



Chapter 9: Multi-Role Tasks

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Starting the R/3 System

To start the R/3 System in a productive environment:

1. Start the operating system (if required).
2. Check the operating system logs to verify a good start.
3. Start the database.

This step is optional because starting the R/3 System also starts the database. However, manually starting the database allows you to review the database log **before** starting the R/3 System.

 - ▶ NT/SQL: If not automatically started, use the *SQL Server Service Manager* to start the database.
 - ▶ NT/Oracle: If not automatically started, use *SAPDBA* to start the database.
 - ▶ UNIX: At the command prompt, enter **startsap db**.
4. Check the database logs to verify a good start.
5. Start R/3 on the central instance.
 - ▶ NT: Use the *SAP Management Console*.
 - ▶ UNIX: At the command prompt, enter **startsap r3**.



To start the R/3 System, at the restart, wait for 60 seconds before you change the server's clock. This step makes it easier to read the system log. For example, the last stop entry is 19:26:xx and the first start entry is 19:27:xx, where time is reported as hh:mm:ss.

6. Check the *R/3 System log (SM21)* to verify a good start.

Problems at this point may require you to cycle (stop and start) the system.
7. Start R/3 on the application instances.

The application servers would be started any time after step 2.
8. Check the *R/3 System log*.

Start R/3—NT

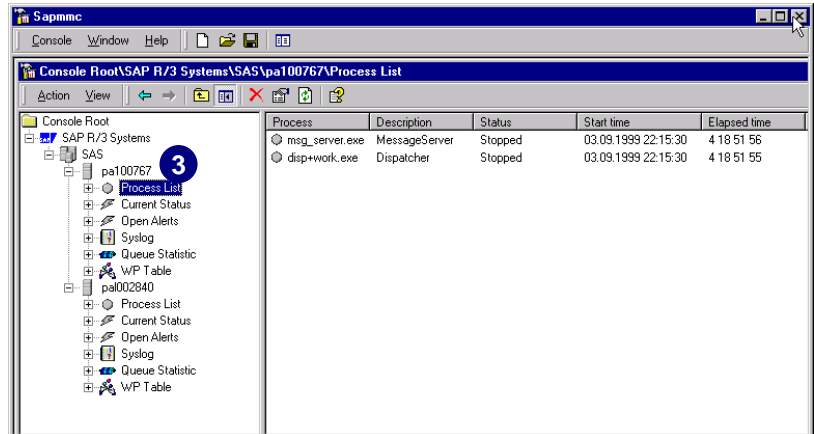
1. On the NT desktop, double-click *SAP R/3 Management Console*.



2. Click on the nodes (+) to drill down to the <servers>.

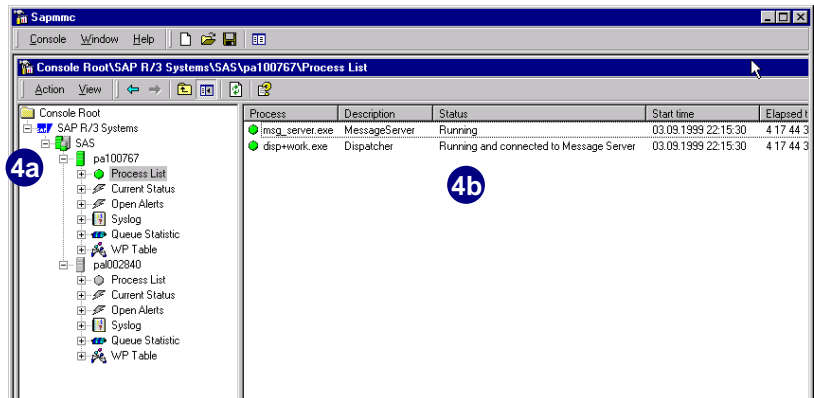
Start the Central Instance (on the database server).

3. Right click on the <database server> (for example, **pa100767**), and choose *Start*.



4. The following two items indicate that the database instance has started and that R/3 has completed the start process:

- a. The status indicators for the database server change color to green.
- b. The *Status* for both processes indicates *Running*.

