Documentation

Cisco Information Server Environments KPI

Functional Requirements

Data Virtualization Business Unit Professional Services

June 2014

TABLE OF CONTENTS

DOCUMENT CONTROL

Version History

Version	Date	Author	Description
1.0	June 2014	Scott Neustein	Initial revision
1.1	June 2014	Scott Neustein	Updated car file names, added SQL Server specific install instructions, and fixed the path for KPI.

Related Documents

Document	Date	Author

Data Virtualization Business Unit (DVBU) Products Referenced

DVBU Product Name	Version
Cisco Information Server (CIS)	6.2.x
AS Utilities	2013Q402 or later

Supported Database Platforms

The majority of metrics discussed in the previous sections are generated using custom aggregation procedures. Because CIS does not retain the system metrics data needed to generate KPI data long enough for historical reporting, the KPI module must store this cached data to a dedicated database in order to retain the generated results.

The KPI module only supports the following database platforms at this time as incremental caching targets.

1. Oracle 11g or later
2. SQL Server 2012 or later
3. MySQL 5.0 or later

Support for additional platforms would require customization of the KPI module by a dvbu solutions consultant. Please contact Cisco's dvbu professional service group for details.

New Installation

Import the KPI components to your CIS instance

You must deploy the KPI components to your CIS instance in order to use the KPI module.

Complete the following steps to deploy the KPI components

1. Sign into Studio and connect to your target CIS instance as a user with administrator privileges.

2. In the repository tree, right click on the "Desktop (username)" folder icon at the top left and select Import. This is done here as this will also create a database object.

3. Import the file Kpi_for_CIS_*major_minor*.car with the overwrite checkbox enabled. The folder /shared/ASAssets/KPI should appear after the import completes. (This may need to be done twice to resolve impacted items that should not be impacted.)

Configure the KPI data source

The KPI module makes use of several custom tables to store logging and metrics data. You must configure a data source connection in order to view KPI data.

1. Locate and configure the data source for your KPI database.

    a. If using a MySQL database, configure the data source /shared/ASAssets/KPI/Physical/Metadata/KPI_mysql

    b. If using an Oracle database, configure the data source /shared/ASAssets/KPI/Physical/Metadata/KPI_oracle

    c. If using a SQL Server 2012 database, configure the data source /shared/ASAssets/KPI/Physical/Metadata/KPI_sqlserver

Note: If you are going to be using SQL Server you will need to install the Kpi_SQLServer_for_CIS_*major_minor*.car file the same way at the other car file. You will also need to download and install the JDBC driver for SQL Server.

Create or Configure the Composite KPI database tables

The KPI module requires several tables in the KPI data source database in order to store metrics data for reporting. You must create these storage tables using the provided DDL in order for the KPI module to function correctly

1. Create the KPI storage tables

    a. If you choose to create the tables from within Studio, execute the packaged queries under /shared/ASAssets/KP/Physical/Metadata/DDL for your data source.

    b. If you choose to execute the DDL externally. Copy the DDL from the packaged queries for your database, execute them in your external tool and then introspect the tables under your data source.

2. Reintrospect the KPI data source to confirm that the tables are visible.

    Please note: If you had to change the schema or catalog of the database, then you will need to update the table creation DDL in the packaged queries before they are executed.

    Also note that if you changed the schema or catalog, you will need to reintrospect all tables into your data source, and reconfigure view caches

3. Execute the procedure /shared/ASAssets/KPI/Utilities/rebindPhysicalAbstraction to rebind all KPI abstraction layer views to the appropriate data source. Provide the following

input values appropriate to your data source

a. MySql: Rebinding not needed

b. Oracle: oldDatasourceFolderName: KPI_mysql, newDataSourceFolderName: KPI_oracle

c. SQL Server: oldDatasourceFolderName: KPI_mysql, newDataSourceFolderName: KPI_sqlserver

Configure Resource Usage Data Source

You must configure the KI data source /shared/ASAssets/KPI/Physical/Metadata/CIS_Resource_Usage to point to your CIS server's logs directory to allow the KPI module to successfully load resource usage data. DO NOT reintrospect the data source after updating it's configuration settings.

Please note that the following instructions assume that your Composite server is configured to use the default log directory. If you have configured your server to use a different logs directory, you will need to update the data source with the correct path.

1. Update the Root Path property of the data source /shared/ASAssets/KPI/Physical/Metadata/CIS_Resource_Usage to point to <CIS Install Directory>/logs.

Deploy CPU and Memory Checker shell scripts (Linux installs only)

When deploying the KPI module to a CIS instance running on Linux, you must also deploy the shell scripts FreeMemCommand.sh and TopCommandGrepCpu.sh to your CIS server in a location that they can be executed by the user account that CIS is running under. Take note of where the scripts have been deployed, you will need to provide the path to the scripts when configuring the KPI module.

Please note that you do not need to complete this step if deploying the KPI module onto a CIS instance hosted on Windows.

Configuration

Once the custom logger has been configured, you must configure Composite server events to be written to the custom logger.

Update Common Values

The KPI module uses several constant values that are set with in the procedure /shared/ASAssets/KPI/constance/commonValues. You will need to update some of these constants with values for your environment to ensure that KPI functions

correctly. Complete the following steps to proceed.

1. Open the procedure /shared/ASAssets/KPI/constance/commonValues and modify the following properties:

    a. defaultDomainName – Provide the domain name of the ldap domain used for authentication

    b. memoryCheckerCommandPath – Provide the absolute path to the shell script FreeMemCommand.sh. Do not change this value if deploying KPI on a windows server.

    c. CpuCheckerCommandPath - Provide the absolute path to the shell script TopCommandGrepCpu.sh. Do not change this value if deploying KPI on a windows server.

    d. dataSourceName – Provide the name of the data source used to store KPI data. Valid values are KPI_mysql, KPI_oracle or KPI_sqlserver.

Configure LDAP data source (if applicable)

The KPI module is designed to retrieve user data from an LDAP directory server in order provide additional detail on which users are making use of a monitored CIS environment. You must configure the LDAP datasource provided with the KPI module to connect to your corporate LDAP directory server.

Update CIS Logging settings

You will need to enable additional logging functionality on the Composite server in order for the KPI module to collect system metrics needed for reporting.

1. Sign into Composite studio with admin rights

2. Execute the procedure /shared/ASAssets/KPI/Utilities/initializeCISLogs

Enable Incremental Caches

The KPI module makes use of incremental caches in order to retain CIS metrics for a longer period than supported by the base CIS logging functionality.

Please note that incremental caches should only be enabled after all other deployment and configuration steps have successfully completed.

1. Create cache indexes (if applicable) by executing the appropriate packaged query for you database under /shared/ASAssets/KPI/Physical/Metadata/DDL

2. Execute the procedure /shared/ASAssets/KPI/Utilities/updateCachedViews with the input value '1' to enable all incremental caches on KPI views.
Note: this procedure is being deprecated

   Or execute /shared/ASAssets/KPI/Utilites/toggleKPICaches with the input of E to enable or D to disable.

Update Installation

When you import this new version of the KPI it will overwrite your current KPI and remove any custom modifications you have made. We are working on an upgrade path that is not destructive.

Update Database

Since the database is not over written you only need to run the upgrade scripts in /shared/ASAssets/KPI/Physical/Metadata/DDL/UpgradeBeta2toBeta3. Only the upgrade for SQL Server currently exists.

Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at **www.cisco.com/go/offices.**

Printed in USA CXX-XXXXXX-XX 10/11