



**New Features Guide**

---

**SAP Replication Server®**  
**Options 15.7.1 SP201**

Linux, Microsoft Windows, and UNIX

DOCUMENT ID: DC01004-01-1571201-01

LAST REVISED: April 2014

Copyright © 2014 by SAP AG or an SAP affiliate company. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors. National product specifications may vary.

These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

SAP and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries. Please see <http://www.sap.com/corporate-en/legal/copyright/index.epx#trademark> for additional trademark information and notices.

# Contents

<b>New Features in Replication Server Options 15.7.1</b>	
<b>SP201</b> .....	<b>1</b>
New Features in Replication Agent for Oracle .....	1
Parallel Scan Support .....	1
DDL Replication Using XStream APIs in Heterogeneous Environments .....	3
New Feature in Replication Agent for Microsoft SQL Server .....	3
New Command .....	3
pdb_get_table_md .....	3

# Contents

# New Features in Replication Server Options 15.7.1 SP201

Learn about the new features in SAP® Replication Server® Options 15.7.1 SP201 and its component, Replication Agent™.

## New Features in Replication Agent for Oracle

To improve the scanning performance, Replication Agent for Oracle 15.7.1 SP201 introduces support for running multiple scanners in parallel with the LogMiner Log Reader component.

Replication Agent for Oracle 15.7.1 SP201 also supports data definition language (DDL) replication in heterogeneous environments using XStream APIs.

### Parallel Scan Support

Replication Agent for Oracle allows you to run multiple scanner threads in parallel to read from transaction logs. Parallel scan is supported only with the Oracle LogMiner Log Reader component. Parallel scanners cannot be used to replicate tables containing large object (LOB) datatypes.

For a parallel scan, include a single Replication Agent process with multiple scanner threads to read from the Oracle transaction logs. Each thread that reads data records from the next batch of Oracle transaction log is sorted in a round-robin fashion. For example, a single scanner reads a batch of log records and sends them to the operation processor thread, which then reads the next batch while the next scanner sends its batch to the operation processor thread.

To use parallel scan, you must set these configuration parameters:

- **lr\_parallel\_scan**
- **lr\_parallel\_scan\_range**
- **lr\_parallel\_scanner\_count**
- **lr\_parallel\_scan\_queue\_size**

#### lr\_parallel\_scan

(Oracle only) Determines whether Replication Agent can run multiple Oracle LogMiner scanners in parallel or whether a single scanner thread is used, relying on the Oracle LogMiner **Continuous Mine** option.

*Default*  
**false**

*Values*

- **true** – Replication Agent runs multiple Oracle LogMiner scanners in parallel.
- **false** – Replication Agent runs a single scanner using the Oracle LogMiner **Continuous Mine** option.

*Comments*

Use **lr\_parallel\_scan** to improve performance and reduce read and process latency by querying the Oracle transaction log using multiple parallel scanner threads.

**lr\_parallel\_scan\_range**

(Oracle only) The maximum number of system change numbers (SCN) processed by each Oracle LogMiner scanner, when parallel scan is enabled, that is, when **lr\_parallel\_scan** is true.

*Default*

**1024**

*Values*

An integer from 128 to 2147483647.

**lr\_parallel\_scanner\_count**

(Oracle only) The maximum number of Oracle LogMiner scanners running in parallel, when parallel scan is enabled, that is, when **lr\_parallel\_scan** is true.

*Default*

**4**

*Values*

An integer from 1 to 64.

**lr\_parallel\_scan\_queue\_size**

(Oracle only) The maximum scan queue size of each single LogMiner scanner, when parallel scan is enabled, that is, when **lr\_parallel\_scan** is true.

*Default*

**0 (scan queue size is unlimited)**

*Values*

0 to 2147483647

## DDL Replication Using XStream APIs in Heterogeneous Environments

The Replication Agent for Oracle Log Reader with XStream APIs now supports data definition language (DDL) replication in heterogeneous replication environments.

Use **pdb\_setrepddl** to view the DDL replication status, and to enable or disable replication of DDL statements.

Replication Agent for Oracle supports these DDL configuration parameters:

- **pdb\_automark\_tables**
- **ddl\_password**
- **ddl\_username**

See *Replication Agent Reference Manual*.

## New Feature in Replication Agent for Microsoft SQL Server

The Replication Agent for Microsoft SQL now supports the **display\_only** option with **rs\_create\_repdef**.

Use the **display\_only** option with **rs\_create\_repdef** to view the proposed Replication Command Language (RCL) or syntax that Replication Agent sends to SAP® Replication Server® for creating the replication definition.

---

**Note:** The **display\_only** option already exists in Replication Agents for UDB and Oracle.

---

### **Example:**

```
rs_create_repdef table22, display_only
```

## New Command

Use the **pdb\_get\_table\_md** command result to get the column metadata, including the Replication Server type mapping, for the specified table.

### pdb\_get\_table\_md

Returns a list of columns in a table from the primary database.

#### **Syntax**

```
pdb_get_table_md ownname, tablename
```

### Parameters

- **ownername** – The user name of the owner of the table specified in *tablename*. To specify character case, delimit the value with quotes.
- **tablename** – The name of the table in the database for which information is returned. To specify character case, delimit the value with quotes.

### Examples

- **Example 1** – Returns a list of all the columns in the *authors* table owned by the user *bob*.

```
pdb_get_table_md bob, authors
```

### Usage

- Use **pdb\_get\_table\_md** result to get the column metadata, including the Replication Server type mapping, for the specified table.  
The metadata contains a row for each column that includes the column name, ID, length, scale, primary database type, Replication Server type, whether the column is nullable, and whether the column is a primary key or part of a unique index.  
For numeric types, the precision is described in the length column.  
The Replication Server type includes the length for applicable binary and character types. Replication Agent pads the length for the applicable character types to account for any additional SAP Replication Server storage requirement for characters if the primary database character set is:
  - Different from the SAP Replication Server character set.
  - Single byte, while the SAP Replication Server character set is multibyte.
- You can execute **pdb\_get\_table\_md** in any Replication Agent state.
- **pdb\_get\_table\_md** returns an error if Replication Agent cannot connect to the primary database or SAP Replication Server, or if the SAP Replication Server primary database connection is not available.

See *pdb\_get\_tables*, *pdb\_get\_columns*, and *pdb\_get\_primary\_keys* in the *Replication Agent Reference Manual*.