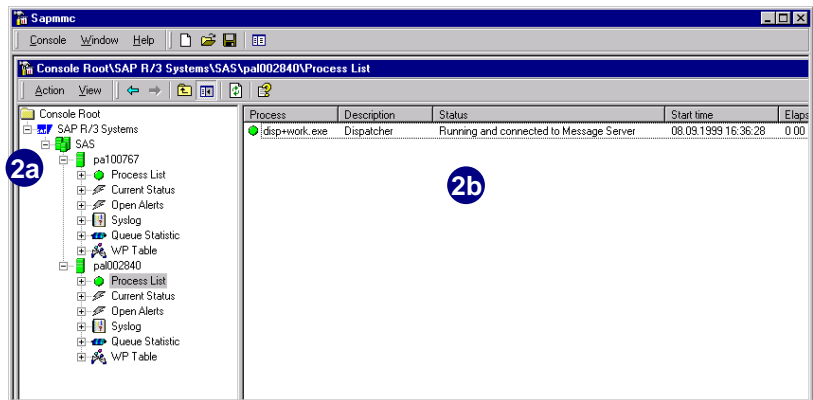
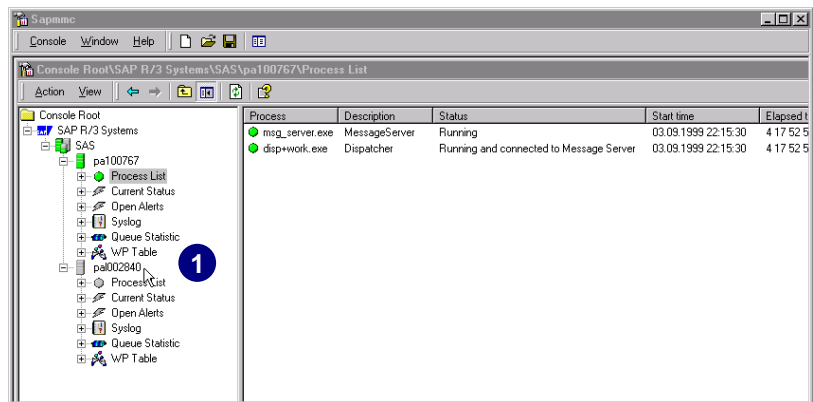


Tools such as *QuickSlice* and *Perfmon* allow you to monitor the activity of the server and know when it is OK to logon to the system.

The steps below are applicable only if you have an application server:

Start the dialog instance (on the application server).

1. Click on the nodes (+) to drill down to the <application server> (for example, **pa1002840**), and choose *Start*.
2. The following two items indicate that the database instance has started and that R/3 has completed the start process:
 - a. The status indicators for the application server change color to green.
 - b. The *Status* for the process indicates *Running*.
3. Wait a few minutes because startup activity is still occurring on the server.



Stopping the R/3 System



- ▶ When you stop R/3, coordinate and plan this stoppage with all users or their representatives.
- ▶ Stopping a system at “your convenience” is unprofessional and usually causes considerable operational issues with users who need (and expect) the system to be up and running.

Stop R/3 Checklist

Task	Date	Initial
The following tasks must be completed well before the R/3 System is stopped:		
Coordinate the shutdown with all affected parties, such as: <ul style="list-style-type: none"> ▶ Finance ▶ Shipping ▶ Sales ▶ Other 		
Reschedule/cancel jobs that would be running or starting during the scheduled shutdown (<i>SM37</i>).		
Create a system message announcing the planned shutdown (<i>SM02</i>).		
The following tasks must be completed before the R/3 System is stopped:		
Check that there are no active users on the system (<i>SM04</i> and <i>AL08</i>).		
Check that there are no active background jobs running (<i>SM37</i>).		
Check for active processes (<i>SM50</i> and <i>SM51</i>).		
Check for active external interfaces.		
To stop the R/3 System:		
Stop the application server instance(s).		
Stop the central instance.		
Stop the database (optional).		

