

Configuration Guide for SAS[®] IT Management Adapter 2.7 for SAP



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Introduction

This document provides the instructions for installing the SAS IT Management Adapter 2.7 for SAP software (the adapter) on the Windows, UNIX, and z/OS systems. Please read these instructions before you attempt to configure the software. The software is installed together with the installation of the SAS 9.1.3 Foundation.

Software Prerequisites

The adapter can only be used in an environment that has the following software components installed:

- SAS 9.1.3 Foundation.
- SAS/ACCESS 9.1.3 Interface to R/3 (it is part of the install bundle).
- SAS IT Resource Management Solutions, Release 2.7.
***Note:** Available hot fixes for the above products are installed.*
- SAP Release 4.5 or higher.
- Network and machine user IDs have been created.
- The SAP GUI is available.
- SAP RFCSDK is installed on the SAS server.

Refer to the *Installation Instructions for SAS/ACCESS 9.1.3 Interface to R/3* for information on configuring SAS/ACCESS Interface to R/3 software.

- **z/OS only:** An existing SAS IT Resource Management PDB.

Using this Configuration Guide

This *Configuration Guide* contains installation and configuration instructions for the SAS IT Management Adapter 2.7 for SAP for the UNIX, Windows, and z/OS operating systems. This document is organized as follows:

- Chapter 1 — Installation for Windows and UNIX on page 3.
- Chapter 2 — Installation for z/OS on page 5.
- Chapter 3 — Installation Tasks on the SAP Servers on page 7.
- Chapter 4 — Activation of Cube Performance Collection in SAP BW on page 9.
- Chapter 5 — Customizing the Adapter for Windows and UNIX on page 11.
- Chapter 6 — Customizing the Adapter for z/OS on page 19.
- Chapter 7 — Test the Installation by Registering a SAP Server to the Adapter on page 21.
- Appendix A — Contents of SAP Transport Files on page 23.

Please see the appropriate chapters for your operating system, and then review Appendix A for details about the SAP transport files which are installed as part of the basic installation procedure.

Chapter 1 — Installation for Windows and UNIX

The adapter relies on other software being in place, so it is important that all solution components are installed prior to testing. Installation and testing details of components other than the adapter are not provided in this document; refer to installation instructions specific to those components.

The recommended order of installation and installation testing is as follows:

1. The installation for SAS 9.1.3 Foundation will install the SAS IT Management Adapter 2.7 for SAP software, and SAS IT Resource Management, along with all your other licensed SAS Foundation components. This installation is controlled by the SAS Installation Data (SID) which came in your Software Order E-mail (SOE). If SAS IT Resource Management and the adapter are in the SID product listing in your SOE, their components will be unloaded in the Foundation install. If these products are **NOT** in your product listing, a **correct** SOE **must** be obtained before attempting installation.
2. Install SAP server (ABAP) components of SAS/ACCESS 9.1.3 Interface to R/3. This will require the use of the SAP transport system, and needs to be done by a SAP administrator.
3. Install SAP server (ABAP) components specific to the adapter. This will use SAP transports preferentially, and a SAP administrator should be available to assist.
4. Ensure that the RFC server is running.
5. Test that the SAS/ACCESS 9.1.3 Interface to R/3 functions correctly.
6. Install and test SAS IT Resource Management Release 2.7 software.
7. Configure the SAS components of the adapter software. Follow the instructions in “Chapter 5 — Customizing the Adapter for Windows and UNIX”.
8. Activate the desired cube information for the BW servers.
9. Test the SAS code.

Chapter 2 — Installation for z/OS

The adapter relies on other software being in place, so it is important that all solution components are installed prior to testing. Installation and testing details of components other than the adapter are not provided in this document; refer to installation instructions specific to those components.

