

# **SAS<sup>®</sup> Offer Optimization for Communications 5.3 Migration Guide**



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**SAS® Offer Optimization for Communications 5.3: Migration Guide**

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# About This Book

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## Audience

This document explains how to migrate SAS Offer Optimization for Communications from a source machine to a target machine. The document assumes that you are familiar with the SAS 9.3 installation and configuration processes.

The instructions in this document describe the installation of SAS Offer Optimization for Communications on a three-tier environment in migration mode. A three-tier plan file includes the SAS server tier, middle tier, and client tier. The document explains how each tier of the solution (including the metadata and the user-created objects) and data are migrated from a source machine to a target machine.

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## Prerequisites

Before you migrate SAS Offer Optimization for Communications to your production environment, complete the following tasks:

- Read the *SAS Intelligence Platform: Installation and Configuration Guide*, which is available at the following location <http://support.sas.com/documentation/cdl/en/biig/62611/PDF/default/biig.pdf>.
- Review the <http://support.sas.com/documentation/installcenter/index.html> page.

This page has the most up-to-date installation and configuration documentation for SAS software. The documentation on this site is grouped by SAS release, installation, and configuration type.

- SAS Offer Optimization for Communications is installed through the SAS Deployment Wizard. For more information, see the *SAS Offer Optimization for Communications: Administrator's Guide*, which is available at the following location: [http://support.sas.com/documentation/onlinedoc/securedoc/index\\_offeropt.html](http://support.sas.com/documentation/onlinedoc/securedoc/index_offeropt.html).
- Review the system requirements for your operating system and upgrade to the required JDK. The system requirements document for SAS Offer Optimization for Communications can be found at: <http://support.sas.com/resources/sysreq/index.html>.
- Review the checklist that is generated with your plan file. This checklist lists the user accounts that you will need to create in your environment.

- Check that you have the correct version of the Web application server for your environment. SAS Offer Optimization for Communications requires one of the following application servers:
  - IBM WebSphere
  - Oracle WebLogic Application Server
  - Red Hat JBoss
- Check the system requirements specification for details about the supported versions of the application server. Information about upgrading your Web application server can be found at: <http://support.sas.com/resources/thirdpartysupport/v93/index.html>
- You will need a plan file to install SAS Intelligence Platform and SAS Offer Optimization for Communications. Plan files can be obtained in the following ways:
  - Your SAS consultant can provide a plan file for your installation.
  - You can create a plan file using the planning tool, which is located at: [https://www3.sas.com/apps/cpi/admincenter\\_planning\\_login.jsp](https://www3.sas.com/apps/cpi/admincenter_planning_login.jsp)
- From the target machine, if you are using a database other than SAS, verify that you can access that third-party database (available on the data server) by using the database client.

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## Document Conventions

The following table lists the conventions that are used in this document:

| Convention                                       | Description   |
|--|---|
| <code>&lt;SAS Home&gt;</code>                    | Represents the path to the folder where SAS is installed. For example, on a Windows computer, this can be <code>C:/Program Files/SASHome</code> .   |
| <code>&lt;SAS configuration directory&gt;</code> | Represents the path to the folder where SAS configuration data is stored. For example, on a Windows computer, this can be <code>C:/SAS/Config</code> .                                      |
| <code>&lt;SAS software depot&gt;</code>          | Represents the path to the folder where the executable file for the SAS Deployment Wizard is available. For example, on a Windows computer this can be <code>C:/SAS Software Depot</code> . |

# Recommended Reading

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When you refer to this document, you could refer to the following documents:

- *SAS Offer Optimization for Communications: Administrator's Guide*
- *SAS Offer Optimization for Communications: User's Guide*

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## Chapter 1

# Migration Steps

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## Overview of the SAS Offer Optimization for Communications Migration

Moving SAS Offer Optimization for Communications from a pre-production environment (source machine) to a production environment (target machine) involves the following steps:

1. Create a migration package on the source machine by using the SAS Migration Utility.
2. Install SAS Offer Optimization for Communications on the target machine by using the migration package.
3. Import data.

*Note:* Any customization that you have done to the SAS Offer Optimization for Communications Server configuration outside the **<SAS configuration directory>** is not automatically migrated. You must manually make this customization after migration. This customization includes any SAS code modifications, user-defined macros, custom scenarios, and database changes.

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## Pre-Migration Tasks

Complete the following tasks before you run the SAS Migration Utility on the source machine:

1. Stop the Web application server (JBoss, WebSphere, or WebLogic, as applicable) and restart all other SAS Servers.

2. Edit the `smu.properties.template` file, which is available at the following location:  
`<SAS software depot>/products/sassmu3__xxxx_.`

Add the following code at the end of the file. This code prevents the data that is available in the following directories from being included in the migration package.

