

insight 6 for SAP

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IBM Insight for SAP - Version 6.0

Overview of Process:

This software captures performance and workload statistics generated by your production SAP systems. The captured statistics are written to the hard drive of the Windows PC dedicated for the collection process. When the collection process is complete, the data is packaged and sent (e-mail, ftp or CD/DVD) to IBM for analysis. A report will be sent to you detailing how your production systems were utilized. The provided collection tool is designed to have a minimal impact on your production environment.

It is recommended that you collect at least **one to three days** of statistics during a peak period to improve the quality and value of the report.

Insight Host CPU Utilizations

Most of Insight's information is related to just the SAP system where Insight was run. However, Insight's host CPU utilization has a wider perspective. It is at a "host view". As such, it includes all the work running in that operating system image -- not just the SAP system where Insight was run. Running unrelated work with SAP will increase the "Host CPU Utilization". Similarly, if you were running two SAP systems on the same operating system image (e.g., in a single zSeries LPAR or with MCOB) the Insight "Host CPU utilization" is for both SAP systems.

However, the "Host CPU Utilization" does not include any work running in other LPARs.

zSeries (S/390) RMF Data (sizing customers only)

In the z/OS (or OS/390) SAP environment, we strongly suggest you also provide us with Resource Measurement Facility (RMF) data that corresponds to the Insight observation interval. This can allow us to better take into account Logical Partitioning, the specific machine type, as well as other z/OS items. The following is a short description of which RMF information we would like. This description assumes familiarity with RMF. So you should pass this on to your z/OS people.

We would like to get the text output of a run of RMF's Postprocessor (ERBRMFPP) sent with the Insight data. Specifically we would like to see the Summary Report, the CPU Activity Report (which includes the Partition Data Report), and the Paging Activity Report. The interval of the report should, as best as possible, correspond to the Insight interval. For example, assume Insight was run from 0800 hrs January 6, 2003 to 08:00 hrs January 9, 2003. Because of limitations of the RMF, this would entail three Postprocessor runs (and the associated RMF reports). See the Postprocessor control statements below as an example.

```
First report (8 AM to 6 PM January 6):
SUMMARY(INT,TOT) /* Summary reports */
REPORTS(CPU) /* CPU activity report - CPU and LPAR information */
REPORTS(PAGING) /* Paging activity report - memory installed how used */
DINTV(0030) /* Length of each reporting interval is 30 minutes */
RTOD(0800,1800) /* Starting and ending time of day to look at - 10 hours */
DATE(01062003,01062003) /* What day to look at - Jan 6, 2003 */
```

```
Second report (January 7 and 8 combined):
SUMMARY(INT,TOT) /* Summary reports */
REPORTS(CPU) /* CPU activity report - CPU and LPAR information */
REPORTS(PAGING) /* Paging activity report - memory installed how used */
DINTV(0100) /* Length of each reporting interval is 1 hour */
RTOD(0000,2400) /* Starting and ending time of day to look at - all day */
DATE(01072003,01082003) /* What days to look at - Jan 7-8, 2003 */
```

```
Third report (0000 hrs to 0800 hrs January 9):
SUMMARY(INT,TOT) /* Summary reports */
```

REPORTS(CPU) /* CPU activity report - CPU and LPAR information */
REPORTS(PAGING) /* Paging activity report - memory installed how used */
DINTV(0015) /* Length of each reporting interval is 15 minutes */
RTOD(0000,0800) /* Starting and ending time of day to look at - 8 hours of night time batch */
DATE(01092003,01092003) /* What day to look at - Jan 9, 2003 */

Send the SYSOUT(s) to the PC that is running Insight. On this PC, rename the file(s) with a *.RMF file type and add the file(s) to the Insight data directory created by the Insight Collector when started. Do this after the data collection phase but before the reduction. The Insight Reducer will then automatically compress the entire directory and send all the data to IBM.

Additionally, we recommend that you save all the SMF type 70 through 78 records for this interval in case you might want to do further analysis later. For example, after IBM has sent you the Insight results, you want to look in more detail at the eight hour peak CPU utilization period identified by Insight.

Usage Requirements:

A Dedicated PC for Data Collection:

- IBM compatible with at least a 2 GHz Core processor and 4GB of RAM.
- Installation of Windows 7, Server 2008, Server 2003, Vista or XP operating system.
- Disk space requirements: 1GB free space for each SAP system.
- PC must be on LAN with direct TCP/IP access to all production servers (except for a standalone database server).
- The TCP/IP address of all server short host names (as seen in SM51) must be resolved by either “hosts” file entries, or DNS with a consistent, fully qualified domain. In an SP environment, short host names may require an alias in the PC’s hosts file to resolve the switch host names over the client token-ring or ethernet network. Note: do not specify a domain in the SAP logon parameters.

Example alias entry in the PC’s hosts file:

#IP address	ethernet	switch
#	hostname	hostname
9.93.100.21	appsv1en	appsv1cs

- The PC must be powered on during the entire data collection process.
- Disable the PC’s power management (suspend) during the collection process.
- Since the Insight Report is based on the PC clock, the PC time must be accurate.

SAP system:

- *Insight* supports SAP releases 4.0B and above.
- For ECC6.0/7.00 systems and above, the SAP system time zone must be the same as the operating system time zone. **Please read SAP note 926290 for instructions.**
- For AIX, i5/OS, and Linux on Power (LoP) virtualized operating system environments, only SAP releases 6.20, 6.40, and 7.x are supported. **Please read SAP note 994025 for patch levels and instructions.**
- For AIX, i5/OS, and Linux on Power (LoP) virtualized operating system environments, running multiple SAP application server instances in the same LPAR is **not** supported.

- The SAP Operating System collector (saposcol) must be setup and running on all application servers in the target system.
- If the database is on a standalone server (no SAP instance) or a server is Java-only, saposcol and sapccmsr must be installed and working. Using sapccmsr (-R), an RFC destination (TCP/IP connection in SM59) must be configured to access the remote agent from a gateway instance.

Please refer to the SAP Help Documentation:

“Installing an Agent on a SAP Web AS 6.20 Java Instance/Other Hosts”

http://help.sap.com/erp2005_ehp_04/helpdata/EN/a8/adf7409b9d8531e10000000a1550b0/frameset.htm

- SAP statistics recording must be enabled (profile parameter: stat/level = 1).
- SAP user ID of type (System) must be created and assigned a profile (e.g. Z:INSIGHT) with the following authorizations:

S_ADMI_FCD	S_ADMI_FCD	STOR SM21
S_RZL_ADM	ACTVT	03
S_C_FUNCT	PROGRAM	*
	ACTVT	16
	CFUNCNAME	*
S_DATASET	PROGRAM	*
	ACTVT	33
	FILENAME	*
S_LOG_COM	COMMAND	TABLESPACE_INFO
	OPSYSTEM	ANYOS
	HOST	*
S_RFC	RFC_TYPE	FUGR
	RFC_NAME	CADR DB02_DB2 DB6M OCSI PERF_TRA_DIA
		RF1 RFCH SCSM_READ_STATISTICS SDB6PM
		SDB6PMST04 SDIFRUNTIME SDTX SMON SPFL
		SRFC STD1 STD4 STU4 STUB STUN STUW SUSE
		SUSR SYST THFB
	ACTVT	16
S_TABU_DIS	ACTVT	03
	DICBERCLS	&NC&
S_TOOLS_EX	AUTH	S_TOOLS_EX_A