The recommended order of installation and installation testing is as follows:

1. The z/OS installation for SAS 9.1.3 Foundation will install the SAS IT Management Adapter 2.7 for SAP software, and SAS IT Resource Management, along with all your other licensed SAS Foundation components. This installation is controlled by the SAS Installation Data (SID) which came in your Software Order E-mail (SOE). If SAS IT Resource Management and the adapter are in the SID product listing in your SOE, their components will be unloaded in the Foundation install. If these products are **NOT** in your product listing, a **correct** SOE **must** be obtained before attempting installation.
2. Following the Foundation install, perform SAS IT Resource Management configuration as directed in Appendix Q of the *Configuration Guide for SAS 9.1.3 Foundation for z/OS*. This includes editing the &CNTLDSN (ITRMEDTP) parameter list, which will **also** contain parameters for configuration of the adapter. Running the &CNTLDSN (ITRMPOST) will create **both** SAS IT Resource Management and adapter utilities which will be found in <USER_PREFIX>.ITRM.CPMISC, with parameters known by the install or in ITRMEDTP already inserted in the text.
3. Install SAP server (ABAP) components of SAS/ACCESS 9.1.3 Interface to R/3. This will require the use of the SAP transport system, and needs to be done by a SAP administrator.
4. Install SAP server (ABAP) components specific to the adapter. This will use SAP transports preferentially, and a SAP administrator should be available to assist.
5. Ensure that the RFC server is running.
6. Test that the SAS/ACCESS 9.1.3 Interface to R/3 functions correctly.
7. Activate the desired cube information for the BW servers.
8. Follow the Instructions in “Chapter 6 — Customizing the Adapter for z/OS”.
9. Test the SAS code.

Chapter 3 — Installation Tasks on the SAP Servers

Note that in addition to the “standard” SAS/ACCESS 9.1.3 Interface to R/3 ABAPs, additional ABAPs are provided with the adapter, and need to be installed by a SAP administrator.

This description does not attempt to give a step-by-step process; it describes what needs to be done. It is assumed that the SAP administrator already has a working knowledge of the required tools in the SAP environment.

ABAP Code to be Installed to Extract SAP Server Performance Statistics

First choose the SAP servers to be used as hubs or *adapter gateway servers*. An adapter gateway server is the SAP server on which the ABAP function `Z_SAS_SAPWL_STATREC_READ_FILE` is installed.

The function is called from SAS to extract performance statistics for the adapter gateway server itself, and for other SAP servers (through RFC destinations). Multiple extractions can be channeled through a single SAP server. As a result, the ABAP function needs to be installed on only one or two servers.

Note: *You need an adapter gateway server for each SAP release because the underlying data structures might change between releases. Remote function calls between SAP instances that have different data structure definitions can result in corrupted returned data.*

The ABAPs are installed using transport files.

Installation Using Transport Files to Install the ABAPs

Transport files for SAP releases 4.5B, 4.6B, 4.6C, 4.6D, 6.10, and 6.20 are supplied in the installation package. If you have another SAP release, please contact SAS technical support. (Note that release 4.7 has an underlying kernel release of 6.20.) See Appendix A for more information on the Transport files.

The relevant transport files are located in the `sasroot` sub-directory `adptitms/sasmisc`.

The files `Transprt.tar` (for UNIX and z/OS) and `Transprt.zip` (for Windows) need to be untarred/unzipped into any local directory so that the transports can be moved to the appropriate SAP server(s).

Only a person with the correct privileges can install the transport files by using the SAP transport manager. This process will be specific to the organization and an SAP administrator should be available for assistance.

ABAP Code to be Installed to Extract BW InfoCube Performance Statistics

BW InfoCube performance statistics tables are extracted using standard SAS/ACCESS 9.1.3 Interface to R/3 ABAPs. No additional ABAPs are required. Note that the ABAP code must be installed on each BW server instance. BW data from BW servers cannot be obtained via a gateway or hub. However, a BW server can serve as a gateway or hub for R/3 data.

SAP Authorization

Some sites might need to restrict the permissions of the SAP user ID used to extract performance data only.

To restrict the user ID permissions that are used to extract performance data, see Appendix C in the *SAS IT Management Adapter 2.7 for SAP User's Guide*. Note that this procedure would need to be adapted if BW cube performance data is also required.

Initial ABAP Testing

To ensure the ABAP function is correctly installed, it is recommended that a **single test** be performed from the ABAP workbench.

Once the SAS environment of the adapter software is installed and configured (after following the instructions in Chapter 5,) test the installation by starting a SAS session, submitting the `autoexec.sas` (for Windows and UNIX) or `autoxmvs` (for z/OS,) followed by **FIRSTRUN.SAS**.

Refer to the section on troubleshooting if there are errors. Note that execution should not take more than a few minutes because it is configured to extract only a few records.

SAP Destinations

It is possible to avoid installing the ABAP on all SAP servers that need to be analyzed by connecting to some SAP servers from SAP servers (hubs) where the ABAP is installed using SAP destinations.