#### Windows

- `levconfig.exclude.dir.12BYTE.1=C:\\SAS\\Config\\Lev1\\AppData\\SASOfferOptforCommServer\\5.3`
- `levconfig.exclude.dir.12BYTE.2=C:\\SAS\\Config\\Lev1\\AppData\\SASDynamicAnalyBaseTblSvr\\5.3`
- `levconfig.exclude.dir.12BYTE.3=C:\\SAS\\Config\\Lev1\\AppData\\SASCustAnalyticsCommServer\\5.3`
- `levconfig.exclude.dir.12BYTE.4=C:\\SAS\\Config\\Lev1\\AppData\\SASCommunicationsCommonSvr\\5.3`
- `levconfig.exclude.dir.12BYTE.5=C:\\SAS\\Config\\Lev1\\AppData\\SASCommAnalyticsArchSvr\\5.3`

*Note:* `C:\\SAS\\Config\\` is the default `<SAS configuration directory>`. If you have the SAS configuration directory in a different location, update this path accordingly.

#### UNIX

- `levconfig.exclude.dir.12BYTE.1=<SAS configuration directory>/AppData/SASOfferOptforCommServer/5.3`
- `levconfig.exclude.dir.12BYTE.2=<SAS configuration directory>/AppData/SASDynamicAnalyBaseTblSvr/5.3`
- `levconfig.exclude.dir.12BYTE.3=<SAS configuration directory>/AppData/SASCustAnalyticsCommServer/5.3`
- `levconfig.exclude.dir.12BYTE.4=<SAS configuration directory>/AppData/SASCommunicationsCommonSvr/5.3`
- `levconfig.exclude.dir.12BYTE.5=<SAS configuration directory>/AppData/SASCommAnalyticsArchSvr/5.3`

3. In the `smu.properties.template`, change the values of the following properties according to your deployment.

*Note:* If the property is commented, uncomment it by removing the hash symbol (#) from the beginning of the line.

On a Windows machine, the properties can be as mentioned below:

- `SMU.config.dir=C:\\SAS\\Config\\Lev1`
- `SMU.SASHOME=C:\\Program Files\\SASHome`
- `SMU.host.metadata=<Complete name of the source machine>`.

For example, the property-value pair can be: `SMU.host.metadata=server01.abc.com`

- `SMU.user=sasadm@saspw`
- `SMU.password=Password1`
- `SMU.SASROOT=<Complete path of SAS root>`

For example, the property-value pair can be: SMU.SASROOT=C:\Program Files\SASHome\SASFoundation\9.3

- SMU.Output.Dir=<Complete path where the migration package will be created.>

For example, the property-value pair can be SMU.Output.Dir=C:\SMU\_Latest\migrationPackage

- SMU.webinfpltfm.dbms.userid=sasadm@saspw
- SMU.webinfpltfm.dbms.password=<Password of the sasadm user>

## Migration Steps

### Create a Migration Package on the Source Machine

To create a migration package:

1. On the source machine, run the SAS Migration Utility.
  - a. On the command prompt, go to the <SAS software depot>/utilities/smu93 directory in which the smu93\_xxx executable file is available.
  - b. On the command prompt, run the following command to create the migration package:

- For SAS 9.3 on Windows 64-bit:

```
smu93_x64 -properties <absolute path name to the
smu.properties.template property file> -replace
```

- For SAS 9.3 on UNIX:

```
smu93 -properties <absolute path name to the
smu.properties.template property file> -replace
```

For detailed instructions on how to run the SAS Migration Utility, see the *SAS 9.3 Intelligence Platform: Migration Guide*, which is available at: <http://support.sas.com/documentation/cdl/en/bimig/62613/HTML/default/viewer.htm#titlepage.htm>.

2. The analysis phase of the migration checks the version of the solution that you are migrating, and then creates a migration package. The migration package is created at the location that you specified in the SMU.Output.Dir property in the smu.properties.template file.

It also generates a report (FullReport.html) that shows whether the migration package was created successfully. The report is generated at the following location:

#### Windows

```
<Output path specified in the smu93.properties file>/
<machine name>/AnalysisReport/
```

#### UNIX

```
<Output path specified in the smu93.properties file>/
<machine name>/AnalysisReport/
```

3. Verify the warnings and errors in the analysis report and resolve them.

4. Copy the migration package to the target machine.

### ***Install SAS Offer Optimization for Communications on the Target Machine***

You have to install SAS Offer Optimization for Communications by using the migration package.

