SharePlex® 10.2

Release Notes

Revision: 8/5/2024

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About SharePlex

SharePlex provides high-speed replication from Oracle database to different target databases and messaging containers on major Unix, Linux and Windows operating systems— both on-premises and in the cloud. SharePlex supports a wide variety of configurations to meet different and complex data availability needs.

SharePlex supports reliable Oracle high availability configurations where replication maintains a duplicate database in a different location that is ready for fast, seamless failover and failback in planned or unplanned mode.

You can also use SharePlex to replicate data from Oracle source to maintain a change history database in an Oracle target. Rather than updating or deleting target rows based on the source change, SharePlex inserts a new row on the target for every source change. The result is an archive that reflects the chronological history of every change made to the source database.

SharePlex also includes, at no extra charge, the compare and repair tools that you need to verify the accuracy of a target maintained by replication. These tools not only detect hidden out-of-sync conditions, but they also repair the target to restore parity of your source and target data.

SharePlex value and versatility continues to grow with the requirements and requests of our customers. Although SharePlex is a reliable, relatively low-maintenance solution, our top-rated support team is ready around the clock to help with any trouble you may have. To get you started with your deployment, our professional services team is highly experienced and readily available.

Join our community

For expert advice and the latest news about SharePlex, join the SharePlex Community at https://www.quest.com/community/products/shareplex. Take advantage of our forums, blogs, videos, and more from our own experts, as well as input from our customers and partners.

About this release

This is a minor release with new and enhanced functionality.

Revision History

Document Version	Date	Change History
2	5th March 2024	Added an important note regarding OLS policy configuration in the Conditions of Support - OLS section.
3	19th March 2024	Updated the Oracle Solaris SPARC support information.
4	6th May 2024	• Added a condition of support for the BINARY DOUBLE and BINARY FLOAT data types. • Updated the supported Solaris platform versions and added a note regarding remote replication for the Solaris 11.3 platform in the Supported Operating Systems for Oracle section.
5	5th August 2024	Added a limitation regarding the replication of data containing the ALTER statement during DDL operations.

New Features in this Release

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Extended Data Types Support

SharePlex supports replication of data with Extended Data Types for the Oracle-to-Oracle replication. The following maximum sizes are now supported for the following data types:

- VARCHAR2 (4000-32767)
- NVARCHAR2 (4000-16383)
- RAW (2000-32767)

LIMITATIONS: The following limitations apply to support for Extended Data Types:

- Horizontal partitioning is not supported by tables containing the Extended Data Type columns.
- Extended Data Types are not supported for the **Copy** command.
- SharePlex does not support the Extended Data Type size on a key column.
- SharePlex does not replicate data with Extended Data Type when target type is JMS Message Queues, File output (XML, JSON, SQL), Event Hubs, or Kafka.

Database Setup for Oracle in Silent Mode

Users can now run the Database Setup (ora_Setup) utility for Oracle in the background. This utility can be run in silent mode without user intervention. The ora_setup utility runs in an unattended mode by reading required parameter details from config file prepared in a specific format.

NOTE: Database setup for Oracle in silent mode supports only on the Linux platform.

Oracle Cloud Infrastructure Support

SharePlex now supports the following Oracle Cloud Infrastructure:

- Oracle Exadata Cloud Service (ExaCS)
- Oracle Exadata Cloud@Customer (ExaCC)*
- Oracle Database Cloud Service (DBCS)

NOTE: *Issues on Oracle Exadata Cloud@Customer will be tested against Oracle Exadata Cloud Service for reproduction purposes.

JRE/JAVA Support

We have upgraded the JRE/JAVA version from **1.8.0_192** to **1.8.0_312**.

Other New Features

- This release includes support for data replication from Oracle to Azure SQL Managed instance.
- DDL changes can now be captured during Activation from SCN.
- Upgraded the log4j version to 2.17.1.

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Kafka Support

Kafka 3.0: This release includes support for replication to Kafka 3.0 target.

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Oracle Remote Capture Support

SharePlex running on Linux supports Remote Capture for all supported versions of Oracle.

MySQL and PostgreSQL Support

This release includes support for the below platforms:

- Oracle to PostgreSQL
- Oracle to MySQL
- Cloud support for PostgreSQL and MySQL databases on Azure, Amazon RDS and AWS

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SQL Server Support

This release includes support for the below platforms:

- Azure SQL Database as a target
- Oracle 19C to SQL Server
- SQL Server 2019 as a target
- Remote Post from Linux to SQL server

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OLTP Compression Support

This release includes support for OLTP compression from and replication to Oracle 19c on the Linux, AIX, and Solaris platforms.

Kafka Authentication and Encryption Support

Support for mTLS Authentication in Kafka: This release includes support for replication from Oracle to Kafka using mTLS authentication.

Support for Kerberos Authentication in Kafka: This release includes support for replication from Oracle to Kafka using Kerberos authentication.

Support for SASL Authentication in Kafka: This release includes support for replication from Oracle to Kafka using SASL authentication.

Support for SSL encryption in Kafka: This release includes support for replication from Oracle to Kafka using SSL encryption.

Date formatting support: SharePlex supports date formatting for all the open targets (such as JMS, file, Kafka) for the XML and JSON record formats.

Azure Event Hubs Support

Support for Azure Event Hubs: This release includes support for replication from Oracle to Azure Event Hubs.

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Database Support. This release of SharePlex includes support for the following database versions:

- **Oracle 19c**. This release includes support for capture from and replication to Oracle 19c on all platforms (except HP/UX).
- **Oracle 19c on RDS**. This release includes support for capture from and replication to RDS running Oracle 19c.

NOTE: Advanced Row (OLTP) Compression is not supported by SharePlex 10.0 for replication of objects using DML operations in Oracle 18c and 19c. This limitation applies to objects in the source database.

Resolved Issues and Enhancements

The following is a list of issues addressed and enhancements implemented in this release of SharePlex.

NOTE: All Resolved Issues and Enhancement from SharePlex 10.2 and older are included in this release.

NOTE: SharePlex 10.2 contains all of published bug fixes from 10.0 and older. Several issues addressed by one-off releases in 10.1.0, 10.1.1, and 10.1.2 were not accumulated in this release, but will be included in the upcoming release. For any queries related to upgrading from 10.1 or 10.1.1 or 10.1.2 to 10.1.3 or bug fixes or documentation, please contact Quest Technical Support.

NOTE: SharePlex has put bug fixes into a cumulative update rollup (denoted by third digit in the version number) — starting with the 9.2.3 release. Customers that require bug fixes which are already available in a patch update rollup will be required to apply that patch release to get the bug fix.

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Issue ID	Description
SPO-23511/ SPO-22963/ SPO-22960/ SPO-22794	A huge memory consumption by the `sp_opst_mt` (Poster) process is affecting the performance of the Oracle database.
SPO-23168	Object cache is displaying the status of the object as `Not in Replication` after activating a config file.
SPO-23166	SharePlex Poster is not able to delete few records from a table without PK/UK.
SPO-23130	Added the below replication parameters as internal parameters in the param capture list. • SP_OCT_REPLICATE_COMMENT • SP_OCT_REPLICATE_GRANT • SP_OCT_REPLICATE_SYNONYM • SP_OCT_REPLICATE_TRIGGER
SPO-22934	SharePlex is not able to connect to Azure Database using `pg_setup` while replicating data from Oracle to Azure PostgreSQL Flexible-Server. This issue is observed because the @ character is not used in the username of Azure's flexible server.
SPO-22925	SharePlex Poster dumps core when users perform the **Array Delete** operation on a table that has the null data for one of the columns. This issue is observed when the conflict resolution is enabled and the `SP_OPO_SUPPRESSED_OOS` is parameter set to 0.
SPO-22923	Poster object cache is displaying the *'Internal error: Poster exit on 9i ddl error due to ORA-00955'* error when running the DDL operation on the source database.

Issue ID	Description
SPO-22877	Replicating Binary LOB data with special characters is causing tables go out of sync on target. This issue is observed intermittently.
SPO-22792	When users run the Compare command on the DML logs, the **Compare Status** report provides incorrect information as a few rows are out-of-sync even when source and target are in sync.
SPO-22777	SharePlex Poster is displaying an error when users add a column with the default value in an Alter table.
SPO-22732	Poster is not checking the information for foreign key after setting the `SP_OPO_DEPENDENCY_CHECK` parameter to 1.
SPO-22521	SharePlex is displaying an error when the `SP_ctrl` command is run on Windows with host or password containing the @ character.
SPO-22429	SharePlex is displaying the *'ERROR: invalid byte sequence for encoding "UTF8": 0xfd;'* error related to character mapping while replicating data from an Oracle database to a PostgreSQL database.
SPO-22356	Users are not able to monitor latency in SharePlex 10.0 and 10.1 environments using SharePlex Manager 3.0.
SPO-22355	SharePlex Poster stops with an *Invalid Column* error when the DDL Alter operation is performed on the replicated table on the SQL file target.
SPO-22354	SharePlex is displaying the '*IP address not found in host file'* error while running the provision utility on the target.
SPO-22315	Poster queue is getting stuck with frequent locking in the database and creating a huge backlog when the `SP_OCT_REDUCED_KEY` parameter is set to 0 and the `SP_OPO_REDUCED_KEY` parameter is set to 1.
SPO-22284	SharePlex Capture is failing when trying to read data from an archive log. When Capture is not able to find the archive log, it tries only one more time and if not found, it stops the process. The issue is observed while replicating data from the Dataguard Standby instance.
SPO-22276	SharePlex is displaying the *Incomplete Key Set* error while replicating data from a source to a target. After SharePlex is upgraded to version 10 and Oracle is upgraded to 19c, some of the updates are missing on the target.
SPO-22210	SharePlex Poster process intermittently displays the *'ORA-12805: parallel query server died unexpectedly'* error while performing the DDL task.
SPO-22085	SharePlex displays if failing when users run the **Compare Using** command with the config file. The issue is observed when the config file has lines with a trailing comment after the routing map field.
SPO-22075	SharePlex Compare or Repair process stops while connecting to the target side message with the *Connection timed out* error.
SPO-21946	When there are multiple `ODR_DEACTIVATE_POST` messages in the Export queue, the Import process is failing when it is trying to write a second `ODR_DEACTIVATE_POST` message.
SPO-21720	Poster queue stops with the *'missing commits detected'* warning.
SPO-21685	SharePlex Capture is failing with an error while reading the archive log on the **dload** operation.
SPO-21664	SharePlex Poster stops with object ID related error when recreating sequences for data

Issue ID	Description
	replication.
SPO-21635	SharePlex Poster is facing the memory leak issue with SQL Cache in the following conditions: • Change history target • `SP_OPO_SQL_CACHE_DISABLE = 0` (default:0) • `SP_OPO_TRACK_PREIMAGE = U` (default:none) • UPDATE operations from source
SPO-21512	SharePlex Capture stops with an error when reading the archive log for an object that has XML datatype. This issue is observed when the XML datatype has the *namespace* tag as part of inner child tags.
SPO-21454	The Compare and Repair process is failing when comparing large tables with **NCHAR** columns using the **Key** option.