The adapter gateway (hub) server extracts data from other SAP servers using the SAP destinations defined on the hub server itself. See Appendix D in the *SAS IT Management Adapter 2.7 for SAP User's Guide* for an example.

When setting up the hubs, only those servers appearing as RFC-connected in transaction SM59 will be able to be accessed—a SAP programmer should help in establishing the ones necessary that are not defined.

Using hubs has an advantage of reducing administrative work by requiring only one ABAP install per SAP release, but also introduces a higher load on the network. It is therefore recommended to install the ABAPs on each server, and avoid doing indirect extractions.

Gathering Non-Default Statistics: Changing SAP R/3 Settings

Use the SAP transactions RZ10 and RZ11. Refer to SAP administration documentation on the effects of collecting non-default information.

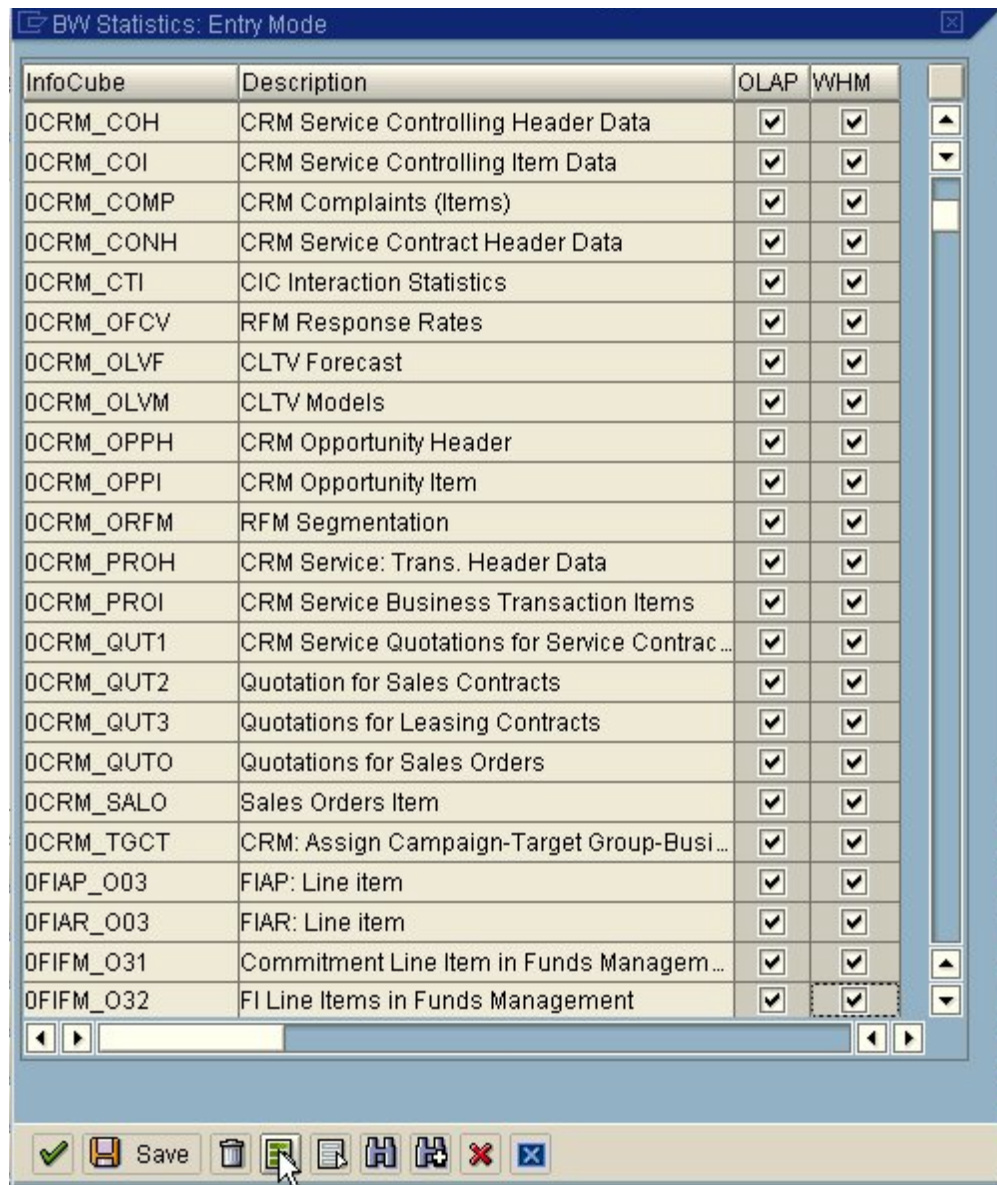
Only knowledgeable SAP system administrators should run these transactions. Parameters are typically named `stat/xxxxxx` (for example, `stat/tabrec`).