Tasks to Be Completed Before Stopping the System

- ▶ Coordinate the shutdown with all effected parties.

If an organization has planned to do something and expects the system to be operational, they may or may not be able to reschedule. You may have to reschedule your shutdown around them and shutdowns are usually negotiated activities.

Example:

An IT person in a company rebooted a server in the middle of the day without telling anyone. He had a date that evening and did not want to stay late. The CFO said, “Yeah, he’ll have a date with the unemployment line.”

Before stopping the system, there are several checks that need to be made. The purpose is to determine that there is no activity on the system when the system is stopped. Certain activities (such as a large posting job), if interrupted, could have some transactions posted and some not yet posted. Recovery could then become an issue.



If you are the cause of the emergency, be prepared to take the consequences. An example of an emergency is not monitoring the file system, having it fill up, which results in stopping R/3.

- ▶ Reschedule or cancel jobs that will be running or starting during the scheduled shutdown.
 - Check SM37 for these jobs and cancel or reschedule them to run after the shutdown.
 - Watch for repeating jobs, such as daily or weekly jobs.

These jobs are not created until the job for the prior period (day, week, etc.) has run. In other words, a daily job cannot exist several days in advance.
- ▶ Create a system message announcing the planned shutdown.
- ▶ Emergency or priority shutdowns (for example, file system full, log full, equipment failure, etc.) are a different matter.

In these instances, you need to shutdown immediately and users need to accommodate you. There may be little—if any—negotiating.

System Message (SM02)

What

A system message is a popup that users see when they first log on to the R/3 System. This window appears after a new message has been created or when users move between screens.



Guided Tour

In the *Command* field, enter transaction **SM02** and choose *Enter*
(or from the *SAP standard menu*, choose *Tools* → *Administration* → *Administration* → *SM02-System messages*).

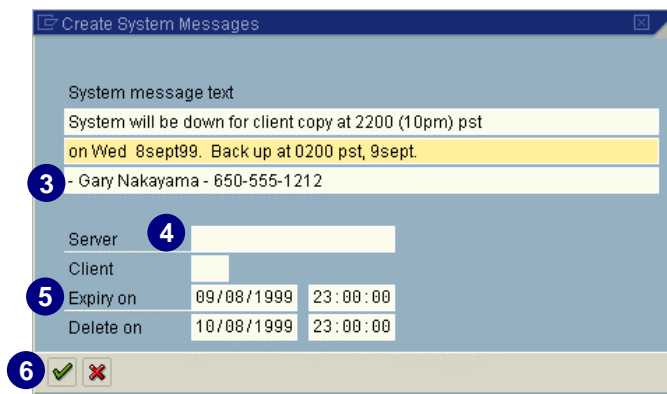
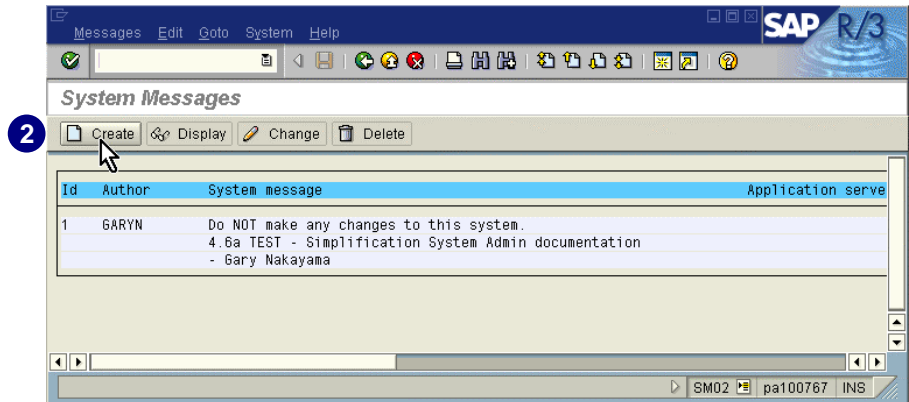
Choose *Create*.