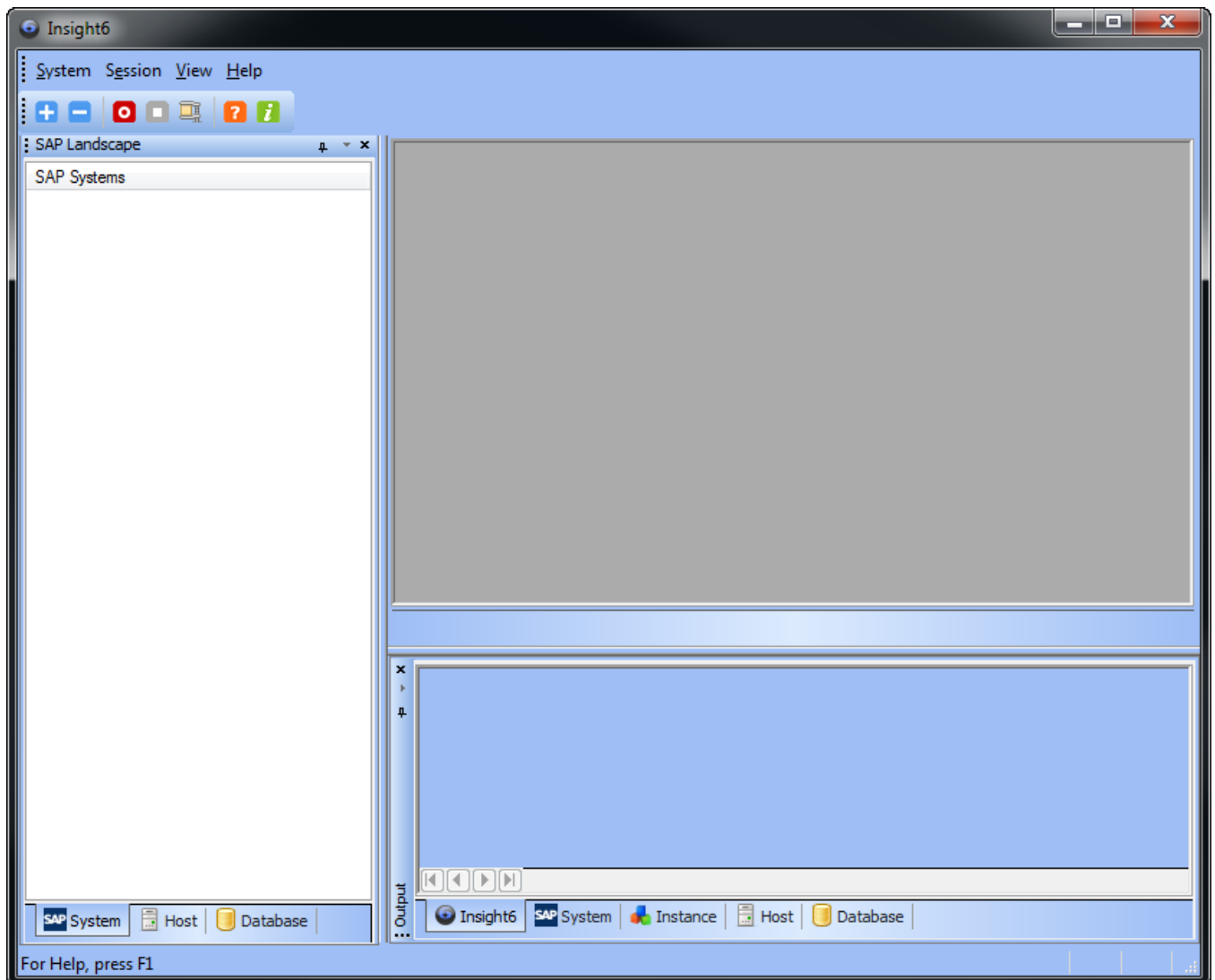
Installation Instructions:

1. On the designated PC, copy the installation executable "SetupInsight6000_x86.exe" to a temporary directory.
2. From Windows Explorer, double click on SetupInsight6000_x86.exe to begin installation. Follow the installation process. *Insight* is designed to be uninstalled later.
3. Ping all SAP application server hosts from PC.
 - a. Using SAPGUI, logon to SAP and execute transaction "SM51".
 - b. The middle column, labeled "Host name", lists all of the short host names that must be directly accessible via TCP/IP from the PC.
 - c. While on the "SM51" screen, note the third column labeled "Type", and identify the host that is running "enque", this will be the name of the server that has the message server running (the host name of the message server will be needed for initial logon).
 - d. **If using DNS**, ping each host with name and domain from the PC command prompt (ex: C:\> ping appsrv01.yourcompany.com).
 - e. **If not using DNS**, the Windows "hosts" file must be maintained. The file is located in the \windows\system32\drivers\etc directory. If no "hosts" file is found, there is usually a sample "hosts.sam" file, which can be copied to "hosts" and then edited. Edit this file and verify that all the server names listed in SM51 and their corresponding TCP/IP addresses are in this file. From the PC command prompt, ping each short host name (ex: C:\> ping appsrv01).
4. Verify that the SAP operating system collector (saposcol) is running on each server (application and database). This can be done in the following manner.
 - a. Logon to SAP and execute transaction "SM51".
 - b. Highlight an application server and select "OS collector". For each application server, verify that some non-zero statistics are returned.
 - c. For a standalone database server, execute transaction OS07. Select the appropriate RFC destination. Verify that some non-zero statistics are returned.

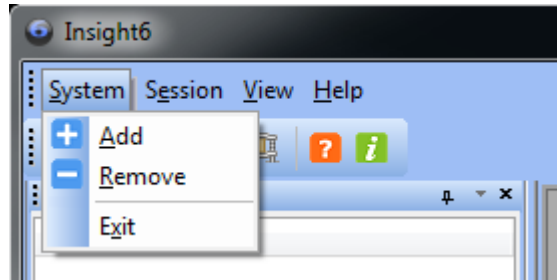
Insight Usage Instructions:

1. Launch the Collector.

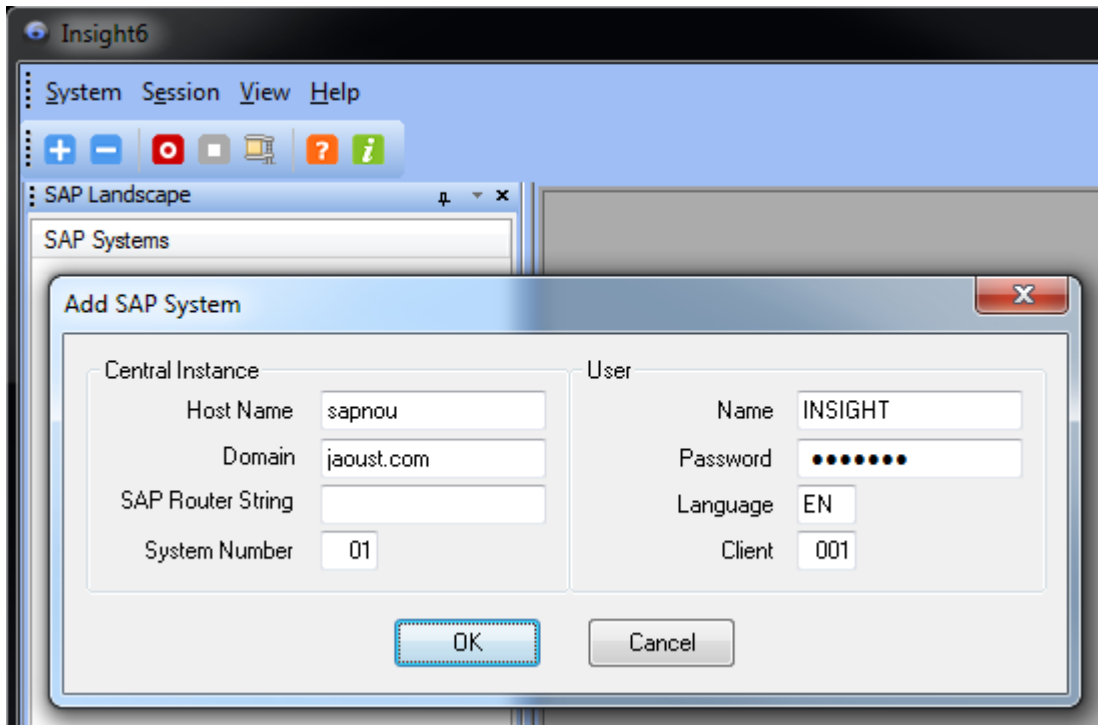
From the Windows Start menu, select All Programs -> Insight6 for SAP -> Insight6



2. Add SAP system by selecting System -> Add.



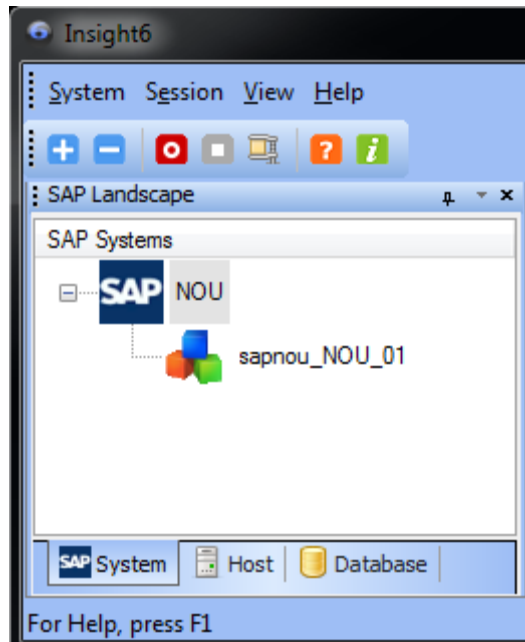
3. Enter SAP login information. (Add additional systems if needed)



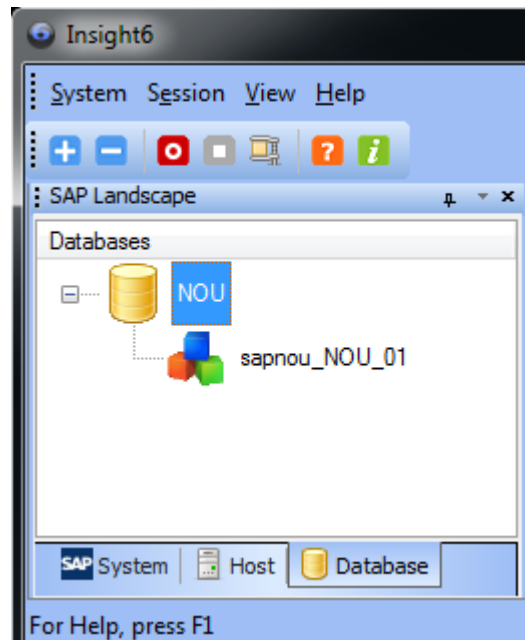
- Enter the message server short hostname. Do not enter an IP address or a domain suffix.
- If using DNS, enter your company's domain (ex: yourcompany.com).
- If required, enter a SAP Router string.
- Enter the message server system number (ex: 00).
- Enter the client number where the Insight user has been created.
- Enter the Insight user name, password, and language. The password is case sensitive.
- Press the "OK" button.

4. Check tab windows for accurate representation of the SAP system.

SAP Systems Tab

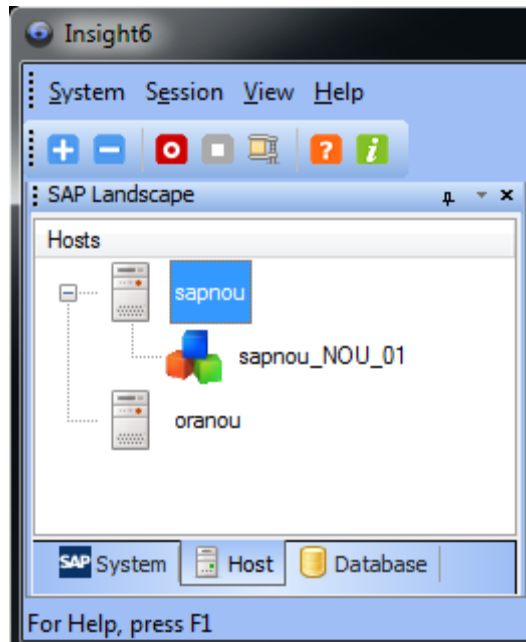


Database Tab:



Host Tab:

5. Standalone Database Server (optional)

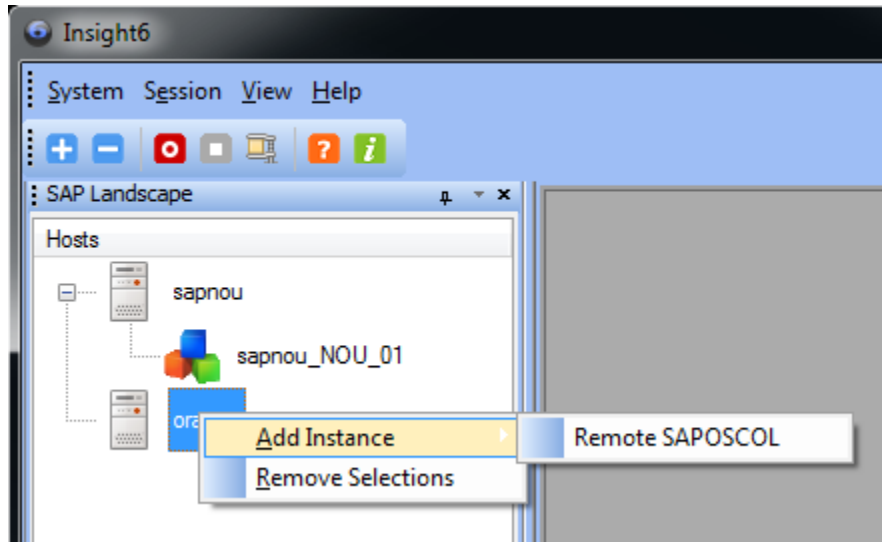


Note in the example, the host "oranou" does not have an instance displayed as a child node. In this case, the host is a standalone database server and has no SAP ABAP instance running on it. In order to collect operating system statistics on a standalone database server, sapccmsr and saposcol must be manually installed and configured. When sapccmsr (-R) is run, an RFC destination is created and registered on the gateway instance.

