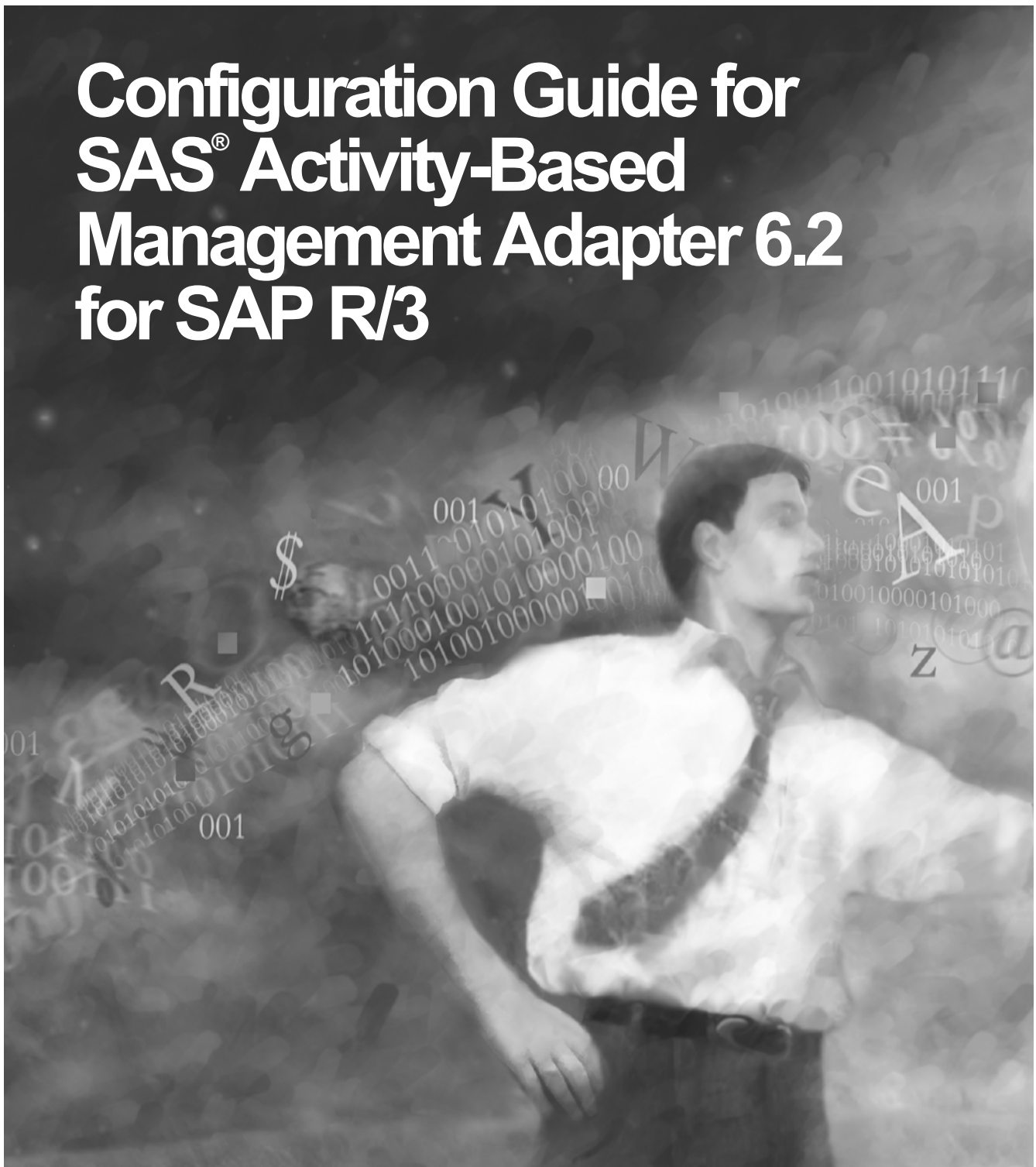




Configuration Guide for SAS[®] Activity-Based Management Adapter 6.2 for SAP R/3



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Configuration Guide for SAS® Activity-Based Management Adapter 6.2 for SAP R/3

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Introduction

This document provides the instructions for configuring the SAS Activity-Based Management Adapter 6.2 for SAP R/3 (the adapter) server and client software on a Windows-based system. Please read these instructions before you attempt to configure the software.

Note: *The client side and server side software **must** be installed on the same computer.*

This document assumes that you are familiar with the Windows operating system, the SAS System, and SAS/ACCESS Interface to R/3 software.

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 Activity-Based Management Adapter 6.2 for R/3 software, 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 the SAS Activity-Based Management Adapter 6.2 for R/3 is in the SID product listing in your SOE, the 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 Interface to R/3, Release 9.1.3. 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 (Windows service) is running.
5. Test that the SAS/ACCESS Interface to R/3 functions correctly.
6. Install and test the SAS Activity-Based Management Adapter 6.2 for SAP R/3 software.
7. Configure the SAS components of the adapter software.

Installation Package Description

After the foundation install there will be three self-extracting .exe files in the !sasroot\abmadaptsap\sasmisc subdirectory (**Note that !sasroot typically resolves to C:\Program Files\SAS\SAS 9.1**):

- `Transprt.exe`, contains the required files for the transport files for SAP
- `Client.exe`, contains the required files for the client side installation
- `Server.exe`, contains the required files for the server side installation

Software Product Requirements

SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires SAP R/3 (Release 4.5B or higher) to be installed prior to the installation of the adapter itself. The adapter must be installed on a machine that already has the SAS Activity-Based Management SAS Server or SAS Activity-Based Management ETL Server installed on it.

Products Required for SAS Activity-Based Management Adapter 6.2 for SAP R/3:

- Base SAS software.
- SAS Activity-Based Management Adapter 6.2 for SAP R/3, which contains necessary elements of SAS/ACCESS Interface to R/3 software.
- SAS/ACCESS Interface to R/3 software, which is bundled with the adapter.

SAS/ACCESS Interface to R/3 software requires the use of communication protocols such as TCP/IP to function properly.

Products Required SAP R/3:

- SAP R/3, Release 4.5B or higher.
- SAP R/3 Remote Function Call Software Development Kit (RFCSDK), which can be installed together with the SAP GUI software.

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.

SAP Server Installation and Configuration

SAP Transport File Installation

In addition to the SAP server installation and setup needed by SAS/ACCESS Interface to R/3 software, there are two more transports needed for the SAS Activity-Based Management Adapter 6.2 for SAP R/3. This document assumes that the standard SAP server components of the SAS/ACCESS Interface to R/3 software have already been installed. If this is not the case, please ensure that these components are installed before continuing.

The SAS Activity-Based Management Adapter 6.2 for SAP R/3 includes components that need to be installed on the SAP system. This is done in the form of SAP transports. The transports should be installed by the responsible SAP administrator.

Double-click the !sasroot\abmadaptsap\sasmisc\Transport.exe file to unzip the SAP transports.

Note: The default path for extracting the files is C:\.

By default, the extraction will create this directory structure:

```
C:\R3Transport
    K900385.SI3
    R900385.SI3
    K900339.SI2
    R900339.SI2
    SAP_Components_ABM.doc
```