Chapter 4 — Activation of Cube Performance Collection in SAP BW

To extract BW cube performance data, first collect cube performance statistics with the BW Administrator's Workbench, which is accessed by using transaction code **RSA1**.

In the workbench, select **Tools → BW Statistics for InfoCubes** (or use key combination <Ctrl><Shift><F10>).

The **BW Statistics: Entry Mode** window appears (see Figure 1), listing all active InfoCubes.



The screenshot shows the 'BW Statistics: Entry Mode' window. It contains a table with the following columns: InfoCube, Description, OLAP, and WHM. The table lists 25 InfoCubes, each with a checked box in the OLAP column and a checked box in the WHM column. The bottom of the window features a toolbar with icons for Save, Delete, Print, and other standard functions.

InfoCube	Description	OLAP	WHM
0CRM_COH	CRM Service Controlling Header Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_COI	CRM Service Controlling Item Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_COMP	CRM Complaints (Items)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_CONH	CRM Service Contract Header Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_CTI	CIC Interaction Statistics	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_OFCV	RFM Response Rates	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_OLVF	CLTV Forecast	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_OLVM	CLTV Models	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_OPPH	CRM Opportunity Header	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_OPPI	CRM Opportunity Item	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_ORFM	RFM Segmentation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_PROH	CRM Service: Trans. Header Data	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_PROI	CRM Service Business Transaction Items	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_QUT1	CRM Service Quotations for Service Contrac...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_QUT2	Quotation for Sales Contracts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_QUT3	Quotations for Leasing Contracts	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_QUTO	Quotations for Sales Orders	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_SALO	Sales Orders Item	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0CRM_TGCT	CRM: Assign Campaign-Target Group-Busi...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0FIAP_003	FIAP: Line item	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0FIAR_003	FIAR: Line item	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0FIFM_031	Commitment Line Item in Funds Managem...	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
0FIFM_032	FI Line Items in Funds Management	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Figure 1 – **BW Statistics: Entry Mode** Window - Extract BW Cube Performance Data

To select all cubes, click the **Select all** icon.

To select individual cube performance information, on the right, under the column headings **OLAP** and **WHM**, click the corresponding **check boxes**.

After you select your cubes, click **Save**.

Chapter 5 — Customizing the Adapter for Windows and UNIX

1. Start an interactive SAS session
2. Create a login profile for each SAP system for which you need to login. To achieve this:
 - a. Start the SAS/ACCESS 9.1.3 Interface to R/3 GUI by entering **%R3ACCESS** on the command line.

Note: On some platforms, such as HP-UX for the Itanium Processor Family, you may need to enter **afa c=sashelp.sr3.primary.scl** on the command line.

- b. Select the Logon icon.



- c. Enter the logon parameters for a SAP system (see Figure 2). Ensure the Advanced parameters are also completed. The advanced parameters are documented in the SAS/ACCESS 9.1.3 Interface to R/3 documentation. This only makes sense for SAP systems that have had the transports applied.

