

TTEC-GO: AVKS

Tivoli Common Reporting

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March 28, 2012



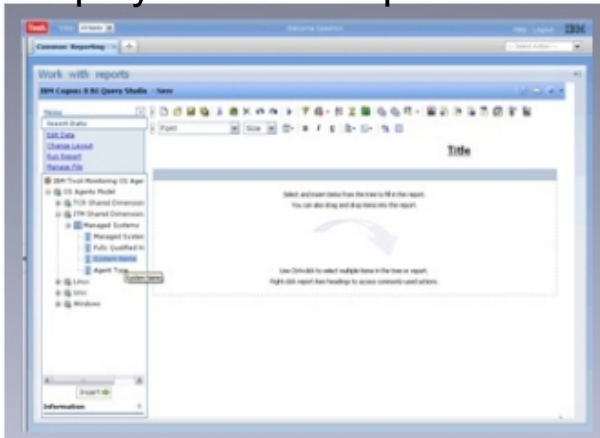
Agenda

- TCR 2.1.1 Overview
 - What is TCR
 - What's new in v2.1.1
 - Where to get started
- Scheduling reports
- Save reports to the file system
- Security
- Performance
- Data model basics
- Building and customizing reports

What is Tivoli Common Reporting

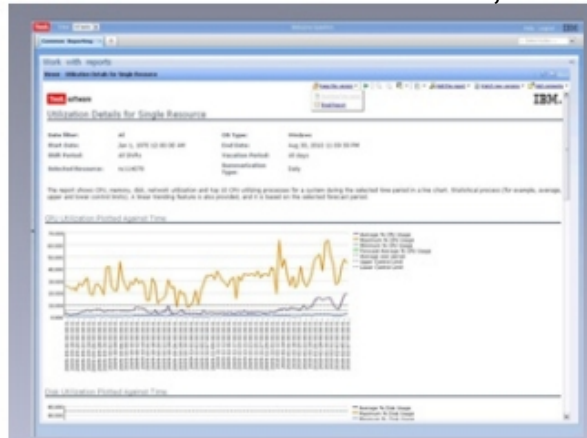
TCR is a common **shared component across Tivoli**. It adds value to Tivoli solutions by **simplifying how information is visualized and shared**

Deployed with 50+ products. The latest release in the field, v2.1.1, shipped 3Q 2011



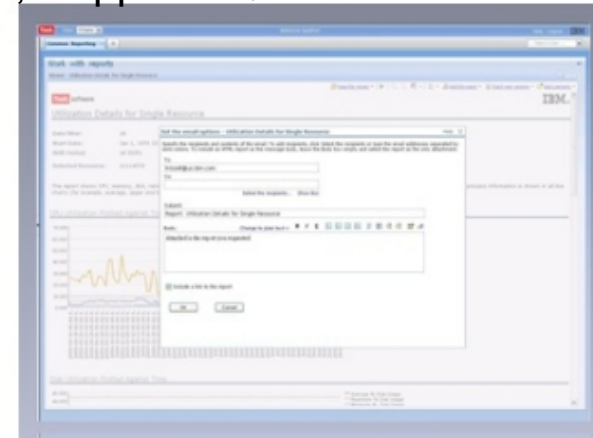
Build custom reports using a drag & drop integrated web-based editor

Author



Single UI for all report formats means common scheduling, distribution, security, and administration

View



Send reports via e-mail, or save for later use. Output in HTML, PDF, Excel, XML, or CSV

Share

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- The Program includes IBM Tivoli Common Reporting (“TCR”) which includes the reporting and modeling components of IBM Cognos Business Intelligence (the "IBM Cognos BI Components") which are subject to the following limited use license.
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Noteworthy Interfaces

- **Query Studio** (Web-based)
 - ✓ Intuitive, self-service “*ad hoc*” reporting
 - ✓ Drag and drop
 - ✓ Easy sorting and filtering
 - ✓ Save, edit, and share