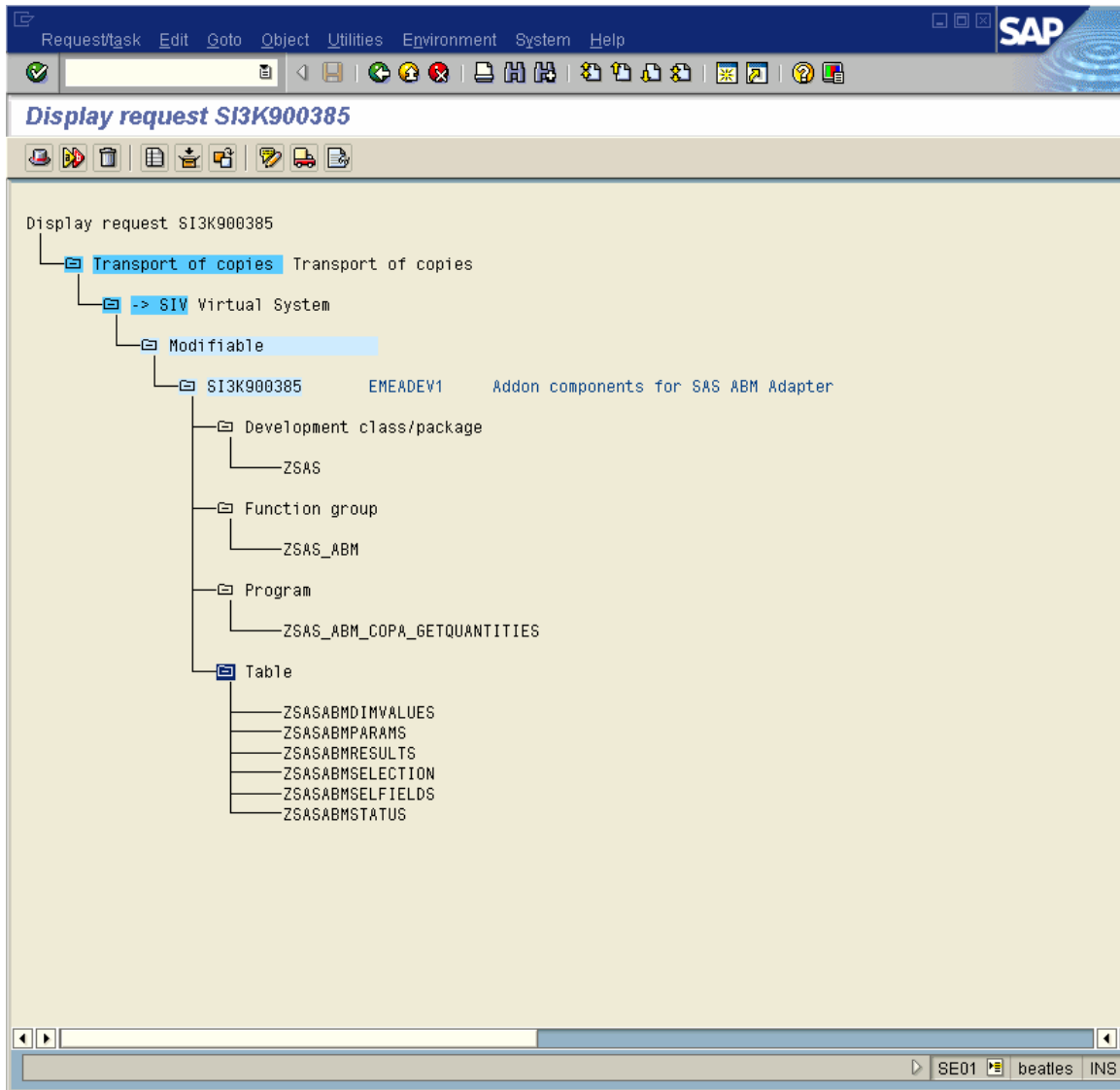
The transports are named SI3K900385 and SI3K900339. Each consists of two files—a data file and a cofile:

- R900385.SI3 (Data file)
- K900385.SI3 (Cofile)
- R900339.SI2 (Data file)
- K900339.SI2 (Cofile)

The transport SI3K900385 consists of:

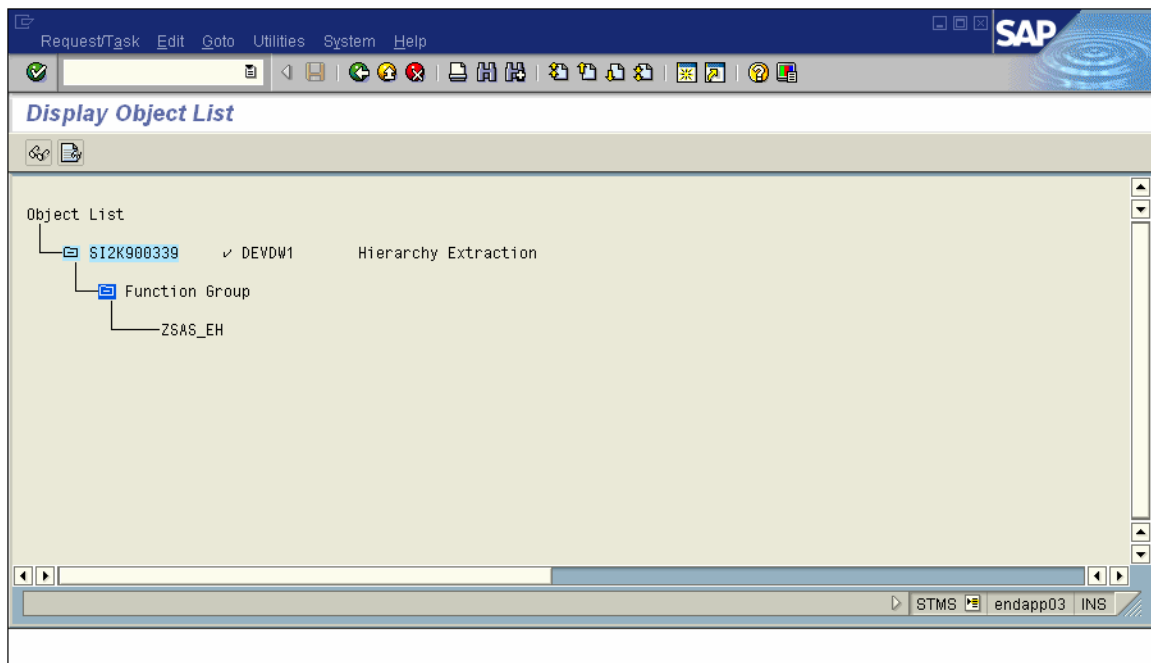
- a package ZSAS
- a function group ZSAS_ABM holding the following function modules:
 - Z_SAS_ABM_COPA_GETQUANTITIES
 - Z_SAS_BATCH_SPAWNER
- a report ZSAS_ABM_COPA_GETQUANTITIES
- six transparent tables:
 - ZSASABMDIMVALUES
 - ZSASABMPARAMS
 - ZSASABMRESULTS
 - ZSASABMSELECTION
 - ZSASABMSELFIELDS
 - ZSASABMSTATUS

The contents of the transport are shown in the following display:



SI2K900339 consists of:

- A function group ZSAS_EH containing the following function module:
 - Z_SAS_G_SET_TREE_IMPORT2

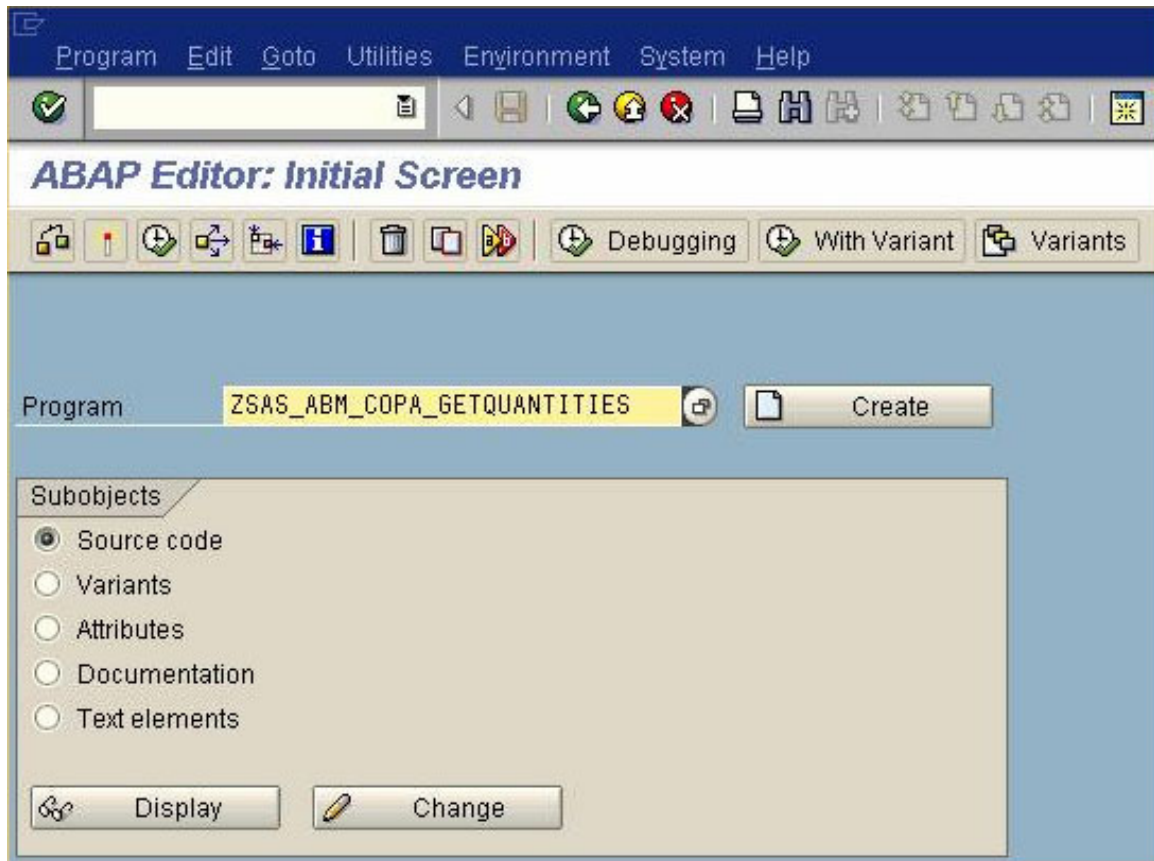


Create Variant for ZSAS_ABM_COPA_GETQUANTITIES

The report ZSAS_ABM_COPA_GETQUANTITIES needs a variant called **ZZ_ABM** to run properly. Create the **ZZ_ABM** variant as follows:

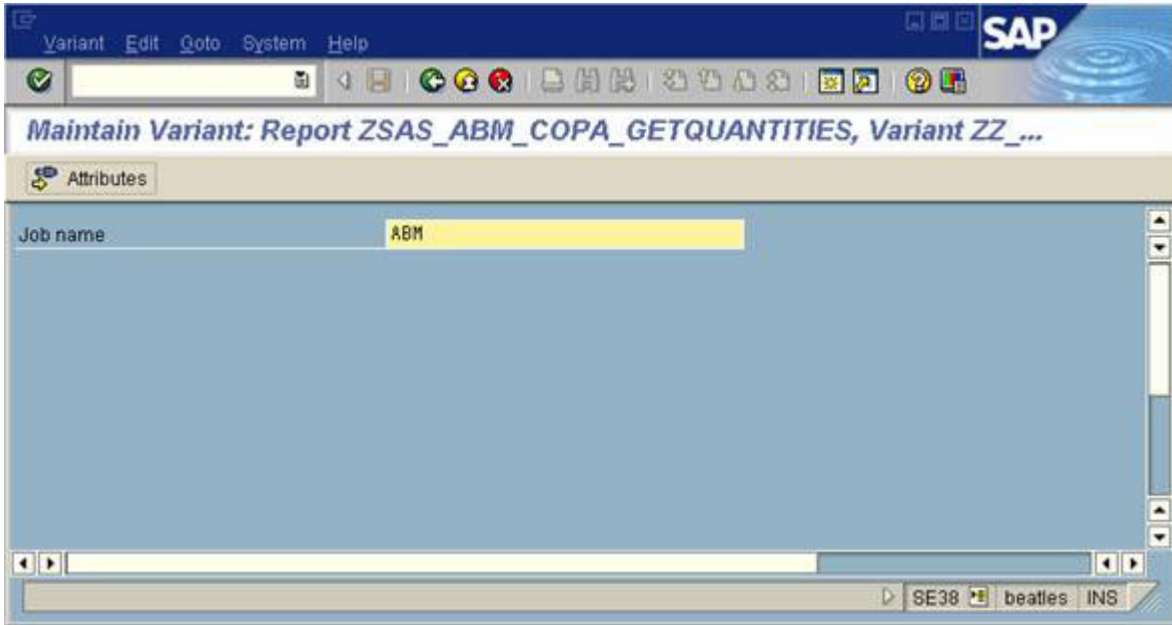
1. Go to se38 in SAP.

2. Enter ZSAS_ABM_COPA_GETQUANTITIES as the name of the program.



3. Select **Variants** under the Subobjects heading.
4. Click **Change**.

5. Enter ZZ_ABM into the variant field and click **Create**. You should see the following display:



Click on **Attributes** and enter a description. Click the **Save** icon (or press CTRL+S) to save the variant.

R/3 Authorizations Required for the Adapter

This section describes the minimum authorizations required for SAS Activity-Based Management Adapter 6.2 for SAP R/3. Four specific SAP profiles are required. Two are standard SAP profiles. Two are custom user profiles which contain authorization objects described further below in this document.

It is also recommended to have an additional user ID that is to be used interactively in the SAP GUI to test functions, browse tables, and facilitate SAP data validation during the implementation phase. This user ID would typically have the same rights as someone in the Controlling department, but with the following additional rights to run transactions:

- SE16 to browse tables
- SE17 and SE38 to run single test functions and programs
- SM21 and SM37 to monitor jobs and logs

Profile	Ty...	Text
K_PCA_ALL1		All profit center authorizations
K_RKE_ALL		CO: All Authorizations for Profitability Analysis
SAS-ABM		SAP Authorizations required for ABM Adapter
SAS-ACCR3		Minimum authorizations for SAS/ACCESS Interface to SAP R/3

Standard R/3 Authorizations profiles:

K_PCA_AL1 - For Profit Center support

K_RKE_ALL - For COPA support

Custom profile for SAS Activity-Based Management Adapter to create:

Profile

```
--□ SAS-ABM <PRO> SAP Authorizations required for Activity-Based Management Adapter
| --□ K_ABC <OBJ> CO-ABC: General Authorization Object, Business Processes
| | --□ SASABM6 <AUT> Business Process
| | | --□ AUTHAREA <FLD> Authorization Area for Business Processes
| | | | ----BP*
| | | --□ CO_ACTION <FLD> Actions for CO-OM Authorization Check
| | | | ----*
| | | --□ KSTAR <FLD> Cost element
| | | | ----*
|--□ K_AUFK_ART <OBJ> CO-OPA: Order Types
| | --□ SASABM14 <AUT> Order types
| | | --□ ACTVT <FLD> Activity
| | | | ----03
| | | --□ ASTNR <FLD> Order status
| | | | ----*
| | | --□ AUFART <FLD> Order type
| | | | ----*
|--□ K_AUFK_SET <OBJ> CO_OPA: Order groups
| | --□ SASABM13 <AUT> Internal Order Group
| | | --□ ACTVT <FLD> Activity
| | | | ----03
| | | --□ HNAME <FLD> Group Name
| | | | ----*
|--□ K_CBPR_SET <OBJ> CO-ABC: Business Process Groups
| | --□ SASABM3 <AUT> Authorizations required for Activity-Based Management Adapter
| | | --□ ACTVT <FLD> Activity
| | | | ----03
| | | --□ KOKRS <FLD> Controlling Area
| | | | ----*
|--□ K_CCA <OBJ> CO-CCA: Gen. Authorization Object for Cost Center Accounting
| | --□ SASABM11 <AUT> CC A
| | | --□ CO_ACTION <FLD> Actions for CO-OM Authorization Check
| | | | ----*
```

```

|-- □ KSTAR <FLD> Cost element
| | |----*
|-- □ RESPAREA <FLD> CO-OM Responsibility Area
| | |----KS* *
|-- □ K_CSKA_SET <OBJ> CO-CCA: Cost Element Groups
|-- □ SASABM2 <AUT> Authorizations required for Activity-Based Management Adapter
| |-- □ ACTVT <FLD> Activity
| | |----03
|-- □ KTOPL <FLD> Chart of accounts
| | |----*
|-- □ K_CSKB <OBJ> CO-CCA: Cost Element Master
|-- □ SASABM9 <AUT> Cost Element
| |-- □ ACTVT <FLD> Activity
| | |----03
|-- □ CO_KAINT <FLD> Cost element classification (primary/secondary)
| | |----*
|-- □ KOKRS <FLD> Controlling Area
| | |----*
|-- □ K_CSKS <OBJ> CO-CCA: Cost Center Master
|-- □ SASABM8 <AUT> Cost Center
| |-- □ ACTVT <FLD> Activity
| | |----03
|-- □ KOKRS <FLD> Controlling Area
| | |----*
|-- □ KOSTL <FLD> Cost Center
| | |----*
|-- □ K_CSKS_SET <OBJ> CO-CCA: Cost Center Groups
|-- □ SASABM1 <AUT> Authorizations required for Activity-Based Management Adapter
| |-- □ ACTVT <FLD> Activity
| | |----03
|-- □ KOKRS <FLD> Controlling Area
| | |----*
|-- □ K_CSLA <OBJ> CO-CCA: Activity Types Master
|-- □ SASABM7 <AUT> Activity type
| |-- □ ACTVT <FLD> Activity
| | |----03
|-- □ KOKRS <FLD> Controlling Area
| | |----*
|-- □ K_CSLA_SET <OBJ> CO-CCA: Activity Type Groups