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Issue ID	Description
SPO-22794	SharePlex Poster is getting stuck and causing performance issues as the **sp_opst_mt** Poster process consumes a large amount of memory.
SPO-22315	Poster queue is getting stuck while performing the batch delete operation and causing a high backlog. This issue is observed intermittently.

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Issue ID	Description
SPO-21934	The issue is observed while creating a new SharePlex user in Azure SQL DB from the mss_setup database setup utility.
SPO-21998	When the "storage in row" clause is enabled on the source table, Poster stops with an error while replicating a large CLOB data from RDS System to MS SQL 2019.

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Issue ID	Description
SPO-21590	While replicating the table that has the INTERVAL DAY TO SECOND Type columns, the

Issue ID	Description
	compare/repair process fails for comparison with an Oracle hashing error. **Workaround:** Enable the SP_DEQ_USE_SP_CKSUM parameter on both source and target database. (sp_ctrl> reset param SP_DEQ_USE_SP_CKSUM)
SPO-21550	SharePlex displays an error when a user runs a provision command on the source database in the existing replication. This issue is observed when the queue name in the rim directory has the "RS" characters. **Workaround:** Rename the queue names inside the rim directory such that it does not have the "RS" characters in it.
SPO-21513	SharePlex displays the "JSON columns not supported" warning when activating tables with a specific constraints, even when there are no JSON columns in the table that are added to activation.
SPO-21508	SharePlex replicates the Grant commands for the definition table to the target database even when the SP_OCT_REPLICATE_GRANT parameter is set to "0". The issue is resolved by using the below workaround. **Workaround:** Configure the SHAREPLEX_DDL_CONTROL table to exclude the replication for the grant command.
SPO-21342	SharePlex displays out of synchronized tables even after performing the repair operation. The issue is observed on the source and the target database, both.
SPO-21465	After performing an INSERT operation, the CDC table displays the INSERT BEFORE row twice instead of displaying two different rows, INSERT BEFORE and INSERT AFTER with the same value on the SHAREPLEX_SOURCE_OPERATION column. This issue is observed when the SP_OPO_TRACK_PREIMAGE parameter is set to I/U/D.
SPO-21463	sp_ctrl fails to start and displays an error when auth_hosts is implemented and SSL is enabled using sp_security on both source and target database.
SPO-21168	The memory usage of the SharePlex sp_copsrv.exe process started increasing before expected timeline. This issue is observed on the Windows operating system.
SPO-21076	SharePlex capture process stopped due to a memory leak issue. This issue is observed on the SharePlex 9.2.8, 9.2.9, and 10.0 versions.
SPO-20957	In Oracle database 12C, OLTP compressed data/table encountered an out-of-sync issue. In Oracle database 19C , OLTP compressed data encountered NULL columns. Oracle has introduced a new patch (32522300) that resolves the above OLTP compression related issues in Oracle 12c and 19c databases.
SPO-20440/ SPO-19931	SharePlex supports the data replication from Oracle to Kafka using the SASL plaintext authentication parameters. For more information, refer to SharePlex 10.1 Administrator Guide.
SPO-18517	SharePlex supports date formatting for all the open targets (such as JMS, file, Kafka) for the XML and JSON record formats.

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Issue ID	Description
SPO-20762	Fixed 'show export detail' statistics to be more accurate.
SPO-20453	Fixed table name greater than 30 characters not replicating in Windows 2019.
SPO-20452	Fixed copy issues where target database name contains a period.
SPO-20780	Fixed issue getting stale data capturing remotely where both SP_OCT_OLOG_USE_OCI and database ASYNC mode is enabled. Under this condition, when stale data is detected SharePlex will automatically force a log switch by issuing the ALTER SYSTEM SWITCH LOGFILE command and begin reading from the archive log until it is current. The workaround is automatic and no manual intervention is needed.

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Issue ID	Description
SPO-19998	Fixed overflow processing DLOADs from OLTP table
SPO-19920	Fixed Capture error using ASM disk with udev
SPO-19919	Fixed Capture error using ASM partition with AFD
SPO-19910	Fixed Post issues replicating compressed LOB data
SPO-19882	Fixed Post exits due after executing reconcile
SPO-18858	Fixed columns ignored when positioned after UDT column
SPO-18529	Fixed CLOB data not replication to XML & JSON

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Issue ID	Description
SPO-21181	Compare/Repair could report a false OOS. This issue is more likely to occur when comparing a single column table without keys.
SPO-21081	SharePlex is unable to compare the tables that are not in the active configuration file using the Compare Force option. The issue is resolved now. The functionality of comparing data that is outside of the replication was removed from SharePlex 9.0 version onwards. However, now, we have added this functionality back into the product for the 9.2.10, 10.0.1, 10.1 versions. **NOTE:** The limitation of comparing tables outside of replicated scheme still applies.
SPO-21076	The memory usage of the SharePlex capture process named "sp_ocap" started increasing after running for a month due to the allocation / de-allocation of the typecheck object.

Issue ID	Description
SPO-21072	SharePlex poster stopped while replicating the data from the source database to the target database due to an invalid length in a column. The issue is observed in the CDC environment.
SPO-21058	SharePlex capture process stops due to an Oracle error whenever the RAC database is restarted. Users need to start the capture manually.
SPO-21054	SharePlex stopped while replicating the Oracle heap organized tables that are altered with the external tables after renaming the table name. The capture was discarding the external table as invalid. This issue was observed intermittently after upgrading from 8.1.6 to 9.2.6.
SPO-21050	SharePlex poster dumped core due to the column data set inappropriately in the key cache. This issue is observed only when the supplemental logging is not set on the source.
SPO-21047	SharePlex capture displayed a full disc space error on a NAS drive immediately after initiating the database replication process, even when there is enough space on the disc.
SPO-21042	Using non-ASCII characters as part of horizontal partitioning column conditions are not accepted via sp_ctrl. SharePlex reader process fails to evaluate such conditions. This issue exists for SharePlex versions 9.x up to 9.2.9. Reader evaluation issue is now resolved if the below workaround for mentioned sp_ctrl issue is performed. **Workaround:** Edit horizontal_partitioning.yaml file to input the non-ASCII characters since sp_ctrl rejects non-ASCII character input.
SPO-20946	SharePlex is unable to display before and after images for the deleted records/rows in the CDC environment even when the sp_opo_track_preimage D parameter for delete is set. This issue is observed after upgrading from SharePlex 9.1.4 to 9.2.8.
SPO-20942	SharePlex poster stopped while performing the cascading replication from source database to target database due to invalid columns and invalid objects in the cache. This issue is observed when bulk updates are being applied such as multiple table creation, peer-to-peer replication, and performing the DDL and DML activity.
SPO-20939	sp_utils does not display the license information for the SharePlex product in the license tab but the customer is able to fetch the license information using splex_get_key. This issue is specific to the windows operating system.
SPO-20931	SharePlex is giving reader core dump in a horizontally partitioned table.
SPO-20929	SharePlex poster dumps core when PEP tries to obtain a row ID for the NOP messages.
SPO-20921	SharePlex capture dumps core and gets memory corruption issue when handling Multi-Block Undo records for 12C or above version of the Oracle database.
SPO-20916	Tables get out of synchronization when a user tries to replicate a horizontally partitioned HP table without a primary key on a dependency check enabled setup. This issue is observed specifically after upgrading from the SharePlex 9.1.4 to 9.2.6 version even after a user performs the full repair.
SPO-20914	SharePlex reader displays an error when a table is dropped without a table name on the source database after updates are accumulated on the capture queue. This issue is observed intermittently while running an internal upgrade application process in the database after upgrading to SharePlex 9.2.7 on a database where PK/UK is not enabled. .
SPO-20911	In the peer-to-peer configuration, SharePlex is unable to replicate the updated information in a row from the source to the target database due to the conflict found in the target database. In the debug process, SharePlex is not able to find the pre-image record to resolve the conflict.

Issue ID	Description
SPO-20780	SharePlex encounters stale blocks in the online log during data replication when the SharePlex was in the remote-connection capture mode. The issue is resolved. When a stale block is detected a switch command is sent to Oracle to switch the log from online log to archive log and the capture reads the data from the archive log.
SPO-20663	SharePlex declines the transaction, which has only LMN records without any HRID value, with 'NULL HRID' warning message. This issue is resolved now. SharePlex now declines the transaction without generating the 'NULL HRID' warning message.
SPO-20623	SharePlex capture process dumps core while trying to read an archive log from a perpetually down node on a RAC environment.
SPO-20330	While cross replicating the data from Oracle to the Windows SQL server, the SharePlex poster is performing the delete operation very slow on tables and most of the tables are displayed out of synchronized. Due to this, a heavy backlog is observed for a particular queue.
SPO-20012	SharePlex poster stopped while executing an insert statement on an object in the target database. It stopped due to an invalid length of the variable character string even when the source and target are having the same structure. This issue is observed while processing the corrupt data specifically the special characters.
SPO-19967	SharePlex capture's parser dumps core while decompressing the OLTP compressed DLOAD records. This issue is observed when the data size of the DLOAD record exceeds the size of the standard message.
SPO-19927	SharePlex is getting an issue while accessing a VARDIR installed on a network drive on Windows environment.
SPO-19318	SharePlex capture process stopped with an error when the DB max sessions per node (5 nodes) was set to 4000 each. Maximum number of concurrent Oracle sessions for DDL and DML are now increased to 5000 per node.
SPO-17695	SharePlex was unable to replicate data from source database to target database when the table data has UDT (User Defined Data Type) and LOB data. This issue was observed on the SharePlex 9.2.1 version.

