



IBM Software Group

Informix Dynamic Server

Monitoring changes for enterprise replication in V10.00.xC9

IBM Information Management software



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This presentation provides an overview of the new monitoring features and changes within enterprise replication V10.00.xC9. These features were added based on feedback from business partners after using enterprise replication within an embedded environment. Information has been provided regarding a few larger changes, but a complete review of all changes has not been done.

Features

- Monitoring changes for the enterprise replication (ER) environment
 - ▶ New System Monitoring Interface (SMI) tables
 - ▶ Global view of ER environment
 - “cdr view”

The new features and changes include the ability to monitor changes for the Enterprise Replication environment, or ER environment. There are new System Monitoring Interface tables, or SMI tables, and a global view of the ER environment through the use of the “cdr view”.

Monitoring changes - Overview

- Current behavior
 - ▶ No pre-existing behavior
- Customer problem
 - ▶ Difficult to programmatically administer and monitor ER across multiple nodes
- Improvements in V10.00.xC9
 - ▶ New SMI tables for customer monitoring and OpenAdmin Tool (OAT) usage
 - ▶ New “cdr view” option for global view of ER environment

Monitoring changes is a new feature. There is no pre-existing behavior. Many customers find it difficult to programmatically administer and monitor ER across multiple nodes. To address these difficulties, new SMI tables were added for customer monitoring and OpenAdmin Tool usage, or OAT usage. Building on these new SMI tables is a new customer data records option, or cdr option, called “cdr view” which provides several new ways to view your entire ER environment.

Preparing sysmaster

- Review descriptions of existing SMI tables
 - ▶ See presentation Enterprise Replication changes and new features V10.00.xC9 tables – part 2
- Create new SMI tables
 - ▶ Log in as user informix
 - ▶ Run \$INFORMIXDIR/etc/buildcdrsmi script
- Revert to an earlier version of IDS if necessary
 - ▶ Log in as user informix
 - ▶ Run \$INFORMIXDIR/etc/dropcdrsmi script

Before using the cdr view, review the descriptions of existing SMI tables found in the Enterprise Replication changes and new features V10.00.xC9 tables – part 2 presentation.

You must first create the new SMI tables in the sysmaster database. To create the SMI tables, log in as user informix and run the \$INFORMIXDIR/etc/buildcdrsmi script.

The cdr view command is only supported in IDS V10.00.xC9 and greater. If you have created these new SMI tables but need to revert to an earlier version of IDS, log in as user informix and run the dropcdrsmi script.

See Appendix A of the Enterprise Replication guide for detailed information about using the cdr view.

New SMI tables

- New Sysmaster Application Programming Interfaces (APIs) for ER
 - ▶ Increase in monitoring requirements
 - ▶ Additional interfaces for OAT
 - ▶ Increase in degree of monitoring and problem analysis
- New SMI tables in presentation Enterprise Replication changes and new features V10.00.xC9 tables – part 2
 - ▶ Column names and meanings of individual column values in presentation Enterprise Replication changes and new features V10.00.xC9 tables – part 2

As part of increased monitoring requirements from Business Partners and the need to provide additional interfaces for OAT, the sysmaster pseudo tables were added and are found in the “Enterprise replication – Tables for monitoring changes in V10.00.xC9” presentation. The column names and meanings of individual column values can also be found in this presentation. The new ER SMI tables added in this release are to help with administration and monitoring of ER from other utilities such as OAT for IDS and for cdr view. These tables can be used with the existing SMI tables to further increase the degree of monitoring and problem analysis available for embedded systems.

Refer to the “IBM Informix Dynamic Server Enterprise Replication Guide” Appendix D for documentation regarding the existing SMI tables.

New SMI tables (continued)

- syscdr_dds table represents the start of the capture process within ER
- DDR component responsible for the protection of a log wrap condition
- If ER is approaching a DDRBLOCK point, DDR creates several spooler threads

The syscdr_dds table represents the start of the capture process within ER. The DDR component is responsible for the protection of a log wrap condition.

If ER is approaching a DDRBLOCK point, DDR will create several spooler threads whose purpose it is to spool transactions in the send queue to disk. The act of spooling the transactions to disk will advance the replay position.

If ER should reach a point where all of the pages represented by ddr_logpage2block are exhausted, then DDRBLOCK is invoked.

Instead of entering a DDRBLOCK, the system can be configured to dynamically create an additional logical log file.

The 'syscdr_dds' pseudo table can be used to determine if the node is in danger of a DDRBLOCK state.

New SMI tables (continued)

- If all pages represented by ddr_logpage2block are exhausted, DDRBLOCK is invoked
- System can dynamically create an additional logical log file
- 'syscdr_dds' pseudo table can determine if node in danger of a DDRBLOCK state

Instead of entering a DDRBLOCK, the system can be configured to dynamically create an additional logical log file.

The 'syscdr_dds' pseudo table can be used to determine if the node is in danger of a DDRBLOCK state.

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