```

```

|-- □ SASABM5 <AUT> Authorizations required for Activity-Based Management Adapter
|   |-- □ ACTVT <FLD> Activity
|   |   |----03
|   |-- □ KOKRS <FLD> Controlling Area
|   |   |----*
|-- □ K_KA03 <OBJ> CO-CCA: Statistical Key Figures
|   |-- □ SASABM10 <AUT> SKF
|   |-- □ ACTVT <FLD> Activity
|   |   |----03
|   |-- □ KOKRS <FLD> Controlling Area
|   |   |----*
|-- □ K_KA03_SET <OBJ> CO-CCA: Statistical Key Figure Groups
|   |-- □ SASABM10 <AUT> SKF group
|   |-- □ ACTVT <FLD> Activity
|   |   |----03
|   |-- □ KOKRS <FLD> Controlling Area
|   |   |----*
|-- □ K_ORDER <OBJ> CO-OPA: General authorization object for internal orders
|   |-- □ K_ORDER_ALL <AUT> All Authorizations
|   |-- □ AUFART <FLD> Order type
|   |   |----*
|   |-- □ AUTHPHASE <FLD> Internal order authorization: Authorization phase
|   |   |----*
|   |-- □ CO_ACTION <FLD> Actions for CO-OM Authorization Check
|   |   |----*
|   |-- □ KSTAR <FLD> Cost element
|   |   |----*
|   |-- □ RESPAREA <FLD> CO-OM Responsibility Area
|   |   |----*
|-- □ K_PCA <OBJ> EC-PCA: Responsibility Area, Profit Center
|   |-- □ K_PCA_ALL <AUT> All Authorizations for the Responsibility Area
|   |-- □ CO_ACTION <FLD> Actions for CO-OM Authorization Check
|   |   |----*
|   |-- □ KSTAR <FLD> Cost element
|   |   |----*
|   |-- □ RESPAREA <FLD> CO-OM Responsibility Area
|   |   |----*
|-- □ K_PCAS_PRC <OBJ> EC-PCA: Profit Center
|   |-- □ SASABM12 <AUT> Profit centers

```

```

|-- ACTVT <FLD> Activity
| | |----03
|-- KOKRS <FLD> Controlling Area
| | |----*
|-- S RFC <OBJ> Authorization check for RFC access
|-- SASABM <AUT> Authorizations required for Activity-Based Management Adapter
|-- ACTVT <FLD> Activity
| | |----16
|-- RFC_NAME <FLD> Name of RFC to be protected
| | |----0004CORE
| | |----KEBAPI1161
| | |----KERFC
| | |----KE_BAPI_COPAQUERY
| | |----KGR2
|-- RFC_TYPE <FLD> Type of RFC object to be protected
| | |----FUGR

```

Authorizations for SAS/ACCESS Interface to R/3:

Profile

```

|-- SAS-ACCR3 <PRO> Minimum authorizations for SAS/ACCESS Interface to R/3
|-- S BTCH_JOB <OBJ> Background Processing: Operations on Background Jobs
| |-- BTCHSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3
| | |-- JOBACTION <FLD> Job operations
| | | | |----RELE
| | |-- JOBGROUP <FLD> Summary of jobs for a group
| | | | |----'1'
|-- S CPIC <OBJ> CPIC Calls from ABAP Programs
| |-- CPICSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3
| | |-- ABAPFORM <FLD> Name of an ABAP/4 FORM routine
| | | | |----*
| | |-- ACTVT <FLD> Activity
| | | | |----37
| | | | |----51
| | |-- CPICDEST <FLD> Symbolic destination
| | | | |----SELF
| | |-- PROGRAM <FLD> ABAP program name
| | | | |----SAPLZSAS
| | | | |----ZSASRDBT

```

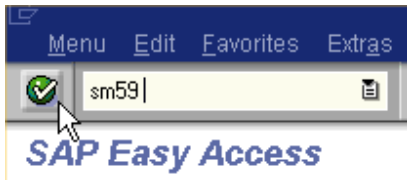
```
|      |----ZSASRDTB
|--□ S RFC <OBJ> Authorization check for RFC access
| |--□ RFCSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3
|   |--□ ACTVT <FLD> Activity
|     | |----*
|     |--□ RFC_NAME <FLD> Name of RFC to be protected
|     | |----*
|     |--□ RFC_TYPE <FLD> Type of RFC object to be protected
|     | |----*
|--□ S_TABU_DIS <OBJ> Table Maintenance (via standard tools such as SM30)
| |--□ TABUSAS <AUT> Minimum authorizations for SAS/ACCESS Interface to R/3
|   |--□ ACTVT <FLD> Activity
|     | |----03
|     |--□ DICBERCLS <FLD> Authorization group
|       |----*
```


Batch RFC Support – SAP Server Configuration

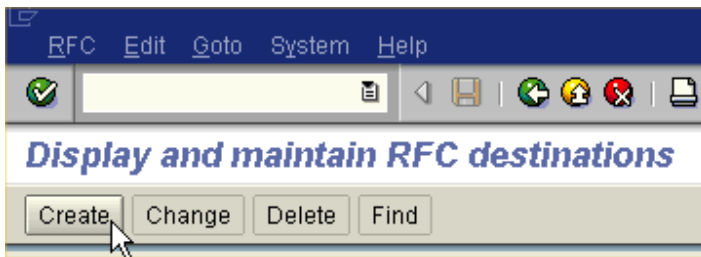
The SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires that the SAS/ACCESS Interface to R/3 RFC server be enabled to support batch mode extractions from SAP. The RFC server is used to connect the SAS server to the SAP server. This is not automatically enabled during the SAS Foundation installation on Windows platforms. The following steps outline what needs to be done on the SAP server to enable batch mode support:

Some screenshots from a SAP R/3 Enterprise system are used to illustrate the process.

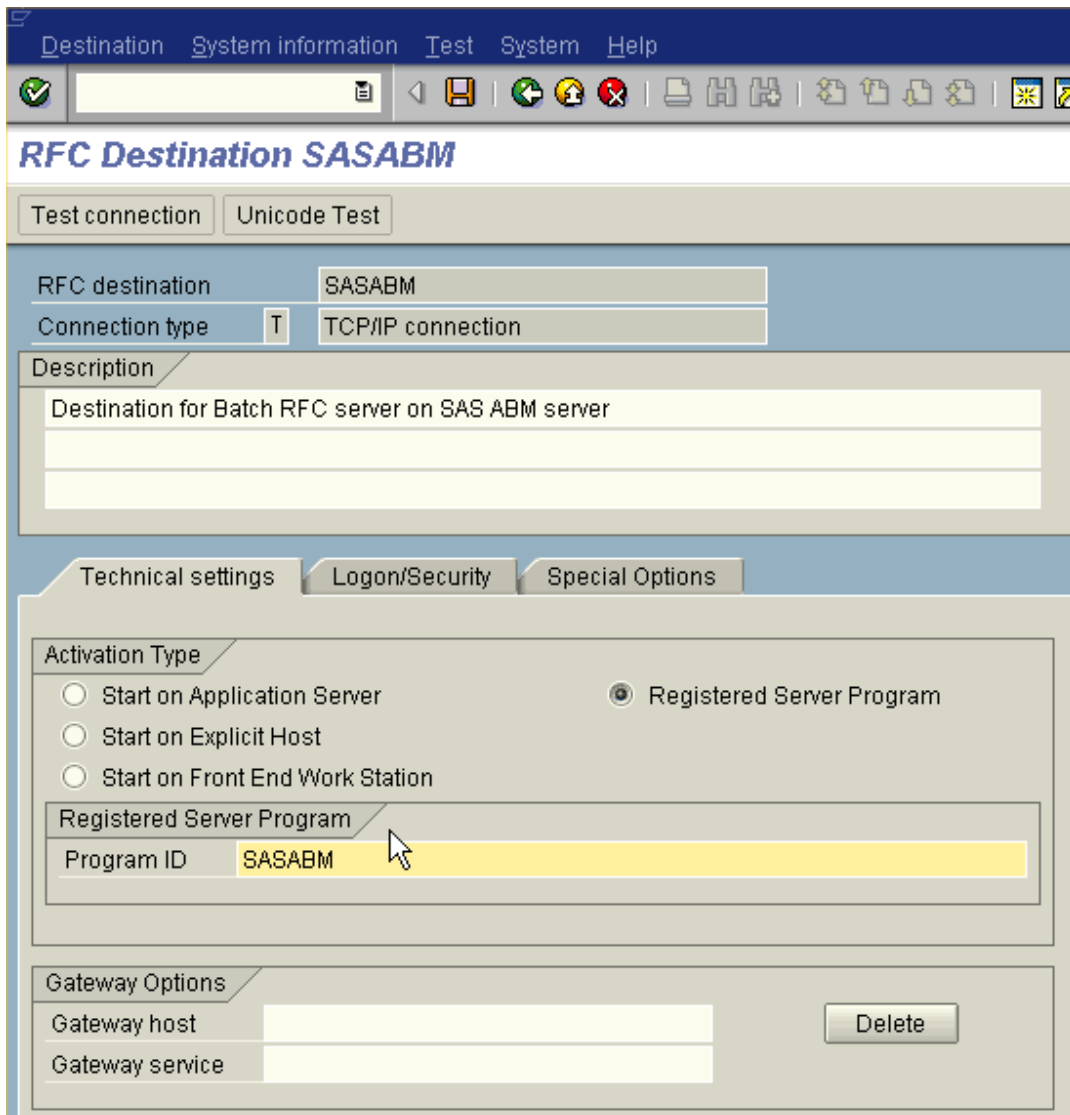
1. Set up a SM59 destination in SAP.