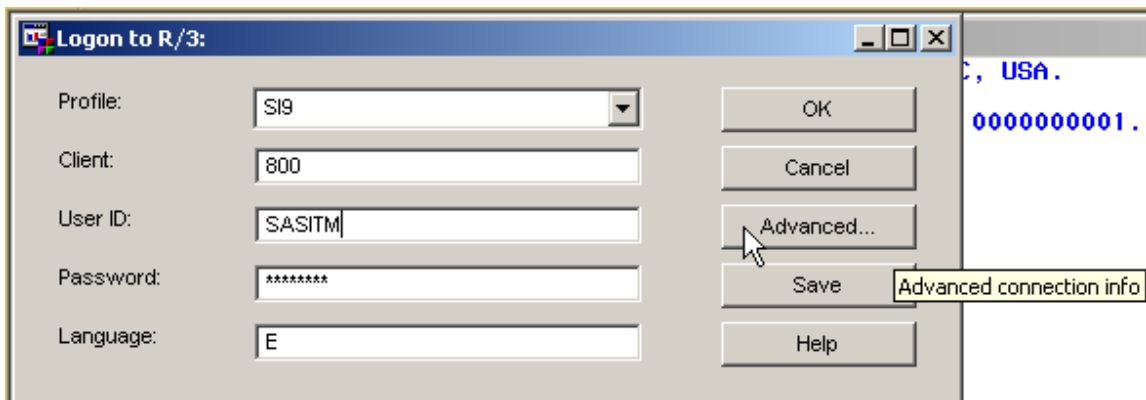


Figure 2 – Logon to R/3 dialog box

- d. Click the Save button to save the settings.
 - e. Enter and save additional server information by simply overtyping the current screen values.

3. Copy sample programs and create batch scripts

You need to copy sample programs, and create batch scripts that can be scheduled. To simplify the copy process, a SAS program is provided to copy the appropriate files and to create batch scripts.

- a. Include the program **r3itmnew.sas** into the SAS program editor (see Figure 3).
- b. Scroll to the end of the program, and modify the **%r3itmnew** macro call to suit your environment, and remove the non-applicable call.

```
* Example calls ;
* Modify according to your environment, and submit;
* Unix style example ;
%r3itmnew(newpath=/usr/local/adapters/itm27,
          emailsys=SMTP,emailhost=mailhost.company.com,emailport=25);

* Windows style example ;
%r3itmnew(newpath=c:\Adapters\itm27,
          emailsys=SMTP,emailhost=mailhost.company.com,emailport=25);
```

Figure 3 – %r3itmnew program example

Explanation of %r3itmnew Parameters

Newpath=

Newpath= allows you to specify a user directory that will be used by the macro to create default versions of SAS programs, as well as .bat files (Windows) or shell scripts (UNIX). When working with the adapter, it may be necessary to have write access to this directory; it may not be possible to have write access to the main !sasroot SAS installation directory after the installation is complete. Note that this newpath is later referred to as the adapter “installation directory”.

Note that if you enter a directory that does not exist, it will be created.

Emailsys=, Emailhost=, Emailport=, and Emailid=

The e-mail parameters are used by **%r3itmnew** to build automatic error notification into the .bat files/shell scripts. Automatic error notification is created in .bat files/shell scripts which need to be scheduled to run on a regular basis.

You might want to refer to SAS On-line help for more information about the system options EMAILSYS, EMAILHOST, EMAILPORT, and EMAILID. Note that you may need to apply for permission to programmatically create e-mails from your mailing system administrator.

Once you have run **%r3itmnew**, proceed to modify files that have been copied into the directory specified by the **newpath=** parameter.

Modify autoexec.sas/autounx.sas

Note: Customizing of the `autoexec.sas` file must be done before testing. `autoexec.sas` must be run first each time.

Important: On UNIX systems you need to open the file `autounx.sas`, and save the modified file as `autoexec.sas`.

All `autoexec.sas` environment settings must be correctly specified. This is crucial for successful adapter configuration. This file is included within the adapter software install directory. The `autoexec.sas` file is split into sections; several of these sections will have settings which need to be modified. Note also that some sections rely on the modified settings.

First Unmodified Code Section

The section containing specific startup definitions (see Figure 4) must not be modified.

```
* Autoexec.sas ;
* -----;
/* do not change following notes*/
%put NOTE: SAS® IT Management Adapter for SAP 2.7 TS nnn;
%put NOTE: Copyright (c) 2004 by SAS Institute Inc., Cary, NC, USA. ;
```

Figure 4 – `autoexec.sas`: First Unmodified Section

Installation Variable Definitions

Within the following code (see Figure 5), variable definitions in ***bold italics*** must be modified to adapt to the installation environment.

The example value set for the macro variable `ITRM_sitelib` points to a location in the `sasroot`. You should ensure that the location specified is the one used in configuring SAS IT Resource Management. If an existing location is not already present, it is suggested that a new directory (with write access) is created, and `ITRM_sitelib` refer to it.

