



KPI for Crystal Enterprise 10

Installation & Administration Guide

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OVERVIEW

KPI for Crystal Enterprise provides the capability to monitor many aspects of your Crystal Enterprise system's operational activity. Included in this solution are two server components that query your Crystal Enterprise system as frequently as you wish, refreshing an external database with a wealth of information for subsequent analysis.

Now you can . . .

- monitor your Crystal Enterprise license usage over time
- analyze the historical activity level of each Crystal Enterprise component
- review your future processing requirements based on report schedules
- assess the processing time of specific report(s) over time
- assess the processing success vs. failure rates of specific report(s) over time
- analyze specific user login activity over time
- analyze who is running which reports and when
- analyze all user & group security settings over time
- refresh a central report design repository
- and more!

KPI is server-based and may be run as an application or as a service. Settings are provided to allow you to control the frequency of the query/external update, by type of information.

For example, you may wish to refresh 'Schedules' information every hour but 'Finished Instances' information every 24 hours.

FILES INCLUDED WITH KPI

KPI is comprised of the following software components:

[apos.lic](#)

The APOS license file that may include a 'number of servers' limitation and/or a demo expiry date.

[APOSKPI.EXE](#)

KPI (Hours) application that may be run as an application or a service.

[APOSKPI.ini](#)

The ini settings for APOSKPI.EXE.

[APOSKPIS.EXE](#)

KPI (Seconds) application that may be run as an application or a service.

[APOSKPIS.ini](#)

The ini settings for APOSKPI.EXE.

[APOSKPI10.mdb](#)

The Microsoft Access database that is updated by APOSKPI.EXE and APOSKPIS.EXE.

[APOSKPI.orig.mdb](#)

An empty copy of the original database, as a backup.

[APOSKPI10 SQL Server Script.sql](#)

An SQL script to assist in creating the APOSKPI database in SQL Server 7/2000.

[APOSKPI10 Oracle Script.sql](#)

An SQL script to assist in creating the APOSKPI database in Oracle 8/9.

[INSTALL.LOG](#)

The installation log file. This file will log activities of the installation including issues that occurred during the setup.

DEMO VERSION LIMITATIONS & LICENSING

After downloading the demo version of *KPI*, a demo license is required to deploy it. Just email a request to apos@apos.on.ca for a demonstration license.

After purchasing a license for *KPI*, a license file will be emailed to you in order to remove the demo limitations. *Apos.lic* is a license file that incorporates a license for a specific number of servers in one site. If, however, you have a different location running a separate Crystal Enterprise system, an additional license must be purchased. This *apos.lic* file should be copied into the `../Program Files/APOSKPI` directory, replacing any existing *apos.lic* file that may already be there.

Note that if your demo license expires, you will receive an error message, see Error Messages section below.

ENVIRONMENT REQUIREMENTS

KPI for Crystal Enterprise 10 must be installed on a server that has some specific characteristics, as follows:

Operating System Requirements

Windows NT v.4 SP6a, Windows 2000 (SP4 or greater), Windows XP

Crystal Enterprise Server Requirements

Crystal Enterprise v.10

If installing on a computer that is not a functioning Crystal Enterprise Server, *KPI* can co-exist on any server that has the **Crystal Enterprise v.10 Developer Components** installed from the Crystal Enterprise v.10 Setup CD.

In addition, any computer that has *KPI* on it requires **ADO v.2.6** to support connectivity to the APOSKPI database. If required, ADO may be downloaded from Microsoft's download area or from the Downloads area of the APOS web site at www.apos.on.ca

CITRIX AND TERMINAL SERVER

APOS add-ins have not been tested in Citrix and Terminal Server environments, however there are sites that use APOS add-ins in Citrix and Terminal Server environments. Please take notice of the recommendations below before you proceed to install in a Citrix or Terminal Server environment.

Citrix:

The APOS add-in must be setup physically on the machine it is going to run on.

Terminal Server:

The APOS add-in can be setup remotely through Terminal Services as long as the user account setting it is a local administrator of the server.

We recommend that the initial setup of the APOS add-in is in a test environment and that you install using an account with full administrative rights.

INSTALLATION STEPS

Please follow these steps to install *KPI*:

- a) Obtain a demo license (apos.lic) by contacting apos@apos.on.ca
- b) Testing the demo version of *KPI* should be done using a test environment, not production.
- c) *KPI* must be installed on a computer that has a minimum of some specific Crystal Enterprise components installed on it. Please see the Environment Requirements section.
- d) Ensure that the current computer user has Administrator rights for the computer where you are installing *KPI*.
- e) Stop all unneeded applications, virus scan utilities, etc.
- f) Download the *KPI* Demo setup program from the Downloads section of www.apos.on.ca and save it to your local system environment.
- g) Run the setup program (APOSKPICE10Setup.exe) - it requires a password:
Password for KPI 10: kpeyce10
- h) Note that the setup program normally requires a system reboot when it finishes.
Rebooting is recommended.
- i) After the setup is completed successfully, replace the apos.lic license file in the ../Program Files/AOSKPI directory, using the demo license file provided.
- j) From the Start menu, run KPI (Hours) Configuration, complete and test all elements, see the KPI (Hours) Configuration section.