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Issue ID	Description
SPO-20665	Fixed inconsistent processing of trailing NULL on chained row preventing it from properly replicating to Kafka.
SPO-20651	Replication of comments on DDL can be disabled by setting SP_OCT_REPLICATE_COMMENT to 0. DDL replication is enabled by setting SP_OCT_REPLICATE_DDL to 1, 2, or 3.
SPO-20562	Fixed cleanup of routing files to after activation is successful.
SPO-20524	Fixed CREATE TABLE AS SELECT DDL not replicating correctly when DDL user is different from schema owner.
SPO-20454	Fixed logic in Compare to work properly even when character set between endpoints are superset or subset of each other when SP_DEQ_CONV2UTF8 is enabled.

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Issue ID	Description
SPO-20426	Fixed Capture DDL replication of grant on commit refresh
SPO-20139	Fixed Capture DDL processing of chained row in system table
SPO-20125	Fixed Post XML missing trailing null columns
SPO-20033	Fixed Windows issue with stopping SharePlex processes from Services
SPO-20024	Fixed Post memory leak due to rollbacks
SPO-19633	Fixed Compare/Repair issue where invalid duplicate checksums reports OOS
SPO-17868	Fixed Post conflict resolution existing win log message output for most and least recent
SPO-19872	Fixed performance issue with large partial rollbacks.

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Issue ID	Description
SPO-19907	Fixed ignored DDL when source and target database endianness are different
SPO-19834	Fixed Post stopping when object cache missing from previous activation
SPO-19734	Fixed Chinese NCHAR & NVARCHAR2 characters not showing up correctly in Kafka
SPO-19722	Fixed Capture core when processing DLOAD from OLTP tables
SPO-19563	Fixed Capture core when issuing DDL alter table modify on XML type column
SPO-19494	Fixed Chinese NVARCHAR2 characters no showing up in Kafka
SPO-19468	Fixed commits not routing to Post due to bad bitmaps in Read
SPO-19458	Fixed compare ignoring nolocksource and nolocktarget parameters
SPO-19448	Fixed Reader redundant processing rollback updates when using horizontal partition
SPO-19070	Fixed VARRAY corrupting XML in Kafka
SPO-19003	Fixed extra data appearing in XML from bad VARRAY parsing in Kafka.NOTE: VARRAY element in XML is fixed to now correctly be a child element of the parent column. VARRAY will no longer appear as a sibling to the column.
SPO-18985	Fixed out-of-sync when operations are related using distributed transactions
SPO-18931	Fixed Post DDL error creating table using materialized views
SPO-18875	Fixed Post stopping when JMS not responding. Post will now retry automatically.
SPO-18800	Fixed Linux endianness posting to Kafka causing invalid characters
SPO-18405	Fixed posting bad records when using OLTP

Issue ID	Description
SPO-18157	Fixed Capture to correctly skip filtered out DDL
SPO-18154	Fixed invalid numeric data by setting the value to zero when condition met in Capture
SPO-18146	Fixed Open Post stopping when DDL messages are only updating object cache
SPO-18138	Fixed CTAS issues when using non-qualified schema
SPO-17856	Fixed Post error ORA-29877 on update table containing SDO_GEOMETRY column but not part of the update
SPO-17693	Fixed upgrade issues from 9.2.1 when processing older DDL cache version
SPO-16944	Fixed Post to properly update LOBs when using CDC
SPO-15820	Fixed errors using Oracle Filter Driver with ASM disks in native mode
SPO-5032	Fixed Poster error ORA-1805 using time zone

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Issue ID	Description
SPO-19151	Resolved capture performance issues when data not ready in log
SPO-18872	Fixed post issues with delete-n where some columns contains NULL
SPO-18866	Resolved corruption using alter table DDL on long name table
SPO-18850	Resolved offset calculation on SecureFiles CLOB with Japanese CharSet
SPO-18838	Resolved issue with alter table DDL using dbms_job package
SPO-18798	Fixed SP_OPX_REDUCED_KEY=2 using update containing keys and non-keys
SPO-18628	Fixed issue with create public synonym
SPO-18625	Fixed conversion issues with SJIS Ⅱsymbol
SPO-18615	Fixed SQL Server ODBC driver issues using float
SPO-18501	Fixed post inserting CLOB with ORA-64204 error
SPO-18402	Fixed corruption issues in object cache on tables with UDT
SPO-18169	Compare now properly supports configurations that use compound routes
SPO-18029	Fixed issue with converting exponential number with some SQL Server ODBC drivers
SPO-17592	Fixed conversion issues with UTF16 Chinese
SPO-17318	Fixed installation issues as root on Red Hat

Issue ID	Description
SPO-17005	Fixed issue replicating insert operation on compressed tables
SPO-10528	Resolved issue with parsing SecureFiles LOB where data object ID not extracted
SPO-10282	Fixed capture to better handle alter table shrink table
SPO-3828	Changed read update of SharePlex marker to once per second

SharePlex 9.2.5

Issue ID	Description
SPO-10592	Fixed post failure when executing 'alter index' with a fully-qualified index name for table replicating to a different schema on target.
SPO-15132	Fixed messages not getting sent when using DML filtering.
SPO-16402	Fixed XML/JSON document types to format null & empty data as attributes.
SPO-17528	Fixed XML document emitting extra tags for CDC.
SPO-17863	Fixed network issue when using SSL.
SPO-17991	Fixed sp_utils not properly showing port numbers.
SPO-18202	Fixed post error recovery accessing row of a record after insert error.
SPO-18224	Fixed read error when using DML filtering
SPO-18259	Fixed better recovery handling after encountering SSL error.
SPO-18321	Fixed export using SP_SYS_HOSTNAME IP when set
SPO-18419	Enhanced capture performance.
SPO-18487	Fixed post shutdown due to ORA-01458 after upgrade and SQL cache is enabled.
SPO-18501	Fixed automatic detection of UTF16 CLOB data.
SPO-18527	Fixed internal routing data to better handle non-UTF8 characters.
SPO-18617	Fixed parsing of DLOAD record with OLTP.
SPO-18794/4506554	ON CASCADE DELETE constraints are now supported.

SharePlex 9.2.4

Issue ID	Description
SPO-16402	Corrected XML messages not properly tagging NULL or EMPTY columns
SPO-17528	Resolved XML messages including extraneous metadata

Issue ID	Description
SPO-17991	Fix Windows 'SharePlex Utilities' not showing correct port number for associated processes
SPO-18321	Fix export not using SP_SYS_HOST_NAME parameter value
SPO-18419	Resolved capture performance issues
SPO-18487	Fix post stopping due to ORA-1458 after upgrading when SQL cache is enabled
SPO-18501	Fix post stopping due to ORA-600 or ORA-64204 when using CLOB caused by incorrect character set parsing

SharePlex 9.2.3

Issue ID	Description
SPO-17377	Corrected an issue that caused the Post process to stop with the following error: "ORA-01741: illegal zero-length identifier."
SPO-17384	Corrected an issue in which a DDL transaction (alter table to add partition) was not processed successfully after a database upgrade.
SPO-17507	Resolved an issue which caused the Repair process to fail because the SQLite marker table used in the Compare process was not successfully created.
SPO-17668	Resolved an issue that caused remote Capture to stall when reading online logs and disk_asynch_io was enabled on the remote database.
SPO-17681	Corrected an issue which caused the following error when replicating to JMS: "No such file or directory - bridge.ini."

Basic System Requirements

This chapter contains the basic system requirements for SharePlex. See also: Source and Target System Requirements and Data Types

System

Before installing SharePlex, ensure that your system meets the minimum hardware and software requirements.

- SharePlex processes are all 64-bit and can exceed 4 GB.
- Per process memory of greater than or equal to 256 MB is required. Depending on how you configure SharePlex, there can be one or more of the following processes on a system :
    - Capture
    - Read
    - Export
    - Import
    - Post
- See the Preinstallation Checklist in the SharePlex Installation Guide for additional system and/or database requirements.

Communications Protocols

SSL/TLS

For TLS connections, SharePlex supports TLS 1.2 (or later) only.

Internet Protocol

SharePlex supports IPv4 and IPv6 internet protocols. The following table shows the operating systems for which SharePlex was tested with IPv6.

NOTE: If the SP_SYS_HOST_NAME environment variable is set to an IPV6 address on the source system, SharePlex on the target system must be version 9.0 or later.

Operating System	Source	Target	SharePlex Source and Target versions	On-premises/Cloud
Linux RHEL	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
Linux RHEL	Link-Local IPV6	Link-Local IPV6	8.6.5 - 9.0	On-premises
Linux RHEL	Link-Local IPV6	Link-Local IPV6	9.0 - 8.6	On-premises
Linux Suse	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
Windows	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
Windows	Link-Local IPV6	Link-Local IPV6	9.0 - 8.6.4	On-premises
HP UA	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
HP IA	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
SUN Sparc	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
SUN Solaris	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
AIX	Link-Local IPV6	Link-Local IPV6	9.0 - 9.0	On-premises
Linux RHEL	Public IPV6	Public IPV6	9.0 - 9.0	Cloud
Windows	Public IPV6	Public IPV6	9.0 - 9.0	Cloud

Interoperability between versions

Refer to the following guidelines if the system where you are installing SharePlex is in a configuration where one or more other systems will continue to use an older version of SharePlex. An example is when installing or upgrading SharePlex on a target, but the source will continue to use SharePlex 8.6.x.

Versions with full interoperability

The following SharePlex versions are fully interoperable, including the Compare/Repair feature:

- 8.6.x
- 9.0.x
- 9.1.x

- 9.2.x
- 9.4.x
- 10.0.x
- 10.1.x

To support replication from a higher to a lower version, set the SP_SYS_TARGET_COMPATIBILITY parameter on the **source** system to the *lower* SharePlex version. If Capture is running, restart it.

IMPORTANT: Downgrading from a higher to a lower version of SharePlex is not supported.

NOTES:

- The older version of the SP_SYS_TARGET_COMPATIBILITY parameter, SP_OCT_TARGET_COMPATIBILITY, was deprecated in version 9.0. If your source SharePlex is currently replicating to a lower SharePlex version on the target and you have SP_OCT_TARGET_COMPATIBILITY set to the lower version, SharePlex will continue to use that value after you upgrade to the current version.
- If you upgrade the target to the current release at a future time, issue a reset for SP_OCT_TARGET_COMPATIBILITY on the source system to remove it from the SharePlex environment. Going forward, SharePlex will use the setting of the new SP_SYS_TARGET_COMPATIBILITY parameter, which defaults to the current version.