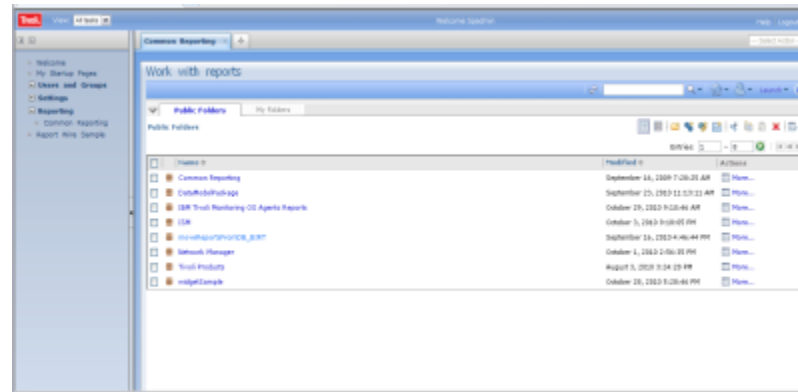
- **Report Studio** (Web-based)
 - ✓ Create and edit more advanced reports
 - ✓ Query Studio functions plus
 - ✓ Parameterization
 - ✓ Globalization
 - ✓ Advanced query manipulation
 - ✓ Additional chart types (e.g., maps, gauges)

- **Framework Manager**
 - ✓ Builds the view into the data from the authoring perspective
 - ✓ Abstracts the data layer from the building of reports
 - ✓ Defines the relationships, attribute types, organizes data



What's New in TCR v2.1?

- Simplified Interface: All report types in a single common interface - “Common Reporting”
- This means common report viewing, scheduling, emailing, and administrative functions, regardless of the report type



- Command line interface for Cognos-based reports
 - Useful for automation
- Load balancing of web console to support more concurrent users
- Improved performance in the console and the reporting engine

What's New in TCR v2.1.1?

- Adds new platforms including 64-bit images for more scalability

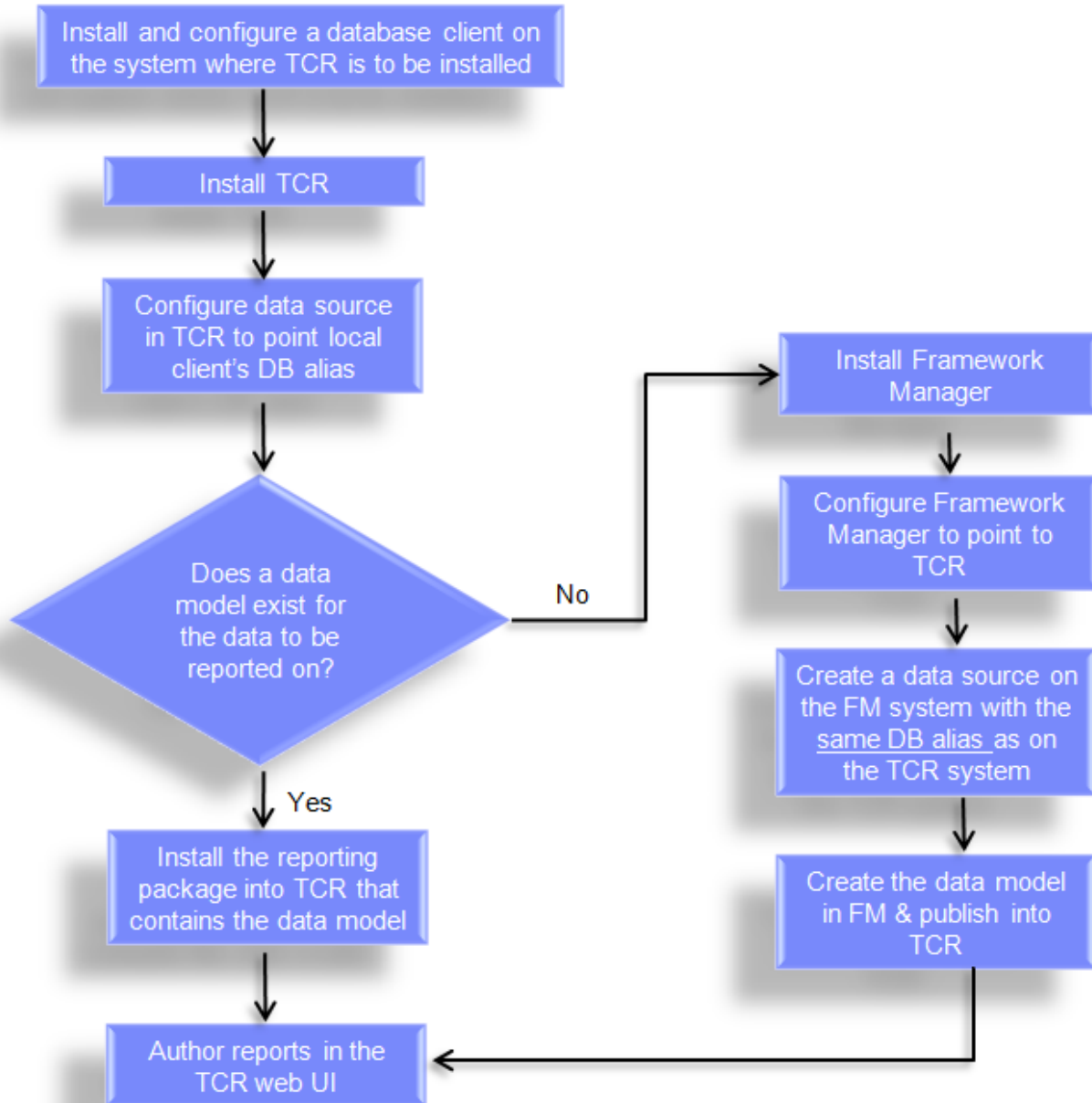
- Reporting engine maintenance: over 100 fixes & improvements