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- m) From the Start menu, run KPI (Seconds) Configuration, complete and test all elements, see the KPI (Seconds) Configuration section.
- n) From the Start menu, start KPI (Hours) as an Application, ensure that it processes all tables successfully, then examine APOSKPI.MDB tables and review what data has been updated.
- o) From the Start menu, start KPI (Seconds) as an Application, ensure that it processes all tables successfully, then examine APOSKPI.MDB tables and review what data has been updated.
- p) Run ePortfolio and run 'View on Demand' as well as a 'View History' on a test report, then examine the APOSKPI.MDB Log table and review what data has been updated.
- q) Assuming all testing has been successful, stop and close both 'run as an application' windows.
- r) In Services, set the APOS KPI (Hours) for Crystal Enterprise service startup to Automatic if desired (recommended for normal use).
- s) In Services, set the APOS KPI (Seconds) for Crystal Enterprise service startup to Automatic if desired (recommended for normal use).

INSTALLATION TIPS AND TRICKS

A few general tips and tricks regarding installation and browsing reports with a Web browser . . .

NT / WIN 2000 ADMINISTRATOR RIGHTS

You MUST have Administrator rights to run the setup program successfully. Make sure you've logged onto NT/W2K as a user with Administrator rights or else the setup program may be denied the right to replace some core DLL's, etc.

INSTALLATION LOG

Installing *KPI* creates an Install.log file in the directory chosen as the main program location during setup. This log file can be reviewed with any editor to see a complete log of the installation process, including all dll's installed or bypassed due to version checking being performed. Please check this log file if you require any information on what files the setup procedure actually installed. If you need to contact APOS Systems Inc. for installation help please include this log.

BACKUP DURING INSTALLATION

Installing *KPI* checks the version and date of a number of critical files and if appropriate will replace and try to register them automatically. Any files that are replaced during installation will be copied to a \Backup directory within the directory chosen as the main program location during setup. Please check this directory to see what files have been replaced. This step is provided to ensure that you have a copy of any older dll's, etc. that have been replaced in case you need them for some reason.

REBOOT DURING INSTALLATION

Some computers have older versions of some system dll's that cannot be updated without a reboot. If installing *KPI* tries to replace such a file, Windows will force you to reboot your computer before continuing. If you are asked to reboot, simply run the setup again after the reboot. Make sure that you stop IIS (NT only) if you must rerun the setup after a reboot.

CLOSE ALL WINDOWS APPLICATIONS

You must make sure that no other Windows applications are running before starting the setup program. This is because the setup procedure may try to update some core Microsoft DLL's, etc. that could be in use by other applications. Also, make sure that any background programs like Viruscan utilities, etc. are not running before starting the setup program for the same reason.

INI FILE SETTINGS

KPI utilizes ini files (APOSKPI.ini, APOSKPIS.ini) to control many of its actions. These ini files can be edited manually except for the encrypted password and connection string. It is recommended that all changes to the ini files be made using the *KPI* Configuration screen.

COMMAND LINE EXECUTION

KPI can be run in various ways from the Run command line in Windows, as follows:

.. /APOSKPI.exe /?	List run time options available
.. /APOSKPI.exe /Setup	Run Configuration
.. /APOSKPI.exe /App	Run as an application
.. /APOSKPI.exe /I	Install as a service
.. /APOSKPI.exe /U	Uninstall as a service
.. /APOSKPI.exe /SI	Silent install as a service
.. /APOSKPI.exe /SU	Silent uninstall as a service
.. /APOSKPIS.exe /?	List run time options available
.. /APOSKPIS.exe /Setup	Run Configuration
.. /APOSKPIS.exe /App	Run as an application
.. /APOSKPIS.exe /I	Install as a service
.. /APOSKPIS.exe /U	Uninstall as a service
.. /APOSKPIS.exe /SI	Silent install as a service
.. /APOSKPIS.exe /SU	Silent uninstall as a service

KPI (SECONDS) OVERVIEW

The screenshot shows a configuration window titled "KPI (Seconds) for Crystal Enterprise Configuration v. 10.0.005". It is organized into three main sections:

- Crystal Enterprise Information:** Includes fields for "CMS:" (empty), "User Name:" (empty), "Password:" (empty), and "Logon Using:" (set to "secEnterprise"). Buttons for "Test Login", "Save", and "Restore" are on the right.
- KPI Database Information:** Includes a "Connection String:" field containing "Provider=MSDASQL.1;Data Source=APOSKPI10" and a "Table Prefix:" field (empty). Buttons for "Test DB", "Save", and "Restore" are on the right.
- Processing Cycle Information:** Includes "Update Frequency (In Seconds):" set to "30" and "Maximum Days of History (0=Unlimited):" set to "7". Buttons for "Save" and "Restore" are on the right.

At the bottom of the window are "About" and "Done" buttons.

KPI (Seconds) supports frequent queries that can be repeated every x seconds, to update the following APOSKPI database tables:

[AP_Connections](#) - historical information regarding which users were logged into Crystal Enterprise and the method used to log in.

[AP_SumStat](#) - historical statistical information regarding Crystal Enterprise component(s).

CRYSTAL ENTERPRISE INFORMATION

Enter your CMS name, administrator user name/password and logon method, then press Save. Ensure that Test Login is successful.

KPI DATABASE INFORMATION

Enter the necessary connection string to connect the APOSKPI database, then press Save. Ensure that Test DB is successful.

PROCESSING CYCLE INFORMATION

Enter the desired number of seconds between processing cycles and the number of days of history to keep in the above tables, then press Save.

KPI (HOURS) OVERVIEW

Objects/Users/Groups:	Update Frequency (In Hours)	Base Time (Military Time)	Maximum Days of History (0=Unlimited)	Include
Finished Instances:	24	00:00	30	<input checked="" type="checkbox"/>
Schedules:	24	00:00	30	<input checked="" type="checkbox"/>
Services:	24	00:00	30	<input checked="" type="checkbox"/>

Include Report Extended Information Include Security Information Exclude Analysis Reports
 Include Extended Information SQL Exclude SQL info if password is blank

KPI (Hours) supports less frequent queries that can be repeated every x hours, to update the following APOSKPI database tables:

[AP_FinishedInstances](#) - contains one record for each 'finished' report instance, whether successful or not.

