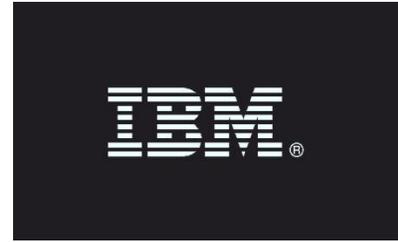


# IBM InfoSphere Guardium

## Best Practices



## Upgrade InfoSphere Guardium V8.2 to v9.0p02

### Introduction

This document describes the recommended approach and the sequence of activities to upgrade from IBM InfoSphere Guardium version v8.2 to version v9.0p02. This document is meant to be used in conjunction with IBM InfoSphere Guardium v9.0 Upgrade Guide.

This document is applicable for any patch level on version 8.2.

Please notice that this document is intended to be best practices guidance for the customers, however with any concerns or questions, please contact Guardium Technical support for further clarifications.

17 Dec, 2012

IBM InfoSphere Guardium Version 8.0 Licensed Materials - Property of IBM. © Copyright IBM Corp. 2012. U.S. Government Users Restricted Rights - Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

IBM, the IBM logo, and ibm.com® are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the Web at "Copyright and trademark information" ([www.ibm.com/legal/copytrade.shtml](http://www.ibm.com/legal/copytrade.shtml))

# Contents

- Best Practices .....1
- Upgrade InfoSphere Guardium V8.2 to v9.0p02 .....1
  - Introduction .....1
  - Before You Begin.....3
  - Upgrade procedure .....3
  - Download patches from IBM InfoSphere Guardium Fix Central site:.....3
  - Step by step upgrade procedure:.....4
    - Down time .....4
    - Purge the systems .....4
    - Run pre-upgrade backup for v8.2 .....4
    - Run pre-upgrade Health Check patch.....5
    - High-Availability System upgrades.....5
    - Keep current GUI layout .....6
    - Stop Export process.....6
    - Upgrade Sequence for Aggregation Environment.....6
    - Upload v8.2-v9.0p02 upgrade bundle patch.....6
    - Install bundle patch on single appliance.....6
    - Install bundle patch as background process from Central Manager (CM):.....7
    - GIM Installation .....8
    - Upgrade S-TAPs.....8
- Additional references.....9
  - V8.2 to V9.0 upgrade .....9
  - V9.0 Release Notes (2-page with hyperlinks to V9.0 announcement documents).....9
  - V9.0 Detailed release notes .....9
  - V9.0 Filenames and MD5SUMs .....9
  - V9.0 Software Appliance Technical requirements.....9
  - V9.0 System Requirements (Platforms supported) .....9
  - V9.0 Quick Start guide .....9
  - V9.0p02 GPU release notes.....9

## Before You Begin

Before beginning the upgrade process, be sure to read through all of the topics in this section.

Dell models	R610
IBM models	xSeries 3550 M4
InfoSphere Guardium Patch Level	Version 8.2
Memory	4 GB – 16 GB
Disk Space	No minimum

If your hardware is older than the minimum listing here, discuss how to upgrade your equipment with Technical Support.

## Upgrade procedure

Upgrade IBM InfoSphere Guardium appliances in following required top-down order:

1. Central Manager;
2. Aggregators;
3. Collectors;
4. GIM agents
5. S-TAP agents.

Please make sure that each step in the sequence above successfully completed before proceeding to the next step.

The upgrade process usually cannot be done simultaneously on all appliances (Central Manager, Aggregator, Collector and Managed Units) and all S-TAPs at the same time. During the upgrade transition, the customer will have a hybrid Version 8.2 and Version 9.x Guardium solution. Please make a note of known limitations during this transitional period listed in IBM InfoSphere Guardium v9.0 Upgrade Guide.

While this "hybrid mode" is supported by Guardium, many functions are limited until all components are at the same version. Therefore, it is strongly recommended to complete the upgrade in a timely manner and have all Guardium components at the same version and the same patch level.

## Download patches from IBM InfoSphere Guardium Fix Central site:

Following is the list of patches that need to be downloaded from IBM Fix Central site.

Login to the IBM Fix Central site: <http://www-933.ibm.com/support/fixcentral/>

Download following patches:

*Health Check patch for v8.2 – v9.0 upgrade*

**fix pack:** [InfoSphere Guardium Health Check v9.0 Upgrade <timestamp>](#)

*Upgrade bundle for v8.2 – v9.0p02 upgrade*

**fix pack:** [InfoSphere Guardium V8.2 to V9.0p02 Upgrade Bundle](#)

## Step by step upgrade procedure:

### Down time

Plan at least two hours of down time for the upgrade. As mentioned above, the duration of the upgrade procedure depends on the amount of data on the appliance so it is suggested that you purge all unnecessary data before upgrading.

### Purge the systems

In order to make an upgrade process runs much more quickly and efficiently, please make sure to purge all unnecessary data on the system. Upgrade process requires appliance DB below 50% utilization, however its strongly recommended to go much lower (below 20%) to speed up the process and minimize the risks related to the upgrade of large amounts of data.