A `%put` statement writes an `ERROR:` message that indicates that the `autoexec.sas` has not been reviewed. After you have tested that all the library definitions are working and refer to existing physical locations, you should remove this error message.

```

/* review and adapt the following code to fit your environment */
* macro variable definitions ;
* ----- ;
* SAS ITRM environment information;
* specify the path where the adapter is installed (should end ITRM);
%let r3ITRM_solution_root=your-install-path/ITRM;

* Install path of SAS ITRM solution and sitelib (see ITRM installation
instructions);
%let ITRM_root=c:/PROGRA~1/SAS/SAS9~1.1/CPE;
%let ITRM_sitelib=c:/PROGRA~1/SAS/SAS9~1.1/CPE/SITELIB;

* email userid if errors on log - string must include @ ;
*%let notify_mailuser=firstname.lastname@company.com;

* ITRM for SAP PDB location;
%let pdb_name=path_to_pdb_area/SAP_PDB;
%let pdb=path_to_pdb_area/pdb_name;

* SAS/ACCESS 9.1.3 Interface to R/3 environment information;
%let accr3_profile_dsn=SASUSER.r3conn;

/* NB: Remove the following %put statements when you are sure
that the libraries defined below are all defined
correctly. (Note that SAPCOLL and R3LIB both
refer to the same physical path) */
%put ERROR: autoexec.sas has not been reviewed yet.;
%put Review, and remove this message!;

```

Figure 5 – autoexec.sas: Installation Variable Definitions

Second Unmodified Code Section

The next section (see Figure 6) contains all library definitions defined by macro variables. It also ensures all the needed macros are made available to the environment. These definitions rely on the modifications made in the previous section.

```
* =====;
* You should not need to change any of the following code: ;
* -----;
*
* SAS library definitions;
* -----;
libname sapcoll "&r3ITRM_solution_root/sapcoll";
libname rawdata "&r3ITRM_solution_root/data";
libname ITRMview "&r3ITRM_solution_root/data/view";
libname r3temp "&r3ITRM_solution_root/data/temp";
libname r3lib "&r3ITRM_solution_root/sapcoll";

<Additional code removed>
```

Figure 6 – autoexec.sas: Second Unmodified Section

Review Scripts to Match Installation Environment

To ensure the correct adapter installation environment setup, various scripts may need to be modified so that the paths match the installation paths. The scripts should have been created by the **%r3itmnew** program. You may wish to review them. The following scripts are used to call the Standard Calling Programs that are described in the *SAS IT Management Adapter 2.7 for SAP User's Guide*. The scripts are provided so that all the calling programs can be run in a batch or scheduled environment as well as interactively.

Windows Scripts

For Windows operating environments, review the BAT scripts such as the example for **NEXTRUNS.BAT** that follows.

There are corresponding scripts for each of the called SAS programs that need to be scheduled. You need to review each one (even though not all of them are shown in detail here). The BAT scripts to review are:

For SAP server statistics:

- **NEXTRUNS.BAT**

For BW InfoCube statistics:

- **NXTRUNBW.BAT**

For both SAP server and BW InfoCube statistics:

- **NIGHTRUN.BAT**

NEXTRUNS.BAT

NEXTRUNS.BAT initially calls **NEXTRUNS.SAS**, and then (depending on options used when running **r3itmnew.sas**) scans the NEXTRUNS.SAS log, e-mailing an excerpt of the log if it contains errors. If no errors are detected, then e-mail is sent with a subject that contains the execution date and time but without text in the body of the message. This e-mail confirms that the job executed without errors.

Although scheduling using the SAP scheduler (see Appendix A of the *SAS IT Management Adapter 2.7 for SAP: User's Guide*) is not recommended, if it is decided to do this, then another statement is required:

```
type lexcerpt.txt
```

This statement is required for the following reasons:

- It provides you with the results at the time the command is invoked from SAP.
- If the last command in the BAT file does not execute cleanly, then it causes a SAP system dump. To avoid this problem, a command must be inserted that can be depended upon to always execute cleanly.

Review the code (see Figure 7), paying special attention to the code segments in ***bold italics***. Note that the statement that invokes SAS has been split for readability. In the actual file it needs to be in a single line.

```
c:
cd \adapters\ITM
c:\PROGRA~1\ SAS\SAS9~1.1\sas -sysin nextruns.sas
-dmsbatch -icon -nosplash

c:\PROGRA~1\ SAS\SAS9~1.1\sas
-sysin chknxlog.sas
-dmsbatch -icon -nosplash
-EMAILSYS SMTP -EMAILHOST mailhost.company.com -EMAILPORT 25
-EMAILID sender.userid@company.com

type lexcerpt.txt
```

Figure 7 – Windows NEXTRUNS.BAT File Installation Environment Script

To schedule the execution using SAP, ensure that paths containing commands in the script files do not include blanks.