[AP_Objects](#) - contains historical information regarding all Crystal Enterprise report and folder objects.

[AP_Schedules](#) - contains historical information regarding all scheduled Crystal Enterprise reports.

[AP_Security](#) - contains historical information regarding all Crystal Enterprise objects security settings.

[AP_ServerInfoAPS](#) - contains historical information regarding the Crystal Enterprise CMS component(s).

[AP_ServerInfoCache](#) - contains historical information regarding the Crystal Enterprise Cache Server component(s).

[AP_ServerInfoEvent](#) - contains historical information regarding the Crystal Enterprise Event Server component(s).

[AP_ServerInfoWCS](#) - contains historical information regarding the Crystal Enterprise Web Component Server component(s).

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[AP_ServerInfoFileRep](#) - contains historical information regarding the Crystal Enterprise Event Server component(s).

[AP_ServerInfoGen](#) - contains historical information regarding all Crystal Enterprise server components.

[AP_ServerInfoJob](#) - contains historical information regarding the Crystal Enterprise Job Server component(s).

[AP_ServerInfoPage](#) - contains historical information regarding the Crystal Enterprise Page Server component(s).

[AP_UsersAndGroups](#) - contains historical information regarding all Crystal Enterprise users and user groups.

[AP_UsersAndGroupsRel](#) - contains historical information regarding which user groups all Crystal Enterprise users are assigned to. In addition, it contains information about which group is the sub group of which other group.

CRYSTAL ENTERPRISE INFORMATION

Enter your CMS name, administrator user name/password and logon method, then press Save. Ensure that Test Login is successful.

KPI DATABASE INFORMATION

Enter the necessary connection string to connect the APOSKPI database, then press Save. Ensure that Test DB is successful.

PROCESSING CYCLE INFORMATION

Enter the desired number of hours between processing cycles, what time to set as the anchor for the update frequency and how many days of history to keep for each of the following:

[Objects/Users/Groups](#) - AP_Objects, AP_Security, AP_UsersAndGroups, AP_UsersAndGroupsRel

[Finished Instances](#) - AP_FinishedInstances

[Schedules](#) - AP_Schedules

[Services](#) - AP_ServerInfoAPS, AP_ServerInfoCache, AP_ServerInfoEvent, AP_ServerInfoFileRep, AP_ServerInfoGen, AP_ServerInfoJob, AP_ServerInfoPage, AP_ServerInfoRAS, AP_ServerInfoWCS

[Include Report Extended Information](#) - report documentation tables - AP_ReportExtInfo, etc.

DATABASE INFORMATION

TABLE NAME: AP_Connections

Field Name	Description
AP_UpdateDate	record updated date and time stamp
SI_ID	user connection unique ID
SI_NAME	textual name of the object
SI_DESCRIPTION	textual description of the object
SI_APSNAME	name of the APS on which the scheduled report was run
SI_AUTHEN_METHOD	authentication method used to log on
SI_FAILEDLOGONCOUNT	number of failed logon attempts since the last successful logon
SI_LAST_ACCESS	last date and time this user accessed the APS
SI_LASTLOGONTIME	last date and time this user connected to the APS
SI_LOGON_ALIAS	alias that the user used to log on to the APS
SI_USERID	ID that the user used to log on to the APS

UPDATED BY:

APOSKPIS.EXE - KPI (Seconds)

INDEXES:

AP_UpdateDate + SI_ID (primary key)

LINKS:

Standalone file, no links to other tables.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding which users were logged into Crystal Enterprise and the method used to log in. APOSKPIS.EXE appends one record to this table for each current user connection on whatever frequency APOSKPIS.EXE is set for.

TABLE NAME: AP_FinishedInstances

Field Name	Description
SI_ID	instance unique ID
SI_NAME	textual name of the object
SI_SCHEDULE_STATUS	1-success, 3-failed
SI_STARTTIME	date and time that the instance actually began being processed
SI_ENDTIME	date and time that the instance actually finished being processed
SI_UPDATE_TS	last time the object was modified
SI_ERROR_MESSAGE	errors that may have occurred while the report was being run
SI_PARENTID	unique ID for a particular object's parent
SI_MACHINE_USED	name of the Job Server on which an instance of a report was processed
SI_SUBMITTER	user name of the person who submitted the job to the APS
SI_PROGID	the type of CE object - report, word, pdf, etc.
AP_Location	CE folder path and report name
AP_Parameters	parameter names and values at schedule time
AP_Proc_Ext	which, if any, Processing Extension the report uses
AP_Destination	destination of the instance (repository, SMTP, etc)
AP_Printer	if Destination was set to Printer, the printer to which the report was sent
AP_Alert	the Alert that was Enabled for the Scheduled Report
AP_Database	database that the report connected to at schedule time
AP_Process	which Server Group did the report process on
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier
SI_PARENTCUID	the Parent Cluster specific unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

SI_ID (primary key)

LINKS:

Use SI_PARENTID to connect to its parent report in AP_Objects.SI_ID.

PURGING:

This table builds a growing list of all instances - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains one record for each 'finished' report instance, whether successful or not. No records are written to this table for 'view on demand' or 'view history' activity (available in AP_Log table). APOSKPI.EXE refreshes the contents of this table on whatever frequency APOSKPIS.EXE is set for.