  To reset SP_OCT_TARGET_COMPATIBILITY

  1. Stop Capture.

     `sp_ctrl>` **stop capture**

  2. In **sp_ctrl** on the source system, issue the following command:

     `sp_ctrl>`**reset param SP_OCT_TARGET_COMPATIBILITY**

  3. Restart Capture.

     `sp_ctrl>`**start capture**

Source and Target System Requirements and Data Types

This chapter contains the requirements when capturing from an Oracle source database and replicating to a supported target database.

PREREQUISITE: At least the minimum level of supplemental logging must be enabled. Some SharePlex features may require PK/UK supplemental logging to be enabled.

Oracle Source and Target

SharePlex supports replication from Oracle to Oracle, according to the details below.

Supported Operating Systems for Oracle

The following operating systems are supported for capture from a supported Oracle database and replication to an Oracle target database. For a list of supported source and target databases for Oracle capture, see Supported Oracle Source and Target Versions.

SharePlex supports only the 64-bit version of the listed operating systems.

NOTE: SharePlex supports the following operating systems and only where the version matches the Oracle certified platforms. For example, Oracle 19c supports Linux 7 and later, therefore installation of SharePlex on a system with Oracle 19c is supported only on Linux 7 and later.

- AIX 7.1 and 7.2
- CentOS Linux 5.x, 6.x,7.x, and 8.x
- Oracle Linux (RHCK and UEK) 5.x, 6.x,7.x, and 8.x
- RHEL 5.x, 6.x,7.x, and 8.x
- SuSE SLES 11.x, 12.x, and 15.x
- Oracle Solaris SPARC 10.0, 11.0, and 11.4*
- Oracle Solaris x86 10.0 and 11.4*
- Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016, and 2019
- HP-UX 11.31 Itanium
- IaaS (Infrastructure as a Service) support - Azure and AWS

NOTE: *SharePlex supports remote replication for the Solaris 11.3 platform when the database is running on Solaris 11.3 and SharePlex is on a Linux platform.

Supported Cloud Platforms for Oracle

Oracle Cloud Infrastructure

- Oracle Exadata Cloud Service (ExaCS)
- Oracle Exadata Cloud@Customer (ExaCC)[1]
- Oracle Database Cloud Service (DBCS)
- Oracle Compute (IaaS) Virtual Machines and Bare Metal

Amazon Web Services

- Amazon RDS for Oracle [2]
- Amazon EC2 (IaaS) Virtual Machine

Microsoft Azure

Azure Virtual Machine (IaaS)

Condition of support

1. Conditions of support - ExaCC

Issues on Oracle Exadata Cloud@Customer will be tested against Oracle Exadata Cloud Service for reproduction purposes.

2. Conditions of support - Amazon RDS for Oracle

Please see Supported Oracle Source and Target Versions for additional clarification on version compatibility.

Supported Oracle Source and Target Versions

SharePlex supports the Standard and Enterprise Editions of Oracle 11gR2, 12cR1, 12cR2, 18c, and 19c.

NOTES:

- Unless specified, Oracle, RAC, and ASM are supported for the same versions.
- SharePlex supports only the 64-bit version of Oracle Database
- In addition to the Supported Operating Systems for Oracle and the Supported Cloud Platforms for Oracle, the Oracle versions listed above are also supported when running on an Oracle Exadata Database Machine.
- Amazon RDS for Oracle 11gR2 (supported 11gR2 versions are 11.2.0.4.v11 or later), 12cR1 (supported 12cR1 versions are 12.1.0.2.v7 or later), and 19c. Support for Oracle features on Amazon RDS is limited to the default option groups: default:oracle-ee-11-2, default:oracle-ee-12-1, default:oracle-ee-19 & default:oracle-se2-19.

Supported Data Types: Oracle to Oracle

SharePlex supports the following Oracle data types for replication to Oracle targets. See the Conditions of support for additional information.

- ANYDATA [1]
- B-FILE
- BINARY DOUBLE
- BINARY FLOAT
- BLOB [2]
- CHAR
- CLOB [2]
- DATE
- INTERVAL
- LONG RAW[2]
- LONG [2]
- NCHAR
- NCLOB [3]
- NUMBER
- NVARCHAR2 [8]
- RAW [8]
- ROWID
- SDO_GEOMETRY
- TIMESTAMP
- TIMESTAMP WITH LOCAL TIME ZONE
- TIMESTAMP WITH TIME ZONE
- UDT (User Defined Type)[5]
- UROWID
- VARCHAR
- VARCHAR2 [8]
- VARRAY collectors
- XMLTYPE [4]

NOTE: SharePlex supports columns that are defined as INVISIBLE.

Conditions of support

1. ANYDATA

- Replication of ANYDATA is supported, except when it contains a UDT or the storage is defined as SecureFile LOB with compression. SecureFile LOB without compression is supported. Only the following data types within ANYDATA are supported by SharePlex:
    - CHAR
    - DATE
    - NUMBER
    - RAW
    - VARCHAR
    - VARCHAR2
    - TIMESTAMP
- A data type within an ANYDATA type must be in-row (inside the column data). Oracle encapsulates the ANYDATA type as an in-row secure file LOB. If the encapsulated data is longer than the length allowed for an in-row LOB, that data appears as out-of-row LOB data. SharePlex assumes that the encapsulated data always appears as in-row LOB.

2. LONG and LOB (BLOB, CLOB)

- Any table that contains a LOB or LONG should have a primary key or unique key defined on it. If a table does not have a key, SharePlex builds its own key from all of the columns except LONGs or LOBs. If a LOB or LONG is the only difference between two rows that otherwise satisfy the Post WHERE clause, SharePlex cannot guarantee that the correct row will be updated.
- SharePlex supports SecureFiles LOBs as follows:
    - Logging must be enabled.
    - SharePlex supports uncompressed SecureFiles LOBS and SecureFiles LOBS with high or medium compression
    - SecureFiles LOBS are not supported when the storage specification includes encryption and/or deduplication.
- SharePlex does not support LONG and LONG_RAW data types in a configuration where transformation or conflict resolution are performed.

3. NCLOB

NCLOBs are not supported by Compare/Repair if the source and target have different character sets.

4. XMLTYPE

SharePlex supports the replication of XMLTYPE stored as CLOB and BINARY. SharePlex does not support XMLTYPE stored as OBJECT RELATIONAL. Additionally, the following applies:

- XMLTYPE stored as BINARY is not supported when the storage is defined as SecureFile LOB with compression. SecureFile LOB without compression is supported.
- Binary XMLTypes are not supported by Compare/Repair when the source and target character sets are different and require character set conversion.
- Compare/Repair does not support comparison of XMLTYPE when the source and target have different storage clauses. Compare/Repair only supports compare/repair when source and target are both stored as BINARY or both are stored as CLOB.

5. User-defined types

SharePlex does not support abstract data types and VARRAYs in a configuration where the SharePlex conflict resolution feature is performed.

NOTE: SharePlex replicates tables with the UDT fields in the base type ONLY. In case of columns containing multiple subtypes, replication is applicable only for base type fields.

6. General

If the precision or size of the target data type is not large enough for the data being replicated, the data may be truncated or rounded by the database when applied.

7. BINARY DOUBLE and BINARY FLOAT

The BINARY DOUBLE and the BINARY FLOAT data types are not supported for the **copy** command.

8. Extended Data Types

- Extended Data Types are not supported for the **copy** command.
- Extended Data Types are not supported on a key column. The keys that do not support the Extended Data Types include:
    - Primary key on the Oracle table
    - Unique key on the Oracle table
- Horizontal partitioning is not supported by tables containing the Extended Data Type columns.
- SharePlex does not replicate data with Extended Data Type when target type is JMS Message Queues, File output (XML, JSON, SQL), Event Hubs, or Kafka.

PostgreSQL Target

SharePlex supports replication from Oracle to PostgreSQL, according to the details below.

Supported Operating Systems for PostgreSQL

The following operating systems are supported for PostgreSQL Server database. SharePlex supports only the 64-bit version of the listed operating systems.

Native SharePlex installation is supported on the below platforms:

- RHEL 7.x and 8.x
- IaaS (Infrastructure as a Service) support - Azure and AWS

Replication can be supported on the below platforms using Remote Post from Linux:
Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016, and 2019

Supported Cloud Platforms for PostgreSQL

Oracle Cloud Infrastructure

- Oracle Compute (IaaS) Virtual Machines and Bare Metal

Amazon Web Services

- Amazon RDS for PostgreSQL
- Amazon Aurora
- Amazon EC2 (IaaS) Virtual Machine

Microsoft Azure

- Azure Virtual Machine (IaaS)
- Azure DBaaS

Supported Database Versions for PostgreSQL

PostgreSQL 9.4, 9.5, 9.6, 10, 13.4, and 14.0
ODBC driver requirement: pgsql-14

Supported Data Types: Oracle to PostgreSQL

How to Read the Supported Data Types Table/Grid
This section contains information about the supported data types grid that can be read vertically and horizontally to understand how SharePlex supports replication between an Oracle source and the various Open Target targets (non-Oracle targets) that SharePlex supports.

- **Column 1:** Shows the Oracle data types that SharePlex can replicate to an Open Target target type (non-Oracle target).
- **Column 2:** Shows the native data types that SharePlex supports for each target type.
- **Rows spanning Column 1 and Column 2:** Shows the default data type mapping (native Oracle data type to native target data type) that SharePlex uses when replicating Oracle ALTER TABLE...ADD COLUMN DDL operations. Post uses the specified native target data type in the column definition of the command on the target. The default mapping is what was tested and is supported.

Oracle	PostgreSQL
BINARY_DOUBLE	DOUBLE PRECISION

Oracle	PostgreSQL
BINARY_FLOAT	REAL
CHAR (n)	CHAR (n)
CHAR (n CHAR)	CHAR (n)
CLOB	TEXT
DATE	DATE
LONG	TEXT
NCHAR (n)	CHAR (n)
NCLOB	TEXT
NUMBER	NUMERIC
NUMBER (p,0:)	NUMERIC (p,s)
NUMBER (p,s)	NUMERIC
NVARCHAR2 (n)	VARCHAR (n)
TIMESTAMP (7:9)	TIMESTAMP (6)
TIMESTAMP (p)	TIMESTAMP (p)
TIMESTAMP (7:9) WITH TIME ZONE	TIMESTAMP (6) WITH TIME ZONE
TIMESTAMP (p) WITH TIME ZONE	TIMESTAMP (p) WITH TIME ZONE
TIMESTAMP (7:9) WITH LOCAL TIME ZONE	TIMESTAMP (6)
TIMESTAMP (p) WITH LOCAL TIME ZONE	TIMESTAMP (p)
VARCHAR2 (n)	VARCHAR (n)
VARCHAR2 (n CHAR)	VARCHAR (n)

Conditions of support

See Supported Data Types: Oracle to Oracle for additional conditions of support for Oracle source data types.