### Run pre-upgrade backup for v8.2

Make sure to back up the system in v8.2 by running system backup before starting any pre-upgrade activity.

Before taking a backup, stop the sniffer on the collector in order to stop collecting data from STAP engines (Network and Local Inspection Engines).

Following step are performed while logged in as the CLI user on the IBM InfoSphere Guardium appliance:

1. Using an SSH client, log in to the IBM InfoSphere Guardium unit as the CLI user.
2. Run following command to stop the sniffer:

**stop inspection-core**

You will be prompted that systems is stopping inspection core and you should restart the Inspections core manually after maintenance is completed.

3. Run following command to back up the IBM InfoSphere Guardium system:

**backup system**

You will be prompted to supply host, directory and password information for the system to which the backup data will be sent. Respond appropriately, and a series of messages will inform you that various processes or services are being stopped. Ultimately, you will be informed of the result of the backup operation with a message like the one illustrated below:

***Backup done.***

***Keep the file /<xxx>/<host\_name.domain\_name-yyyy-mm-dd>.sqlguard.bak in a safe place.*** [Press Enter to continue]

4. Press Enter to complete the operation. A series of messages will display to confirm the backup.
5. Log in to the backup host and verify that the backup file has been copied there.
6. Run following command to manually restart the sniffer:

**start inspection-core**

You will be prompted that systems is started inspection core.

## Run pre-upgrade Health Check patch

This Health Check patch is also suitable for validation preceding installation of v8.2-v9.0p02 upgrade bundle, recommended in this document.

Run Health Check patch on all the appliances to validate that it's ready for upgrade (link [here](#))

Please make sure to run Health Check patch right before the upgrade. If there are issues found in the patch log file which require support attention or any other reason causing subsequent upgrade delay, please rerun Health Check patch again right before new upgrade date. Please also avoid any configuration changes on the machine during this period.

The health check generates a following log file: *health\_check.<time\_stamp>.log*.

In order to view the log file:

1. type **fileserver** command in Guardium CLI
2. use displayed link to open the fileserver page in web browser
3. go to Sqlguard logs -> diag -> current folder and open the log file

In case when Health Check determines an issue on the appliance, failed validation will appear in the log with "ERROR:" prefix. Subsequently, following message will appear at the end of the log file:

*Please send <file\_name> file to support team.*

If no problem was determined during the Health Check process, following message will appear at the end of the log file:

*Appliance is ready for upgrade.*

For CLI installation method, logout from CLI session before you proceed with installation steps.

## High-Availability System upgrades

If your unit is configured for high-availability then this functionality must be turned off via the CLI, and the unit must be rebooted before performing the upgrade. Use following command to turn off high availability mode:

*store network interface high-availability off*

After the upgrade completes, the high-availability functionality can be turned on again via the CLI. Another reboot of the appliance will be required.

## Keep current GUI layout

This option recommended only to customers with large number of GUI layout customizations.

By default, the upgrade process will apply the version 9.0 look and feel. Customers, who have made many panel customizations in their version 8.2 or prior versions UI, and wish to retain their current GUI layout, can do so by using the CLI command, *keep\_psmls*, BEFORE the upgrade.

At any point, the IBM InfoSphere Guardium customer may reset the version 9.0 UI to its default layout through the GUI; Edit Account --> select Layout --> Reset

## Stop Export process

Login to GUI, under Administration Console and stop (Pause) the Export processes.

## Upgrade Sequence for Aggregation Environment

Upgrade the aggregator before upgrading any of the units that export data to it. An upgraded aggregator can aggregate data from older releases, but an older aggregator cannot aggregate data from newer releases.

At least one day before updating the aggregator, from the admin account, stop the aggregation process (the Export Data schedule) on all collectors that export data to that aggregator. Do not restart the Export Data schedules on the collectors until after the aggregator has been upgraded.

## Upload v8.2-v9.0p02 upgrade bundle patch

When Backup, Health Check and all other required pre-upgrade activities listed above are completed, please proceed with the v9.0 upgrade using upgrade bundle, downloadable from Fix Central (see [here](#)):

Use **fileserv** CLI command to upload bundle patch:

1. Type **fileserv** command in Guardium CLI
2. Use displayed link to open the fileserv page in web browser
3. Go to [Upload a patch](#), browse to patch location and upload upgrade bundle.
4. Press [enter] in CLI to exit from fileserv.

At this point bundle is registered and available to be installed or distributed to Managed Units.

## Install bundle patch on single appliance

To install patch on local appliance use following CLI command:

```
store system patch install sys [now|<date time>]
```

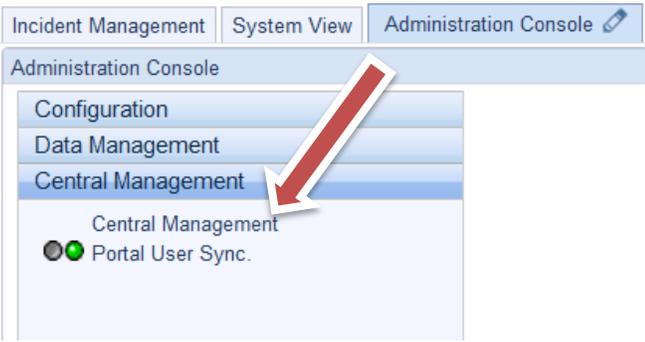
Follow the on screen instruction to start bundle patch installation

Please note: During the upgrade process, the IBM InfoSphere Guardium unit will restart/reboot a few times. That is expected and does not require any action. Do not restart the system manually!