In *System message text*, enter your message.

If you are only shutting down one server, you may also enter text in the *Server* field. To enter this text, choose and select the instance on which the message should appear.

In *Expiry on*, enter the message's expiration date and time.

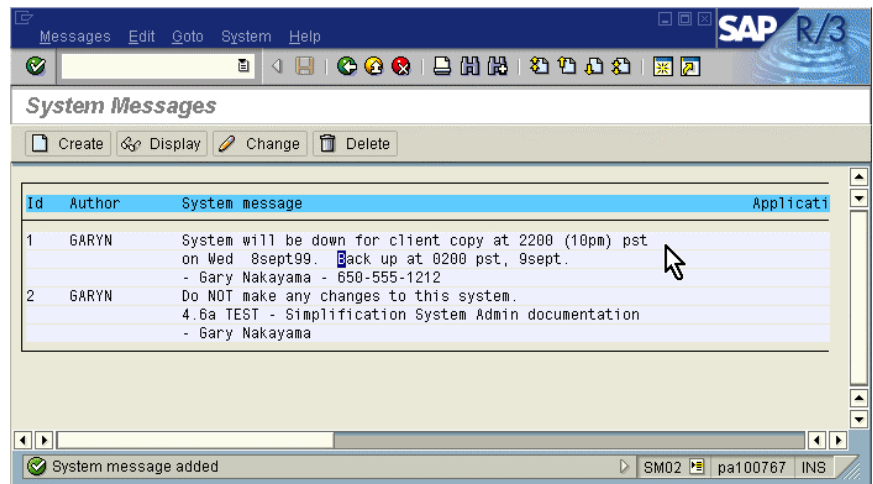
Choose .



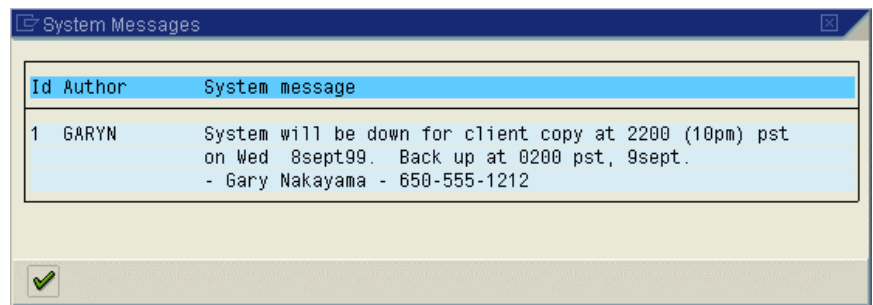
When referencing the time for the shutdown, always enter the specific time, time zone, and date (for example, 0230 PDST-Mon-Jun 8,1998). Entering vague information, such as “in 15 minutes” creates possible confusion as to when and where an event has been scheduled. Some examples of confusion that may arise include:

- ▶ 15 minutes (from when?)
- ▶ 0230 (where? Corporate offices or where the user is?)
- ▶ 6:00 (a.m. or p.m.?)
- ▶ Monday (of which week?)

The message in the status bar indicates that your message has been saved.



This screen shows the message as the user would see it.



Check that No Active Users Are on the System (AL08/SM04)



Guided Tour

For a system **without** application servers:

1. In the *Command* field, enter **SM04** and choose *Enter*
(or from the *SAP standard menu*, choose *Tools* → *Administration* → *Monitor* → *System monitoring* → *SM04-User overview*).
2. Contact the users and have them log off.
3. If users cannot be contacted, delete their session as described in chapter 12, *Deleting a User's Session*.

The screenshot shows the SAP R/3 'User list' window. The title bar includes 'User', 'Edit', 'Goto', 'List', 'Settings', 'System', and 'Help'. Below the title bar is a menu bar with 'Sessions', navigation icons, and 'Block', 'Choose', 'Save' buttons. The main area contains a table with the following data:

Clnt	User	Terminal	Transaction	Time	Sess. Type
100	GARYN	pa11e10108	SM04	10.01.34	1 GUI

The status bar at the bottom shows 'SM04', 'pa100767', and 'INS'.

