Cisco Information Server Environments KPI

Functional Requirements

Data Virtualization Business Unit Professional Services

June 2014

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DOCUMENT CONTROL

Version History

Version	Date	Author	Description
1.0	June 2014	Scott Neustein	Initial revision

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 folder /shared/PSAssets icon and select Import

3. Import the file Kpi.car with the overwrite checkbox enabled. The folder /shared/PSAssets/KPI should appear after the import completes.

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/PSAssets/KPI/Physical/Metadata/KPI_mysql

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

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

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/PSAssets/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/PSAssets/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/PSAssets/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/PSAssets/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/PSAssets/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/PSAssets/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/PSAssets/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/PSAssets/KPI/Physical/Metadata/DDL

2. Execute the procedure /shared/PSAssets/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/PSAssets/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/PSAssets/KPI/Physical/Metadata/DDL/UpgradeBeta2toBeta3. Only the upgrade for SQL Server currently exists.

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