
9907	Warning ( <i>nn</i> => 1) Critical ( <i>nn</i> => 2)	Database	<i>nn</i> Oracle exclusive lock waits  <i>nn</i> = number	Oracle exclusive lock waits number exceeds the corresponding threshold. This alert will be generated by mySAP agent. Please SAP Admin or Oracle DBA to check what happens
9908	Warning ( <i>nn</i> => 30) Critical ( <i>nn</i> => 60)	Database	Oracle exclusive lock wait pending <i>nn</i> seconds  <i>nn</i> = number	The alert notifies ITM user, Some oracle exclusive lock waits are pending longer than the threshold. Please SAP Admin or Oracle DBA to check what happens

9909	Critical	System	Statistics file too large (The SAP statistics file is over twice the optimum size.)	The size of stat files (by default, they are stat* files under /usr/sap/<SID>/<INSTANCE NAME>/data) are bigger than wlparms-statfilesz * 125 / 100 * 1024 * 1024 bytes. Note: wlparms is retrieved by calling function module SAPWL_WORKLOAD_GET_PARAMETERS
9910	Warning	System	Performance collector job not running	Check if jobs <b>"SAP_COLLECTOR_FOR_PERFMONITOR"</b> is scheduled in the standard jobs, if not, please schedule this job. On SAP R/3 systems, you must set the SAP system time zone to match the operating system time zone in order for SAP statistics to be collected with the correct time stamps. You must make this change in order for the mySAP agent to successfully collect data. Please see <b>SAP Note 926290</b> located in the SAP Support Portal for more information on this problem.
9911	Warning ( <i>nnnn</i> > 1000) Critical ( <i>nnnn</i> => 1500)	Tivoli	Excessive data collected for workspace, <i>nnnn</i> rows deleted workspace = workspace name <i>nnnn</i> = number	Excessive data are collected for a workspace. According to the ITM framework recommendation for improving the monitoring performance, some rows are deleted from the collection result when excessive data are collected. Customer can customize the workspace to display data in more short period.

9912	Critical	CCMS Alerts	CCMS alerts collection did not complete. Last started at HH:MM:SS on MM/DD/YYYY	CCMS alerts collection does not complete in the reasonable period. Please consult with SAP admin why there are so many alerts in the SAP System. SAP Admin also can refer to the link to narrow down the <b>Monitoring Set</b> and <b>Monitoring Name</b> to reduce the Alerts collected by mySAP agent.  <a href="http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itmfa.doc/main_r314.htm?resultof=%22%2f%69%62%6d%6d%6f%6e%2f%69%74%6d%5f%63%6f%6e%66%69%67%22%20">http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/topic/com.ibm.itmfa.doc/main_r314.htm?resultof=%22%2f%69%62%6d%6d%6f%6e%2f%69%74%6d%5f%63%6f%6e%66%69%67%22%20</a>
9913	Critical	System	Operating system collector (saposcol) error occurred - eeeee	Some wrong with saposcol process, please check saposcol process status.
9914	Critical	Database	Oracle statistics are not available, verify performance collector job is running	Oracle statistics functions are not available, Please ask SAP Admin to verify Oracle statistics is enabled.
9915	Warning	System	Reconnect to SAP system	mySAP agent reconnects with SAP System instances which are used to configure the mySAP agent.

Table 8: predefined agent alerts

## 9 Technotes (Trouble shootings)

**Problem 1:** When customer imports the transports file in the following patches for mySAP agent, customer will meet with the problem that the transport file can't be imported successfully and there are some ABAP dumps with the key word ITM-ITM-ILED\_STAT\_FILE\_READ\_REMOTE or ITM-D\_STAT\_FILE\_STATRECS\_FRAME.

**Solution:** The major reason of this problem is caused by not scheduling the SAP\_COLLECTOR\_FOR\_PERFMONITOR standard job and the statistical data of

today doesn't exist. And the mySAP agent depends on SAP statistics collection working correctly on the SAP systems it monitors. Customer can follow the steps to solve this problem.