For systems **with** application servers:

1. In the *Command* field, enter **AL08** and choose *Enter*
(or from the *SAP standard menu*, choose *Tools* → *CCMS* → *Control/Monitoring* → *Performance menu* → *Exceptions/users* → *Active users* → *AL08-Users global*).
2. Scroll down the transaction screen to see all the servers in the system and the users on those servers.
3. Contact the users to have them log off.
4. If the users cannot be contacted, delete their session as described in chapter 12, *Deleting a User's Session*.

You cannot delete a user from transaction *AL08*. You must log into the individual instance and use transaction *SM04* to delete the user session.

Current Active Users

Refresh

System	SAS	Overview of all
Day, Time	17.11.1999 12:52:29	logged on users

Active instance	Number of active users
pa100767_SAS_00	2
pa1101003_SAS_00	2

2 destinations with 4 users

pa100767_SAS_00	Mand	User	Terminal	TCod
	100	REKHAK	palle10217	
	100	REKHAK	palle10217	AL08
	100	GARYN	palle10108	

pa1101003_SAS_00	Mand	User	Terminal	TCod
	100	REKHAK	palle10217	
	100	CKAN	palle101526	
	100	ALFTAYEH	palle10337	SU01

Check for Batch Jobs Running or Scheduled (SM37)

Check for any batch jobs that are running or are scheduled to run during the shutdown.



Guided Tour

1. In the *Command* field, enter **SM37** and choose *Enter*
(or from the *SAP standard menu*, choose *Tools* → *CCMS Jobs* → *SM37-Maintenance*).
2. Enter ***** in *User name*.
3. Under *Job status*, select the following:
 - ▶ *Planned*
 - ▶ *Released*
 - ▶ *Ready*
 - ▶ *Active*
4. Change the *Fr (from)* date back a year.
5. Change the *To* date to a date beyond the shutdown period.
6. In *or after event*, choose and select *****.
7. Choose *Execute*.

The screenshot shows the SAP R/3 'Select Background Jobs' dialog box. The interface includes a menu bar (Job, Edit, Goto, System, Help) and a toolbar. The dialog is titled 'Select Background Jobs'. It contains several sections:

- Job name** and **User name** fields, both containing an asterisk (*).
- Job status** section with checkboxes for Planned, Released, Ready, Active, Finished, and Canceled. The first four are checked.
- Job start condition** section with 'Fr.' (From) date set to 8/31/99 and 'To' date set to 9/2/99.
- or after event:** section with a calendar icon and a dropdown menu set to *.
- Job step** section with 'ABAP program name:' field.
- Buttons for 'Execute' (marked with a green checkmark icon) and 'Expanded job selection'.

 Numbered callouts (1-7) are placed over the interface to indicate the steps: 1 points to the Command field (not visible in this specific view but implied), 2 points to the User name field, 3 points to the Job status checkboxes, 4 points to the Fr. date, 5 points to the To date, 6 points to the 'or after event' dropdown, and 7 points to the Execute button.

8. Choose a job to review (for example, *GARY-TEST*).
9. From the menu bar, choose *Job* → *Change*.

9

SAP R/3

Job Edit Goto Extras Settings System Help

Job Overview

Release Spool Job log Step Application servers

Job overview from: 08/31/1999 at: : :
to: 09/02/1999 at: : :
Selected job names: *
Selected user names: *

☒ Scheduled ☒ Released ☒ Ready ☒ Active ☐ Finished ☐ Cancelled
☐ Event controlled Event ID: : :
☐ ABAP program Program name: :

JobName	Ln	Job CreatedBy	Status	Start date	Start time	Durati
<input type="checkbox"/> CLIENTCOPY 001 -> 100		SAP*	Scheduled	/ /	: :	
<input type="checkbox"/> GARY-TEST		GARYN	Released	/ /	: :	
<input type="checkbox"/> SAP_COLLECTOR_FOR_JOBSTATISTICS		BATCH	Released	/ /	: :	
<input type="checkbox"/> SAP_REORG_ABAPDUMPS		BATCH	Released	/ /	: :	
*Summary						

SM37 pa100767 INS



Change the display to show the planned start date and time.