SQL Server Target

SharePlex supports replication from Oracle to SQL Server, according to the details below.

Supported Operating Systems for SQL Server

The following operating systems are supported for SQL Server database. SharePlex supports only the 64-bit version of the listed operating systems.

Native SharePlex installation is supported on the below platforms:

- RHEL 7.x and 8.x
- IaaS (Infrastructure as a Service) support - Azure and AWS

Replication can be supported on the below platforms using Remote Post from Linux:

Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016, and 2019

Supported Cloud Platforms for SQL Server

Amazon Web Services

Amazon EC2 (IaaS) Virtual Machine

Microsoft Azure

- Azure Virtual Machine (IaaS)
- Azure SQL Database
- Azure SQL Managed Instance

Supported Database Versions for SQL Server

SQL Server 2008, 2008 R2, 2012, 2014, 2016, 2017, and 2019.

ODBC driver requirement:

- Microsoft ODBC Driver 17 for SQL Server
- Microsoft ODBC Driver 18 for SQL Server

NOTES:

- The SQL Server database is supported on RHEL and Windows server operating systems.
- Azure SQL Database and SQL Server database are supported on RHEL 7.x and Windows Server 2016 & 2019 as a remote post.

Supported Data Types: Oracle to SQL Server

Oracle	SQL Server
ANYDATA	VARIENT
BINARY_DOUBLE	FLOAT (53)
BINARY_FLOAT	FLOAT (24)
BLOB	VARBINARY (MAX)
CHAR (n)	CHAR (n)
CHAR (n CHAR)	CHAR (n)
CLOB	VARCHAR (MAX)
DATE	DATETIME2 (7)
LONG	VARCHAR (MAX)
LONGRAW	VARBINARY (MAX)
NCHAR (n)	NCHAR (n)
NCLOB	NVARCHAR (MAX)
NUMBER	FLOAT (53)
NUMBER (p,0:)	NUMERIC (p,s)
NUMBER (p,s)	FLOAT (53)
NVARCHAR2 (n)	NVARCHAR (n)
RAW (n)	VARBINARY (n)
TIMESTAMP (8:9)	DATETIME2 (7)
TIMESTAMP (p)	DATETIME2 (p)
TIMESTAMP (8:9) WITH TIME ZONE	DATETIMEOFFSET (7)
TIMESTAMP (p) WITH TIME ZONE	DATETIMEOFFSET (p)
VARCHAR2 (n)	VARCHAR (n)
VARCHAR2 (n CHAR)	VARCHAR (n)

NOTE: To understand how to read the above grid/table, see How to read the supported data types table/grid.

Conditions of support

See Supported Data Types: Oracle to Oracle for additional conditions of support for Oracle source data types.

MySQL Target

SharePlex supports replication from Oracle to MySQL, according to the details below.

Supported Operating Systems for MySQL

The following operating systems are supported for MySQL Server database. SharePlex supports only the 64-bit version of the listed operating systems.

Native SharePlex installation is supported on the below platforms:

- RHEL 7.x and 8.x
- IaaS (Infrastructure as a Service) support - Azure and AWS

Replication can be supported on the below platforms using Remote Post from Linux:

Windows Server 2008, 2008 R2, 2012, 2012 R2, 2016, and 2019

Supported Cloud Platforms for MySQL

Amazon Web Services

- Amazon RDS for MySQL
- Amazon Aurora

Microsoft Azure

- Azure Virtual Machine (IaaS)
- MySQL Azure database (PaaS)

Supported Database Versions for MySQL

MySQL 5.5, 5.6, 5.7, and 8

ODBC driver requirement: MySQL ODBC Drivers 8.0.26 for Linux

Supported Data Types: Oracle to MySQL

Oracle	MySQL
BINARY_DOUBLE [1]	DOUBLE
BINARY_FLOAT	DOUBLE
BLOB	LONGBLOB

Oracle	MySQL
CHAR (n)	CHAR (n)
CLOB	LONGTEXT
DATE	DATETIME (0)
LONG	LONGTEXT
LONGRAW	LONGBLOB
NUMBER	DOUBLE
NUMBER (p,0:)	NUMERIC (p,s)
NUMBER (p,s)	DOUBLE
RAW (n)	VARBINARY (n)
TIMESTAMP (7:9) [2]	DATETIME (6)
TIMESTAMP (p) [2]	DATETIME (p)
VARCHAR2 (n)	VARCHAR (n)

NOTE: To understand how to read the above grid/table, see How to read the supported data types table/grid.

Conditions of support

1. Because Oracle and MySQL handle this data type differently, there may be a very small difference in precision between the value of the source and the value of the target row. You may see the difference when viewing the data from SQL*Plus or other utility, but SharePlex will not report this difference as an out-of-sync condition.
2. If the MySQL target database is earlier than version 5.6.4, the fractional seconds will be truncated. Earlier versions did not support fractional seconds.

See Supported Data Types: Oracle to Oracle for additional conditions of support for Oracle source data types.

Hana Target

SharePlex for Hana is in limited support effective February 1, 2022. SharePlex supports replication from Oracle to HANA, according to the details below.

Supported Hana Targets

SAP HANA 1.0 SPS 11

Supported Data Types: Oracle to HANA

Oracle	HANA
BINARY_DOUBLE	DOUBLE
BINARY_FLOAT	DOUBLE
BLOB	BLOB
CHAR (n)	CHAR (n)
CLOB	CLOB
DATE	TIMESTAMP
LONG	CLOB
LONGRAW	BLOB
NCHAR (n)	NCHAR (n)
NCLOB	NCLOB
NUMBER	DECIMAL
NUMBER (p,0:)	DECIMAL (p,s)
NUMBER (p,s)	DECIMAL
NVARCHAR2 (n)	NVARCHAR (n)
RAW (n)	VARBINARY (n)
TIMESTAMP (p)	TIMESTAMP
VARCHAR2 (n)	VARCHAR (n)

NOTE: To understand how to read the above grid/table, see How to read the supported data types table/grid.

Conditions of support

See Supported Oracle Source and Target Versions for additional conditions of support for Oracle source data types.

Kafka Target

SharePlex supports replication from Oracle to Kafka, according to the details below.

Supported Kafka Targets

Apache Kafka 0.8.x, 0.9.x, 0.10.x, 0.11.x, 1.0.x, 1.1.x, 2.0.x, 2.1.0, 2.3.1, 2.5.0, and 3.0

Supported File Types

- XML file
  For XML supported data type information, see XML Supported Data Types.
- JSON file
  For JSON supported data type information, see JSON Supported Data Types.

Supported Platforms

Linux: When replicating data to the Kafka (Apache and Confluent) target, target SharePlex should be installed only on the **Linux** platform.

We test and reproduce issues against:

- Apache Kafka
- Confluent Kafka

NOTE: If you would like to use a different vendor who provides their own Kafka distribution or provides a Kafka-compliant interface, you are welcome to do so. From a support perspective, our support and development teams will share any Kafka broker errors that SharePlex receives and also ensure SharePlex itself is working properly to capture data, the target configuration formats in SharePlex are correct, and the SharePlex poster is posting or attempting to post according to the Kafka versions under support. If there are SharePlex issues with Kafka support that can be reproduced on Apache Kafka or otherwise demonstrated to be definitely associated with SharePlex, our team will address those as standard Kafka issues.

Azure Event Hubs Target

SharePlex supports replication from Oracle to Azure Event Hubs, according to the details below.

Supported Azure Event Hubs Target

Supported message queue: Azure Event Hubs

Supported File Types

- XML file
  For XML supported data type information, see XML Supported Data Types.
- JSON file
  For JSON supported data type information, see JSON Supported Data Types.

JMS Message Queues Target

SharePlex supports replication from Oracle to JMS Message Queues, according to the details below.

Supported JMS Message Queues

- JMS - Apache ActiveMQ 5.8
- JMS - IBM MQ 8

Supported File Types

- XML file
  For XML supported data type information, see XML Supported Data Types.
- JSON file
  For JSON supported data type information, see JSON Supported Data Types.

File Output Target

SharePlex supports replication from Oracle to File Output, according to the details below.

Supported File Types

- XML file
- SQL file
- JSON file

XML Supported Data Types

This mapping applies to all targets that receive messages as XML:

- File in XML format
- JMS
- Kafka
- Azure/Kafka Event Hubs

Oracle	XML
BINARY_DOUBLE	decimal
BINARY_FLOAT	decimal
BLOB	base64Binary

Oracle	XML
CHAR	string
CLOB	string
DATE	dateTime
INTERVAL DAY TO SECOND	dayTimeDuration
INTERVAL YEAR TO MONTH	yearMonthDuration
LONG	string
NCHAR	string
NCLOB	string
NUMBER	decimal
NVARCHAR2	string
RAW	base64Binary
ROWID	string
TIMESTAMP	dateTime
TIMESTAMP WITH LOCAL TIME ZONE	dateTimeStamp
TIMESTAMP WITH TIME ZONE	dateTimeStamp
VARCHAR2	string
VARRAY	Post maps the data types in the source VARRAY to the appropriate XML data types. Only certain data types in a VARRAY are supported. See the conditions of support.

NOTE: To understand how to read the above grid/table, see How to read the supported data types table/grid.

Conditions of support

Only the following data types in a VARRAY are supported by SharePlex when replicating to XML output:

- BINARY_FLOAT
- VARCHAR2
- BINARY_DOUBLE
- NUMBER
- TIMESTAMP (This is converted to a DATE data type without microseconds in XML output)
- DATE
- UDT (only if it contains one of the data types in this list)

See Supported Oracle Source and Target Versions for additional conditions of support for Oracle source data types.