1. Open the SAPGUI, logon the SAP R/3 System which is monitored by the mySAP agent.
2. Run the ST03 transaction code, expand the workload, <hostname><SAPSYSTEMNAME><SAPSYSTEMNUMBER> and Day sub-tree node, and make sure the day node includes the today sub-tree node.
3. Double click the today sub-tree node and make sure the statistical data of today can be displayed as below:

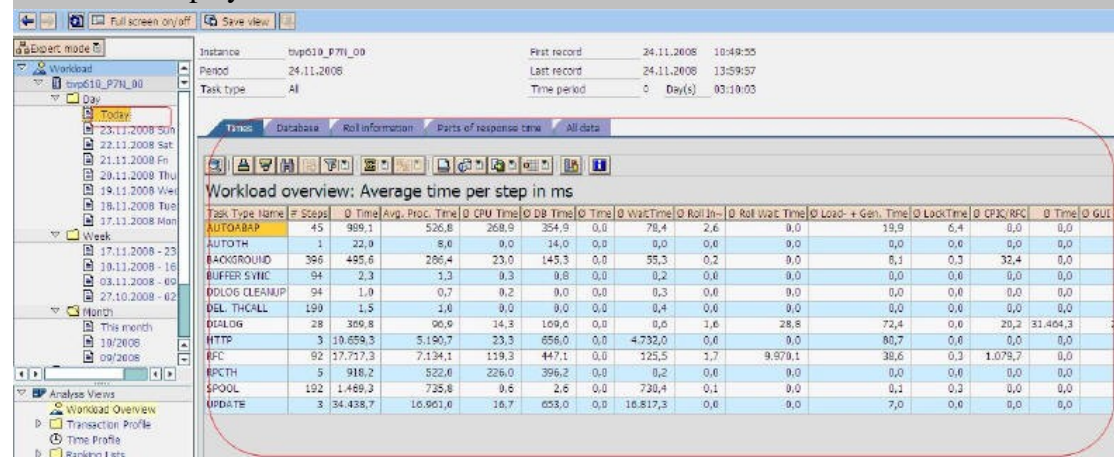


Figure 21: ST03 transaction

4. If there is no statistical data or no today sub-tree node, please run SM36 TCode, and check the jobs "SAP\_COLLECTOR\_FOR\_PERFMONITOR" is scheduled in the standard jobs, if not, please schedule this job. On SAP R/3 systems, you must set the SAP system time zone to match the operating system time zone in order for SAP statistics to be collected with the correct time stamps. You must make this change in order for the mySAP agent to successfully collect data. Please see SAP Note 926290 located in the SAP Support Portal for more information on this problem.

Note: If the statistical data of today exists, but there are still some ABAP dumps about ITM-ITM-ILED\_STAT\_FILE\_READ\_REMOTE. Please do the following steps to avoid those ABAP dumps.

- 1) Logon SAPGUI and run the SE16 transaction code
- 2) Input the /IBMMON/ITM\_CNFG as the table name, and insert a parameter STATFILE\_DUMPS with NO as its char value.
- 3) Click save button.
- 4) Re-import the transport into SAP System if the abap dump is generated during importing transport.
- 5) Restart the mySAP agent.

**Problem 2:** When install ITM for SAP 6.2 iFix6 application support on TEMS on 64bit Linux platform, the iFix installer failed with below error messages in log files: (Sep 25, 2008 9:24:21 AM), Install, com.ibm.tivoli.itm.install.appsupport.SeedTEMSAction, dbg, /banktools/itm6/lx8266/ms/bin/ksminst: error while loading shared libraries: libkbb.so: wrong ELF class: ELFCLASS64

**Solution:** The root cause of the problem is incorrect libkbb.so. After ITM 6.2 TEMS installed, we can find libkbb.so with different size located in three different directories as below:

```
rw-rw-rw- 1 root root 421690 Jun 12 19:15 ./lx8266/ms/lib/libkbb.so
rw-rw-rw- 1 root root 509092 Jun 12 19:15 ./lx8266/ui/lib/libkbb.so
rw-rw-rw- 1 root root 509092 Jun 12 19:15 ./tmaitm6/lx8266/lib/libkbb.so
```

