FUJITSU Software
Symfoware Server V12.1.0

Release Notes

Windows

Preface

Purpose of This Document

This document provides release information for Symfoware Server.

Structure of This Document

This document is structured as follows:

Chapter 1 New Features and Improvements

Explains the new features and improvements in this version.

Chapter 2 Compatibility Information

Provides information regarding compatibility.

Chapter 3 Program Updates

Lists the program updates.

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Chapter 1 New Features and Improvements

This chapter explains Symfoware Server new features and improvements.

Table 1.1 New features and improvements

Version and level	Classification	Feature name	EE	SE
V12.1.0	Operation	PL/extJava	Y	Y
		Database multiplexing	Y	Y
	Performance	Expanded performance information	Y	Y
		Improved scalability during concurrent execution of update transactions	Y	Y
	Application development	Expanded trigger definition Feature	Y	Y
		Statement cache	Y	Y
		Hint clause support	Y	Y
	Installation	Support for installer standardization	Y	Y
	Platform enhancement	Operating system addition	Y	Y

Y: Provided

1.1 Features Added in V12.1.0

This section explains V12.1.0 new features and improvements.

1.1.1 Operation

This section explains the new features related to operation:

- PL/extJava

- Database multiplexing

1.1.1.1 PL/extJava

PL/extJava is provided as infrastructure for executing Java applications. Using PL/extJava enhances application performance and ensures stable operation.

See
. . . .
Refer to "Setting up and Operating PL/extJava" in the Operation Guide for details.
. . . .

1.1.1.2 Database Multiplexing

Database multiplicity is a standard feature for multiplexing a database. In addition, the Mirroring Controller option enables you to automatically switch the database if the database server fails. Database multiplicity enables highly reliable database operation.

Furthermore, the Mirroring Controller option supports reference jobs using data from the standby server in parallel with jobs on the primary server.

The Mirroring Controller option is available in Symfoware Server Enterprise Edition.

1.1.2 Performance

This section explains the new features related to performance:

- Expanded performance information

- Improved throughput during concurrent execution of update transactions

1.1.2.1 Expanded Performance Information

Information such as SQL execution count information and information related to transaction logs have been added to performance information collected during tuning and monitoring. This enables the user to monitor changes in the database status.

1.1.2.2 Improved Scalability during Concurrent Execution of Update Transactions

Performance of record insertion to the WAL buffer has been improved. This results in improved scalability of concurrent update transactions executed on database servers with multiple processor cores.

1.1.3 Application Development

This section explains the new features related to application development:

- Expanded trigger definition feature

- Statement cache

- Hint support

1.1.3.1 Expanded Trigger Definition Feature

The REPLACE feature and the function call feature can be used from pgAdmin.

1.1.3.2 Statement Cache

A statement cache feature has been provided for enabling the caching and reuse of SQL statements in Java applications. This improves performance when the same SQL statement is executed repeatedly.

1.1.3.3 Hint Clause Support

The open-source software pg_hint_plan and pg_dbms_stats are provided as Symfoware Server features. These features enables you to control execution planning for SQL statements.

 See
....
Refer to "Enhanced Query Plan Stability" in the Application Development Guide for details.
....

1.1.4 Installation

This section explains the new feature related to installation:

- Support for installer standardization

1.1.4.1 Support for Installer Standardization

This feature supports the standardization of the installer for Fujitsu middleware products. This product can therefore be installed using the same operation as for other middleware products.

 See
....
Refer to the Installation and Setup Guide for Server and the Installation and Setup Guide for Client for details.
....

1.1.5 Platform enhancement

The following are supported as client operating environments.

- RHEL7

 See
....
Refer to "Required Operating System" in the Installation and Setup Guide for Client for details.
....

Chapter 2 Compatibility Information

This chapter lists incompatibility information, as well as the action required for features modified since the previous version.

2.1 Changes to Uninstallation

There are changes to uninstallation in Symfoware Server V12.1.0 or later.

Incompatibility

The uninstallation operation has the following incompatibilities in V12.1.0 or later:

V12.0.0

    In [Control Panel], select [Programs and Features] or [Add or Remove Programs], and then uninstall Symfoware Server.

V12.1.0 or later

    From the Start menu, select [Uninstall (middleware)], and then uninstall Symfoware Server.

Corrective action

Use the Uninstall (middleware) tool to perform uninstallation.