From the menu bar, on the screen above, choose *Settings* → *Display variant* → *Current*. On the field selection screen, move the *planned start date* and *planned start time* from the *hidden fields* on the right, to the *displayed fields* on the left.

10. Choose  *Start condition*.

10


SAP R/3

Job Edit Goto System Help

Change Job GARY-TEST

Start condition Step Job details Predecessor job Successor job Job overview

General data

Job name: GARY-TEST
Job class: 
Status: Released
Target server:
Spool list recipient:

Job start

	Date	Time
Planned start	09/02/1999	12:00:00

Job frequency

SM37 pa100767 INS

11. Change the *Scheduled start* date, to a date after the shutdown.

12. Choose *Save*.

Start Time

Immediate Date/Time After job After event At operation mode =..

Date/Time

Scheduled start Date 11 09/02/1999 Time 12:00:00

No start after Date Time

After job At operation mode

After event

☐ Per job 12

Check Period values Restrictions

13. Verify the new start date.

14. Choose *Save*.

Job Edit Goto System Help SAP R/3

Change Job GARY-TEST

Start condition Step Job details Predecessor job Successor job Job overview

General data

Job name GARY-TEST

Job class

Status Released

Target server

Spool list recipient

Job start Job frequency

Planned start Date Time

09/03/1999 12:00:00

SM37 pa100767 INS

15. A message indicates that the job was saved.
16. Repeat the steps for each of the other jobs that need to be moved.

Job Overview: Alphabetic

Job Edit Goto System Help

Job log Release Refresh Spool list Steps

Job name	Scheduled	Released	Ready	Active	Finished	Can
BC-SPOOL-CLEANUP		X				
COLLECTOR_FOR_PERFORMANCEMONITOR		X				
EU_PUT		X				
EU_REORG		X				
GARY-TEST		X				
SPOOL_CLEANUP		X				

15 Job GARY-TEST changed SM37 pa100767 INS 10:12AM

17. As a final step, repeat the initial job selection to verify that there are no jobs scheduled during the system shutdown.

SAP R/3

Job Edit Goto System Help

Select Background Jobs

Execute Expanded job selection

Job name *

User name *

Job status

☒ Planned ☒ Released ☒ Ready ☒ Active ☐ Finished ☐ Canceled

Job start condition

Fr. 8/31/99 To 9/2/99

or after event:

Job step

ABAP program name:

SM37 pa100767 INS


Check for Active Processes on All Systems (SM51)