TABLE NAME: AP_Objects

Field Name	Description
AP_Info_Date	DateTime of last update from KPI
SI_ID	a number that uniquely identifies an object in the Crystal Enterprise system
SI_NAME	textual name of the object
SI_DESCRIPTION	textual description of the object
SI_PARENTID	unique ID for a particular object's parent
SI_CHILDREN	number of children an object has
SI_LAST_RUN_TIME	date and time when the report was last run
SI_LAST_SUCCESSFUL_INSTANCE_ID	ID of the last successful instance that was run on the APS
SI_PROGID	type of CE object - folder, report, etc.
AP_Location	CE folder path and report name
AP_Parameters	parameter names and values at schedule time
AP_Proc_Ext	which, if any, Processing Extension the report uses
AP_File	physical location of the report file
AP_Destination	the Input File Location for this Object
AP_Dependants	the CE Object ID of the Events that this Object will Trigger
AP_Dependencies	the CE Object ID of the Events that this Object is Dependant upon
AP_Schedule_Type	describes the type of schedule that this object uses (Once, Weekly, Daily, etc.)
AP_Printer	the Printer to which this Object will send its Scheduled Instances
AP_Alert	the Alert that was Enabled for the Scheduled Report
AP_Database	database that the report connected to at schedule time
AP_Process	which Server Group will the report process on
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier
SI_PARENTCUID	the Parent Cluster specific unique identifier

TABLE NAME: AP_Objects

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ID (primary key)

SI_PROGID

LINKS:

This table will join to itself (a report to a parent folder etc.) or to AP_Security

(AP_UpdateDate, AP_OBJECTID) using SI_ID and AP_Info_Date.

AP_Schedules and AP_FinishedInstances can join to this table to get the parent report.

Use SI_LAST_SUCCESSFUL_INSTANCE_ID to join to the last successful instance for a report.

PURGING:

This table grows each processing cycle therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding all Crystal Enterprise report and folder objects. APOSKPI.EXE appends one record to this table for each report or folder object on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ReportExtInfo

Field Name	Description
AP_Info_Date	DateTime of last update from KPI
SI_ID	ID of the Report
SI_NAME	textual name of the object
CE_Record_Selection	Record Selection Formula with modifications made in CMC
CE_Group_Selection	Group Selection Formula with modifications made in CMC
CR_Author	The Report Author as set when the Report was designed
CR_Comments	The Report Comments as set when the Report was designed
CR_Keywords	The Report Keywords as set when the Report was designed
CR_Subject	The Report Subject as set when the Report was designed
CR_Title	The Report Title as set when the Report was designed
CR_Record_Selection	Record Selection Formula as set when the Report was designed
CR_Group_Selection	Group Selection Formula as set when the Report was designed
CR_SQLQueryString	SQL Statement in the RPT file
CR_EnableSelectDistinctRecords	Boolean - Is 'Select Distinct Records' turned on
CR_CanPerformGroupingOnServer	Boolean - Is 'Perform Grouping on Server' turned on
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

TABLE NAME: AP_ReportExtInfo

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ID (primary key)

LINKS:

This table can be joined to AP_Objects using AP_Info_Date and SI_ID.

PURGING:

This table grows each processing cycle therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains summary information about design content of Report Objects in Crystal Enterprise.

If the Select Statement in the report contains double carriage returns, some fields that should have data may be empty. If this occurs, please open the report in Crystal Designer and remove the extra carriage return and try again. Please contact our Help Desk for additional information.

TABLE NAME: AP_ReportExtInfoCEDB

Field Name	Description
AP_Info_Date	DateTime of last update from KPI
SI_ID	ID of the Report
AP_DataSourceID	The numeric id of this connection in the logons collection
AP_TableID	The numeric id of the table prefix for this connection in the TableLocationPrefixes collection - a record is created for each table prefix in each connection
AP_ServerName	ODBC DSN or Name of Server if using OLE DB or Native Connection
AP_ServerType	One of CeReportServerType - 1=ODBC,2=Oracle,3=DB2,4=Sybase,5=Informix,6=SQL Server
AP_DatabaseName	Name of the SQL type database
AP_UserName	User name used to connect to the database
AP_CustomServerName	Server name if modified in CMC
AP_CustomServerType	Type of Database connection 0=default,1=ODBC,2=Oracle,3=DB2,4=Sybase,5=Informix
AP_CustomDatabaseName	Name of the SQL type database
AP_CustomUserName	User name used to connect to the database
AP_CustomDatabaseDLLName	Crystal DLL used to connect to the database
AP_OLAPDataSource	Is the report based on an OLAP data source
AP_PromptOnDemandViewing	Should the user be prompted when the report is viewed on demand
AP_SubReportName	If the connection belongs to a sub report only the sub report name will be displayed - empty otherwise
AP_UseOriginalDataSource	Boolean. Uses the Original datasource that was used when report was designed.
AP_MappedTablePrefix	The mapped table prefix if the original was changed when the administrator created a custom data connection
AP_tablePrefix	The original table prefix
AP_UseMappedTablePrefix	Should the server use the mapped table prefix instead of the original
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

TABLE NAME: AP_ReportExtInfoCEDB

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ ID (primary key)

AP_DataSourceID

AP_TableID

LINKS:

This table can be joined to AP_Objects using AP_Info_Date and SI_ID.

This table can be joined to AP_ReportExtInfoCRDB using AP_Info_Date , SI_ID and AP_TableID.

PURGING:

This table grows each processing cycle therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains Database Connection information of Report Objects in Crystal Enterprise.