Enter the SM59 transaction command.



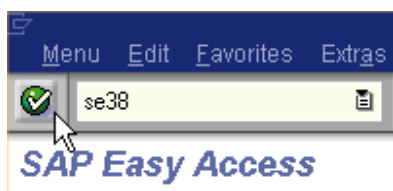
Click **Create**.



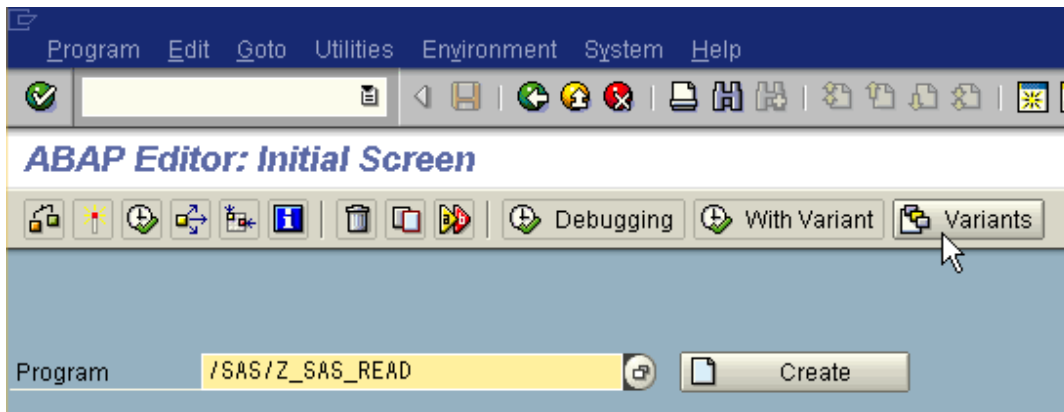
In this example, the destination and program ID are both called SASABM. The connection type must be “T” (TCP/IP connection), and the Activation type must be Registration (Registered Server Program).

Save the destination.

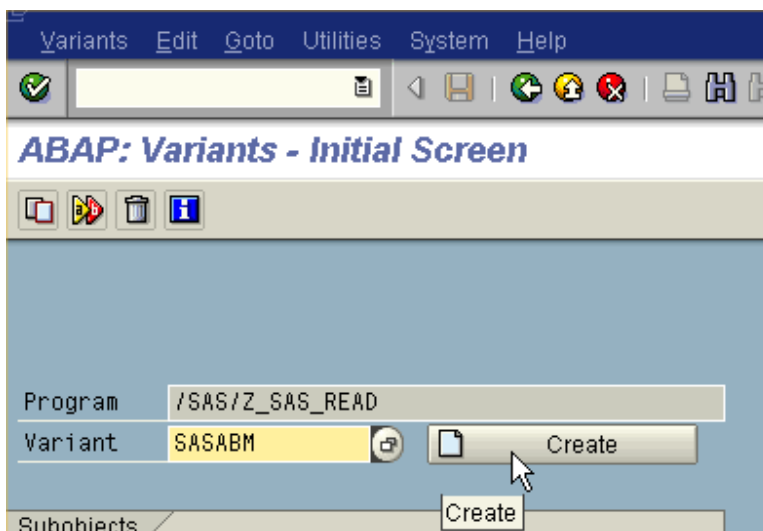
2. Create a variant of the ABAP program /SAS/Z_SAS_READ that references this destination. On the SAS server (=default RFC server).



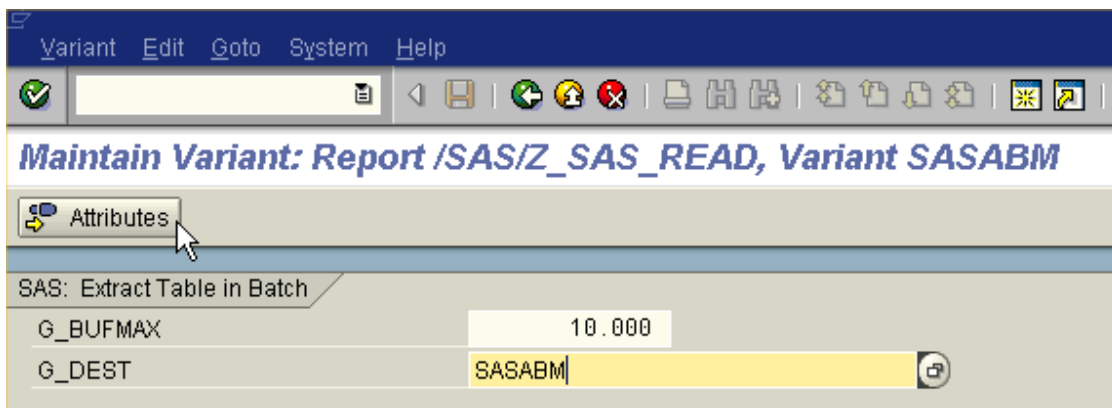
Enter the **se38** transaction command.



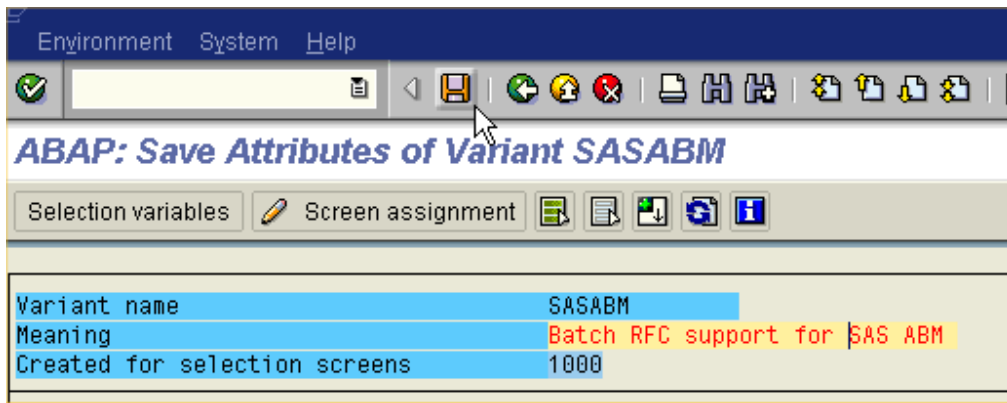
Enter the program name **/SAS/_Z_SAS_READ**, and click **Variants** (or CTRL+F1).



Enter the variant name **SASABM**, and then click **Create**.



Enter the destination **SASABM**, and then click **Attributes**.



Enter a description, and save the Variant.

SAS Server Installation and Configuration

Client Side Installation

To install the adapter on the client side:

1. Close all open SAS applications.

Note: The SAS Foundation setup will normally install the SAS Private JRE which is 1.4.1 for Windows. The JRE is required to run the client.

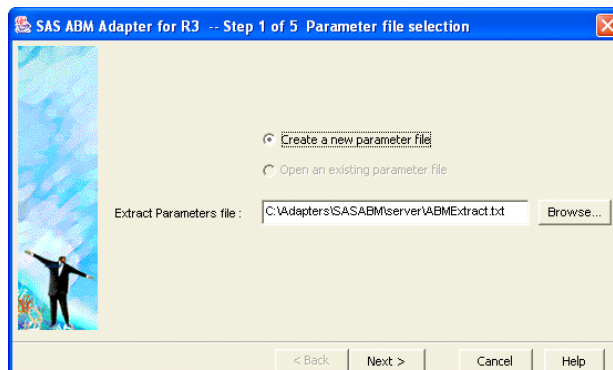
2. Double-click the !sasroot\abmadaptsap\sasmisc\Client.exe file.

Note: The default path for extracting the files should be C:\ (highly recommended). If you change this location, you will have to change many of the programs to deal with the revised directory paths.

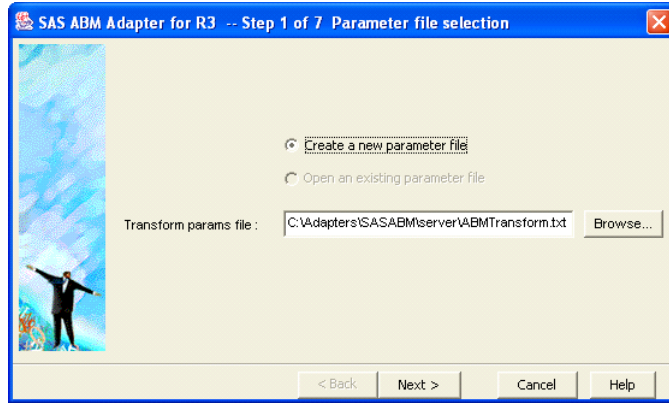
By default, the extraction will create this directory structure:

```
C:\adapters
    \SASABM62
        \client
            \ExtractWizard.bat
            \TransformWizard.bat
            \ABMAdapterExtractWz.jar
            \ABMAdapterTransformWz.jar
            \saswizard.jar
            \SAS ABM Adapter Extraction Wizard
            \SAS ABM Adapter Transform Wizard
```

3. Copy the SAS ABM Adapter Extraction Wizard and SAS ABM Adapter Transform Wizard shortcuts to the Windows Desktop.
4. Verify that the adapter client side software is installed correctly:
 - Double-click the **SAS ABM Adapter Extraction Wizard** shortcut on the Desktop. If the Extraction Wizard was installed correctly, after a brief delay, the following window will appear:



- Click **Cancel**.
- Double-click the **SAS ABM Adapter Transform Wizard** shortcut on the Desktop. If the Transform Wizard was installed correctly, after a brief delay, the following window will appear:



- Click **Cancel**.

