IBM InfoSphere Optim Query Capture and Replay
Version 1.1

IBM ®

Quick Start Guide

This guide gets you started with a typical installation for InfoSphere Optim Query Capture and Replay.

Product overview

InfoSphere® Optim™ Query Capture and Replay is built on the IBM® InfoSphere Guardium® platform, and provides the ability to capture workloads, and to replay the captured workloads to analyze and compare the accuracy and execution time of the replayed SQL statements. The product includes two separate web interfaces. Use the InfoSphere Capture Replay web console to capture and replay workloads on DB2® for Linux, UNIX, and Windows databases. To capture and replay workloads on database combinations other than DB2-toDB2, which is known as *heterogeneous capture and replay*, use the InfoSphere Guardium web console.

1   Step 1: Access the software and documentation

If you download InfoSphere Optim Query Capture and Replay from IBM Passport Advantage®, follow the instructions in the download document at: http://www.ibm.com/support/docview.wss?uid=swg24031817. **Important:** If you are installing S-TAP™ on a Linux database server, check if any fix packs are available for your version of Linux in IBM Fix Central at: http://www.ibm.com/support/fixcentral/

This product offering includes:
- IBM InfoSphere Optim Query Capture and Replay Quick Start Guide and Installation Guide CD
- IBM InfoSphere Optim Query Capture and Replay 1.1 RedHat DVD
- IBM InfoSphere Optim Query Capture and Replay 1.1 Product Key CD
- IBM InfoSphere Optim Query Capture and Replay 1.1 S-TAP Agents DVD
- IBM InfoSphere Guardium V8 Base Product Image 8.2.0 DVD
- IBM InfoSphere Guardium - Product Manuals V8.2.0 DVD
- IBM InfoSphere Guardium - Software Appliance Kit V8.2.0 DVD

2   Step 2: Evaluate the hardware and system configuration

InfoSphere Optim Query Capture and Replay is an appliance solution that bundles an operating system and all necessary software. You can install the product on a physical appliance or on a VMware server such as VMware ESX. The installation program installs a Red Hat Linux Version 5.6, 32-bit, operating system on your server or virtual machine, and then installs the Guardium software.

For detailed system requirements, see the system requirements at: https://www.ibm.com/support/docview.wss?uid=swg27021801

For information about how to set up a VMWare environment, see Appendix B: How to Create the Virtual Image in the Installing section of the InfoSphere Guardium information center at: http://publib.boulder.ibm.com/infocenter/igsec/v1/index.jsp, or in the *IBM InfoSphere Guardium Software Appliance Installation Guide* which is on the IBM InfoSphere Guardium - Software Appliance Kit V8.2.0 DVD.

3   Step 3: Review the base architecture

The InfoSphere Optim Query Capture and Replay software package includes the software components and a software license.

4 | Step 4: Overview of an InfoSphere Optim Query Capture and Replay installation
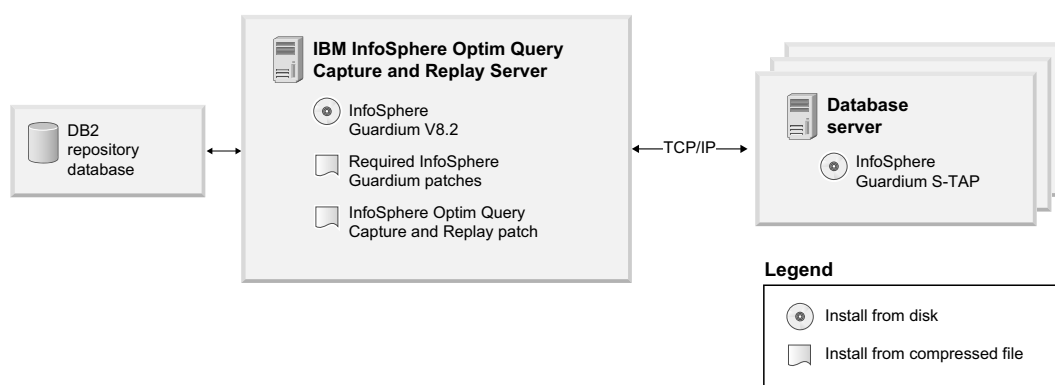
The following overview describes the required steps for installing and configuring InfoSphere Optim Query Capture and Replay. To install the product, follow the detailed instructions in the *IBM InfoSphere Optim Query Capture and Replay Installation Guide* PDF that is available on the IBM InfoSphere Optim Query Capture and Replay Quick Start Guide and Installation Guide CD. The instructions are also available in the IBM InfoSphere Optim Query Capture and Replay information center at: http://publib.boulder.ibm.com/infocenter/caprep/v1r1/index.jsp.

High-level overview of the installation process:

1. **Tip:** Review and fill out the installation planners to get an overview of the required input for each installation step. The planners are available in the installation guide PDF or from the information center.

2. **On the IBM InfoSphere Optim Query Capture and Replay server:** Install and configure InfoSphere Guardium.

    a. Install the Guardium appliance.