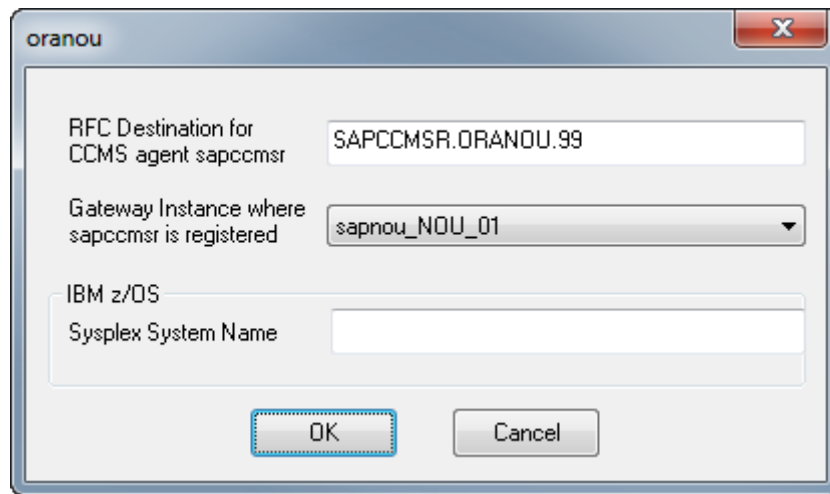
Please refer to the SAP Help Documentation:

“Installing an Agent on a SAP Web AS 6.20 Java Instance/Other Hosts”

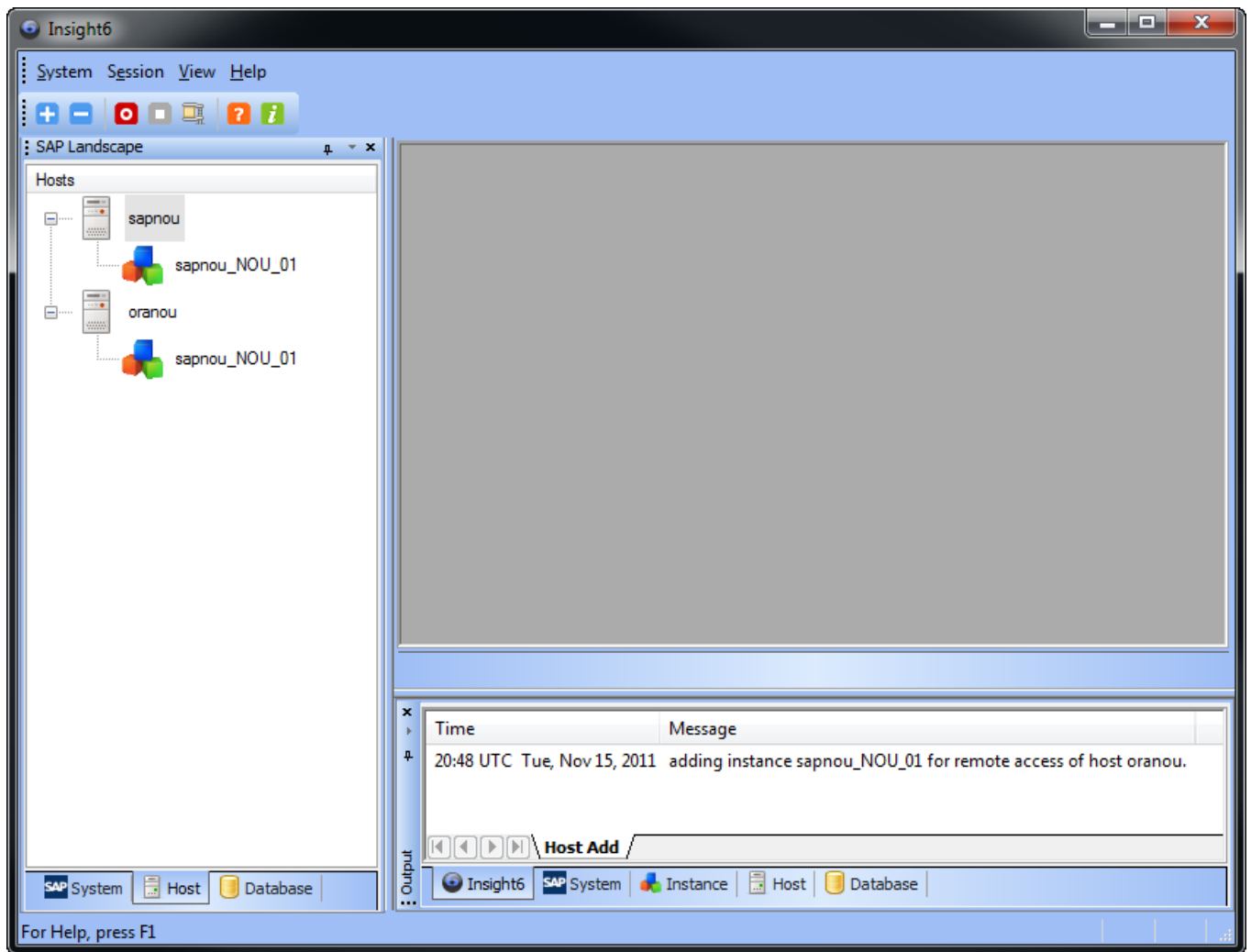
http://help.sap.com/erp2005_ehp_04/helpdata/EN/a8/adf7409b9d8531e10000000a1550b0/frameset.htm



The gateway instance is attached to the database host by right clicking on the host name and selecting Add Instance -> Remote SAPOSCOL.