Description of client side installation files:

Filename	Description
ExtractWizard.bat	Batch file to run the Extraction Wizard
TransformWizard.bat	Batch file to run the Transformation Wizard
SAS ABM Adapter Extraction Wizard	Shortcut to place on the Desktop to run the Extraction Wizard
SAS ABM Adapter Transform Wizard	Shortcut to place on the Desktop to run the Transformation Wizard
ABMAdapterExtractWz.jar	Extraction Wizard Java P-code
ABMAdapterTransformWz.jar	Transformation Wizard Java P-code
saswizard.jar	Common P-code for the Wizards

Server Side Installation

To install the adapter on the server side:

1. Install the SAS 9.1.3 Foundation software.
2. Install SAS/ACCESS Interface to R/3 software.
3. Create a directory to hold the SAP extracted data on your hard drive:

C:\R3Data

4. Extract the R/3 Metadata. Refer to the “Metadata Extraction” section on page 25 for details.

The metadata extraction should be done AFTER installing the SAP transport. This is required to get metadata registered by the Transport for the tables **ZSASABMRESULTS** and **ZSASABMSTATUS**.

5. Close all open SAS applications.
6. Double-click the !sasroot\abmadaptsap\sasmisc\server.exe file.

Note: The default path for extracting the files should be C:\ (**highly** recommended).
If you change this location, you will have to change many of the programs to deal with the revised directory paths.

By default, the extraction will create this directory structure:

```

C:\Adapters
  \SASABM62
    \Server
      \r3lib
      \Samples
        \ABM Extract Samples - Many files
        \Batch
          Batch_Periodic_extract.bat
          Scheduled_Extract_Period.sas
          Setenv.bat
        \abmadapt_export_to_access.sas
        \abmadapt_Extract_Master_Data.sas
        \abmadapt_Extract_Periodic_Data.sas
        \abmadapt_initial.sas
        \abmadapt_Transform.sas
        \ABMExtract.txt
        \ABMTransform.txt
        \ABMTransform_all_params.txt
        \autoexec.sas
        \autoexec_ui.sas
        \B_ExportToAccess.bat
        \B_Extract_Meta_Data.bat
        \B_ExtractMaster.bat
        \B_ExtractPeriodic.bat
        \B_Transform.bat
        \common_logoff.sas
        \common_logon.sas
        \MetaDataExtraction.sas
        \SAS_9 ABM Adapter UI.lnk
        \SAS_9 ABM Adapter.lnk
        \setenv.bat
  
```

7. Copy the SAS ABM Adapter UI and SAS ABM Adapter shortcuts to the Windows Desktop.

Customization of the Adapter Environment

If you did not change the default installation path for the SAS 9.1.3 Foundation and the adapter, you can proceed to the section entitled “Verify that the Installation is Set Up Correctly” on page 23.

This installation package assumes that the SAS 9.1.3 Foundation was installed in (the default location)

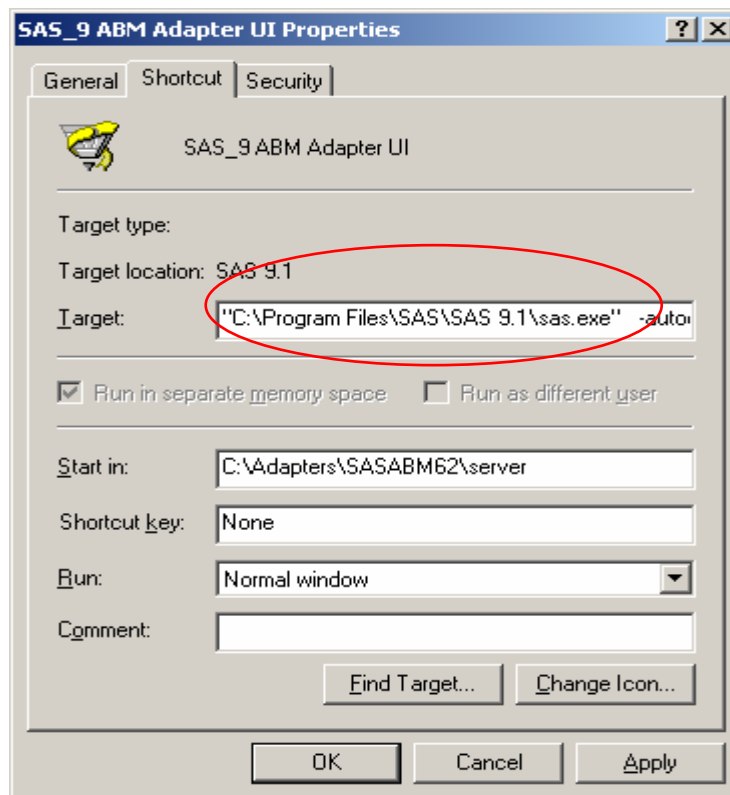
```
C:\Program Files\SAS\SAS 9.1\
```

If you changed the default installation path, you must modify `\setenv.bat` to point to the correct path. To modify this file, select it with Windows Explorer, right-click the file name, then select **Edit**.

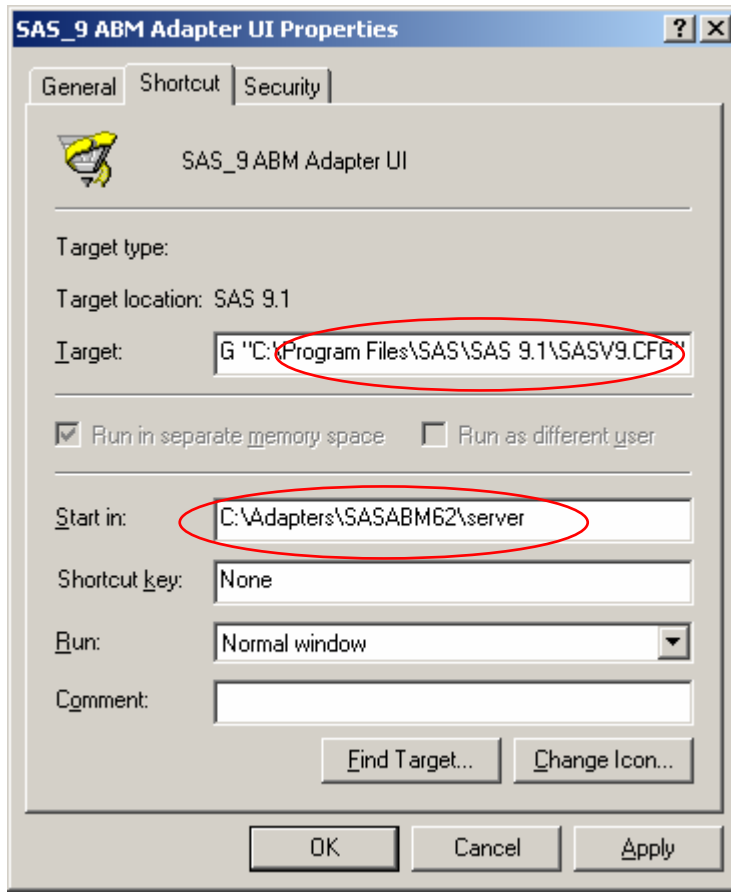
Change the reference to the SAS 9.1.3 Foundation, as shown in the following example:

```
If SAS is installed in E:\mySASpath, change the set SASROOT= statement in
\setenv.bat from
set SASROOT= C:\Program Files\SAS\SAS 9.1\ to
set SASROOT=E:\mySASpath
```

You will also have to modify *each of the four shortcuts* on the Desktop with the proper path information. For example, to modify the SAS_9 ABM Adapter UI shortcut on the Windows Desktop, right-click the **shortcut**, select **Properties**, and modify the path to the SAS System in the **Target** field.



Next, modify the `-config` parameter in the target, and the **Start in** field. Click **OK** when done.



Be sure to modify the *remaining three icons* on the Windows Desktop to update the path information as necessary.