During my testing, I found that the correct libkbb.so on Redhat Linux 64bit should be the one under ./lx8266/ms/lib/. The ones under ./lx8266/ui/lib/ and ./tmaitm6/lx8266/lib/ are incorrect. The ITM fixpack installer load wrong libkbb.so from ./lx8266/ui/lib/ or ./tmaitm6/lx8266/lib/, that's why installer failed with below errors,

```
/banktools/itm6/lx8266/ms/bin/ksminst: error while loading shared libraries:
libkbb.so: wrong ELF class: ELFCLASS64
```

Based on above findings, I got a workaround for this problem and the detailed steps as below:

1. Enter into \$CANDLEHOME with command 'cd /banktools/itm6'
2. Backup libkbb.so under \$CANDLEHOME/lx8266/ui/lib/ with command 'mv ./lx8266/ui/lib/libkbb.so ./lx8266/ui/lib/libkbb.so.bak'
3. Backup libkbb.so under \$CANDLEHOME/tmaitm6/lx8266/lib/ with command 'mv ./tmaitm6/lx8266/lib/libkbb.so ./tmaitm6/lx8266/lib/libkbb.so.bak'
4. Copy libkbb.so from \$CANDLEHOME/lx8266/ms/lib/ to \$CANDLEHOME/lx8266/ui/lib/ and \$CANDLEHOME/tmaitm6/lx8266/lib/ with commands:

```
cp ./lx8266/ms/lib/libkbb.so ./lx8266/ui/lib/libkbb.so
cp ./lx8266/ms/lib/libkbb.so ./tmaitm6/lx8266/lib/libkbb.so
```
5. After above steps, re-run the ifix installer and this time the installation will be successful.
6. When ifix installed finished, restore the libkbb.so under ./lx8266/ui/lib/ and ./tmaitm6/lx8266/lib/ with below commands:

```
cp -f ./lx8266/ui/lib/libkbb.so.bak ./lx8266/ui/lib/libkbb.so
cp -f ./tmaitm6/lx8266/lib/libkbb.so.bak ./tmaitm6/lx8266/lib/libkbb.so
```



**Problem 3:** Successfully install mySAP agent on windows server 2003 enterprise edition service pack 2, but failed to start agent via MTEMS due to below error:  
"The service did not respond to the start or control request in a timely fashion".

**Solution:** For SAP Releases 4.6D EX2, Web AS 6.40 EX2, SAP Netweaver 7.01 and 7.10 and higher, download the installation program vcredist\_<platform>.exe (C runtime 8.0; this is contained in Microsoft Visual C++ 2005 SP1 Redistributables) from the Microsoft download page. Then execute the program. The vcredist\_<platform> installation packages are also delivered with the installation master DVDs of SAP Releases 7.01 and 7.10 and are located in the NTPATCH directory.

Windows X86 (32-bit)

<http://www.microsoft.com/downloads/details.aspx?FamilyID=200B2FD9-AE1A-4A14-984D-389C36F85647&displaylang=en>

Windows X64 (64-bit)

<http://www.microsoft.com/downloads/details.aspx?FamilyID=EB4EBE2D-33C0-4A47-9DD4-B9A6D7BD44DA&displaylang=en>

Windows IA64 (64-bit)

<http://www.microsoft.com/downloads/details.aspx?FamilyID=747AAD7C-5D6B-4432-8186-85DF93DD51A9&displaylang=en>

For detailed information, Please refer to SAP note 684106.

