



EDB Postgres Advanced Server
Release Notes
Release 14.1.0

EnterpriseDB

Dec 17, 2021

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New features, enhancements, bug fixes, and other changes in EDB Postgres Advanced Server 14 include:

Type	Description
Upstream Merge	EDB Postgres Advanced Server 14.1.0 is built on open-source PostgreSQL 14.1 which introduces a myriad of enhancements that enable databases to scale up and scale out in more efficient ways. See the [PostgreSQL 14 Release Notes](https://www.postgresql.org/docs/14/release-14.html) for more information. See also [PostgreSQL 14 Open Items](https://wiki.postgresql.org/wiki/PostgreSQL_14_Open_Items).
Feature	Store creation and last DDL time for all SQL objects: Allows a user to track an object when it is created and last modified. Users can now view the created and last DDL time through respective Redwood-compatible views.
Feature	Implementation of <i>SUBPARTITION TEMPLATE</i> : With the <i>SUBPARTITION TEMPLATE</i> clause you can provide the subpartition descriptor to create subpartitions for each table partition. Specify the <i>TEMPLATE</i> once and it gets applied to every partition automatically.
Feature	Access to a partition by <i>PARTITION</i> (<partname>) or subpartition by <i>SUBPARTITION</i> (<subpartname>) clause: Allows access to the particular partition using the <i>PARTITION</i> (<partname>) clause and subpartition using the <i>SUBPARTITION</i> (<subpartname>) clause for <i>SELECT UPDATE INSERT</i> and <i>DELETE</i> queries.
Feature	Support for object-level auditing: Allows selective auditing of objects for specific DML statements such as <i>SELECT INSERT UPDATE</i> or <i>DELETE</i> in the <i>edb_audit_statement</i> GUC including or excluding certain groups. Allows users to either include (@) or exclude (-) particular statement type for a relation. Currently supports the <i>{SELECT UPDATE</i>
Feature	Audit Log Archiver: A new parameter <i>edb_audit_archiver</i> helps a DBA to control the space consumed by the audit log directory and manage the audit log files. The <i>edb_audit_archiver</i> parameter helps in compressing the old audit log files by specifying the compression command and executing the command before removing the old audit log files.
Feature	Support for <i>USERENV()</i> : Provides user environment and session-related details.
Feature	Redwood-compatible bitwise <i>AND</i> and <i>OR</i> functions and aggregates: Unlike existing bitwise functions and aggregates these also support bitwise operation on a numeric data type for Redwood compatibility. In addition there is support for bitwise '&' and operators for the numeric data type.

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Type	Description
Feature	Support for an alias on the table name in an <i>INSERT</i> statement: You can use <i>ALIAS</i> to access a partition or subpartition with <i>SELECT INSERT UPDATE</i> or <i>DELETE</i> statements to qualify the table columns. For example <i>INSERT INTO table_name t (t.col1) VALUES (10);</i>
Feature	Option to audit the <i>SET</i> commands: There is a new option in <i>edb_audit_statement</i> to log the <i>SET</i> commands. To enable this you need to modify the <i>log_statement</i> GUC.
Feature	<i>DBMS_SQL</i> compatible with Oracle: The enhanced <i>DBMS_SQL</i> function accepts <i>NUMBER</i> instead of <i>INTEGER</i> so that both <i>INTEGER</i> to <i>NUMBER</i> functions can accept both <i>NUMBER</i> and <i>INTEGER</i> type values. Since these functions are compatible with both <i>NUMBER</i> and <i>INTEGER</i> EDB Postgres Advanced Server restricts the input range within the <i>INTEGER</i> 's limit.
Feature	Create <i>ROWID</i> columns with <i>IMPORT FOREIGN SCHEMA</i> : When the remote table has a <i>rowid</i> column the foreign table that gets created as part of the <i>IMPORT FOREIGN SCHEMA</i> previously skipped the <i>rowid</i> column for a foreign table. Allows <i>rowids</i> columns to be created for the foreign table.
Feature	Global sequence for the <i>ROWID</i> 's: <i>ROWID</i> is now unique across the database which allows using <i>ROWID</i> 's on the partitioned table.
Feature	<i>NVL2</i> uses <i>ANYCOMPATIBLE</i> pseudo-type: Allows the <i>NVL2</i> function to support considerably more argument-type combinations. For example the <i>NVL2</i> version can match a call with one <i>INTEGER</i> and multiple <i>BIGINT</i> arguments and the <i>INTEGER</i> is automatically promoted to <i>BIGINT</i> . With the previous <i>ANYELEMENT</i> version you had to cast the <i>INTEGER</i> explicitly.
Feature	The <i>h</i> command now displays the syntax on a psql prompt for EDB Postgres Advanced Server objects.
Feature	Tab-completion support for EDB Postgres Advanced Server syntaxes.
Feature	Improved Oracle compatibility syntax: - Migrate from Oracle without applying syntax changes for <i>ENABLE</i> . - Migrate from Oracle without applying syntax changes for <i>USING INDEX ENABLE</i> . - Migrate from Oracle without applying syntax changes for <i>NOCYCLE</i> . - Migrate from Oracle without applying syntax changes for a sequence with a too high upper boundary. Now EDB Postgres Advanced Server applies the upper boundary and logs a warning message. -Migrate from Oracle without applying syntax changes for a sequence specifying the <i>NOORDER</i> keyword. The keyword is considered a <i>NOOP</i> keyword. A warning message is logged stating that the <i>NOORDER</i> keyword has no beneficial effect in EDB Postgres Advanced Server and is ignored.

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Type	Description
Enhancement	<i>CONNECT_BY</i> feature enhancements: - Allow the use of multiple PRIOR expressions. - Use AND/OR with multiple conditions to allow any combination of Unary Binary or Prior expressions. - Use of Unary expressions. - Make PRIOR optional with CONNECT BY query. - Enhance the function to detect the cycle so that it can work with multiple PRIOR expressions. - Support PRIOR in the target list.

For information about EDB Postgres Advanced Server features that are compatible with Oracle databases, see the following guides:

- [Database Compatibility **for** Oracle Developers SQL Guide](../epas_compat_sql)
- [Database Compatibility **for** Oracle Developers Reference Guide](../epas_compat_oracle_dev_guide)
- [Database Compatibility **for** Oracle Developers Built-in Package Guide](../epas_compat_bip_guide/)
- [Database Compatibility **for** Oracle Developers Tools **and** Utilities Guide](../epas_compat_tools_guide)
- [Database Compatibility Table Partitioning Guide](../epas_compat_table_partitioning)
- [Database Compatibility Stored Procedural Language Guide](../epas_compat_spl)