The default path statements are listed below. If you installed SAS and the adapter in the default locations, it is not necessary to edit any of these path statements.

What	Path
Desktop Icon	SAS ABM Adapter Transform Wizard
Default Target Path	C:\adapters\SASABM62\client\TransformWizard.bat
Default Start in	C:\adapters\SASABM62\client
Desktop Icon	SAS ABM Adapter Extract Wizard
Default Target Path	C:\adapters\SASABM62\client\ExtractWizard.bat
Default Start in	C:\adapters\SASABM62\client
Desktop Icon	SAS ABM Adapter UI
Default Target Path	" C:\Program Files\SAS\SAS 9.1\sas.exe" -autoexec autoexec_ui.sas
Default Start in	C:\Adapters\SASABM62\server
Desktop Icon	SAS ABM Adapter
Default Target Path	"C:\C:\Program Files\SAS\SAS 9.1\sas.exe"
Default Start in	C:\Adapters\SASABM62\server

Set the Adapter Parameters Files Location

By default, the adapter process will search for these parameter files (if you installed the adapter in the default location you do not need to perform any edits):

```
c:\Adapters\SASABM62\server\ABMExtract.txt
```

```
c:\Adapters\SASABM62\server\ABMTransform.txt
```

These locations must be pointed to by the adapter Client Wizards. If you want the adapter to look for these files in another location, you have to modify the `autoexec.sas` file.

Open the `autoexec.sas` file specifically located in the adapter installation directory (`C:\adapters\SASABM\server`) with Notepad. There will be multiple copies of the `autoexec.sas` file based upon the base SAS install and what other SAS products are running on the system.

Using Notepad, modify these lines according to the installation:

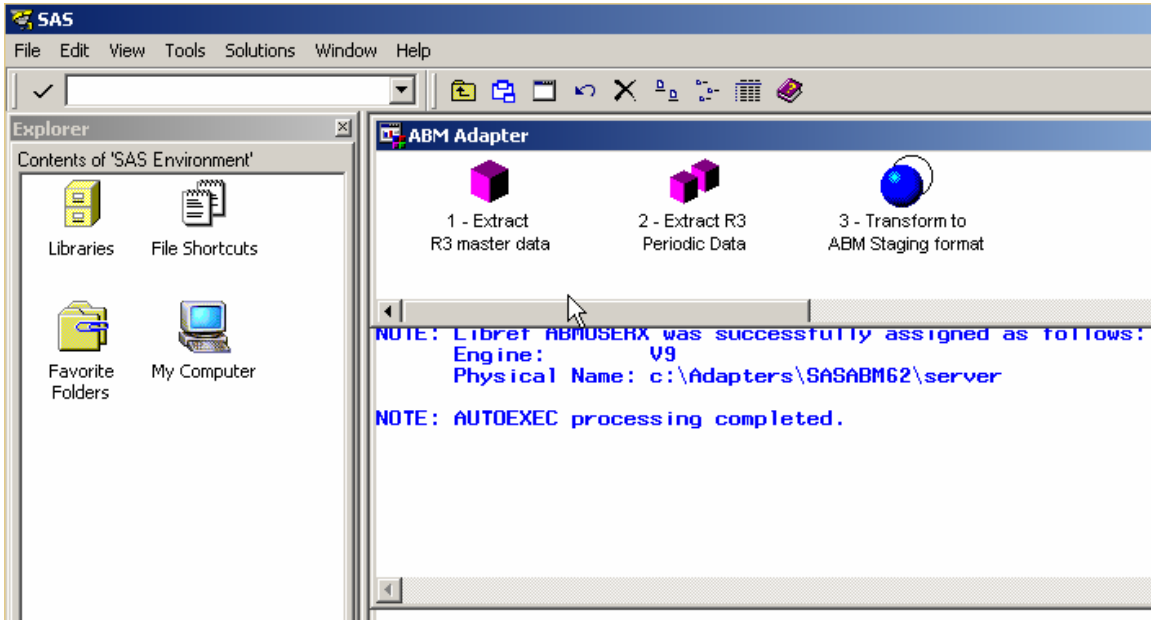
```
* Autoexec for SAS Activity-Based Management Adapter for SAP R/3;  
* -----  
-----;  
Filename ABMEXTRA "c:\Adapters\SASABM62\server\ABMExtract.txt";  
Filename ABMTRANS "c:\Adapters\SASABM62\server\ABMTransform.txt";
```

Save the `autoexec.sas` file.

Verify that the Installation is Set Up Correctly

Follow these steps:

1. Double-click the SAS ABM Adapter UI **shortcut** on the Windows Desktop.
2. SAS should run and open on the SAS ABM Adapter folder. You should see a window similar to the following:



Description of server side files:

Filename	Description
abmadapt_export_to_access.sas	SAS Script which runs exportation to access process
abmadapt_Extract_Master_Data.sas	SAS Script which runs master data extraction process
abmadapt_Extract_Periodic_Data.sas	SAS Script which runs Period data extraction process
abmadapt_initial.sas	SAS Script which can be used to extract Metadata
abmadapt_Transform.sas	SAS Script which runs Transformation process
ABMExtract.txt	Created as a result of running the Extract Wizard (contains a sample Extract file)
ABMTransform.txt	Created as a result of running the Transformation Wizard (contains a sample Transform file)
autoexec.sas	Autoexec where parameter file locations are referenced
autoexec_ui.sas	Autoexec used to start the interactive SAS ABM session
B_Extract_Meta_Data.bat	Runs Metadata extraction in Batch mode

Filename	Description
B_ExportToAccess.bat	Runs Exportation to Access in Batch mode
B_ExtractMaster.bat	Runs Master data Extraction in Batch mode
B_ExtractPeriodic.bat	Runs Periodic data Extraction in Batch mode
B_Transform.bat	Runs Transformation in Batch mode
Common_logoff.sas	Utility program to logoff from SAP
Common_logon.sas	Utility program to logon to SAP
DriverQuantityExtractor.sas	SAS Program which Extracts and Summarizes Driver Quantities
GenericCostsExtractor.sas	SAS Program which Extracts and Summarizes Costs
MetaDataExtraction.sas	Metadata extraction script
\r3lib	Directory to be populated with the SAP Metadata. Either a full SAP metadata extract or a specific ABM extract needs to be run to feed the ABM Adapter (this is the default directory created for metadata)
Read_costcenter_hierarchy2.sas	Read the Cost Center Hierarchy from SAP
SAS ABM Adapter.lnk	Shortcut to place on the Windows Desktop
SAS ABM Adapter UI.lnk	Shortcut to place on the Windows Desktop
Sas_abm_user_exits.sas7bcats	Example user exits SAS catalog
Setenv.bat	Utility to centrally set the SAS root directory
Setup_batchrfc.sas	Utility to reinstall the RFC service to support batch mode extraction

RFC Server

The SAS Activity-Based Management Adapter 6.2 for SAP R/3 requires that the SAS/ACCESS Interface to R/3 RFC server be enabled to support batch mode extractions from SAP. On the SAS server, using a Windows administrator user ID:

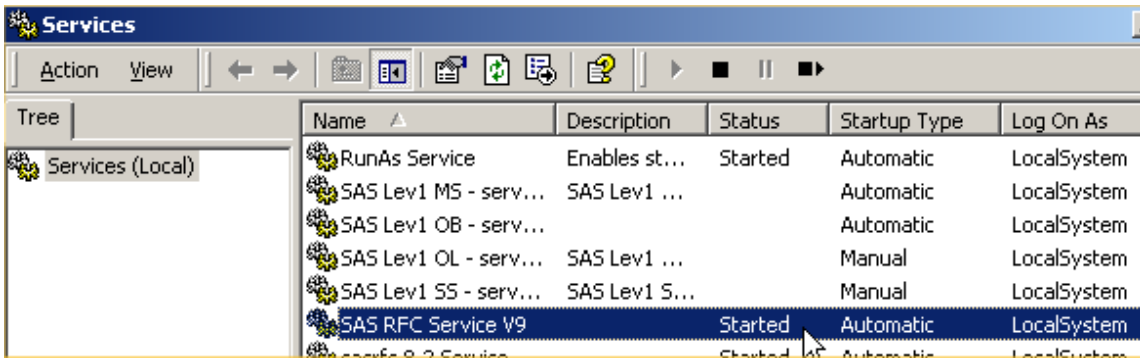
1. Remove the default installed service.
2. Re-install the RFC service with parameters that reference the ABAP variant.

These steps can be achieved by including the program setup_batchrfc.sas into the SAS editor.

Note: This program assumes the default settings for port numbers, service names, etc.