- Align TCR with the new TIP release, v2.2

- Includes quality improvements
 - Install & upgrade rollback capability
 - Avoids environment corruption
 - Saves a lot of energy & time to redeploy from scratch

 - Provide the prerequisite scanner tool
 - Significantly improves time-to-value and reduces the risk of failed deployments

Where to start?



(Links to doc for each item in backup)

2.1.1 Part numbers

IBM Tivoli Common Reporting 2.1.1 for Windows 32 Bit Multilingual (CZZM7ML)

IBM Tivoli Common Reporting 2.1.1 Windows 64 Bit Multilingual (CI01HML)

IBM Tivoli Common Reporting 2.1.1 Linux 32 Bit Multilingual (CZZM8ML)

IBM Tivoli Common Reporting 2.1.1 Linux 64 Bit Multilingual (CI01JML)

IBM Tivoli Common Reporting 2.1.1 AIX 32 Bit Multilingual (CZZM9ML)

IBM Tivoli Common Reporting 2.1.1 AIX 64 Bit Multilingual (CI01KML)

IBM Tivoli Common Reporting 2.1.1 HP-UX 32 Bit Multilingual (CZZN0ML)

IBM Tivoli Common Reporting 2.1.1 HP-UX 64 Bit Multilingual (CI01NML)

IBM Tivoli Common Reporting 2.1.1 Solaris 32 Bit Multilingual (CZZN1ML)

IBM Tivoli Common Reporting 2.1.1 Solaris 64 Bit Multilingual (CI01LML)

IBM Tivoli Common Reporting 2.1.1 Linux on System z 32 Bit Multilingual (CZZN2ML)

IBM Tivoli Common Reporting 2.1.1 Linux on System z 64 Bit Multilingual (CI01MML)

IBM Tivoli Common Reporting 2.1.1 Cognos Framework Manager Multiplatform Multilingual (CZZN3ML)

How do I know what product reports are available?