       Install the Guardium appliance, set passwords for the CLI, ADMIN, and ACCESS MANAGER users, and configure the Guardium appliance for your environment. You install the Guardium appliance by using the system command line, and you configure the installation by using the Guardium Command Line Interface (CLI). A typical installation, including system reboots, takes a minimum of 45 minutes.

    b. Install the license key.

       The InfoSphereOptim Query Capture and Replay license enables the capture and replay feature on the Guardium appliance. You can use the command line to install the license, or use the Guardium web console at `https://guardium_hostname_or_ip:8443` to install the software license.

    c. Install InfoSphere Optim Query Capture and Replay and required patches.

       InfoSphere Optim Query Capture and Replay is installed as a patch on the Guardium appliance, and provides the web console user interface for DB2-to-DB2 capture and replay. Use the Guardium Command Line Interface to install any required software patches and to install InfoSphere Optim Query Capture and Replay as a patch on the InfoSphere Guardium appliance.

    d. Install the required capture and replay policies.

       A Guardium policy is a filter that defines the information that is included in the workloads that you capture. The two capture and replay policies are created when you install InfoSphereOptim Query Capture and Replay. Depending on the type of workload capture and replay that you plan to do, use the Guardium web console to install one of the following policies:
       • Capture and Replay - DB2-to-DB2
       • Capture and Replay - Heterogeneous

3. **On each database server:** Install InfoSphere Guardium S-TAP on each database server that you will use for capturing or replaying workloads.

    S-TAP is a lightweight software component that runs on the database server and is used by the Guardium appliance to collect local and network traffic to that database. Use the Guardium S-TAP installer to install Guardium S-TAP. S-TAP requires a root account to install on Linux and UNIX systems, and an administrator account to install on Windows. To complete the S-TAP installation, the database server must reboot.

4. **On the IBM InfoSphere Optim Query Capture and Replay server:** Complete the product configuration.

    a. Add inspection engines for your databases.

       Inspection engines make the SQL traffic that is captured by Guardium S-TAP available for the capture and replay tool. You use the Guardium web console to add an inspection engine for each database instance for which you want to capture or replay workloads.

    b. **Heterogeneous capture and replay:** Add the role of user to the admin user ID

       Before you can use the Guardium web console for heterogeneous capture and replay, you must add the role of user to the admin user ID.

    c. **DB2-to-DB2 capture and replay:** Add database connections.

       To use the InfoSphere Capture Replay web console to capture and replay workloads, you must first add database connections to the DB2 databases that you configured for capture and replay.

    d. **Optional: DB2-to-DB2 capture and replay:** Configure InfoSphere Capture Replay for web console authentication.

       To use InfoSphere Capture Replay with multiple users, you must configure it for web console authentication by adding a repository database. Then, configure authentication for the users and groups of that database.

You can now use the product web consoles to capture workloads from one database, replay them on other databases, and compare workloads.

Tip: Before you start capturing a workload, clone the capture database on the database server that hosts your replay database. You can use a tool such as FlashCopy®, or backup, restore, and roll forward to a point in time. Cloning the database ensures that the replayed workload more closely simulates the captured workload.

DB2-to-DB2 capture and replay

1. Open the Capture and Replay web console at:

   `https://`*`guardium_hostname_or_ip`*`:8443/dsweb/console/ocr/index.jsp`

2. From the task launcher, configure the database connections and privileges for the databases from which to capture the target workload, and on which you plan to replay the workload.
   a. Click **Add database connections** and add database connections for the databases.
   b. Click **Manage capture and replay database privileges** and grant capture and replay privileges to the users of the databases.
3. Capture a workload. From the Task Launcher, click **Capture a DB2 workload**.
4. Transform the workload.
   a. When the workload is captured, from the Capture and Replay page, select the SQL Workloads tab.
   b. Select the captured workload and click **2. Transform**.
5. Select the new replay-ready workload and click **3. Replay**.
6. After the workload replays, select the new replayed workload and click **4. Report** to create a report that lets you compare the execution of the two workloads.

Heterogeneous capture and replay

1. Log on to the InfoSphere Guardium web console as the ADMIN user at:

   `https://`*`guardium_hostname_or_ip`*`:8443`

2. Verify that you have installed the required capture and replay policy.
3. Select the **Tools** tab, then select **Replay Builder** from the Config & Control pane.

   Tip: Click ⑦ to open the embedded help for Capture Replay, which provides detailed instructions for the following steps.
4. Add a replay configuration to identify the SQL stream that you want to capture.
5. Stage the replay configuration that you created to filter the captured data and to associate it with the replay configuration.
6. Specify the replay database on which you want to replay the captured workload, set other parameters for the replay, and then replay the workload.
7. After the workload replays, use the capture-replay list to compare the executions of the captured workload with the replayed workload.

More information

For more information, see the following resources:
- Information roadmap at: http://www.ibm.com/developerworks/data/roadmaps/roadmap_caprep.html
- Troubleshooting information at: http://publib.boulder.ibm.com/infocenter/caprep/v1r1/topic/ com.ibm.datatools.capturereplay.troubleshooting.doc/topics/cr_ts_troubleshooting.html
- Product support at: http://www.ibm.com/support/entry/portal/Overview/Software/Information_Management/ InfoSphere_Optim_Query_Capture_and_Replay