

SharePlex® 11.3
Upgrade Guide



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SharePlex Upgrade Guide

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About this Guide

This guide contains instructions for upgrading SharePlex environment. It is intended for administrators, consultants, analysts, and any other IT professionals tasked with upgrading SharePlex.

Other SharePlex documentation

For the complete SharePlex documentation set, go to <https://support.quest.com/shareplex/technical-documents>.

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Before you Upgrade

This section contains important information that you need to know before you select a SharePlex installer and begin the upgrade procedure.

Gather the Required Information

You will need the following information about the installation that you want to upgrade:

- Location of the SharePlex product directory
- Location of the SharePlex variable-data directory (or directories) in this instance of SharePlex.
- Name of the SharePlex administrator group (that contains the SharePlex administrator user).
- The ORACLE_SID and ORACLE_HOME (Oracle) or the database name (Open Target) associated with the installation you are upgrading. To determine this, look in the **default.yaml** file in the **data** sub-directory of the product directory.
- DSN name from `var/odbc/ODBC.ini` file.

Check interoperability

If you are upgrading some SharePlex installations in a configuration, but not others, view the SharePlex Release Notes for interoperability support between versions. Parameter settings may be required.

Who should perform the upgrade

Some steps in the upgrade procedures require the **Administrator** authorization level, which normally is only granted to the person or persons designated as the SharePlex Administrators. An upgrade can only be performed by a person who has this authorization and is familiar with SharePlex.

Check for new and deprecated parameters

- Review the release notes and [Deprecated Parameters](#) section of the [SharePlex Reference Guide](#) to determine if any of the parameters that you are using were deprecated in this release. SharePlex retains backward compatibility of your current parameter settings, including those that are newly deprecated, so that you do not need to stop processes to reconfigure settings. However, you should familiarize yourself with the new parameter or default functionality that replaces a deprecated parameter to determine whether any configuration changes are appropriate.
- Review the [New features in this release](#) and [Enhancements in this release](#) sections of the Release Notes for any new parameters that affect your current configuration. If any upgrade steps are required, they will be noted.

Upgrade on a source system

These requirements apply to SharePlex when it captures from an Oracle or PostgreSQL source database.

Verify inclusion of one-off builds

If you have received one-off builds of SharePlex, confirm that those builds are included as fixes in the new release that you are installing. This applies to Linux/Unix only as applicable.

To verify one-offs:

1. Run the **sp-bininfo** utility from the **util** subdirectory of the product directory of your current SharePlex installation.

```
$ cd path_to_SharePlex_proddir/util
```

```
$ ./sp-bininfo
```
2. Compare the CRs of each one-off shown in the **sp-bininfo** output with the CRs in the Resolved Issues section of the Release Notes that are included with the new SharePlex version.
3. If any CRs of your one-offs are not shown in the Resolved Issues, the new version does not include that functionality, and you should not proceed with the upgrade. Contact SharePlex support to obtain the missing fixes.

Requirements to support character set conversion for Oracle database as a source

When replicating to an open target (non-Oracle), SharePlex supports replication from any Oracle Unicode character set and the US7ASCII character set. SharePlex posts data to Open Target in the Unicode character set, and therefore if the source data is Unicode or US7ASCII, no conversion on the target is required.

However, if the following are true, conversion is required on the target:

- If the character set of the source data is anything other than Oracle Unicode or US7ASCII, you must install an Oracle client on the target to perform the conversion to Unicode for posting to the target.
- If the data must be posted to the target database in any character set other than Unicode, you must install an Oracle client on the target to perform the conversion and use the **target** command to identify the target character set for Post to use.
- If you are replicating LOB data, conversion is required regardless of what the source character set is.

To perform conversion with an Oracle client on Linux:

1. Install an Oracle *Administrator* client on the target system. The client must be the Administrator installation type. The Instant Client and Runtime installation types are not supported.
2. Set ORACLE_HOME to the client installation. Set ORACLE_SID to an alias or a non-existing SID. SharePlex does not use them and a database does not have to be running.
3. Upgrade SharePlex using the Linux/Unix installer for your operating system.
4. Make certain the SP_OPX-NLS_CONVERSION parameter is set to the default of 1.