Check the TCR report catalog:
<http://ibm.co/xhkDRC>



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| <p>Asset Management</p> <ul style="list-style-type: none"> • IBM Maximo Enterprise Asset Management 7.1 ** • IBM Asset Manager for IT 7.1 ** • IBM Maximo Asset Management 7.1.1.6 (Data Model generation) €** • IBM Change and Configuration Management Database 7.2.1 (Data Model generation) €** • IBM Tivoli Asset Management for IT 7.2.2 (Data Model generation) €** <p>Business Application Management</p> <ul style="list-style-type: none"> • IBM Tivoli Business Service Manager 6.1 €** • IBM Tivoli Business Service Manager 4.2 ** • IBM Tivoli Business Service Manager 4.1.1 ** • IBM Tivoli Performance Analyzer 6.1.1 ** <p>Security Management</p> <ul style="list-style-type: none"> • Tivoli Access Manager for e-business 6.1 • Tivoli Federated Identity Manager 6.1 ** • Tivoli Identity Manager 5.0 ** <p>Service Management</p> <ul style="list-style-type: none"> • IBM Tivoli Application Dependency Discovery Manager ** • IBM Tivoli Release Process Manager ** • IBM Tivoli Service Request Manager ** • IBM Tivoli Provisioning Manager ** • IBM Tivoli Service Request Manager 7.2.1 (Data Model generation) €** • IBM Tivoli Application Dependency Discovery Manager 7.2.1 €** • IBM Tivoli Asset Discovery for Distributed 7.2.2 €** <p>Storage Management</p> <ul style="list-style-type: none"> • IBM Tivoli Storage Manager 6.3 €** • IBM Tivoli Storage Manager 6.1 ** • IBM Tivoli Storage Manager Fastback 5.5.4 ** • IBM Tivoli Productivity Center 4.2.2 €** <p>Business Partners</p> <ul style="list-style-type: none"> • IBM Tivoli Directory Server Agent Reports by Blue Medora • ITM Agent for Ping Probe Reports by Blue Medora • ITM Agent for Remote SSL Certificates by Blue Medora | <p>Server Network and Device Management</p> <ul style="list-style-type: none"> • IBM Tivoli Monitoring for Energy Management ** • IBM Tivoli Monitoring OS Agent Reports • IBM Tivoli Monitoring 6.2 VMWare VI Agent • IBM Tivoli Composite Application Manager for Reponse Time 6.2 • IBM Tivoli Composite Application Manager for SOA 7.1 • IBM Tivoli Composite Application Manager for WS / J2EE • IBM Tivoli Composite Application Manager for Applications • IBM Tivoli Decision Support for z/OS • IBM Tivoli Omegamon XE for IMS 4.1 • IBM Tivoli Omegamon XE for CICS 4.1 • IBM Tivoli Omegamon XE on z/OS 4.1 • IBM Tivoli Omegamon XE for z/VM and Linux 4.1 • IBM Tivoli Omegamon XE for Mainframe Networks 4.1 • IBM Tivoli Omegamon XE for Storage 4.2 ** • IBM Tivoli Omegamon XE for Messaging 7.0 ** • IBM Tivoli Netcool Omnibus 7.2.1 • IBM Tivoli NetView for z/OS 5.3 • IBM Tivoli Network Manager 3.7 • IBM Tivoli System Automation 3.1 ** • IBM Tivoli Monitoring 6.2.2 Fix Pack 2 €** • IBM Tivoli Netcool Performance Manager 1.3 € • IBM Tivoli Netcool Performance Manager 1.3.1** € • IBM Tivoli Monitoring 6.2.2 for Virtual Servers-VMware** • IBM Tivoli Monitoring 6.2.3 for Virtual Servers-VMware** € • ITM for Virtual Servers 6.2.3: Citrix XenServer € • IBM Tivoli Monitoring 7.1 for Virtual Environments €** • IBM Tivoli Composite Application Manager for Transactions 7.2+ € ** • ITM for System P v6.2.2.1 € • IBM Tivoli Omegamon XE on z/OS 4.2€ • IBM Tivoli Omegamon XE for Storage on z/OS 4.2€ • IBM Tivoli Composite Application Manager for Applications 6.2.1 € • IBM Tivoli Composite Application Manager for Applications - Siebel CRM Agent € • IBM Tivoli Network Manager 3.8 ** • IBM Tivoli Network Manager 3.9 €** • IBM Tivoli Monitoring 6.2.2 Fix Pack 2+, OS Agents** € • IBM Tivoli Usage and Accounting Manager v7.1.3 € • IBM Log Analysis € • IBM Tivoli Composite Application Manager for Microsoft Applications 6.2.3 € • IBM Tivoli Monitoring for Energy Management 6.3+ ** € • IBM Tivoli Monitoring Agent Builder 6.2.3 (Data Model Generation) ** € |
|---|--|

Scheduling Reports

A. Schedule a report directly

- ✓ Only one instance of the schedule



B. Schedule a job

- ✓ Batch report processing
- ✓ Allows you to run several instances of the same report, with different parameters
- ✓ Sequential or parallel
- ✓ Stop on error or continue
- ✓ Set a default format and distribution for all reports in the job, or set each one individually



Two Methods to Save to the File System

A. Allow a 'save to file system' prompt

- ✓ Only save selected reports to the FS.
- ✓ User chosen file name, overwrite or not, append date or not