If the Select Statement in the report contains double carriage returns, some fields that should have data may be empty. If this occurs, please open the report in Crystal Designer and remove the extra carriage return and try again. Please contact our Help Desk for additional information.

TABLE NAME: AP_ReportExtInfoCEParm

Field Name	Description
AP_Info_Date	DateTime of last update from KPI
SI_ID	ID of the Report
AP_ParmID	The Parameter # in the Report
AP_ParameterName	The name of the Parameter
AP_CurrentValuesCount	# of Values entered as defaults in CE Management Console
AP_DefaultValuesCount	# of Values entered as defaults in CE Management Console
AP_DisallowEditing	Boolean. Is User allowed to edit the default list of values.
AP_EditMask	The Edit Mask that was applied to theString Parameter
AP_EnableMultipleValues	Boolean. Does the parameter support Multiple Values
AP_EnableNullValue	Boolean. Does the parameter support NULL
AP_EnableRangeLimit	Boolean. Does the Parameter support a Range limit.
AP_MaximumValue	Low end of Range limit
AP_MinimumValue	Upper end of Range limit
AP_Prompt	The prompting text for the parameter.
AP_PromptOnDemandViewing	Boolean. Is Flag set in CMC to prompt user for parameter when viewing.
AP_SupportsDiscreteValues	Boolean. Is Parameter a Discrete value.
AP_SupportsRangeValues	Boolean. Is Parameter a Range value.
AP_ValueDisplayString	The default value set in the CMC.
AP_ValueType	Type of Parameter. 0=Numeric,1=Currency, 2=Boolean, 3= Date, 4=Time, 5=DateTime, 6=String
AP_ReportName	Name of Subreport that this Parameter belongs to. Only unlinked parameters show here.
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

TABLE NAME: AP_ReportExtInfoCEParm

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ ID (primary key)

AP_ParmID

LINKS:

This table can be joined to AP_Objects using AP_Info_Date and SI_ID.

PURGING:

This table grows each processing cycle therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains Parameter information of Report Objects in Crystal Enterprise.

If the Select Statement in the report contains double carriage returns, some fields that should have data may be empty. If this occurs, please open the report in Crystal Designer and remove the extra carriage return and try again. Please contact our Help Desk for additional information.

TABLE NAME: AP_ReportExtInfoCRDB

Field Name	Description
AP_Info_Date	Date/Time of last update from KPI
SI_ID	Parent Report's ID
CR_SubReportName	Name of Subreport that uses the tables
AP_TableID	ID # of the table in the subreport
CR_Kind	Kind of database connection. One of: crConnectionInfoKindCRQE, crConnectionInfoKindDBFile, crConnectionInfoKindMetaData, crConnectionInfoKindQuery, crConnectionInfoKindSQL, Unknown
CR_Name	Table name
CR_Alias	Table Alias
CR_Description	Description of table
CR_QualifiedName	Qualified name of Table
ConnectionInfo	Connection string information
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ID (primary key)

AP_TableID

CR_SubReportName

LINKS:

This table can be joined to AP_Objects using AP_Info_Date and SI_ID.

This table can be joined to AP_ReportExtInfoCEDB using AP_Info_Date , SI_ID and AP_TableID.

PURGING:

This table grows each processing cycle therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains Database Table information of Report Objects in Crystal Enterprise.

If the Select Statement in the report contains double carriage returns, some fields that should have data may be empty. If this occurs, please open the report in Crystal Designer and remove the extra carriage return and try again. Please contact our Help Desk for additional information.

TABLE NAME: AP_ReportExtInfoEI

Field Name	Description
AP_Info_Date	DateTime of last update from KPI
SI_ID	ID of the Report
CR_SubReportName	Sub report name for elements from a sub report - Currently unavailable - RAS limitation
AP_Element_ID	ID that defines this element in the Report
AP_Element_Type	Type of Report Element. Field, Parameter, Summary, etc.
AP_Name	Name of the Element
AP_ShortName	Short name of the Element
AP_LongName	Long name of the Element
AP_FormulaForm	Format of the Element Name if it were in a Crystal Formula
AP_Description	Description of Database field, if any in the database
AP_SubType	Sub-type of the Report Element
AP_Text	Text of Element. If a Formula, contains the Formula text.
AP_ValueType	Value Type of Element. Different for each element type.
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ID (primary key)

AP_Element_ID

CR_SubReportName

LINKS:

This table can be joined to AP_Objects using AP_Info_Date and SI_ID.

PURGING:

This table grows each processing cycle therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains information about the various Elements of Report Objects in Crystal Enterprise.

If the Select Statement in the report contains double carriage returns, some fields that should have data may be empty. If this occurs, please open the report in Crystal Designer and remove the extra carriage return and try again. Please contact our Help Desk for additional information.

TABLE NAME: AP_Schedules

Field Name	Description
AP_Info_Date	DateTime of last update from KPI
SI_ID	a unique schedule ID
SI_NAME	textual name of the object
SI_SCHEDULE_STATUS	8-paused, 9-pending
SI_UPDATE_TS	last time the object was modified
SI_NEXTRUNTIME	date and time when the report will next be run
SI_PARENTID	unique ID for a particular object's parent
SI_PROGID	type of schedule format - report, pdf, word, etc.
SI_RECURRING	True if the InfoObject is a recurring instance, and False otherwise
SI_SUBMITTER	user name of the person who submitted the job to the APS
AP_Location	CE folder path and report name
AP_Parameters	parameter names and values at schedule time
AP_Proc_Ext	which, if any, Processing Extension the report uses
AP_Destination	destination of the instance (repository, SMTP, etc)
AP_Dependants	list of schedule ID's
AP_Dependencies	the dependencies this schedule waits for - SI_ID of event
AP_Schedule_Type	the recurring schedule that this instance is based on
AP_Printer	Printer to which to scheduled report will print
AP_Alert	The Alert that will be sent upon success
AP_Database	Database that the Report will connect to
AP_Process	Which Server Group will the Report process on
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier
SI_PARENTCUID	the Parent Cluster specific unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + SI_ID (primary key)