 See
. . . .
Refer to "Uninstallation" in the Installation and Setup Guide for Server, and "Uninstallation" in the Installation and Setup Guide for Client for information on how to uninstall the software.
. . . .

2.2 Product Combinations when Using Streaming Replication

Incompatibility

When using streaming replication in Symfoware Server V12.1.0 or later, you cannot build a server in combination with the following products:

  - Symfoware Server V12.0.0

Corrective action

Use V12.1.0 or later to build the primary server and all standby servers that will be used for streaming replication.

In addition, to continue using streaming replication built using V12.0.0, upgrade all servers to V12.1.0 or later.

2.3 Changes to Symfoware Help in pgAdmin

The contents of Symfoware Help that can be referenced from pgAdmin have been changed in Symfoware Server V12.1.0 or later.

Incompatibility

In V12.1.0 or later, the Symfoware Server manual can no longer be referenced from pgAdmin.

V12.0.0

    All Symfoware Server manuals can be referenced.

V12.1.0 or later

    Only manuals related to pgAdmin operations can be referenced.

Corrective action

In V12.1.0 or later, refer to the manual provided with the product.

2.4 Changes to Operation of the Validity Check by the SET Clause of the CREATE FUNCTION Command

In Symfoware Server V12.1.0 or later, the validity check performed by the SET clause of the CREATE FUNCTION command operates differently if check_function_bodies is set to "off" in postgresql.conf.

Incompatibility

The validity check that was performed by the SET clause of the CREATE FUNCTION command in V12.0.0 will no longer be performed in V12.1.0 or later if check_function_bodies is set to "off" in postgresql.conf.

Corrective action

To run the validity check performed by the SET clause of the CREATE FUNCTION command, set check_function_bodies to "on" in postgresql.conf.

2.5 Changes to Restrictions on WITH ADMIN OPTION for Granting (GRANT) Privileges to a Role

In Symfoware Server V12.1.0 or later, this feature has been changed so that, without exception, members cannot be added to or deleted from a role you granted privileges to unless WITH ADMIN OPTION is specified in the GRANT command.

Incompatibility

Previously, even if you granted privileges to a role without specifying WITH ADMIN OPTION in the GRANT command, issuing the SET ROLE command in advance enabled you to add members to or delete them from that role. However, in V12.1.0 or later, you can no longer add or delete members.

Corrective action

To add members to a role or delete them, specify WITH ADMIN OPTION in the GRANT command.

2.6 Changes to Prevent Promotion of Special Rights when the Validator of the Procedural Language is Explicitly Called as a Normal SQL Function

Symfoware Server V12.1.0 or later adds a process for checking privileges to the validator of its procedural language. This change means that, similar to the privileges check performed when the validator is called implicitly during execution of CREATE FUNCTION, a privileges check is also performed when the validator is called explicitly.

Incompatibility

Adding a process for checking privileges to the validator of the procedural language means that an error occurs if the user has insufficient privileges when the validator is called explicitly.

Corrective action

None

2.7 Enhanced Checks to Prevent Index Conflict during Execution of Multiple DDL Commands

Symfoware Server V12.1.0 or later enhances the checks performed when multiple DDL commands are executed at the same time, in order to prevent the creation of invalid indexes caused by conflict between CREATE INDEX and unspecified ALTER TABLE commands.

Incompatibility

Third-party programs directly using PostgreSQL internal functions may no longer operate properly. Their developers must modify the programs and rebuild them.

The incompatible internal functions are listed below.

- Functions for which the command call rules have changed

    - DefineIndex, CreateTrigger, transformIndexStmt, transformAlterTableStmt, CheckIndexCompatible

- Functions which were deleted in PostgreSQL 9.2 or later versions and for which the command call rules for old branches have changed

    - CheckRelationOwnership

- Structures with added fields

    - old_pktable_oid of the Constraint struct

Corrective action

None

2.8 Addition of a Validity Check of the wal_level and hot_standby Parameters during Crash Recovery

Changes have been made in Symfoware Server V12.1.0 or later so that the wal_level and hot_standby parameters in postgresql.conf are checked for the following two invalid cases during crash recovery:

- wal_level is set to "minimal"

- hot_standby is set to "on" and wal_level is set to a value other than "hot_standby"

Incompatibility

If a crash recovery is performed while the wal_level and hot_standby parameters in postgresql.conf have an invalid value, the database fails to start and an error occurs.

Corrective action

None

Chapter 3 Program Updates

There are no updates from previous versions and levels.

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