**Problem 4:** Sometimes, when mySAP agent running and retrieving the data via calling the function module, there are some error messages in the mySAP agent's logs as below: KSA0301 errmsg: Error message: Overflow for arithmetical operation (type P) in program SAPLSTUB and Logon the SAPGUI, run the ST22, some ABAP Dump runtime errors with keyword "COMPUTE\_BCD\_OVERFLOW", in the detailed ABAP Dump error analysis, the \*"SAPTUNE\_BUFFER\_QUALITIES"\* can be found

**Solution:** It is a known issue for SAP R/3 system, please logon the SAP Service website and refer to the detailed information of SAP Note: 1012604 to solve the problem.

**Problem 5:** In the mySAP agent log files, the error messages "Name or password incorrect (repeat logon)" occurs

**Solution 1:** Sometimes the RFC library fails to get the RFC connection from SAP System even though the username and password are correct. This limitation will cause "Name or password incorrect (repeat logon)" error message in mySAP agent. Please follow the SAP Note: 987166 to solve this problem.

**Solution 2:** Please first make sure the password is correct and then verify the user is created in SAP system. Use 'SU01' transaction code to verify the user exist or not, if it doesn't exist, there are two possible reasons: One is customer use Central User Administration (CUA) to manage SAP user and password and another one is customer doesn't specify client number when install ABAP transport into SAP system.

At first, ask customer to confirm whether he is using CUA to manage SAP user and password. If yes, there are some manually steps in mySAP agent User Guide that must be done to manually create user and password. I attached the section as below about CUA in User Guide for customer reference.

Central User Administration (CUA):

If you want to use the predefined user ID and authorization role to monitor a SAP system set up with Central User Administration, perform one of the following steps:

1. Install the transport into the Central User Administration parent logical system client.
2. Manually create the user ID or role in the client where you want to install the transport. The user ID or role is in the client where the transport is installed (imported).
3. Manually create the user ID or role in the Central User Administration parent logical system client and distribute the user ID or role to the client where the agent is to run.
4. Manually create the user ID or role in the Central User Administration parent logical system client and run the agent in this client.

Secondly, if customer doesn't use CUA, so ask customer to reinstall ABAP transport into SAP system with specifying client number again, that's because if customer doesn't specify client number, the user may not be created successfully. If customer us 'TP' command to install ABAP transport, please make sure he has specify the client number as below:

```
Non-Unicode
tp addtobuffer ITMK620_00048 SID
pf=\usr\sap\trans\bin\PROFILE_NAME
tp import ITMK620_00048 SID client=nnn U16
pf=\usr\sap\trans\bin\PROFILE_NAME
```

## Unicode

```
tp addtobuffer ITMK620_00048U SID
pf=\usr\sap\trans\bin\PROFILE_NAME
tp import ITMK620_00048U SID client=nnn U16
pf=\usr\sap\trans\bin\PROFILE_NAME
```

If customer use STMS transaction code to import the transport requests. Ensure that the client number is specified, and ensure that the Import Transport Request Again and the Overwrite Objects in Unconfirmed Repairs options are checked on the Import Options tab of the Import Transport Request window. Here is an example:

After reinstall the transport, please run 'SU01' transaction code and confirm the 'IBMMON\_AGENT' user is created or not. If the user is successfully create, please restart mySAP agent to verify whether customer problem is fixed or not; If the user is not create, please check if any ABAP dump generated.

Thirdly, if the 'IBMMON\_AGENT' user is not created correctly in above steps, customer could manually create it and assign required roles/profiles to it. Here are detailed steps:

1. Check whether '/IBMMON/AUTH' profile is created or not, if it doesn't exist, create it and assign below roles to this profile