LINKS:

May be joined to AP_Objects using SI_ID and AP_Info_Date to the parent report.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding all scheduled Crystal Enterprise reports. APOSKPI.EXE appends one record to this table for each scheduled report on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_Security

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_OBJECTID	SI_ID of the report or folder
AP_OBJECT_NAME	SI_NAME of the report or folder
AP_OBJECT_LOCATION	CE folder path and report name
AP_PRINCIPALID	id of user or user group
AP_PRINCIPAL_NAME	name of user or user group
AP_ROLE	security role applied for group or user
AP_INHERITED	boolean 0=false -1=true
ceRightAdd	add objects to the folder
ceRightView	view (analyze) objects
ceRightEdit	edit objects
ceRightModifyRights	modify the rights users have to objects
ceRightSchedule	schedule the report to run
ceRightDelete	delete objects
ceRightPickMachines	specify server groups to process jobs
ceRightDeleteInstance	delete instances
ceRightCopy	copy objects to another folder
ceRightSetDestination	schedule to destinations
ceRightViewInstance	view report instances
ceRightPauseResumeSchedule	pause and resume scheduled report instances
ceRightOwnerView	view objects that the user owns
ceRightOwnerEdit	edit objects that the user owns
ceRightOwnerModifyRights	modify objects that the user owns
ceRightOwnerDelete	delete objects that the user owns
ceRightOwnerDeleteInstance	delete report instances that the user owns
ceRightOwnerViewInstance	view instances that the user owns
ceRightOwnerPauseResumeSchedule	pause and resume scheduled report instances that the user owns
ceReportRightRefreshOnDemandReport	refresh the report's data
ceReportRightPrintReport	schedule the report to printer
ceReportRightPageServerExport	export the report's data
AP_OBJECTCUID	the Cluster specific unique identifier
AP_OBJECTGUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
AP_OBJECTRUID	Object Package Component unique identifier
AP_PRINCIPALCUID	the Cluster specific unique identifier
AP_PRINCIPALGUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
AP_PRINCIPALRUID	Object Package Component unique identifier

TABLE NAME: AP_Security

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_OBJECTID + AP_PRINCIPALID (primary key)

LINKS:

Join this table to AP_Objects using AP_UpdateDate and AP_OBJECTID.

Join this table to AP_UsersAndGroups using AP_UpdateDate and AP_PRINCIPALID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding all Crystal Enterprise objects security settings. APOSKPI.EXE appends one record to this table for each Crystal Enterprise object on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoAPS

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the APS
AP_APSBuildDate	build date of the APS database
AP_APSDatabaseName	name of the APS database
AP_APSDatabaseServerName	description of the APS database
AP_APSDatabaseUserName	user name of the account used to access the APS database
AP_APSDataSourceName	APS data source name
AP_APSPrivateBuildNumber	private build number of the APS
AP_APSProductVersion	product version of the APS
AP_APSResourceVersion	version number of the APS resource DLL
AP_ClusterMembers	list of APS machines in the cluster
AP_FailedJobs	total number of failed jobs in the cluster
AP_LicensesConcurrent	total number of concurrent licenses for the cluster
AP_LicensesDesigners	not used
AP_LicensesNamedUsers	total number of named user licenses for the cluster
AP_LicensesProcessors	total number of licensed processors for the cluster
AP_PendingJobs	total number of pending jobs in the cluster
AP_RunningJobs	current number of running jobs in the cluster
AP_SuccessJobs	total number of successful jobs in the cluster
AP_UserConnectedConcurrent	total number of connected users with concurrent licensing in the cluster
AP_UserConnectedNamedUsers	total number of connected users with named licensing in the cluster
AP_UserExistingConcurrent	total number of existing users with concurrent licensing in the cluster
AP_UserExistingNamedUsers	total number of existing users with named licensing in the cluster
AP_UserTokenConnections	total number of token connections in the cluster
AP_WaitingJobs	total number of waiting jobs in the cluster
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

TABLE NAME: AP_ServerInfoAPS

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise CMS component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise CMS component on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoCache

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the Cache Server
AP_BytesTransferred	total number of bytes transferred in KB
AP_CacheSize	current cache size in KB
AP_Connections	number of current connections made to the Page Server(s)
AP_Directory	Cache Server's current directory path
AP_DriveSpaceUsed	amount of disk space, in KB, used by the Cache Server
AP_HitRate	rate of requests that can be fulfilled by the Cache Server's cache
AP_MaxIdleTime	maximum time in minutes before an idle job is closed
AP_MaxThreads	maximum number of simultaneous processing threads
AP_PageServerConnection	collection of Page Servers connected to the current Cache Server
AP_QueuedRequests	number of requests to the Page Server(s) that are in the queue and are waiting to be processed
AP_Refresh	amount of time in minutes before a shareable report will refresh from the database
AP_RefreshAlwaysHitsDb	whether or not a request to refresh the report from the viewer will always hit database
AP_Threads	current number of processing threads running
AP_TotalRequests	total number of requests served
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Cache Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise Cache Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoEvent

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the Event Server
AP_Events	total number of events monitored by the Event server
AP_FilePollTime	how often the Event server polls for a file that will trigger an event
AP_HostName	host name of the Event server
AP_ListFileMonitored	collection of files monitored by the Event server
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Event Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise Event Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoFileRep

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of Input or Output Server
AP_ServerKind	registered server kind
AP_AvailableDiskPercent	available disk space as a percentage of the host machines total disk space
AP_AvailableDiskSpace	available disk space on the host machine in bytes
AP_BytesSent	number of bytes being read from the File Repository Server
AP_BytesWritten	number of bytes being written to the File Repository Server
AP_ClientConnections	number of active client connections to File Repository Server
AP_DiskSpaceLeft	amount of disk space left on the host machine in bytes
AP_HostName	name of the host machine that the File Repository Service is running on
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Event Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise Event Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoGen

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the server
AP_Title	SI_NAME of the server
AP_Desc	type of server
AP_APSLoad	number of jobs
AP_NTSEv	NT service name
AP_RegTo	server name that the service is registered to
AP_ServDesc	short description of service
AP_ServReg	is server registered (boolean)
AP_CPU	name of the host hardware processor
AP_CPUCount	number of processors in the server host
AP_CurrentTime	local time on the server host
AP_DiskSpaceAvailable	available disk space on the host
AP_DiskSpaceTotal	total disk space available on the host
AP_Memory	maximum memory available in KBs
AP_OperatingSystem	server's operating system name
AP_StartTime	date and time that the server was last started
AP_Version	version number of the server executable/binary
AP_Disabled	True if the server is disabled
AP_FriendlyName	Crystal Enterprise Friendly Name of the server
AP_ServerDescriptor	type of Crystal Enterprise Server
AP_ServerID	Nameserver registered server ID
AP_ServerIOR	server's unique identifier
AP_ServerIsAlive	True if server is alive (running)
AP_ServerKind	registered server kind
AP_ServerName	name of the host (machine) where the server is running
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

TABLE NAME: AP_ServerInfoGen

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ ID (primary key)

LINKS:

This table can be joined to AP_ServerInfoAPS, AP_ServerInfoCache, AP_ServerInfoEvent, AP_ServerInfoFileRep, AP_ServerInfoJob, AP_ServerInfoPage, AP_ServerInfoWCS using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding all Crystal Enterprise server components. APOSKPI.EXE appends one record to this table for each Crystal Enterprise server component on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoJob

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the Job Server
AP_CurrentJobs	current number of jobs processing
AP_DiskUnmanagedEn	is unmanaged disk enabled
AP_FtpEn	is FTP enabled
AP_SmtpEn	is SMTP enabled
AP_DiskUnmanagedInfo	default user name for logging on to unmanaged disk
AP_FtpInfo	FTP setup info
AP_SmtpInfo	SMTP setup info
AP_DLLName	DLL associated with the object type the Job Server processes
AP_FailedCreated	total number of failed job creations
AP_MaxJobs	maximum number of requests the Job Server can process at one time
AP_ObjectTypeName	Object type name processed by the Job Server
AP_ProcType	process mode for every request
AP_TempDir	location of the Job Servers temporary files
AP_TotalJobs	number of job requests received
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Job Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise Job Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoPage

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of Page Server
AP_BytesTransferred	total number of bytes transferred in KB
AP_Connections	total number of current connections from the Cache Server(s)
AP_Directory	Page Server's current directory path
AP_MaxIdleTime	maximum time in minutes before an idle job is closed
AP_MaxThreads	maximum number of simultaneous processing threads
AP_QueuedRequests	number of Cache Server(s) requests in the queue that are waiting to be processed
AP_Threads	current number of processing threads that are running
AP_TotalRequests	total number of requests served
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Page Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise Page Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoRAS

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of RAS Server
AP_AgentTimeout	Number of minutes of inactivity before the Agent times out
AP_CurrentAgentCount	Number of Agent threads that are currently running
AP_CurrentDocumentCount	Number of Documents that are currently open
AP_EnableAsyncQuery	Boolean. Is Asynchronous SQL query enabled.
AP_EnablePushDownGroupBy	Boolean. Is Group-By on Server enabled
AP_EnableSelectDistinctRecords	Boolean. Is Select Distinct enabled.
AP_MaxNumOfRecords	Maximum number of records that can be returned. -1 indicates Unlimited
AP_NumOfBrowsingRecords	Number of Records to return when browsing
AP_RowsetBatchSize	Number of Records per batch
AP_TotalAgentCount	Total number of Agent threads that have been created
AP_TotalDocumentCount	Total Number of Documents created since Server was started
AP_UseInprocAgent	Should RAS run threads in process or out of process
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Report Application Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise RAS Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_ServerInfoWCS

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of WCS
AP_AverageBytes	average number of bytes per request
AP_AverageRequestTime	average time taken per request (seconds)
AP_CurrentRequests	total number of current requests
AP_LogFields	LogFields collection
AP_Logging	whether or not the WCS server will create a log file
AP_LogPath	path for log files created by the WCS
AP_SingleSignOn	whether or not the WCS accepts NT single sign-on
AP_TotalBytes	total number of bytes sent by the WCS
AP_TotalRequests	total number of requests sent by the WCS
AP_TotalTime	total time taken for all requests sent by the WCS (seconds)
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table can be joined to AP_ServerGen using AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding the Crystal Enterprise Web Component Server component(s). APOSKPI.EXE appends one record to this table for each Crystal Enterprise Web Component Server on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_SumStat