For example, `cd \program files\SAS\SAS 9.1` is valid because the command `cd` is known.

However, `c:\program files\sas\sas 9.1\sas` is not valid, because SAP would attempt to execute a command *program* with parameters `files \sas\sas` and `9.1\sas`.

To overcome this limitation, use DOS 8.3 style file and directory names such as

```
c:\PROGRA~1\SAS\SAS9~1.1\SAS\
```

UNIX Scripts

For UNIX platforms, review the scripts such as in the example for **NEXTRUNS** below. There are corresponding scripts for each of the SAS programs that need to be scheduled. You need to review each one (even though not all of them are shown in detail here). The scripts to review are:

For SAP server statistics

- **NEXTRUNS** (see Figure 8)

For BW InfoCube statistics

- **NXTRUNBW**

For both SAP server and BW InfoCube statistics

- **NIGHTRUN**

NEXTRUNS

```
cd ~/adapters/ITM
/opt/sas/sas91/sas \
    -sysin nextruns.sas \
    -dmsbatch

/opt/sas/sas91/sas \
    -sysin chknxlog.sas -dmsbatch -EMAILSYS SMTP -EMAILHOST
mailhost.company.com -EMAILPORT 25
    -EMAILID sender.userid@company.com
```

Figure 8 – UNIX NEXTRUNS File Installation Environment Script

Chapter 6 — Customizing the Adapter for z/OS

Follow these steps to customize the adapter for z/OS:

1. Start an interactive SAS session.
2. Create a login profile for each SAP system for which you need to login. To achieve this:
 - a. Include the program <install path>.**ITRM.CPMISC(R3CONN)** into the SAS program editor.
 - b. Update the included source code to enter the login parameters for all the SAP systems for which login access will be needed. For each SAP system required there should be an invocation of the %r3conn macro present at the bottom of the code. The parameters are documented in the SAS/ACCESS 9.1.3 Interface to R/3 documentation. This only makes sense for SAP systems that have had the transports applied.
 - c. Submit the SAS code and check the SAS log.
 - d. By default, the code creates a SAS dataset called `SASUSER.R3CONN`. This dataset can be browsed to ensure correct setting of the login parameters.

Review AUTOXMVS

Note: Customizing of the AUTOXMVS file must be done before testing. AUTOXMVS must be run first each time.

All AUTOXMVS environment settings must be correctly specified. This is crucial for successful adapter configuration. This file is included within the adapter software install directory. The AUTOXMVS file should have been customized by the install process, but you need to check that all settings are correct, and that the code executes correctly.

Review JCL to Match Installation Environment

To ensure the correct adapter installation environment setup, various JCL jobs may need to be modified so that the paths match the installation paths. Example JCL jobs are supplied with the Adapter, and are customized by the install process. These should be reviewed. The jobs are used to call the Standard Calling Programs that are described in the *SAS IT Management Adapter 2.7 for SAP User's Guide*. The jobs are provided so that all the calling programs can be run in a batch or scheduled environment.

z/OS JCL

For z/OS operating environments, review the JCL jobs.

There are corresponding jobs for each of the SAS programs that need to be scheduled. You need to review each one. The jobs to review, in <install path>.**ITRM.CPMISC**, are:

For SAP server statistics:

- **NEXTRUNS**

For BW InfoCube statistics:

- **NXTRUNBW**

For both SAP server and BW InfoCube statistics:

- **NIGHTRUN**

SAS/ACCESS 9.1.3 Interface to R/3 Logon Profiles

You need to create a logon profile for each SAP server to which you wish to connect. Refer to the installation instructions for SAS/ACCESS 9.1.3 Interface to R/3 for help in doing so. The default location for storing the logon profiles is in the SASUSER.R3CONN table. If you have created logon profiles while in a SAS session that have an alternative location for the SASUSER library, then you need to copy the SASUSER.R3CONN table into the location used.

SASUSER Library Location

You need to ensure that when working in interactive SAS sessions, that the same SASUSER location is used as that used by the batch SAS programs.