To install SAS Offer Optimization for Communications:

1. On the target machine, run the SAS Deployment Wizard.
2. On the Migration Information page of the wizard, specify the path to the migration package on the target machine.
3. Change the default Application Server Context name from SASMeta to SASApp at places wherever applicable.
4. Complete the rest of the steps by using the default settings of the SAS Deployment Wizard.

*Note:* Change of database (wherever database is applicable) is not supported.

## Chapter 2

# Post-Migration Tasks

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## Data Migration

Copy the physical folders with data from the following directories in the source machine to the corresponding directory in the target machine:

### Windows

- C:\\SAS\\Config\\Lev1\\AppData\\SASCommAnalyticsArchSvr\\5.3
- C:\\SAS\\Config\\Lev1\\AppData\\SASDynamicAnalyBaseTblSvr\\5.3
- C:\\SAS\\Config\\Lev1\\AppData\\SASCustAnalyticsCommServer\\5.3
- C:\\SAS\\Config\\Lev1\\AppData\\SASCommunicationsCommonSvr\\5.3
- C:\\SAS\\Config\\Lev1\\AppData\\SASOfferOptforCommServer\\5.3

*Note:* C:\\SAS\\Config\\ is the default <SAS configuration directory>.

If you have the SAS configuration directory in a different location, update this path accordingly.

### UNIX

- <SAS configuration directory>/AppData/SASCommAnalyticsArchSvr/5.3

- <SAS configuration directory>/AppData/SASDynamicAnalyBaseTblSvr/5.3
- <SAS configuration directory>/AppData/SASCustAnalyticsCommServer/5.3
- <SAS configuration directory>/AppData/SASCommunicationsCommonSvr/5.3
- <SAS configuration directory>/AppData/SASOfferOptforCommServer/5.3

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## Post-Installation Instructions

### Verify Operating System Users and Grant Permissions

Verify that a user group named SAS Server Users exists at the operating system level. This user group is created as a part of the SAS installation. Make sure that this group includes the sassrv user (a SAS Server user).

Grant the SAS Server Users group Full Control permission (on Windows) or 775 permission (on UNIX) for the following folders and their subfolders:

- <SAS configuration directory>/Lev1/AppData/SASOfferOptforCommServer
- <SAS configuration directory>/Lev1/Applications/SASOfferOptforCommServer5.3

### Grant Random Access for Data in CFDDIM Library

Some ETL jobs might require random access to the data and therefore might not run successfully. Therefore, in order to ensure that these ETLs run successfully, you have to grant random access for data in the CFDDIM library.

*Note:* Perform these steps if you are using a third-party database such as Oracle.

To grant random access to data:

1. Log on to SAS Data Integration Studio and connect to a profile.
2. Select the **Inventory** tab and expand the **Library** folder.
3. Right-click the **CFDDIM** library and select **Properties**.
  - a. On the **Options** tab, click **Advanced Options**.
  - b. On the **Input/Output** tab, select **Yes** for **Allow random access to a table when rereading a row**.
  - c. Click **OK**.
4. Close SAS Data Integration Studio.