To apply Unicode and US7ASCII data without conversion:

If the source data is Unicode or US7ASCII and you are not replicating LOB data, no conversion or Oracle client is needed. Set the SP_OPX-NLS_CONVERSION parameter to 0 to disable conversion, and then restart Post if it is running.

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Download the SharePlex Installer

There are different installers for SharePlex based on the type of operating system. This topic helps you understand the differences and the naming conventions used.

Linux and Unix

The SharePlex installer on Linux and Unix, as applicable, is a self-extracting installation file with the extension **.tpm**.

Oracle and Open Target:

There is a separate SharePlex installer build for each supported platform.

SharePlex-release#-build#-platform-chipset.tpm

For Oracle Solaris (Sun), there is a separate SharePlex installer build for each supported operating system version. If the operating system version that you have is not listed, choose the highest number that is *below* your version.

SharePlex-release#-build#-platform-version-chipset.tpm

The installer creates a temporary target directory, within the current directory, for extraction. This temporary target directory is removed upon installation completion. You can extract the files to a file system that is separate from the SharePlex installation location by using the **-t** option when running the **.tpm** file.

NOTE: The installation file (**.tpm**) file for the PostgreSQL database is available only for the Linux platform.

Where to get SharePlex installers

Download the SharePlex installation package that matches the operating system you are using.

Additionally, download any SharePlex patches, so that you can install them after you install the base software.

Perform the below steps to download the SharePlex patches:

1. Go to the Quest Software Support page: <http://support.quest.com/>
2. Click **Download Software**.
3. In the search box, type **SharePlex** and press **Go**.
4. Click the arrow in the **Download** column for the version you need. You can also click the file name for access to more information and to download the file(s).
5. Transfer the file to system where you are installing SharePlex.
6. You are ready to begin the installation process. Be sure to thoroughly read the version specific Release Notes *prior* to running the installer.

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Upgrade on Linux/Unix

These instructions are for upgrading SharePlex when configured for an Oracle or PostgreSQL database running on a Linux or Unix system.

IMPORTANT!:

- If you are upgrading some SharePlex installations in a configuration, but not others, view the SharePlex Release Notes for interoperability support between versions.
- See [Before you Upgrade](#) on page 5 for any pre-installation items that apply to your SharePlex installation.
- You can upgrade SharePlex in the product directory that is currently being used, or you can upgrade to a new product directory. Instructions are supplied for both scenarios.

To upgrade SharePlex in the current product directory:

1. Log in to the system as the SharePlex installation owner.
2. (If using **copy/append**) In **sp_ctrl** on the target systems, stop **sp_sync_launcher** before applying the SharePlex upgrade.

```
sp_ctrl> stop launcher
```

3. (applicable only for Oracle source) In **sp_ctrl** on the source system, use the **set param** command to stop DDL replication by setting the **SP_OCT_REPLICATE_ALL_DDL** parameter to 0.

```
sp_ctrl> set param SP_OCT_REPLICATE_ALL_DDL 0
```

4. Shut down the SharePlex instance that you are upgrading.

```
sp_ctrl> shutdown
```

5. Verify that all SharePlex processes in that SharePlex instance are stopped, and stop any that are still running.

```
# ps -ef | grep sp_
```

```
sp_ctl> stop process
```

6. (Optional) If you need to upgrade the Oracle or PostgreSQL database, do so now.
7. Tar up the existing SharePlex product directory and move the tar file to different location as a backup.

8. Run the SharePlex installation program.
 - a. Log in to the system as the user that will be named as the SharePlex Administrator during this installation. This user will own the installation files and binaries.
 - b. If **sp_cop** is running, shut it down.
`sp_ctrl> shutdown`
 - c. Copy the installation file to a temporary directory where you have write permissions.
 - d. Grant executable permissions to the file.
`#chmod 555installation_file`
 - e. Run the .tpm file. If installing SharePlex in a cluster, run the installer from the primary node (the one to which the shared disk is mounted)
`# .installation_file`
 - f. Verify that the information shown on the first screen corresponds to the version and platform (Oracle or PostgreSQL) you are upgrading.
9. Verify that the information shown on the first prompt corresponds to the version and platform (Oracle or PostgreSQL) that you are upgrading.
10. Follow the prompts to supply the following information:

Prompt	Input
Installation type	Select the current product directory of the SharePlex installation you are upgrading.
SharePlex Admin group	Select the DBA-privileged group to which the SharePlex Administrator user belongs.
Proceed with upgrade?	Press Enter to confirm the SharePlex environment and proceed with the upgrade.
License key (do you want to upgrade?)	Press Enter to accept the default of N (no) to keep the existing license, or enter Y to specify a new license key if required for this upgrade.
Please specify platform for license key (select a number):	Please select the appropriate number from the following list of platforms to install the license key: <ol style="list-style-type: none"> 1) Oracle 2) File 3) JMS 4) Kafka 5) SQL Server 6) Postgres 7) MySQL 8) Snowflake 9) Event Hubs

Prompt	Input
	10) All Platforms q) Quit License Utility
License key	(If Y was selected) Enter the new license key that you received from Quest.

NOTE: The installer will upgrade the default variable-data directory that is listed in the **default.yaml** file, which is located in the **data** sub-directory of the product directory.

- Run the database setup utility for each variable-data directory in the installation of SharePlex that you upgraded. See the [SharePlex Installation and Setup Guide](#) to run the [Database Setup for Oracle or PostgreSQL](#).

Oracle: `ora_setup`

PostgreSQL: `pg_setup`

- Start SharePlex using the following syntax with options as appropriate.

```
$ cd /productdir/bin
```

```
$ ./sp_cop [-uidentifier] &
```

where:

- `-uidentifier` starts **sp_cop** with the unique identifier for the instance you are upgrading, and is only needed if there are multiple instances of **sp_cop** running on the system.

- (applicable only for Oracle source) In **sp_ctrl** on the source system, set the the `SP_OCT_REPLICATE_ALL_DDL` parameter to 1.

```
sp_ctrl> set param SP_OCT_REPLICATE_ALL_DDL 1
```

To upgrade SharePlex to a new product directory:

- Shut down **sp_cop**.

```
sp_ctrl> shutdown
```

- (Optional) If you need to upgrade the Oracle or PostgreSQL database, do so now.
- Tar up the existing SharePlex product directory and move the tar file to different location as a backup.

4. Run the SharePlex installer and, when prompted to specify the product directory location, select **New Installation**.

You are prompted for the following:

Prompt	Input
Installation type	Select < New Installation >.
Product directory location (path)	<p>Enter the path to the SharePlex installation directory.</p> <p>If the specified directory does not exist, the installer creates it. If the directory exists, it must be empty. The installer quits if the directory contains prior SharePlex installations or other files.</p> <p>(Applicable only for Oracle source) In a cluster, install on the shared disk. For more information, see Installation and setup for Oracle cluster in the <i>Installation and Setup Guide</i> document.</p>
Variable data directory location	<p>Specify an empty directory. The installer creates the specified directory if it does not exist. IMPORTANT! Do not install this directory into the SharePlex product directory.</p> <p>(Applicable only for Oracle source) In a cluster, install the variable-data directory on the shared disk. For more information, see Installation and setup for Oracle cluster in the <i>Installation and Setup Guide</i> document.</p>
SharePlex Admin group	<p>Enter the DBA-privileged group to which the SharePlex Administrator user belongs, which will own the SharePlex binaries. If the default group of the SharePlex Administrator is oinstall, select any option, and make certain this user is listed under oinstall in the etc/group file. For more information, see Installer checklist in the <i>Installation and Setup Guide</i> document.</p>
TCP/IP port for SharePlex	Enter the port number to use for SharePlex TCP/IP communications.
License key (do you have?)	<p>Press Enter to accept the default of Y (yes). If you do not have a license, enter no.</p> <p>For licensing on a cluster, see Installation and setup for Oracle cluster in the <i>Installation and Setup Guide</i> document.</p> <p>At any point before you run SharePlex you can add the license key with the splex_add_key utility. For more information, see SharePlex license utilities in the</p>

Prompt	Input
	Installation and Setup Guide document.
Please specify platform for license key (select a number):	Please select the appropriate number from the following list of platforms to install the license key: 1) Oracle 2) File 3) JMS 4) Kafka 5) SQL Server 6) Postgres 7) MySQL 8) Snowflake 9) Event Hubs 10) All Platforms q) Quit License Utility
License key	Enter the license key you received from Quest.