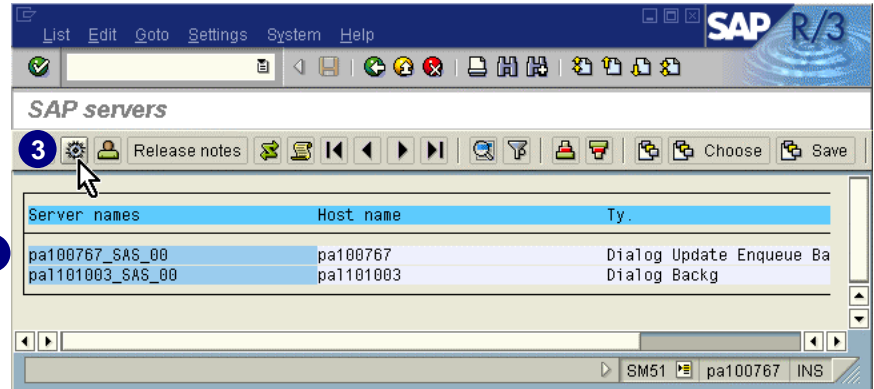


Guided Tour

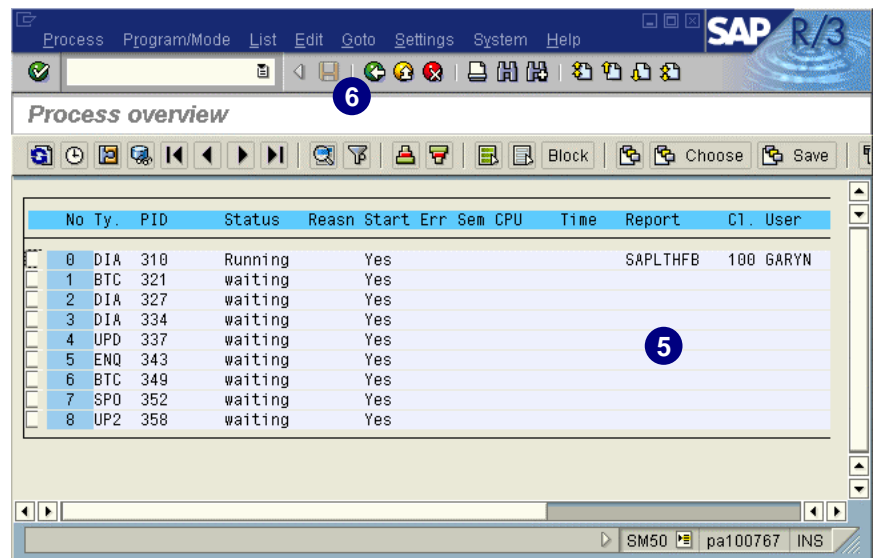
1. In the *Command* field, enter transaction **SM51** and choose *Enter* (or from the *SAP standard menu*, choose *Tools* → *Administration* → *Monitor* → *System monitoring* → *SM51-Servers*).

This screen lists all instances in the system.

2. Select an instance.
3. Choose .



4. The screen that appears is the transaction *SM50* screen for that server.
5. Review for activities.
6. Choose *Back* and return to the SAP servers transaction (*SM51*).
7. Repeat steps 2 to 5 for each instance.



Check for External Interfaces

External interfaces are interfaces where data is being moved to or from the R/3 System. Checking for active interfaces depends on the specific interface and how it has been designed, built, and implemented. The developer or consultant can help you determine if the interface is active.

Stopping R/3



- ▶ When you bring down or stop R/3, coordinate and plan this event with all the R/3 users or their representatives.
- ▶ Stopping a system at “your convenience” is unprofessional and usually causes considerable operational issues with users who need (and expect) the system to be up and running.

Stop R/3 only after all checks have been made and you are certain that there is no activity on the system.

To stop the R/3 System:

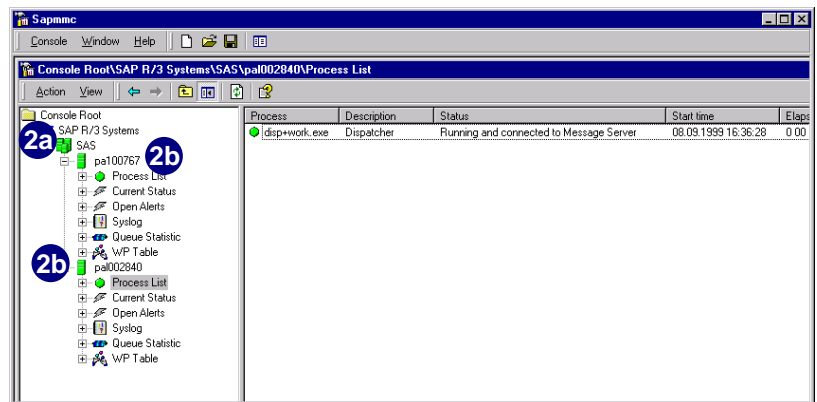
1. If there are application servers in the system, stop the instance on the application server(s).
2. Stop the instance on the database server.
 - ▶ NT/SQL: Use the *SAP Management Console*.
 - ▶ UNIX: At the command prompt, enter **stopsap**
This script may also stop the database; check your specific installation.
3. If needed, stop the database.
The database must be stopped separately. Unlike the start process, stopping the system does not also stop the database.
 - ▶ NT/SQL: Use *SQL Server Service Manager* to stop the database.
 - ▶ NT/Oracle: Use *SAPDBA* to stop the database.
 - ▶ UNIX: Use either *SAPDBA* or the **stopsap** script to stop the database.
4. If needed, stop the operating system.