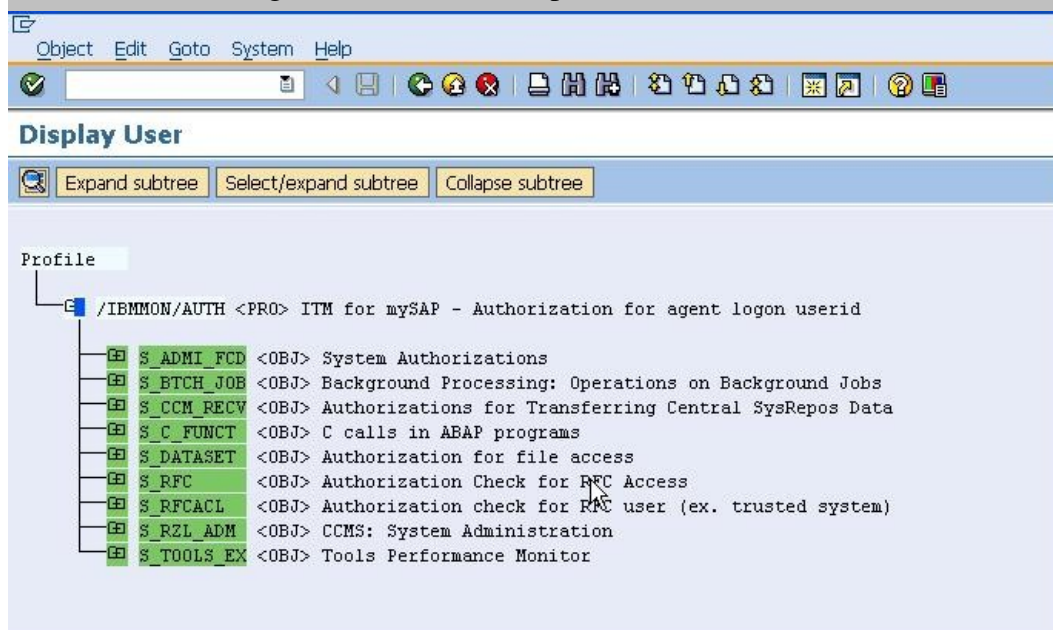


Figure 22: '/IBMMON/AUTH' profile

2. Create a user 'IBMMON\_AGENT' with 'Communications' type, and then assign the profile created to it as below

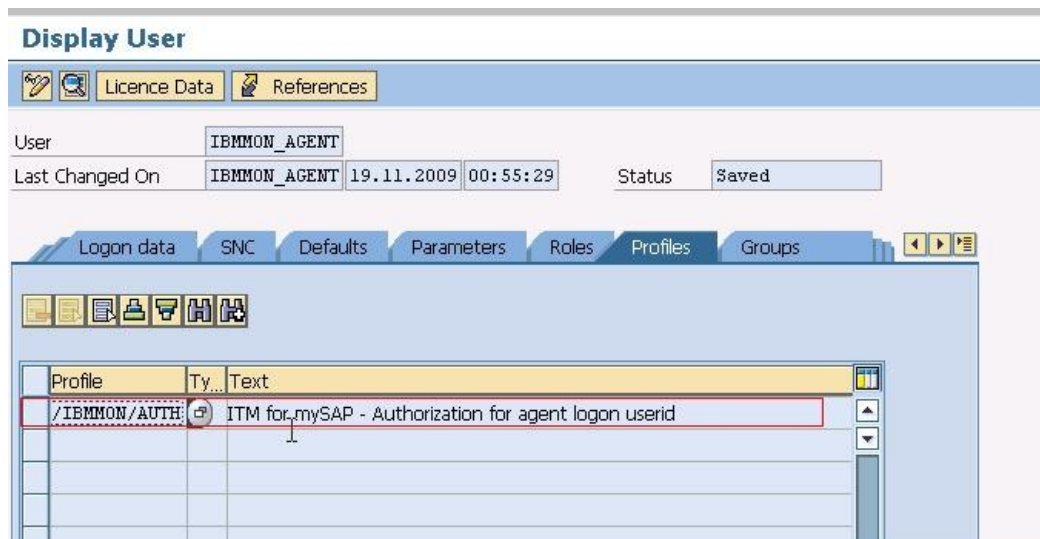


Figure 23: Assign profile

3. Save all the changes.
4. Restart the mySAP agent and verify customer's problem fix or not.

**Problem 6:** mySAP agent built-in situation 'R3\_Instance\_Down2\_Crit' or customized situations for inactive instances do not fire when SAP instance is stopped.