5. Export the `SP_SYS_VARDIR` environment variable to the *existing* variable-data directory (*not* the temporary one) that you want to upgrade.
6. Run the database setup utility using the existing SharePlex database user. See the [SharePlex Installation and Setup Guide](#) to run the [Database Setup for Oracle or PostgreSQL](#).
Oracle: `ora_setup`
PostgreSQL: `pg_setup`
7. Start `sp_cop`.
`$ /productdir/bin/sp_cop [-uidentifier] [-s] &`

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Upgrade on Linux/Unix for Open Target Databases

These instructions are for upgrading SharePlex when configured for an open target database running on a Linux or Unix system.

IMPORTANT!

- If you are upgrading some SharePlex installations in a configuration, but not others, view the SharePlex Release Notes for interoperability support between versions.
- Perform the upgrade on all Linux machines that host open targets involved in SharePlex replication.
- See [Before you Upgrade](#) on page 5 for any pre-installation items that apply to your SharePlex installation.

To run the upgrade:

1. Log in to the system as the user that will be named as the SharePlex Administrator during this installation. This user will own the installation files and binaries.
2. (Reinstallations) If **sp_cop** is running, shut it down.
3. Copy the installation file to a temporary directory where you have write permissions.
4. Grant executable permissions to the file.

```
# chmod 555 installation_file
```
5. Run the .tpm file. If installing SharePlex in a cluster, run the installer from the primary node (the one to which the shared disk is mounted)

```
# .installation_file
```

6. You are prompted for the following:

Prompt for:	Input
Installation type	Select < New Installation >.
Product directory location (path)	Enter the path to the existing SharePlex installation directory.
Variable data directory location	Enter the name of the existing variable-data directory.
SharePlex Admin group	Enter the DBA-privileged group to which the SharePlex Administrator user belongs, which owns the SharePlex binaries.
TCP/IP port for SharePlex	Enter the port number of the SharePlex instance you are upgrading.
License key (do you want to upgrade?)	Press Enter to accept the default of N (no) to keep the existing license, or enter Y to specify a new license key if required for this upgrade.
Please specify platform for license key (select a number):	Please select the appropriate number from the following list of platforms to install the license key: 1) Oracle 2) File 3) JMS 4) Kafka 5) SQL Server 6) Postgres 7) MySQL 8) Snowflake 9) Event Hubs 10) All Platforms q) Quit License Utility
License key	(If Y was selected) Enter the new license key that you received from Quest.

The installer displays the location of the install log file and then quits.

7. Run the appropriate Database Setup utility for your database to upgrade the SharePlex database account. See [SharePlex utilities](#) in the "[SharePlex Installation and Setup Guide](#)".
8. all of the installation procedures for all Unix and Linux machines that host an Open Target database.

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Verify Partition Schemes

If you are upgrading from a SharePlex version earlier than 9.0, the method of creating and storing partition schemes and row partitions for horizontal partitioning has changed. This information no longer is stored in the database.

When you run database setup during an upgrade, it converts the data from the SHAREPLEX_PARTITION table to the new internal storage format. After the conversion, you can view the partitions with the **view partitions** command in **sp_ctrl** to ensure that the partitions converted properly.

NOTE: For more information about the **view partitions** command, see the [SharePlex Reference Guide](#).

To view row partitions:

1. Run `sp_ctrl` on the source system.
2. Issue the following command with either option, depending on whether you want to view all partitions or just those for a particular partition scheme.

```
sp_ctrl> view partitions for {scheme_name | all}
```

The following is an example of converted partition schemes. Note that the conversion program populates the **Name** field with the name of the queue from the **Route** column.

Scheme	Name	Route	Hash	Condition
HASH4	hash	sys02:hash #@o.ora112	4	ROWID
TEST_CT	highvalues	sys02:highvalues@o.ora112		sales>=10000
TEST_CT	lowvalues	sys02:lowvalues@o.ora112		sales<10000

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- Submit and manage a Service Request
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- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product