STOP R/3—NT

1. On the NT desktop, double-click *SAP R3 Management Console*.



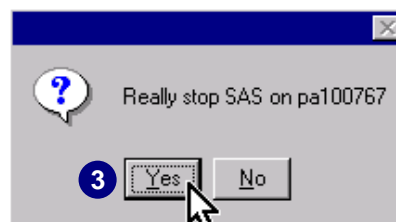
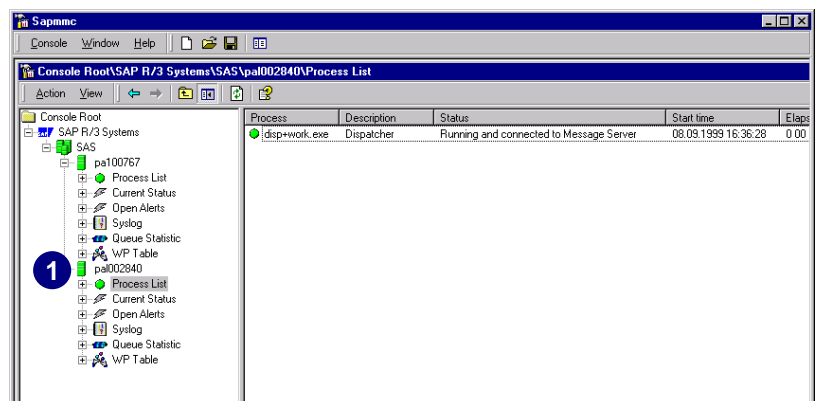
2. Drill down to the:
 - a. <SID> (for example, *SAS*).
 - b. <servers> (for example, *pa100767* and *pa1002840*).



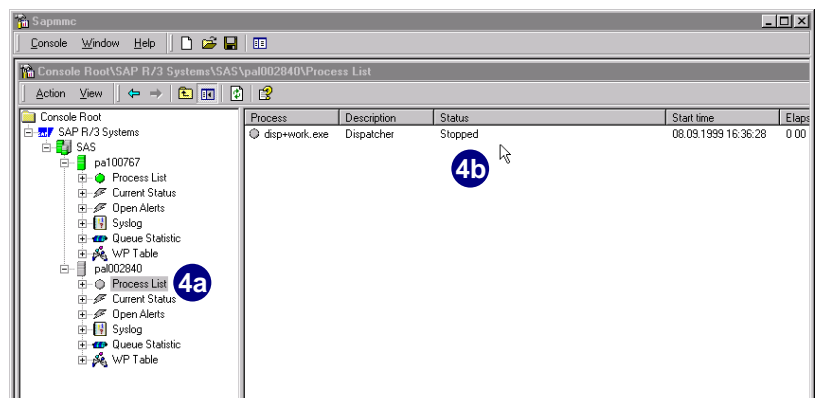
The following steps are applicable only if you have application servers.

Stop the R/3 dialog instance (on the application server).

1. Click on the nodes (+) to drill down to the <application server> (for example, *pa1002840*).
2. Right click on the <application server> and choose *Stop*.
3. Choose *Yes*.



4. When R/3 stops:
 - a. The status indicators change color to gray.
 - b. The *Status* indicates *Stopped*.



Stopping the R/3 System

Stop the R/3 central instance (on the database server).

1. Click on the nodes (+) to drill down to the <database server> (for example, *pa100767*).
2. Right click on the <database server> and choose *Stop*.

3. Choose Yes.

4. When R/3 stops:
 - a. The status indicators change color to gray.
 - b. The *Status* indicates *Stopped*.