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the server
AP_Title	SI_NAME of the server
AP_ServerKind	registered server kind
AP_APS_FailedJobs	total number of failed jobs in the cluster
AP_APS_PendingJobs	total number of pending jobs in the cluster
AP_APS_RunningJobs	current number of running jobs in the cluster
AP_APS_SuccessJobs	total number of successful jobs in the cluster
AP_APS_WaitingJobs	total number of waiting jobs in the cluster
AP_APS_UserConnectedConcurrent	total number of connected users with concurrent licensing in the cluster
AP_APS_UserConnectedNamedUsers	total number of connected users with named licensing in the cluster
AP_APS_UserExistingConcurrent	total number of existing users with concurrent licensing in the cluster
AP_APS_UserExistingNamedUsers	total number of existing users with named licensing in the cluster
AP_APS_UserTokenConnections	total number of token connections in the cluster
AP_Page_Connections	total number of current connections from the Cache Server(s)
AP_Page_QueuedRequests	number of Cache Server(s) requests in the queue that are waiting to be processed
AP_Page_Threads	current number of processing threads that are running
AP_Cache_Connections	number of current connections made to the Page Server(s)
AP_Cache_DriveSpaceUsed	amount of disk space, in KB, used by the Cache Server
AP_Cache_HitRate	rate of requests that can be fulfilled by the Cache Server's cache
AP_Cache_QueuedRequests	number of requests to the Page Server(s) that are in the queue and are waiting to be processed
AP_Cache_Threads	current number of processing threads running
AP_Input_ClientConnections	number of active connections to Input FRS
AP_Output_ClientConnections	number of active connections to Output FRS
AP_WCS_CurrentRequests	total number of current requests
AP_WCS_AverageBytes	average number of bytes per request
AP_WCS_AverageRequestTime	average time taken per request (seconds)
AP_RAS_CurrentAgentCount	Number of Agent threads that are currently running on RAS Server
AP_RAS_CurrentDocumentCount	Number of Documents that are currently open on RAS Server

TABLE NAME: AP_SumStat

UPDATED BY:

APOSKPIS.EXE - KPI (Seconds)

INDEXES:

AP_UpdateDate + AP_ID (primary key)

LINKS:

This table stands on it own but can be joined to any of the server tables using AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical statistical information regarding Crystal Enterprise component(s). APOSKPIS.EXE appends one record to this table for each Crystal Enterprise component on whatever frequency APOSKPIS.EXE is set for.

TABLE NAME: AP_UsersAndGroups

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of the user or group
SI_NAME	textual name of the object
AP_TYPE	user or group
AP_ALIASES	alias, enabled/disabled, security type
SI_CHANGEPASSWORD	whether or not the user can change the password
SI_FORCE_PASSWORD_CHANGE	whether or not the user is forced to change the password at the next logon
SI_NAMEDUSER	True if the license being used is named, and False if it is concurrent
SI_USERFULLNAME	full name of the user
SI_PASSWORDEXPIR	True if the password is allowed to expire, and False otherwise
AP_DESKTOPSETTINGS	eportfolio custom settings (i.e. viewer type, colour scheme, etc.)
SI_CUID	the Cluster specific unique identifier
SI_GUID	the Global Unique Identifier Description field part of SQL Server's Data Transformation Services (DTS)
SI_RUID	Object Package Component unique identifier

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + AP_ID (primary key)

LINKS:

This table can be joined to AP_UsersAndGroupsRel using AP_UpdateDate and AP_ID. You can find which user belongs to what group and which sub group belongs to which group by using the AP_BELONGS_TO_ID in AP_UsersAndGroupsRel and joining back to AP_UsersAndGroups.

This table can also be joined to AP_Security - see above.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding all Crystal Enterprise users and user groups. APOSKPI.EXE appends one record to this table for each user and user group on whatever frequency APOSKPI.EXE is set for.

TABLE NAME: AP_UsersAndGroupsRel

Field Name	Description
AP_UpdateDate	record updated date and time stamp
AP_ID	SI_ID of a user or a sub group
AP_BELONGS_TO_ID	SI_ID of a group the user or sub group belongs to

UPDATED BY:

APOSKPI.EXE - KPI (Hours)

INDEXES:

AP_Info_Date + AP_ID + AP_BELONGS_TO_ID (primary key)

LINKS:

This table can be joined to itself.

This table can be joined to AP_UsersAndGroups to AP_UpdateDate and AP_ID.

PURGING:

This table grows each processing cycle, therefore it may become very large - you can set a maximum to the number of days of history to keep.

DESCRIPTION:

This table contains historical information regarding which user groups all Crystal Enterprise users or sub groups are assigned to. APOSKPI.EXE appends one record to this table for each user on whatever frequency APOSKPI.EXE is set for.

TROUBLE SHOOTING TIPS

Here are some common challenges and tips:

Install.log is created by the setup procedure. You can check it for a detailed list of what was successfully installed or anything that failed. It can be found in the *KPI* directory location you specified during the setup procedure. If you are unsuccessful installing *KPI* and require assistance, please email this Install.log file to support@apos.on.ca with technical information about the system and versions of all relevant software installed on it and email. Telephone support is also available at 519-653-8332.

If *KPI* is running as a Service, it will write entries to the Event Log for your review. For example, if your license has expired or if your Crystal Enterprise system has more servers than you are licensed for, *KPI* will not function and an event will be recorded. When in doubt, check the event log.

AP_REPORTTEXT FIELDS EMPTY*

If the Select statement in the report contains double carriage returns, some fields that should have data may be empty. If this occurs, please open the report in Crystal Designer and remove the extra carriage return and try again. Please contact our Help Desk for additional information.

ERROR MESSAGES

Potential error messages include:

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END-USER LICENSE AGREEMENT FOR APOS SOFTWARE - IMPORTANT - READ CAREFULLY:

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