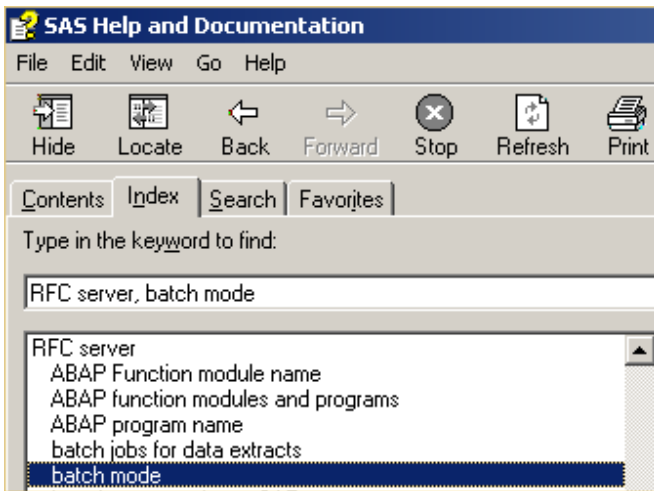
At the end of the program, in the macro call of %setup_batchrfc, modify the name of the variant to match the name of the variant created on the SAP server, and submit

```
%setup_batchrfc (variant=SASABM, newpath=c:\Adapters\SASABM62);
```



In the Windows services window, check the SAS RFC Service V9 service is correctly started, and is set to start-up automatically.

If the default settings are not required, then refer to the SAS online help using Index “RFC Server, batch mode”.



Metadata Extraction

The adapter is based on the SAS/ACCESS Interface to R/3 software; the R/3 Metadata needs to be extracted to use it. If you have not already extracted the R/3 Metadata, or if you have not extracted the required table, you will have to perform this process.

The Metadata extraction process assumes that you are familiar with the SAS/ACCESS Interface to R/3 software.

Procedure Using the Metadata Wizard

- Open the SAS/ACCESS Interface to R/3 windows (enter **%r3access** in the transaction field of SAS).
- Logon to R/3 by clicking the **Logon** icon.
- Run the Metadata Extraction Wizard.
- Select **Data Dictionary** on the Select import type window, and then click **Next**.
- Select the connection on the Connection window, and then click **Next**.
- Select **R3Lib** on the Metadata destination window.

- Libname R3lib 'C:\adapters\SASABM62\server\r3lib';

- **Note:** *If you have already extracted Metadata for a tool other than the SAS Activity-Based Management Adapter 6.2 for SAP R/3, check the **merge into existing metadata** check box.*
- On the Metadata selection window, only check the **Tables** and **Fields** check boxes; uncheck any others.
- Click the **Range** button, and specify the following tables:

From	To
TKA01	TKA03
T001	T001
TGSBT	TGSBT
TFKBT	TFKBT
TCURT	TCURT
CEPC	CEPC
COSP	COSP
COSR	COSS
CSKS	CSLA
CSKB	CSKB
AUFK	AUFK
CBPR	CBPR
CBPT	CBPT
ZSASABMRESULTS	ZSASABMRESULTS
ZSASABMSTATUS	ZSASABMSTATUS

- Click **OK**, and then click **NEXT**.
- On the Select file window, you can create a SAS script which can be reused if you need to extract the Metadata again. If you want to create one, enter a **location** and a **script name**, and then click **NEXT**.
- On the Begin metadata extract window, click **Finish** to begin the process, which should take about two minutes to complete.

Running the Adapter Using the Batch Mode Script

You can use the script `B_Extract_Meta_Data.bat` to extract the metadata needed to run the adapter. You only need to extract the metadata once; either do so interactively using the Wizard to load metadata, or in batch mode using the script. Do not do both.

Batch Mode Requirements

In order to use the scripts, a few prerequisites must be met:

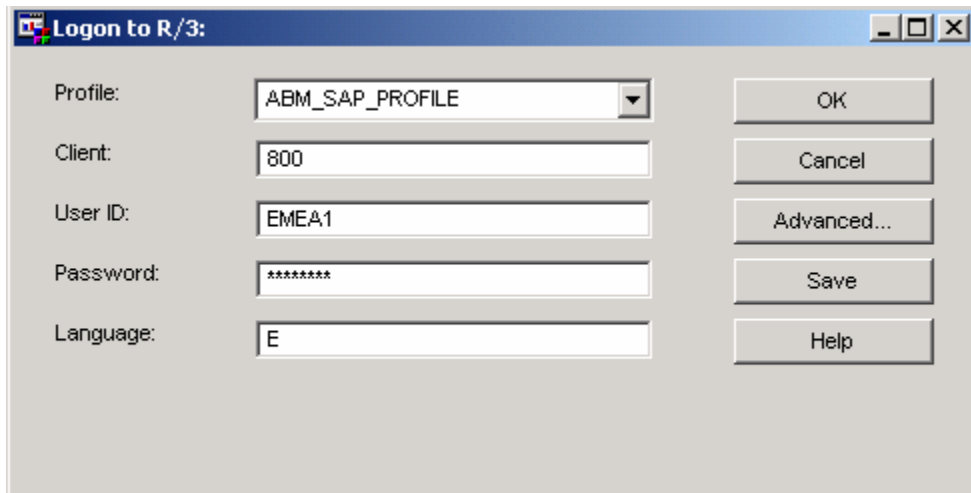
1. The default configuration assumes that `sas.exe` is located in

```
C:\Program Files\SAS\SAS 9.1\sas.exe
```

If you need to change this location, edit the file `setenv.bat`.

2. You need a valid logon profile in SAS/ACCESS Interface to R/3 named `ABM_SAP_PROFILE`. Alternatively, you can use a different profile name by editing `autoexec.sas` to include the following statement:

```
%let sap_profile=<the profile name>.
```



Please see the SAS/ACCESS Interface to R/3 documentation and the SAP system administrator for the parameters required to define the `ABM_SAP_Profile` (all advanced tabs for Profile – general, TCP/IP, RFC, CPI-C). You should define two Profiles: (1) an `ABM_SAP_Profile` for basic access using Remote Function Calls, and (2) an `ABM_SAP_Profile_Batch` for remote access using the Batch Remote Function Calls. A different port number will be used for each of the two profiles.

3. The SAP Metadata should be located (by default) in `C:\Adapters\SASABM62\server\r3lib`. If you need to change this location, edit `autoexec.sas`. For example, if the metadata resides in `C:\metadata`, then adjust the line `LIBNAME r3lib...` in `autoexec.sas` to `LIBNAME r3lib 'C:\metadata';`

If you intend to use the script `B_Extract_Meta_Data.bat` to extract Metadata from an SAP system, please make sure that the directory specified in the `LIBNAME` statement already exists in the file system.

Running Batch Mode

In addition to using the interactive wizard to load metadata to run the metadata extractions, you can use scripts in batch mode to automate the process. Using batch mode allows the jobs to be run in the background without user interaction.

To run the batch scripts:

1. Create a SAS/ACCESS Interface to R/3: Profile “ABM_SAP_PROFILE”.
2. Run through the SAS Activity-Based Management Adapter Extraction Wizard to make selections.
3. Open Windows Explorer.
4. Browse to the install for the adapter – C:\adapters\SASABM62\Server\.
5. Double-click on the specific batch file to run it – the order makes a difference.
 - a. B_Extract_Meta_Data.bat – to extract the SAP Metadata specific to SAS Activity-Based Management
 - b. B_ExtractMaster.bat – to extract the Master SAP data
 - c. B_ExtractPeriodic.bat – to extract the Periodic SAP data
6. Run through the Transformation Wizard to make selections.
 - a. B_Transform.bat – transforms data for SAS Activity-Based Management
 - b. B_ExportToAccess.bat – exports SAS tables to MS Access
7. Review all logs for errors – saved in C:\Adapters\SASABM62\Server.
 - a. Abmadapt_initial.log – for the Metadata extraction
 - b. Abmadapt_Extract_Master_Data – for the master data
 - c. Abmadapt_Extract_Periodic_Data – for the Periodic data
 - d. Abmadapt_Transform – for the transform to Staging tables
 - e. Abmadapt_export_to_Access
8. The following scripts (initial sequence) can be used to automate the data extraction process:

B_Extract_Meta_Data.bat	(Extracts Metadata from SAP)
B_ExtractMaster.bat	(Extracts master data from SAP)
B_ExtractPeriodic.bat	(Extracts periodic data from SAP)
B_Transform.bat	(Transforms the extracted data to fit the SAS ABM)
B_ExportToAccess.bat	(Creates an MS Access database from the SAS datasets)

9. The scripts rely on existing configuration files created by the Extraction Wizard and the Transformation Wizard (default locations C:\Adapters\SASABM62\server\ABMExtract.txt and C:\Adapters\SASABM62\server\ABMTransform.txt), and that the specified directories exist in the file system (for example, the **Destination Library Path** default is C:\R3DATA\).



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