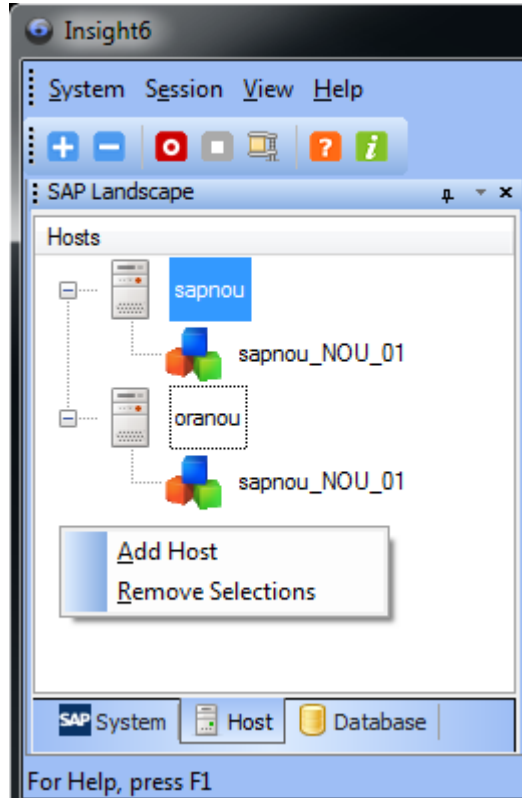


Enter the RFC destination created by sapccmsr (check transaction SM59). And, enter the gateway instance where sapccmsr is registered. If running saposcol in a z/OS Sysplex, enter the Sysplex name if needed.

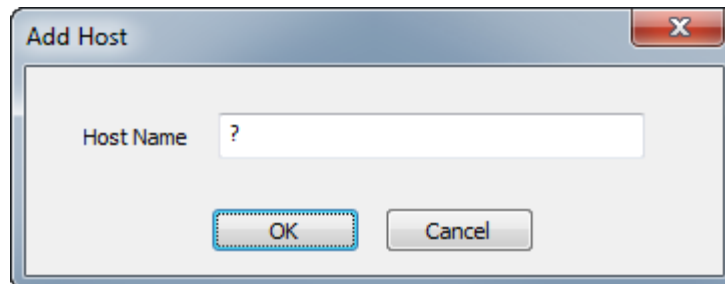


The gateway instance is now attached to the standalone database host.

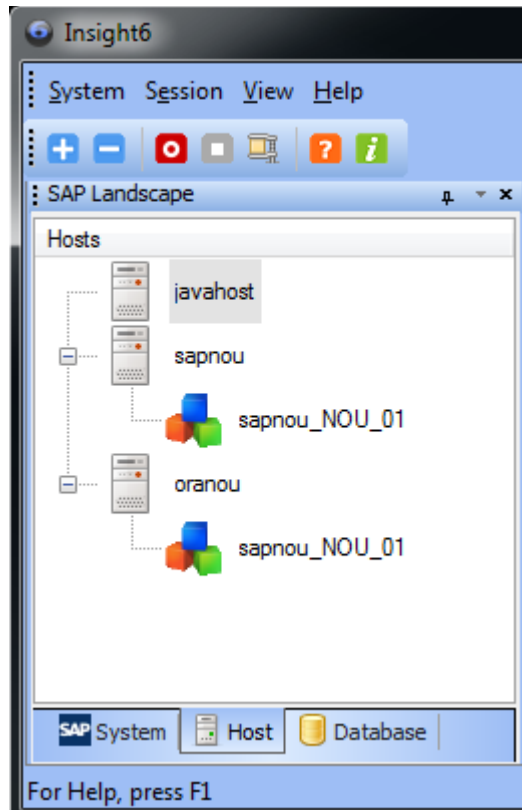
Java-only Host (optional)



A Java-only host can be added by right-clicking in an empty area of the Hosts tab and selecting “Add Host”.



Enter the host name of the Java-only server in the “Add Host” dialog box.

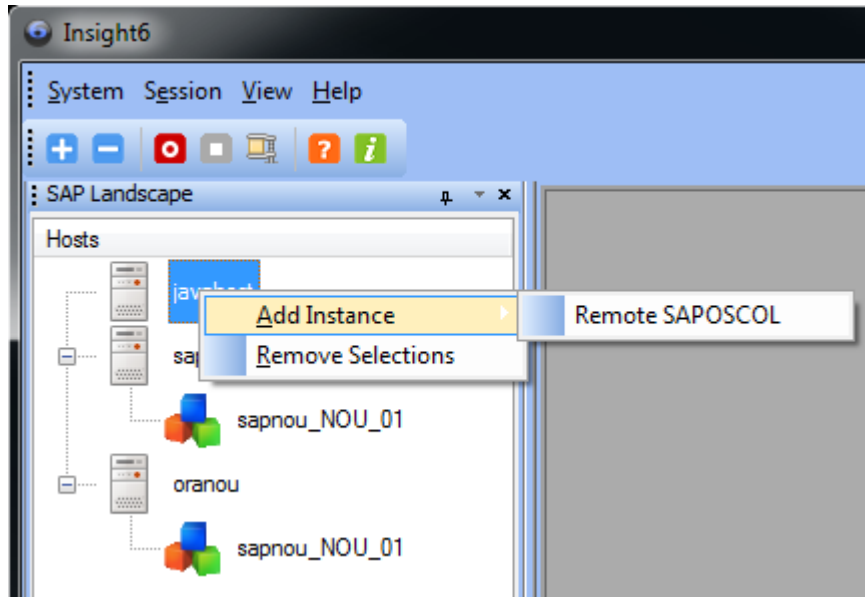


In order to collect operating system statistics on a Java-only server, sapccmsr and sapocol must be manually installed and configured. When sapccmsr (-R) is run, an RFC destination is created and registered on the gateway instance.

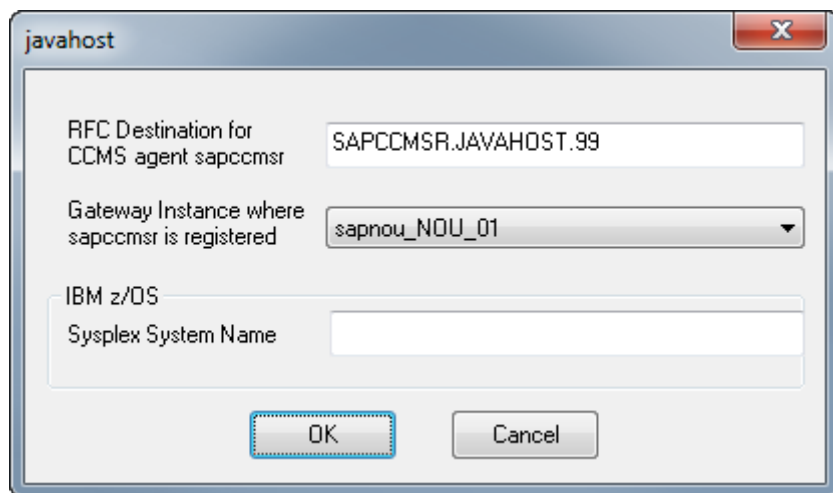
Please refer to the SAP Help Documentation:

“Installing an Agent on a SAP Web AS 6.20 Java Instance/Other Hosts”