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## Validation Instructions

### **Verify the Installation of SAS Offer Optimization for Communications**

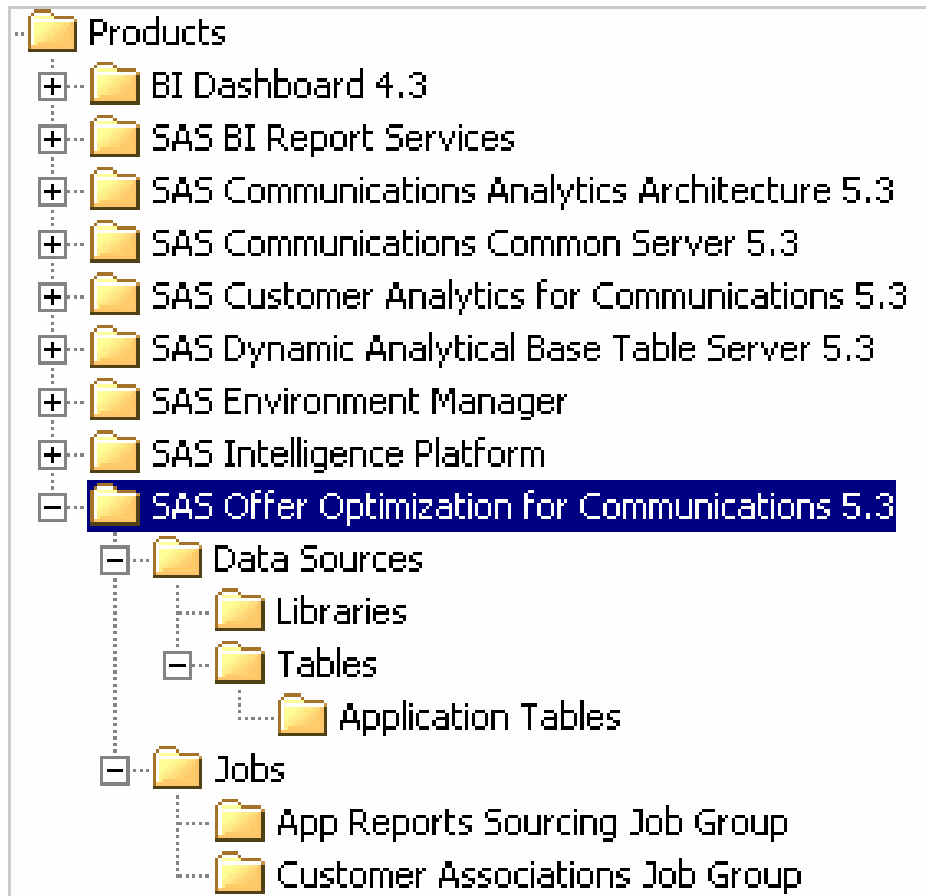
To verify whether SAS Offer Optimization for Communications has been installed properly:

1. Enter the application URL in the address field of your Web browser, and then press ENTER. For example, you might enter **http://server01.abc.com:8080/SASOfferOptForComm**.
2. Log on to SAS Offer Optimization for Communications as a user who has all the capabilities of the Administration role.
3. You should see the following workspaces:
  - Business Groups
  - Projects
4. In the Business Groups workspace, check that you can create a business group. After you create a business group, you can define its selection criteria. For instructions on how to create a business group and define its selection criteria, see the *SAS Offer Optimization for Communications: User's Guide*.
5. On the Application bar, click **Log Off**.

### **Verify the Metadata Layout**

To verify that all the required metadata components are created successfully:

1. Log on to SAS Management Console with the profile of an administrator.
2. On the **Folders** tab, expand **Products** ⇒ **SAS Offer Optimization for Communications**.
3. Confirm that the following subfolders are created in each of these folders.

**Display 2.1** Metadata Layout

### Verify the Stored Processes

To verify that the stored procedures are registered appropriately, complete these steps:

1. Open SAS Management Console with the profile of an administrator.
2. On the **Folders** tab, expand **System** ⇒ **Applications** ⇒ **SAS Offer Optimization for Communications** ⇒ **Offer Opt for Comm Server 5.3**.
3. Select **ooc\_stp** and in the right pane verify that 29 stored processes are registered.

### Verify the Predefined Libraries

To confirm that the predefined libraries are created appropriately:

1. Open SAS Management Console with the profile of an administrator.
2. On the **Plug-ins** tab, expand **Environment Management** ⇒ **Data Library Manager** ⇒ **Libraries**.
3. Make sure that the following libraries are created
  - ooc\_bppaptbl\_base
  - ooc\_bppaptbl\_remote



- ooc\_bppinf\_base
  - ooc\_bppinf\_remote
  - OOCBASE
4. Close SAS Management Console.
  5. Go to the `<SAS configuration directory>/Lev1/<SAS Application Server context name>` folder.
  6. Depending on whether the operating system is Windows or UNIX, run the `sas.bat` or the `sas.sh` file respectively. For example, on the Windows machine, run the `C:/SAS/Config93/Lev1/SASApp/sas.bat` file.
  7. In the SAS Explorer, double-click **Libraries** and verify that the following library names are displayed:
    - BPPAPTBL
    - BPPINF
    - OOCBASE
- Note:* If the BPPAPTBL library does not appear in the list of libraries, you have to add certain library name statements in the SASApp autoexec file and in the SAS Share server autoexec file. For details, see the *SAS Offer Optimization for Communications: Administrator's Guide*.
8. Close Base SAS.

### **Verify the Migration of DDLs**

Verify whether the DDLs are successfully migrated to the following location of the target machine: `<SAS configuration directory>/Lev1/Applications/SASOfferOptforCommServer5.3/ddl`. For example, on the Windows machine, the DDL should be available in the following location: `C:\SAS\Config\Lev1\Applications\SASOfferOptforCommServer5.3\ddl`.