**Solution:** The root cause of the problem is the inactive instances are not configured or misconfigured in 'RZ04' transaction code. When you view SAP instances status in 'RZ03' transaction code, you will not see the inactive instances status. Please Follow below steps to configure SAP instances correctly in 'RZ04' transaction code and make sure all the instances status are displayed correctly in 'RZ03' transaction code.

1. Connect to SAP system via SAP GUI.
2. Run 'RZ04' transaction code and double click the operation mode
3. Click 'Settings' -> 'Based on current status' -> 'New instance' -> 'Generate'. It will automatically include all active instances and configure them, like picture

Instance Edit Goto Settings System Help

Based on current status Existing instances New Instances Generate

CCMS: Maintain Operation Modes and Instances

Consistency check Profile view

Productive instances and their WP distribution

Host Name	Server Name	Instance Profile OP Mode	WP distribution							
			Dia	BP	BPA	Spo	Upd	Up2	Enq	Sum
tivx012	tivx012_PR1_00	PR1_DVEBMGS00_TIVX012 Normalbetrieb	3	2	-	1	2	2	1	11
tivx012	tivx012_PR1_03	PR1_D03_TIVX012 Normalbetrieb	2	2	-	1	1	-	-	6
tivx012.cn.i	tivx012_PR1_04	PR1_D04_TIVX012 Normalbetrieb	2	2	-	-	-	-	-	4

Figure 24: RZ04 transaction

4. For inactive instances, there are two way to configure it. One is start the instance and repeat step 3 to automatically configure, another one is configure it manually with step 5.
5. Press 'F6' button and input the required values correctly like picture 2

## CCMS: Maintain Instance Data

Current settings   Maintain details   Check profile

Installation data	
Host name	tivx012.cn.ibm.com
SAP system number	05

Start profile	
Profile name	START_D05_TIVX012
Display   Change	

Instance profile	
Profile name	PR1_D05_TIVX012
Display   Change	

Admin. user for start/stop	
User name	

Instance details	
Appl. server name	tivx012_PR1_05
Instance name	D05
Operating sys. type	Windows NT
Home directory	D:\usr\sap\PR1\D05\work
Start profile	D:\usr\sap\PR1\SYS\profile\START_D05_tivx012
Inst. profile	D:\usr\sap\PR1\SYS\profile\PR1_D05_tivx012

Number of work processes	
According to InstProf	
Dialog	2
Background	2
Update	0
Update2	0
Enqueue	0
Spool	0
Total	4

Figure 25: Maintain Instance Data

6. Save all the changes.
7. Verify all the instances are configured correct in 'RZ04' transaction code and check all instances are showed in 'RZ03' transaction code and verify their status are correct like picture 3