The screenshot shows a dialog box titled "Set the options when saving to a file system - Enterprise Resources List". The dialog contains the following elements:

- A title bar with the text "Set the options when saving to a file system - Enterprise Resources List".
- A subtitle: "Specify the name and location of the report on the file system and the action to take when saving a file that already exists."
- A "Name:" section with two radio buttons:
 - Use the report name
 - Specify a file name: (with an empty text input field below it)
- A "Location:" section with a dropdown menu showing "itm_reports".
- A "Conflict resolution:" section with four radio buttons:
 - Keep existing files
 - Replace existing files
 - Make the file names unique and append a timestamp
 - Make the file names unique and append a sequence number
- At the bottom, there are two buttons: "OK" and "Cancel".

B. Automatically save all reports to the FS when they are saved in TCR.

- ✓ Saves report with auto appended name to avoid overwrite
- ✓ XML is also written with details on report parameters, running user, creation time, etc
- ✓ Optionally call user provided script - Useful for automation

Note: Regardless of which method, it's up to the user to manage the files once they are written to the file system

A: “Save Report Output Outside IBM Cognos 8”

1: Set the root directory:

http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/index.jsp?topic=/com.ibm.swg.im.cognos.inst_cr_winux.8.4.1.doc/inst_cr_winux_id17308inst_SaveReportOutputToFileSystem.html

Follow the section "Save Report Output *Outside* IBM Cognos 8" to set the archive root directory

Note, If on Windows, Cognos Configuration is in the start menu. For other platforms, launch `tipv2Components\TCRComponent\cognos\bin\tr_cogconfig.sh`

2. After saving and closing Cognos Configuration, restart TCR.

3. Configure the subdirectory level:

http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/index.jsp?topic=/com.ibm.swg.im.cognos.ug_cra.8.4.1.doc/ug_cra_i_LocalFileOutputLocation.html

Now when you run a report, there is an option to save to the file system with options to over write file names, append timestamps, etc.

B: “Save Report Output Inside IBM Cognos 8”

1: Allow to save to the file system:

http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/index.jsp?topic=/com.ibm.swg.im.cognos.inst_cr_winux.8.4.1.doc/inst_cr_winux_id17308inst_SaveReportOutputToFileSystem.html

Follow the section "Save Report Output *Inside* IBM Cognos 8" to allow saving to the file system

Note, If on Windows, Cognos Configuration is in the start menu. For other platforms, launch `tipv2Components\TCRComponent\cognos\bin\tr_cogconfig.sh`

2. After saving and closing Cognos Configuration, restart TCR.

3. Configure the output location and optionally automation script:

http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/topic/com.ibm.swg.im.cognos.ug_cra.8.4.1.doc/ug_cra_i_System-WideReportOutputLocation.html#System-WideReportOutputLocation

Now when you save any report in TCR, is it also saved to the file system. If you provided a `CM.Outputscript`, it is invoked when reports are saved.

Security

Authentication

- Single system installation uses the WAS federated repository. Includes a built in repository or add your own LDAP/AD
- Distributed TCR installation requires a common LDAP/AD

Authorization

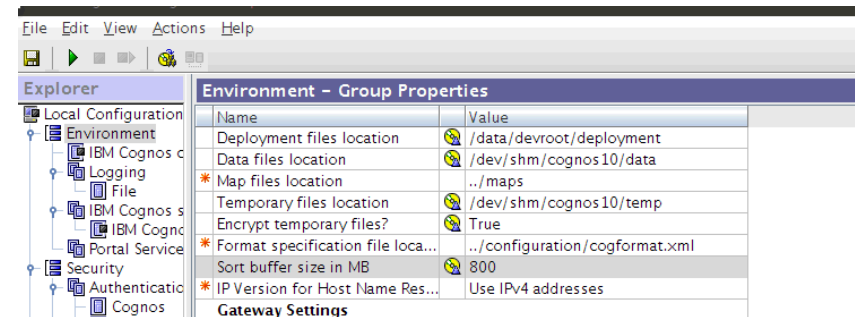
- Grant or deny access to any reporting resources
- Easiest way to implement security is by using the predefined reporting roles (reader, consumer, author, etc.)
- To make TCR just work after installation, everyone is a reporting system administrator out of the box. Remove everyone from the predefined roles and add your users/groups.