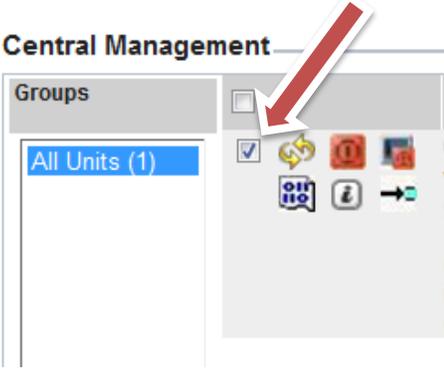
### Install bundle patch as background process from Central Manager (CM):

To install patch on managed units from Central Manager, upload the bundle to Central Manager and follow instructions below.

Select a *Central Manager*



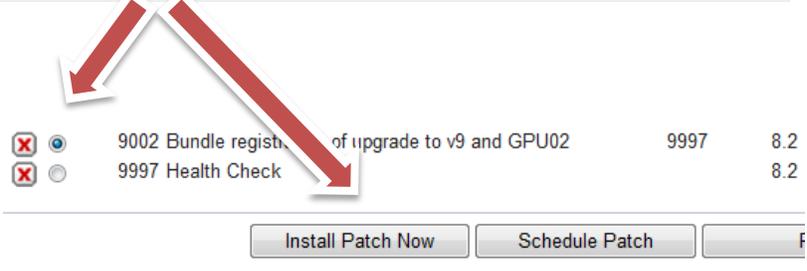
Select target appliance/s



Select *Patch Distribution*



Select bundle and press *Install Now*



Bundle ID	Bundle Name	Version
9002	Bundle registration of upgrade to v9 and GPU02	9997 8.2
9997	Health Check	8.2

After successful installation of this bundle, appliance should be on Guardium v9.2p02 version.

## GIM Installation

The purpose of IBM InfoSphere Guardium Installation Manager (GIM) is to simplify the task of managing the IBM InfoSphere Guardium remote modules such as S-TAP, K-TAP, and CAS. Installing GIM first simplifies the upgrade of Guardium agents.

Customers are advised to install/upgrade GIM agents before proceeding with installation of STAP agents.

For detailed instructions on how to install GIM, see the GIM online help book available on all IBM InfoSphere Guardium 9.0 appliances. You can download a PDF version of the GIM information from the GIM help book in the IBM InfoSphere Guardium Help Contents.

## Upgrade S-TAPs

IBM InfoSphere Guardium 9.0 appliances can service 8.2 S-TAPs and it is recommended that you upgrade all 8.2 S TAPs to Version 9.0 as soon as possible, to take advantage of all new features and enhancements. The easiest way to upgrade S-TAPs is by using the IBM InfoSphere **Guardium Installation Manager (GIM)**

If you have multiple IBM InfoSphere Guardium appliances, and you want to minimize S-TAP downtime, you can temporarily reset the primary IBM InfoSphere Guardium host for each S-TAP serviced by the appliance to be upgraded. Then after the appliance has been upgraded, you can restore the primary host assignments for those S TAPs.

Starting with version v8.x, Guardium supports live (boot-less) KTAP upgrade, which does not require reboot of DB Server after installation of new version of STAP. Live update mechanism controlled through the GUI or BUNDLE-STAP/KTAP installers using KTAP\_LIVE\_UPDATE parameter.

For detailed instructions on how to upgrade or install new S-TAPs, see the S-TAP online help book available on all IBM InfoSphere Guardium 9.0 appliances. You can download a PDF version of that information from the S-TAP help book in the IBM InfoSphere Guardium Help Contents.

## Additional references

For detailed information about upgrade procedures please use following links:

### **V8.2 to V9.0 upgrade**

<http://www.ibm.com/support/docview.wss?&uid=swg27036225>

### **V9.0 Release Notes (2-page with hyperlinks to V9.0 announcement documents)**

<http://www.ibm.com/support/docview.wss?&uid=swg27036230>

### **V9.0 Detailed release notes**

For new and enhanced features, see <http://www.ibm.com/support/docview.wss?&uid=swg27036227>

### **V9.0 Filenames and MD5SUMs**

For S-TAP versions and MD5SUMs, see <http://www.ibm.com/support/docview.wss?&uid=swg27036228>

### **V9.0 Software Appliance Technical requirements**

<http://www.ibm.com/support/docview.wss?&uid=swg27036229>

### **V9.0 System Requirements (Platforms supported)**

<http://www.ibm.com/support/docview.wss?&uid=swg27035836>

### **V9.0 Quick Start guide**

<http://www.ibm.com/support/docview.wss?&uid=swg27036226>

### **V9.0p02 GPU release notes**

<http://www-01.ibm.com/support/docview.wss?uid=swg21616640>