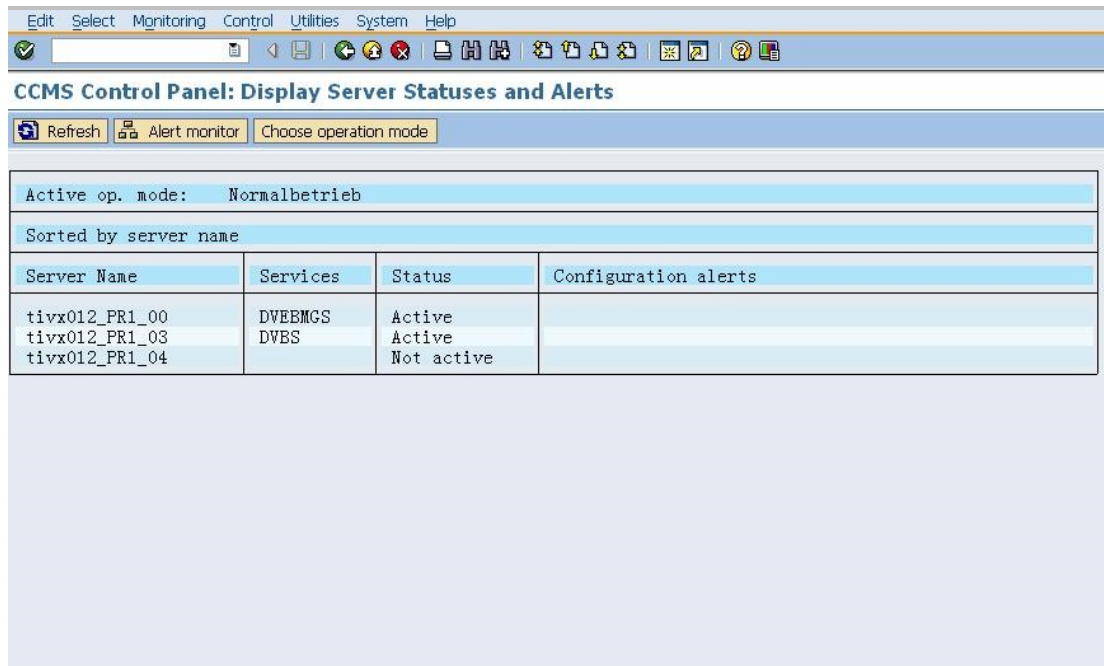


Figure 26: Check all instances

8. Restart mySAP agent and verify the situation could be fired.

**Problem 7:** On windows platform, if multiple sap agent instances are configured to monitor different sap systems. Sometimes some sap agent instance will go offline and the process of this sap agent instance will automatically exit.

**Solution:** It is a known issue of SAP RFC Library, please refer to the SAP Note: 1135135 to update the RFC library files under %CANDLE\_HOME%/TMAITM6 directory and then restart all the sap agent instances.

**Problem 8:** ksar3, ksanfy or ksapwd utility tools fail to run with library not found error, for example:

```
/usr/lib/hpux64/dld.so: Unable to find library 'libgsk7iccs_64.so'.
/w99q/IBM/ITM/hpi116/bin/ksar3[41]: 16033 Killed
```

**Solution:** Modify the LIBPATH, LD\_LIBRARY\_PATH or SHLIB\_PATH variable used by the utility tools to make sure the required libraries can be located correctly. Do below steps on mySAP agent machine:

1. cd <CANDLE\_HOME>
2. Run command 'find ./ -name libgsk7iccs\_64.so' to find where the library is. If it is not found, please search it from the root folder by running command 'find / -name libgsk7iccs\_64.so'. Replace libgsk7iccs\_64.so of the library required.
3. cd <CANDLE\_HOME>/<ARCH>/bin
4. Edit the utility tools file (ksar3, ksanfy or ksapwd).
5. Append the absolute path of the required library found in to step 2 to the

LIBPATH, LD\_LIBRARY\_PATH or SHLIB\_PATH variable. For example, found libgsk7iccs\_64.so under /opt/IBM/ITM/hpi116/gs/lib64, then append the path to LIBPATH, LD\_LIBRARY\_PATH or SHLIB\_PATH variable.

6. Save the changes.

**Problem 9:** A list of recurring 'gethostbyname' error messages logged in SAP system log.

**Solution:** The root cause of the problem is the mySAP agent calls the SAP kernel call 'RFCControl' to retrieve IP address from user's terminal (hostname). The 'gethostbyname' error messages are thrown out by this kernel call if it fails to retrieve IP address from hostname. Many reasons may cause IP retrieving failure, for example, hostname of SAP user's terminal is not in Domain Name System (DNS).

If all the IP addresses can be retrieved correctly from DNS, these error messages will not occur, otherwise they will be continually logged in SAP system log.

A solution is provided in IBM Tivoli Monitoring for Application: SAP 6.2 IF0008 to give customer a control option to disable retrieving IP addresses and then avoid such error messages in SAP system log. If customer decides to use this function, the 'IP Address' and 'IP Address(v4/v6)' columns have no data in 'Logon Information' workspace, please pay attention to this.