JSON Supported Data Types

This mapping applies to all targets that receive messages as JSON:

- File in XML format
- JMS
- Kafka
- Azure/Kafka Event Hubs

Oracle	JSON
BINARY_DOUBLE	Number
BINARY_FLOAT	Number
BLOB	String containing base64 encoded data
CHAR	String
CLOB	String
DATE	String containing date
INTERVAL DAY TO SECOND	String containing interval
INTERVAL YEAR TO MONTH	String containing interval
LONG	String
NCHAR	String
NCLOB	String
NUMBER	Number
NVARCHAR2	String
RAW	String containing hex encoded data
ROWID	String
TIMESTAMP	String containing timestamp
TIMESTAMP WITH LOCAL TIME ZONE	String containing timestamp
TIMESTAMP WITH TIME ZONE	String containing timestamp
VARCHAR2	String

NOTE: To understand how to read the above grid/table, see How to read the supported data types table/grid.

Conditions of support

See Supported Data Types: Oracle to Oracle for additional conditions of support for Oracle source data types.

Additional Information about Data Types

Notes about Open Target data type support:

- Replication of SecureFile LOBS to non-Oracle databases is supported except if the storage specification includes any level of compression, encryption, and/or deduplication.
- Replication of LOB operations generated by **dbms_lob** are not supported when replicating to non-Oracle targets.
- SharePlex applies replicated Oracle data to the target according to the data type of the target column, rather than mapping to a default data type. Corresponding source and target columns must contain compatible datatypes to ensure successful DML operations.
- If the precision or size of the target datatype is not large enough for the data being replicated, the target database may truncate or round the data when SharePlex applies it.

SharePlex does not support the replication of data from Oracle to Open Targets for the below Extended Data Types:

- VARCHAR2 (4000-32767)
- NVARCHAR2 (4000-16383)
- RAW (2000-32767)

Supported Objects and Operations for DML Replication

SharePlex supports DML operations on tables and sequences, with some conditions. DML can be replicated from an Oracle source to an Oracle target or an Open Target target.

NOTE: Replication to targets with a different character set is supported, with limitations. When posting to Open Target databases, XML files and JMS, SharePlex supports only UNICODE and US7ASCII on the target, but conversion can be performed by an Oracle client installed on the target system. For full details, see the Preinstallation Checklist in the SharePlex Installation and Setup Guide for an Oracle Source.

Tables

SharePlex supports the following DML operations on tables:

- INSERT, UPDATE, DELETE, COMMIT, ROLLBACK
- Direct-path loads (SQL*Loader) (INSERT AND FULL ROLLBACK).
  NOTE: Replication of partial rollbacks of DLOADs is **not** supported.

The target table must support the column types that are being replicated from the source Oracle table.

SharePlex supports the following table types for DML operations:

Supported table type*	Conditions of Support
Regular Oracle tables	None
Index-organized tables	SharePlex **does not** support: • Replication to/from index-organized tables that contain LOB or VARRAY columns • Replication from a non-index-organized table to an index-organized table • SharePlex hash-based horizontal partitioning of index-organized tables
Partitioned tables	None
Views	None
Materialized views	SharePlex does not support replication from a materialized view to a materialized view. SharePlex can replicate the underlying table of a materialized view to a regular target table.

SharePlex does not support the following table types:

- Replication to/from nested tables
- Replication to/from clustered tables

***SharePlex does not support the following for any table type:**

- Replication to/from Identity columns.
- Replication of rows changed by 'UPDATE WITH CASE' syntax.
- Replication of rows in which data exceeds 319 KB in size, excluding LOB and LONG columns
- Replication of external tables or tables with external partitions

Sequences

- Transactional changes to Oracle sequences can be replicated only from Oracle to Oracle.
- To replicate transactional changes to sequences, the supplemental logging of primary and unique keys must be enabled at the database level, or you must enable supplemental logging for primary keys on the **sys.seq$** table.

Secured and Compressed Objects

SharePlex supports DML operations on secured or compressed objects as described in the following table. See "Conditions of support" following this table for additional information.

Secured/Compressed Object	Can be replicated to:
DML on tables encrypted by Oracle Obfuscation Toolkit	All target types
DML on tables with Transparent Data Encryption (TDE)[1]	All target types
DML on Oracle Label Security (OLS)[2]	All target types
DML on compressed objects: Basic, Advanced Row (OLTP) Compression, HCC[3]	All target types
Direct Load (DLOAD) on compressed objects: Basic, Advanced Row (OLTP) Compression, HCC[3]	All target types

Conditions of Support

1. Conditions of support - TDE

SharePlex supports Tablespace Encryption and Column Encryption, both source and target.

The SharePlex **copy/append** command does not support TDE.

TDE is not supported for sources on RDS.

SharePlex only supports the AES and DES encryption algorithms.

2. Conditions of support - OLS

By default, SharePlex cannot process rows that are protected by OLS (Oracle Label Security) because users granted DBA privileges (like SharePlex) do not have enough privileges to access those rows. However, if privilege is granted from the OLSSYS user, SharePlex can support OLS. SharePlex was tested under the following OLS configuration:

- The SharePlex user was granted full privilege to the objects in replication.
- Test tables with OLS security were created.
- Data was replicated using INSERT, UPDATE, DELETE, ROLLBACK, and TRUNCATE operations, and ALTER TABLE to add and drop columns.

NOTE: If the OLS policy data label column is defined as hidden, the data in that column cannot be replicated by SharePlex.

IMPORTANT: Shareplex does not support OLS policy configuration changes on tables during active replication. Users need to apply these configurations before activating the configuration.

3. Conditions of support - compression

For HCC compression: SharePlex does not support query low compression. Supported types of compression are query high, archive low and archive high.

For Advanced Row (OLTP) Compression: Under certain conditions, Oracle does not provide enough information in the redo log for SharePlex to replicate a DML operation on a OLTP compressed object. Testing of OLTP compressed objects is advised.

Supported Operations and Objects for DDL replication

SharePlex provides default and optional DDL support.

NOTE: Support for DDL on compressed Oracle objects is limited to the following:

- SharePlex supports DDL on compressed objects only for Oracle 11gR2 and later source Oracle databases.
- ALTER TABLE to ADD COLUMN and ALTER TABLE to DROP COLUMN are supported on Basic, Advanced Row (OLTP) Compression, and HCC compressed Oracle objects for replication to all Oracle and Open Targets.

SharePlex does not support:

- ANALYZE TABLE and ANALYZE INDEX
- DDL to ALTER TABLE ADD OVERFLOW to an IOT in replication
- DDL operations issued by the SharePlex database user
- DDL to ALTER INDEX to an IOT in replication
- During DDL replication, data containing the ALTER statement related to Oracle extended statistics— 'Virtual by User'— is not supported. Oracle also does not recommend to use the extended stastistics 'Virtual by User'.

Oracle-to-Oracle DDL Support

This section outlines both default and optional DDL support.

DDL on objects listed in the active configuration file

SharePlex supplies default and optional DDL replication for objects whose **names are listed in the configuration file explicitly or by wildcard**. See "Conditions of support" following this table for additional information.

For details about the controlling parameter, see the SharePlex Reference Guide.

Supported object	Supported DDL Operation	Enabled by default?	Controlling parameter
Table and IOT **(when they exist in the source at the time of configuration activation)**	Truncate Alter to add, drop, modify columns Alter to add, modify, drop, split, coalesce, move, truncate, exchange partition or subpartition[1] Drop Table	**Yes**	SP_OCT_REPLICATE_DDL=3
Table and IOT	Create	**Yes**	SP_OCT_AUTOADD_

Supported object	Supported DDL Operation	Enabled by default?	Controlling parameter
(when they are added to the source after configuration activation)	Create as Select[2]		ENABLE=1
Table	Alter Table Rename	Yes	SP_OCT_DDL_ UPDATE_CONFIG=1
Index	Create Alter Drop	**Yes**	SP_OCT_AUTOADD_ ENABLE=1
Materialized View[3]	Create Drop	No	SP_OCT_AUTOADD_ ENABLE=1 and SP_OCT_AUTOADD_ MVIEW=1 and SP_SYS_TARGET_ COMPATIBILITY=8.6.2 or higher
Sequences[4]	Create, Drop	No	SP_OCT_AUTOADD_ ENABLE=1 and SP_OCT_AUTOADD_ SEQ=1 and SP_SYS_TARGET_ COMPATIBILITY=8.6.3 or higher
Trigger	Create, Drop	No	SP_OCT_REPLICATE_ TRIGGER=1
Synonym	Create, Drop	No	SP_OCT_REPLICATE_ SYNONYM=1
Grant[5]	Create, Drop	No	SP_OCT_REPLICATE_ GRANT=1

Conditions of support

1. ALTER TABLE has the following conditions of support:
    - ALTER TABLE DDL that involves multiple tables, such as EXCHANGE PARTITION between tables, requires all tables involved to be in replication.

- Default DDL support for ALTER TABLE on partitions/subpartitions applies to user-named interval partitions/subpartitions. For system-named (system generated) interval partitions/subpartitions, SharePlex supports only ALTER TABLE to DROP and TRUNCATE the system-named partitions. To enable support for DROP and TRUNCATE of system-named partitions, set the SP_OCT_TRUNC_PARTITION_BY_ID parameter to 1, and ensure that both source and target are updated to SharePlex version 8.6.4 or later. **NOTE:** This requirement has changed from previous SharePlex releases in that the parameter must now be set regardless of the Oracle version, including for Oracle 12.2 and later.
- SharePlex does not support TRUNCATE of a system-generated sub-partition if the sub-partition is empty. In such cases, Post stops with error SP-OPO01002. To configure Post to ignore this error, stop Post, set the SP_OPO_CONT_ON_ERR parameter to 1, and add error number SP-OPO01002 to the top of the **oramsglist** file. See the SharePlex Reference Guide for more information about this parameter.

2. For CREATE TABLE AS SELECT, SharePlex supports the following datatypes: LONG, DATE, RAW, LONG RAW, ROWID, LONG VARCHAR, CHAR, CLOB, BLOB, CFILE, BFILE, TIMESTAMP, INTERVAL YEAR TO MONTH, INTERVAL DAY TO SECOND and ANYDATA.
3. For CREATE MATERIALIZED VIEW the following applies:
   - SharePlex supports the following datatypes for CREATE MATERIALIZED VIEW: LONG, DATE, RAW, LONG RAW, ROWID, UROWID, LONG VARCHAR, CHAR, CLOB, BLOB, CFILE, BFILE, TIMESTAMP, INTERVAL YEAR TO MONTH, INTERVAL DAY TO SECOND and ANYDATA. SharePlex does not support ALTER MATERIALIZE VIEW.
   - SharePlex converts a CREATE MATERIALIZED VIEW to a CREATE TABLE, applies the CREATE TABLE to the target, and then replicates the DML that populates the view. SharePlex does not replicate materialized views to materialized views.
4. To replicate sequences, the supplemental logging of primary and unique keys must be enabled at the database level, or you must enable supplemental logging for primary keys on the **sys.seq$** table.
5. Amazon RDS restricts DBA users from issuing the GRANT command. Because SharePlex runs as the DBA user, SharePlex cannot replicate GRANT to or from an RDS database.