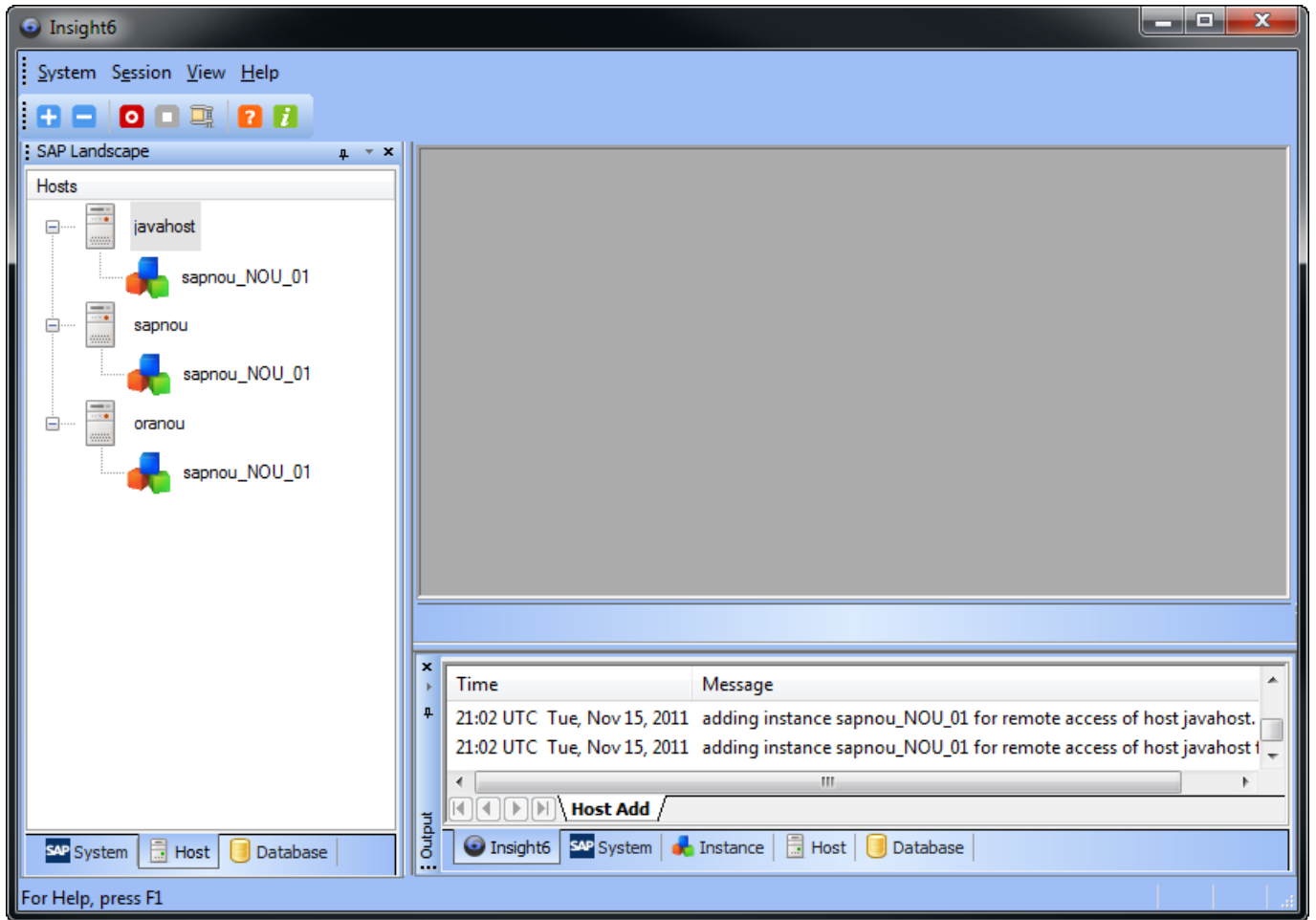
http://help.sap.com/erp2005_ehp_04/helpdata/EN/a8/adf7409b9d8531e1000000a1550b0/frameset.htm



The gateway instance is attached to the Java-only host by right clicking on the host name and selecting Add Instance -> Remote SAPOSCOL.

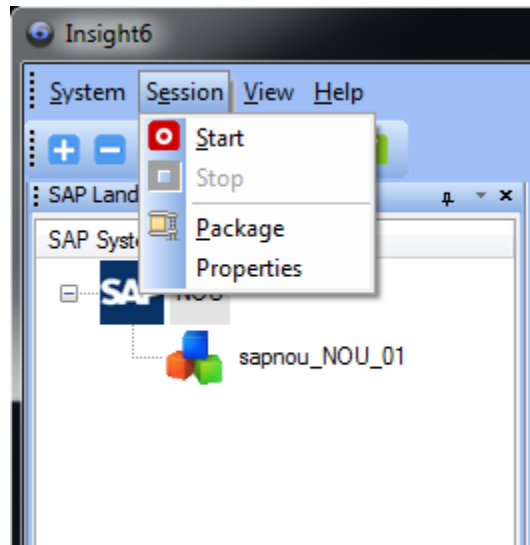


Enter the RFC destination created by sapccmsr (check transaction SM59). And, enter the gateway instance where sapccmsr is registered. If running sapccmsr in a z/OS Sysplex, enter the Sysplex name if needed.



The gateway instance is now attached to the Java-only host.

6. Start Insight data capture session by selecting Session -> Start.



7. Enter customer information and press the "Next" button.

A screenshot of the 'Customer Information' dialog box. The dialog has a title bar with a close button (X). It is divided into two sections: 'Company Information' and 'Contact Information'.
The 'Company Information' section contains:
- 'Company Name' with a text box containing a question mark '?' and an 'Industry' dropdown menu set to 'Aerospace'.
- 'Address 1' with a text box containing a question mark '?'.
- 'Address 2' with an empty text box.
- 'City, State Zip' with a text box containing a question mark '?'.
- 'Country' with a text box containing a question mark '?'.
The 'Contact Information' section contains:
- 'Contact Name' with a text box containing a question mark '?'.
- 'Telephone' with a text box containing a question mark '?' and 'e-mail' with a text box containing a question mark '?'.
At the bottom of the dialog are three buttons: '< Back', 'Next >' (highlighted with a blue dashed border), and 'Cancel'.

8. Enter IBM Rep/Partner information and press the "Next" button.

IBM Information

IBM Sales Rep/Business Partner

Rep/Partner Name ?

Address 1

Address 2

City, State Zip ?

Country ?

Telephone ? e-mail ?