Scheduling

The **NEXTRUNS**, **NXTBWRUN** and **NIGHTRUN** batch/command scripts must be scheduled to run regularly using a suitable scheduling tool. It is recommended that you use a scheduler that is normally used on your install platform. As some sites prefer to use SAP for scheduling, an explanation is provided in the scheduling section of the *SAS IT Management Adapter 2.7 for SAP User's Guide*.

Note: It is important that none of these jobs run simultaneously.

It is recommended that you schedule **NEXTRUNS** hourly. Hourly loads are recommended because data is processed by CCMS on an hourly basis, and hourly scheduling has proved to handle clearing of the stats file in older SAP releases. It is sufficient to schedule **NXTBWRUN** and **NIGHTRUN** to run nightly.

Chapter 7 — Test the Installation by Registering a SAP Server to the Adapter

In a SAS session that has already run the modified `autoexec.sas` or `autoxmv.s` (from the previous steps), include the **firstrun.sas/firstrun** program (see Figure 9). Use it to register a first server, and to test the installation.

You may later register additional SAP servers using the `%register_sap_server` macro from an interactive SAS session.

```
Options notes;

* Use nomprint to suppress, mprint to see macro generated code ;
options nomprint nosource nosource2 ;

*Want to initialise the files, delete any existing tables;
proc datasets library=rawdata nolist kill;
run;

* clean out r3temp library just in case ;
proc datasets library=r3temp nolist kill;

/* define the server and destination that will be added in first
run here by filling in appropriate values into register_sap_server */
```

Figure 9 – **firstrun** program example

Appendix A — Contents of SAP Transport Files

The install procedure copies SAP transport files into `!sasroot/adptitms/misc` directory. They are packaged as `Transprt.zip` and `Transprt.tar`, for extraction to Windows and UNIX respectively. For z/OS the files are packaged as `AITR3ZIP` and `AITR3TAR` and reside in `<USER_PREFIX>.%ENC.TARFILES`.

Note: *These transports are in addition to the standard ones provided by the SAS/ACCESS 9.1.3 Interface to R/3 component product. The standard transports must be installed according to the SAS/ACCESS 9.1.3 Interface to R/3 installations instructions.*

The following is a list and description of the contents of the SAP Transport files.

Directory: Transprt\

stat_45B.ab4	These five ABAP reports do NOT need to be transported to SAP. These are only present to show the underlying ABAP code contained within the transport files.
stat_46B.ab4	
stat_46C.ab4	
stat_610.ab4	
stat_620.ab4	

ZSASPIPE.ab4	ABAP report used for job scheduling within SAP. See Appendix A: Scheduling in the adapter for SAP User's Guide for further details.
--------------	--

Directory: Transprt\AuthorisationProfile\

K900012.si8	Transport containing an ABAP report to implement highly-restrictive access to SAP R/3 via adapter. Do not install this before seeing Appendix C: Restricting the RFC User Account for the IT Management Adapter for SAP in the adapter for SAP User's Guide for further details.
R900012.si8	

NOTE: Implementing this option prevents the extraction of some information from SAP BW systems.

Directory: Transprt\v4.5B\

K900192.si2	Transport containing an ABAP report to set up parameters and call SAP function <code>SAPWL_STATREC_READ_FILE</code> . Valid for SAP release 4.5B .
R900192.si2	

Directory: Transprt\v4.6B

K900108.lnx	Transport containing an ABAP report to set up parameters and call
R900108.lnx	SAP function SAPWL_STATREC_READ_FILE.
	Valid for SAP release 4.6B .

Directory: Transprt\v4.6C

K900218.si3	Transport containing an ABAP report to set up parameters and call
R900218.si3	SAP function SAPWL_READ_STAT_A_ASTAT_FILES.
	Valid for SAP release 4.6C .

Directory: Transprt\v4.6D

K900008.si7	Transport containing an ABAP report to set up parameters and call
R900008.si7	SAP function SAPWL_READ_STAT_A_ASTAT_FILES.
	Valid for SAP release 4.6D .

Directory: Transprt\v6.10

K900026.si6	Transport containing an ABAP report to set up parameters and call
R900026.si6	SAP function SAPWL_READ_STAT_A_ASTAT_FILES.
	Valid for SAP release 6.10 .

Directory: Transprt\v6.20

K900026.si6	Transport containing an ABAP report to set up parameters and call
R900026.si6	SAP function SAPWL_READ_STAT_A_ASTAT_FILES.
	Valid for SAP release 6.20 . (Note it is identical to the 6.10 Transport)



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