DDL on objects not listed in the active configuration file

SharePlex provides expanded DDL support for Oracle objects that are not listed in the configuration file. SharePlex replicates the DDL statements for these objects, but does not maintain synchronization of the objects through DML replication. Expanded DDL replication is optional and is enabled with the following parameter setting:

SP_OCT_REPLICATE_ALL_DDL=1

NOTE: Expanded DDL replication supports not only tables and sequences but also a wide range of other objects such as procedures, functions, users, and views, which are not part of replication. Some of these objects may have underlying objects that *are in replication*. In those cases, Expanded DDL replication applies to the underlying objects in replication, as well as to the object that is not in replication.

See "Table Notes" following this table for additional information.

Supported object	Supported Operation
Table and IOT	Create table
	Create table as select
	Alter table add column
	Alter table drop column
	Drop table
	Truncate
	Comment on table
	Comment on columns
	Associate Statistics
	Disassociate Statistics
Cluster	Create cluster
	Crop cluster
Sequence	Create
	Drop
	Alter
Partition/ Subpartition	Add
	Split
	Merge
	Drop
	Modify
	Coalesce
	Exchange
	Move
	Truncate
	Rename
	Set
Index	Create
	Alter
	Drop
View	Create
	Alter
	Drop
	Comment on view

Supported object	Supported Operation
Synonym	Create
	Drop
Directory[1]	Create
	Drop
User-defined type	Create type
	Alter type
	Drop type
	Create type body
	Drop type body
Stored procedure	Create
	Alter
	Drop
Stored function	Create
	Alter
	Drop
Package	Create package
	Create package body
	Alter package
	Alter package body
	Drop package
	Drop package body
User	Create user
	Alter user
	Drop user
	Grant[1]
	Revoke
Role	Create role
	Alter role
	Drop role
	Grant[1]
	Revoke

TABLE NOTES:

1. Amazon RDS restricts DBA users from issuing certain commands on an Amazon RDS database instance. Because SharePlex runs as the DBA user, SharePlex cannot replicate the following commands to or from an RDS database:
    - CREATE or DROP DIRECTORY
    - GRANT

Oracle to Open Target DDL support

SharePlex provides limited DDL support for replication from Oracle to Open Target. The involved objects must be listed in the active configuration file explicitly or with a wildcard. There is no optional DDL support for replication from Oracle to Open Target.

The default Oracle to Open Target configuration is represented by the following parameter setting:

SP_OCT_REPLICATE_DDL=3

See "Table Notes" following this table for additional information.

Supported object	Supported Operation
Table and IOT	Truncate[1]
	Alter table add column[2]
	Alter table drop column

TABLE NOTES:

1. TRUNCATE TABLE is not supported from Oracle compressed objects to Open Target targets.
2. The default mappings of Oracle data types to their Open Target counterpart for replicated ALTER TABLE ADD COLUMN DDL is shown in Supported Operating Systems for Oracle . When SharePlex adds the column, it defines it with the default data type. This mapping applies to the entire configuration (not per table).

Non-supported Oracle Features

This is a list of commonly used Oracle features which SharePlex does not replicate and are not listed elsewhere in this document. Since both Oracle and SharePlex continually change and improve, this list of exclusions cannot be considered complete. Unless an item is stated here as being supported, assume that SharePlex does not replicate it.

Object/operation/feature	Not supported
Oracle operations	Operations that do not appear in the redo logs. This includes any DML or DDL not in the redo logs, and also PL/SQL packages which do not write results to the redo logs, for example, **dbms_shared_pool.keep** and related packages.
dbms_scheduler.create_job	This object is not supported.
Flashback	SharePlex does not support the Oracle Flashback Table feature. If the SP_

Object/operation/feature	Not supported
	REPLICATE_ALL_DDL parameter is enabled (value of 1), SharePlex may try to replicate the flashback DDL, which will return an error. To perform Flashback Table on a table that is in replication, use the following procedures in the SharePlex Administrator Guide to work around this issue: 1. Remove source objects from replication 2. Perform the flashback 3. Add or change objects in an active configuration

Supported / non-supported SharePlex Features for Open Targets

The following table shows whether specific SharePlex features are supported for replication from Oracle to Open Target targets.

SharePlex feature	Supported for Open Target	Not Supported for Open Target
reconcile command (target instantiation)	X	
compare/compare using and **repair/repair using** commands		X
copy/copy using and **append/append using** commands		X
Hash horizontally partitioned replication		X
Column-based horizontally partitioned replication	X	
Vertically partitioned replication	X	
Column mapping	X	
Key definition	X	
Build configuration with scripts		X
Named queues	X	
Commit Reduction (feature of Post Enhanced Performance)	X	
Dependency Checking (feature of Post Enhanced Performance)		X
Transformation		X
Conflict resolution		X
Peer-to-peer replication (bi-directional)		X
Consolidated replication (many to one)	X	

SharePlex feature	Supported for Open Target	Not Supported for Open Target
Broadcast replication (one to many)	X	
High availability replication (active/passive bi-directional)		X
Change tracking target (CDC)		X
Data encryption	X	
Data compression	X	
SSH	X	
auth_hosts file	X	
Monitoring scripts	X	
SNMP monitoring	X	
Continue posting on error (SP_OPX_CONT_ON_ERR)	X	
Suspend on out of sync errors (SP_OPX_OUT_OF_ SYNC_SUSPEND)	X	
Reduced key (SP_OPX_REDUCED_KEY)	X	
Logical Transaction Rollback on out-of-sync transactions		X

System Requirements for Replication of OLTP Compressed Data

This chapter contains the requirements when capturing OLTP compressed data from an Oracle source database and replicating it to a supported target database.

Supported Operating Systems

The following operating systems are supported for capture from a supported Oracle database and replication to a supported target database.

SharePlex supports only the 64-bit version of the listed operating systems.

NOTE: For OLTP, SharePlex supports the following operating systems only.

- AIX 7.1 and 7.2
- Oracle Linux (RHCK and UEK) 5.x, 6.x, and 7.x
- RHEL Linux 5.x, 6.x, and 7.x
- CentOS Linux 5.x, 6.x, and 7.x
- Oracle Solaris SPARC 11.4

Non-supported Operating Systems

- Windows operating system

  Note: OLTP patch for the Windows operating system is not available from Oracle. Oracle has planned to release it in July 2021.

Supported Oracle Database Version/s

SharePlex supports Oracle 19c database version for replicating the OLTP compressed data.

Known Issues in this Release

The following is a list of issues, including those attributed to third-party products, known to exist at the time of release.

PostgreSQL known issue

Known Issues	Issue ID

While running the pg_setup utility, if users encounter the "file not found" problem on a Linux system , even though the file is present. This issue occurs because the SharePlex has upgraded the OpenSSL library and the PostgreSQL ODBC drivers continue to function with the older version of OpenSSL.
WORKAROUND: Create a symbolic links to the OpenSSL libraries of SharePlex in the `<prod>/lib` directory.
For example: The symbolic link `libcrypto.so.1.0.0` will point to `libcrypto.so.1.1` and the symbolic link `libssl.so.1.0.0` will point to `libssl.so.1.1`.
Commands:
`ln -s libcrypto.so.1.1 libcrypto.so.1.0.0`
`ln -s libssl.so.1.1 libssl.so.1.0.0`
	SPO-22799

SQL Server known issue

Known Issues	Issue ID
SharePlex Poster is displaying the *ODBC Driver Invalid precision value* error when replicating the BLOB data type with the data size of more than 8000 bytes.	SPO-24119

MySQL known issue

Known Issues	Issue ID
Performance issue is observed while performing the DML operations in bulk.	SPO-22342

PostgreSQL and MySQL known issue

Known Issues	Issue ID
Performance issue is observed during replication while using partition table over the cloud.	SPO-22517

Remote Post Linux known issues

Known Issues	Issue ID
Poster stops when users enable an encryption key for the export/ import process while replicating data using remote post. This issue is observed on the Linux server.	SPO-22081

SQL Server known issues

DDL Drop Column known issue

Known Issues	Issue ID
While activating a config file with an Oracle SCN number, users are not able to delete a column in a DDL activity.	SPO-21993

General known issues

Known Issue	Issue ID
The reported core file was not generated on systems running Oracle 11g on the SunOS, and Linux operating systems.	66306
If the customer issues an "ALTER TABLE ... MOVE COMPRESS" DDL command against a table in replication, SharePlex will replicate the DDL to the target by default. After post issues the DDL, if the target table had indexes, they are now unusable and post will subsequently fail trying to apply changes to the table. If post gets an error on the table such as "ORA-01502: index XXX or partition of such index is in unusable state" , the user must rebuild any indexes the table may have before restarting post in order to rectify the situation.	N/A
SharePlex copy is not supported for tables created with "MAPPING TABLE" clause.	SPO-19626

Windows known issues

Known Issue	Issue ID
On Windows systems, the uninstaller does not prompt for the version of SharePlex to be removed from a system. When there are multiple versions of SharePlex installed on a system, it removes only the first installation.	N/A
In the Windows environment, always run sp_ctrl from the same drive on which you have installed SharePlex. If you run sp_ctrl from another drive, you will be prompted for a login ID and password. After you provide the login ID and password, sp_ctrl will run normally.	N/A
If the user wants to change the installation directory for a given port, the user must first uninstall from the previous location. Note that if the user wants to keep the previous VARDIR it should be copied to the new location prior to the uninstall.	62620
Installing on Windows 2019 as Windows Administrator user will cause sp_wallet and qview to fail. **Workaround:** Set NUT_TREAT_ADMINS_AS_ROOT environment variable to 1 for the Windows Administratoruser before starting any SharePlex utilities or applications.	SPO-20785
During installation when upgrading from 9.2.x it is possible to get a file not found error in the PTC NuTCRACKER Platform Components. **Workaround:** Rename or remove the mks_oe directory under the SharePlex installation directory before upgrading.	SPO-20910