Below are the detailed steps to disable 'gethostbyname' error messages logged in SAP system log:

1. Download IBM Tivoli Monitoring for Application: SAP 6.2 IF0008 and apply this ifix.
2. Logon monitored SAP system via SAP GUI and run 'SE16' transaction code.
3. Enter '/IBMMON/ITM\_CNFG' as the table name.
4. Press 'F5' to create a new entry into this table.
5. Enter 'DISABLE\_LOGON\_IP' in the 'PARM NAME' input field and 'YES' in the 'VALUE CHAR' input field.
6. Save the changes.
7. Restart mySAP agent.

**Problem 9:** When installing the interim fixes of IBM Tivoli Monitoring for Applications: mySAP agent 6.2.0 via itmpatch command, the installation fails with the error message as "./itmpatch: line 128: /opt/ibm/itm/li6263/ui/bin/itmpatch: not found"

**Solution:** To avoid this problem, please install the mySAP agent before installing ITM Framework or agents with version 6.2.2 or higher

For example, the correct installation order should be like:

1. Install mySAP agent 6.2.0
2. Install ITM Framework or agents with version 6.2.2 or higher
3. Upgrade mySAP agent to IF0008 with 6.2.0-TIV-ITM\_SAP-IF0008 package via



**Problem 10:** Failed to display historical data in 'Instance Configuration' workspace on Tivoli Enterprise Portal (TEP) with CTX\_JDBCError errors when data collection location is Tivoli Enterprise Monitoring Server (TEMS) instead of Tivoli Enterprise Monitoring Agent (TEMA).

**Solution:** From the analysis, the problem is generated when the system attempts to write null values on the 'R/3\_Instance\_Configuration' table in data warehouse.

The reason is that some columns are not stored when data collection occurs on TEMS instead that on TEMA, which is due to below documented limitation.

[http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itmfa.doc/main\\_r327.htm](http://publib.boulder.ibm.com/infocenter/tivihelp/v15r1/index.jsp?topic=/com.ibm.itmfa.doc/main_r327.htm).

In this case, NULL values are forcedly inserted into the R/3\_Instance\_Configuration.Managed\_System table/column, which is configured as NOT NULL. Then CTX\_JDBCError errors occur on TEP and Warehouse Proxy Agent log.

There are three workarounds for this problem:

1. Disable the R/3\_Instance\_Configuration attributes group historical collection.
2. Reconfigure historical data collection location of R/3\_Instance\_Configuration attributes group from TEMS to TEMA. Here are the detailed steps:
  - 1) Stop historical data collection of R/3\_Instance\_Configuration attributes group.
  - 2) Stop Warehouse Proxy agent and Warehouse Summarization and Pruning Agent.
  - 3) Delete "R/3\_Instance\_Configuration" table from the Warehouse Database. Notes: Backup the data if needed.
  - 4) Reconfigure the historical data collection location to TEMA on TEP.
  - 5) Start Warehouse Proxy agent and Warehouse Summarization and Pruning Agent.
  - 6) Start historical data collection of R/3\_Instance\_Configuration attributes group.
3. Manually alter the "R/3\_Instance\_Configuration" table in Warehouse database to set Managed\_System allow NULL value.

**Problem 11:** mySAP agent version 6.1 not work when the OS Agent or any other agent on that machine is upgraded to 6.2 or 6.21

**Solution:** When the Tivoli Monitoring for Operating Systems or any other Monitoring Agent is upgraded to 6.21 or 6.2 while the mySAP agent is still at 6.1, the mySAP agent no longer works. This is because upgrading the underlying OS Agent also upgrades the underlying Tivoli Framework on the system. The 6.x Framework layer is responsible for password encryption.

The encryption on 6.2 or 6.21 versions of Tivoli Monitoring uses AES256 which is different from what the mySAP agent version 6.1 uses. The failure is caused because the mySAP agent is using an older algorithm to decrypt the password for the user configured to connect to the SAP server. ITM Framework of 6.2 or 6.21 synchronizes the mySAP agent configuration file every time the agent starts thus causing a failure to decrypt the password.