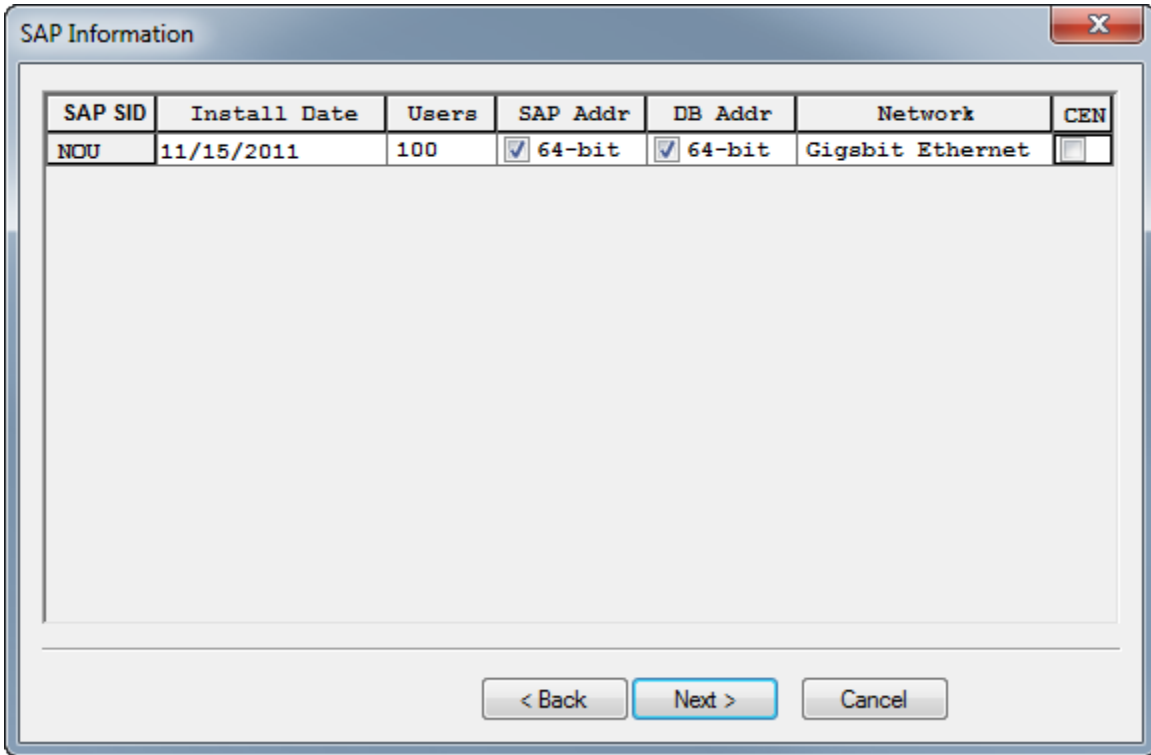
Reason for Analysis ?

Special Sizing Considerations

< Back Next > Cancel

9. Enter the SAP system information.

If the system is configured as a Central Monitoring System (CEN), click the check box in the CEN column. Press the "Next" button to continue.

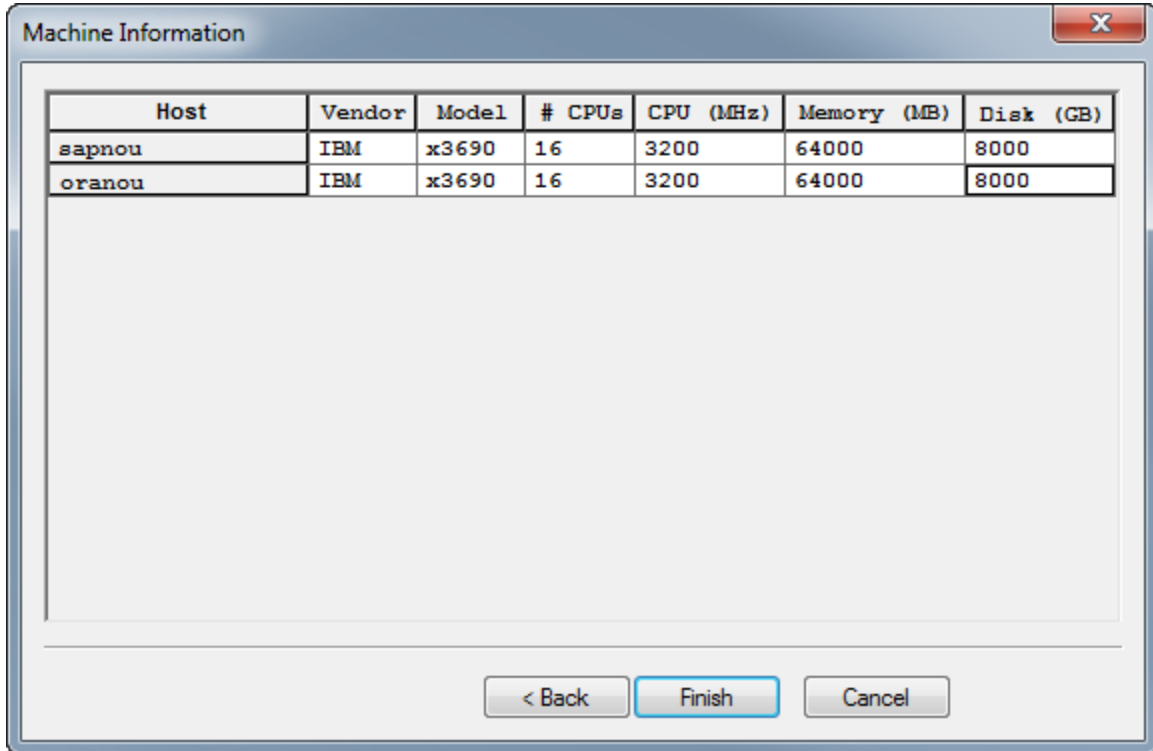


The image shows a dialog box titled "SAP Information" with a close button (X) in the top right corner. It contains a table with the following data:

SAP SID	Install Date	Users	SAP Addr	DB Addr	Network	CEN
NOU	11/15/2011	100	<input checked="" type="checkbox"/> 64-bit	<input checked="" type="checkbox"/> 64-bit	Gigsbit Ethernet	<input type="checkbox"/>

At the bottom of the dialog box, there are three buttons: "< Back", "Next >" (highlighted with a blue border), and "Cancel".