ASM known issues

Known Issue	Issue ID
If the redo_log or archive_log that SharePlex is currently reading is involved in “rebalancing” due to the removal of a disc group, the Capture process will pause until the rebalance procedure for that file is complete.	N/A
On raw device ASM systems, the sp_desvr may get stuck and the process can not be killed even when kill -9 is issued; users must reboot the system to recover from it.	61713

Startup known issues

Known Issue	Issue ID

If you have SharePlex configured to start from a startup script and it returns an error similar to: System call error: sp_cnc (connecting from cdrpx.mcit.med.umich.edu) Bad file number Can't dup2 stderr try adding nohup to your script. The nohup command directs a command (in this case the startup of SharePlex) to continue in the background after the current user (the script) logs out. The syntax is:
`cd /product_directory/bin`
`nohup ./sp_cop &`
	N/A

Character Sets known issues

Known Issue	Issue ID
Avoid replicating NCHAR data types using different character sets such as AL16UTF16 on the source machine and UTF8 on the target due to byte size limitations. Oracle stores NCHAR data with a maximum limit of 2000 bytes. A fixed length NCHAR character set such as AL16UTF16 has a different maximum number of characters than a variable length NCHAR character set such as UTF8. For the fixed length AL16UTF16 character set, each character is stored as 2 bytes; thus, the maximum number of characters is 1000 for NCHAR data. For the variable length UTF8 character set, the maximum number of characters a column can accommodate depends on how many bytes each character requires. If you replicate 1000 3-byte characters from a source machine using the AL16UTF16 character set to a target machine set to UTF8, you will get the following Oracle error message on the target, since it needs 3000 bytes: `ORA-01461 can bind a LONG value only for insert into a LONG column`	35198

Copy/ Append known issues

Known Issue	Issue ID
If you need to copy a materialized view to a table, you should drop the target table before copying. Please be aware that the new target table created by copy will have an additional column named M_ROW$$ which does not exist on the source. The use of append on a materialized view to a table is not supported.	41679
The BINARY_FLOAT and BINARY_DOUBLE data types are not supported for the **copy** command.	SPO-16453
Copy job status shows 'Locked' even when competed.	SPO-20843

Conflict Resolution known issues

Known Issue	Issue ID
The !ControlExtendedCharSet prepared conflict resolution routine and the !DEFAULT parameter currently cannot be used for generic conflict resolution.	N/A

Partitioned Replication known issues

Known Issue	Issue ID
When using a compound routing map in a placeholder route in the configuration file, do not use spaces between each routing component. For example, sysb@o.orab+sysc@o.oraC is correct because there are no spaces before or after the + symbol.	N/A
Post will fail with ORA-14400 performing DML on partitioned table with VARAY residing in an OLTP compressed tablespace.	SPO-20841

Capture known issue

Known Issues	Issue ID
The SharePlex Capture process is getting stuck when users change the Oracle compatibility parameter from 11g to 12c. This issue is observed on the 12c 4 node RAC database.	SPO-21339

Vertical and Horizontal Partitioning known issues

Known Issue	Issue ID
When using horizontal partition replication with DATE data type in the column condition, the DATE needs to follow the SP date string format, 'MMDDSYYYYHH24MISS'. Otherwise, the Read and Compare processes are not able to process it.	55268

LOBs, VARRAYs, and XML known issues

Known Issue	Issue ID
Users may encounter an out-of-sync condition when an UPDATE occurs on a table that contains a UDT with a VARRAY column, and there is no KEY on the table. This issue is specific to Solaris x86 operating systems.	29650
On Oracle 19c processing large n-items can lead to OOS and/or missing commits.	SPO-20842

DDL Replication known issues

Known Issue	Issue ID
Replicating CREATE ROLE (set param SP_OCT_REPLICATE_ALL_DDL 1) is changing the grantee name on the target to the name of the SharePlex Administrator.	2242
If the Capture process is behind in reading the Oracle redo or archive logs when the SP_OCT_REPLICATE_ALL_DDL parameter is enabled it will replicate DDLs whose time stamps precede this event.	56957
In replication from an Oracle source to a non-Oracle target, SharePlex does not support ALTER TABLE to add a number column in which the scale is larger than the precision.	SPO-14372

Partition DDL known issues

Known Issue	Issue ID
If separate SQL statements for partition DDL and index rebuild are run on the source, SharePlex only replicates the partition DDL and leaves target global index unusable. This is because ALTER INDEX is not supported by SharePlex. The recommended work around is that all partition DDLs which mark global indexes as unusable should be run with an appending clause UPDATE GLOBAL INDEXES to the ALTER TABLE SQL statements. The alternative is to manually rebuild the global indexes on target.	57939

Function based index known issues

Known Issue	Issue ID
If there is more than one function defined in the index, SharePlex will choose the first. SharePlex cannot support multiple functions.	92931

Post to JMS known issues

Known Issue	Issue ID
Replication of batch operations to ActiveMQ may cause a hang. The workaround is to set the SP_ORD_BATCH_ENABLE parameter to 0.	SPO-11335
If the post process that is writing to JMS is not on the same machine as the source database, and if the two machines are of different endianness, NCHAR data will not be written to JMS correctly.	107471

Post to non-Oracle targets known issues

Known Issue	Issue ID
Replication of tables with varray columns from an Oracle source to a non-Oracle target can get out of sync because Oracle doesn't include key information on updates.	SPO-19048

Oracle Compression known issues

Known Issue	Issue ID
Oracle 19c OLTP Compression. SharePlex does not support replication of DML operations on objects compressed using OLTP Compression in Oracle 19c.	SPO-19793
Hybrid Columnar Compression. Activation will not fail if a table with “COMPRESS FOR QUERY LOW” compression is activated. Capture will log a message indicating that “COMPRESS FOR QUERY LOW” is not supported.	107487

Third-party known issues

Third-party known issues: Linux

Known Issue	Issue ID
RHEL with 11g may encounter issues when producing core files. To work around this issue users will need to change the parameter "core_pattern" in the /proc/sys/kernel/core_pattern file. The following command enables core files: sysctl -w kernel.core_pattern=core. The original setting is: /corefiles/core. In this state, the system looks for a directory named /corefiles, which does not exist, therefore a core file could not be created.	54799

Third-party known issues: Oracle

Known Issue	Issue ID
There is an Oracle issue that can cause SharePlex Capture to fail when replicating the OLTP compressed table that is having a column name with more than 30 characters. This is a known Oracle issue addressed under Oracle Bug 31776789.	SPO-23856
There is an Oracle issue that can cause SharePlex Poster to fail when replicating the OLTP compressed table that is having a column with more than 30 characters. This is a known Oracle issue addressed under Oracle Bug 31786282.	SPO-23509
Oracle may allow an invalid date, such as year 0000, to be inserted as the key value of a table without generating an error. This causes SharePlex to return an “Invalid DATE format detected in record with rowid” error when trying to insert the record to the target.	SPO-1368
Users wishing to employ IOTs with overflow need to be running Oracle 11g or higher. This is a known Oracle issue addressed under Oracle Bug 4627859.	44626
On Windows systems, the Post process May exit when it encounters an "ORA-07445: exception encountered: core dump" error. Please refer to Oracle Bug 6658912 for more information and the Oracle provided work around.	67441
Oracle 11gR2 - During a SYNC job, the copy of a new table (without data) failed at “EXP-00011:	75179

Known Issue	Issue ID
table does not exist" . The table that failed is a new table without any data. The EXP-00011 is caused by 11gR2 new feature "Deferred Segment Creation" that is controlled by the initialization parameter DEFERRED_SEGMENT_CREATION. The default is ON. To avoid this error, disable the parameter. A tar has been opened with Oracle and Oracle created a note 960216.1 Original Export Raises EXP-11 Table Does Not Exist.	
OLTP compression with supplemental logging enabled may corrupt the Oracle Undo block, so Oracle suggests disabling supplemental logging when running OLTP compression. However, SharePlex requires supplemental logging to be enabled, so you may encounter this bug. This affects Oracle versions 11.2.0.2, 11.2.0.1 and 11.1.0.7. See Metalink ID 1191474.1.	92152
Sometimes the Post process will hang updating a SecureFile LOB. For more information please refer to Oracle tar SR 3-2898230851: OCILobWrite hangs at the OCI_LAST_PIECE for securefile LOB.	N/A
There is an Oracle bug that can cause the database to crash when supplemental logging is enabled and transactions involving tables in a compressed tablespace are rolled back. Please refer to Oracle bug 8331063 for more information.	N/A
A known issue in PL/SQL prevents the SharePlex conflict resolution logic from compiling the PL/SQL for tables whose names are the same as their owners. Oracle has stated that the issue will not be fixed. See Oracle TAR 2577886.996 for more information. This issue does not affect replication; SharePlex supports tables with identical owner and table names.	N/A

Third Party Known Issues: Misc

Known Issue	Issue ID
When replicating data from Oracle to SQL Server, the Microsoft SQL Server ODBC driver supports Owner names of up to 127 bytes only.	SPO-14331
A known issue in EDB Postgres ODBC driver prevents support for emoji UTF-8 character set with EDB Postgres target.	SPO-15251

Licensing

SharePlex licensing information can be found in the Quest Software Product Guide. Please contact your account manager if you have questions.

To activate a trial license

1. Run the SharePlex command:

   ./splex_add_key

   ```
   SharePlex License Utility
   1) Read license key from file
   2) Enter license key manually
   3) Add license key for alternate host
   q) Quit License Utility
   Enter option:
   ```

2. Enter option 2.
3. Enter the key provided in the email from Quest Licensing.
4. For the customer name, enter: Trial Version.

To activate a purchased commercial license

1. Run the SharePlex command:

   ./splex_add_key

   ```
   SharePlex License Utility
   1) Read license key from file
   2) Enter license key manually
   3) Add license key for alternate host
   q) Quit License Utility
   Enter option:
   ```

2. Enter option 2.
3. Enter the key provided in the email from Quest Licensing.
4. Enter the customer name provided in that email.

Third Party Contributions in this Release

This product contains the following third-party components. For third-party license information, go to our website at https://www.quest.com/legal/third-party-licenses.aspx. Source code for components marked with an asterisk (*) is available at https://opensource.quest.com.

Table 1: List of Third-Party Contributions

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