10. Enter the machine information for each host and press the "Finish" button.



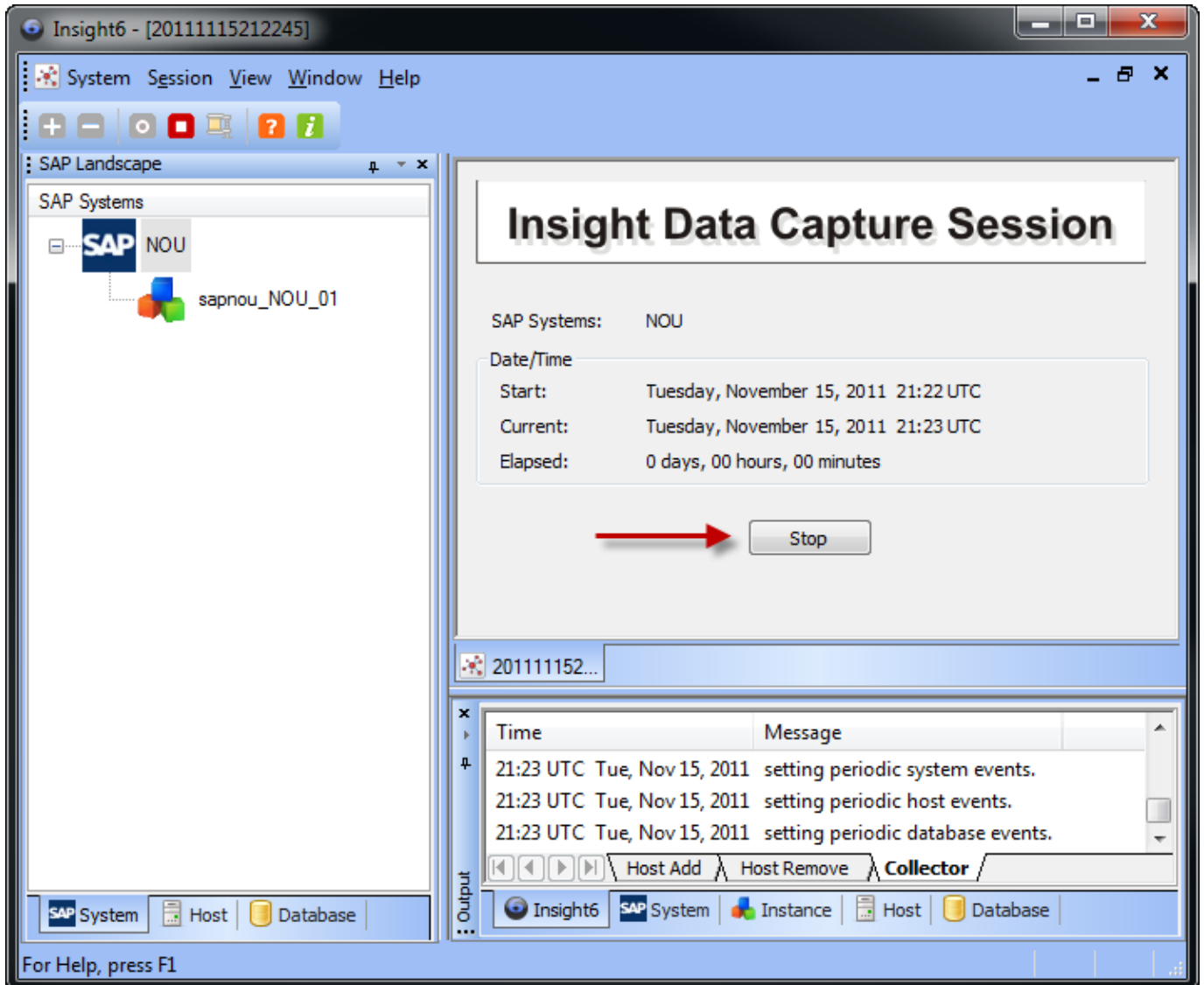
The image shows a dialog box titled "Machine Information" with a close button (X) in the top right corner. Inside the dialog, there is a table with the following data:

Host	Vendor	Model	# CPUs	CPU (MHz)	Memory (MB)	Disk (GB)
sapnou	IBM	x3690	16	3200	64000	8000
oranou	IBM	x3690	16	3200	64000	8000

Below the table, there are three buttons: "< Back", "Finish", and "Cancel". The "Finish" button is highlighted with a blue border.

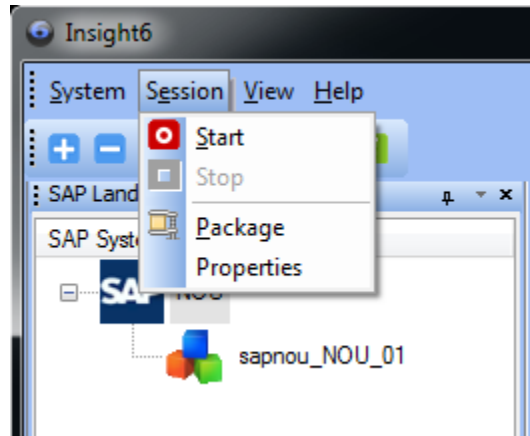
11. Stopping the data collection session.

When the desired collection period has ended, stop the Insight data capture session by pressing the "Stop" button or select from the menu Session->Stop.

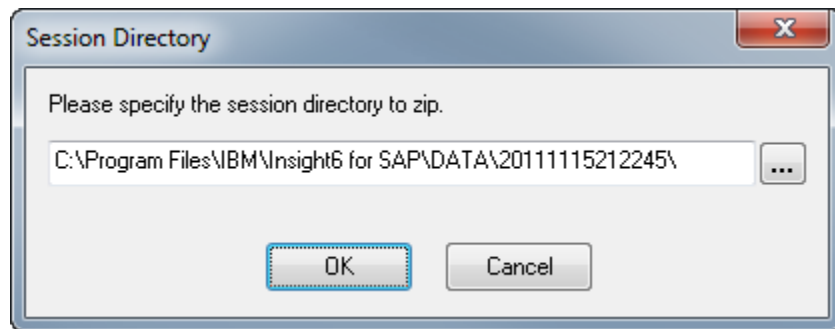


12. Package (ZIP) Insight session data.

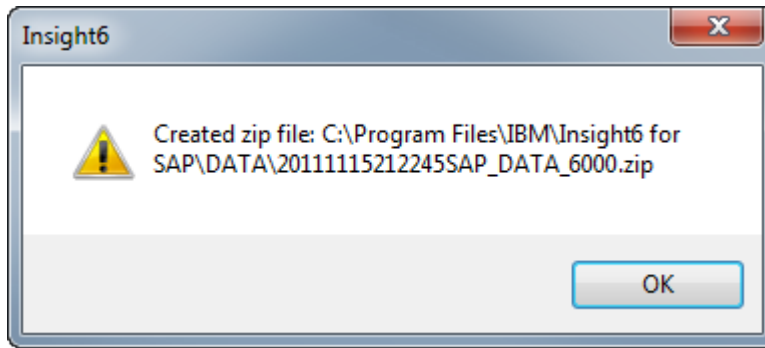
When the data capture session has been stopped, package the session data for submission by selecting Session->Package.



Verify or change the session path and press the "OK" button.



The data files in the session directory are zipped into a single file, SAP_DATA_6000.zip. The zip file is created in the specified session directory.



13. Send the ZIP file created by the package process to IBM Techline for analysis and report generation.

Note for Americas and EMEA: If your Insight dataset SAP_DATA_6000.zip is greater than 5 MB in size then please send a note to the appropriate Techline group:

IBM Americas (North and South America)

ibmerp@us.ibm.com

IBM EMEA (Europe, Middle East and Africa)

EMEA_ERP_TL@de.ibm.com

Put "Insight Data FTP Help Required" in the subject line and we will grant you access to our FTP server for Insight data upload. Please provide your name, phone number and email address in the note and we will contact you right away.

In your email program, create a new mail with the following subject line:

Subject: Insight6 data for <company name>

Complete the following mail body:

Company :
Country :
SAP SID(s) :

Start : <date> <time>
End : <date> <time>

Contact :
Telephone :
email :

Rep/Partner :
Telephone :
email :

Reason :

Considerations :

Attach the ZIP file and send it to the appropriate Techline group:

IBM Americas (North and South America)	ibmerp@us.ibm.com
IBM EMEA (Europe, Middle East, and Africa)	EMEA_ERP_TL@de.ibm.com
IBM AP (ASEAN, SA, ANZ, GCG, Korea)	techline@my.ibm.com
IBM Japan	TLsizing@jp.ibm.com
IBM India	techline@in.ibm.com