Whitepaper available off the TCR developer works site:

<https://www.ibm.com/developerworks/mydeveloperworks/files/form/anonymous/api/library/56745ad5-b3f0-4d4a-9a35-58f9bfe4a3bf/document/4548d264-211a-443d-a57a-cafdbf4eb632/media/Security%20Permissions%20in%20TCR%202.x.pdf>

Performance Notes

- Content Store - TCR comes with a Derby DB for TCR metadata/saved reports. For production usage, instead use an enterprise database, such as DB2
http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_reconf_db.html
- If a single TCR install can't keep up with the demand, a 2nd TCR can be installed, pointing to the same Content Store DB. TCR will then load-balance the requests across TCRs
 - If your reports are waiting on the data source to return data, this won't help
- If you system is multi-core, and unused memory, all more concurrent reports to run by bumping up the max reporting engine instances:
<http://www.ibm.com/developerworks/data/library/cognos/page61.html>
- Sorting buffer – If memory is not constrained, increase the sorting buffer in Cognos Configuration to use memory instead of temp disk
- Adjust the Java memory
<http://www-01.ibm.com/support/docview.wss?uid=swg21585678>



Performance Notes

- Inefficient queries can usually be traced back to the data model
- View the SQL for a query in Report Studio, under the Tools pulldown

Other Resources

- Online & embedded doc
 - Embedded, click the '?' In the reporting portlet. Also context help in various panels.
 - TCR: http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/rtcr_soft_and_hard_reqs.html
 - Cognos – Guides for admin/security, report authoring, framework mgr, etc:
<http://publib.boulder.ibm.com/infocenter/c8bi/v8r4m0/index.jsp?topic=/com.ibm.swg.im.cognos.c8bi.doc/welcome.html>
- Developer Works - Articles, message boards, videos (under wiki - tips & techniques), and report catalog (under wiki)
<https://www.ibm.com/developerworks/mydeveloperworks/groups/service/html/communityview?communityUuid=9caf63c9-15a1-4a03-96b3-8fc700f3a364>
Short cut: <http://ibm.co/xhkDRC>

New articles added. Just this week, “Field Guide to TCR”
- Cognos Proven Practices – Advanced techniques and cookbooks for reporting, modeling, performances, administration, etc.
<http://www.ibm.com/developerworks/data/library/cognos/cognosprovenpractices.html>
- Support Site
http://www-947.ibm.com/support/entry/portal/Overview/Software/Tivoli/Tivoli_Common_Reporting
Or start at IBM Fix Central
- Quickstart Services for TCR
<http://www-01.ibm.com/software/tivoli/services/consulting/offers-composite-app-mgmt.html#tcr>

Creating a simple data model in TCR 2.1

- Set up a data source connection
 - create a database alias local to Framework Manager (FM)
 - create a data source in Tivoli Integrated Portal (TIP)
 - make sure the database alias on the FM system matches the database alias on the TCR system

- Set up for creating a data model
 - Install Framework Manager (windows-only desktop client located under the CognosModeling directory on the TCR Windows Media)
 - Configure Framework Manager (set URLs to point to TCR)

- Creating a data model
 - Create a project in FM
 - Import tables as necessary for your data modeling using Run Metadata Wizard option
 - Create database, consolidation, dimensional and query/presentation views
 - Create a package with appropriate name under Packages.
 - Validate the package for errors. Correct them, if any.
 - Publish the model to TCR

Creating a new report in TCR

- Go to your reports package (published in the data modeling step)
- Use Query Studio to create simple queries and reports
- Drag and drop identifiers, timestamps and metrics from the left pane onto the right pane
- Apply grouping, sorting and filtering if needed
- Create a chart from the resulting table of data
- Save your query and exit query studio
- Open the saved query in Report Studio
- Use Report Studio for advanced querying and layouts
- Run the modified report in various formats like PDF, HTML, EXCEL, CSV and XML

Modifying an existing out-of-the-box report

- Open an out-of-the-box report with Report Studio
- Add more metrics
- Create more charts
- Change the branding in the header of the report

Backup

Resources

- Installing the data base client

Supported data sources:

Relational DB Clients:

http://www-01.ibm.com/support/docview.wss?uid=swg27017522#db_reporting

ODBC:

<http://www-01.ibm.com/support/docview.wss?uid=swg27017522#odbc>

- Installing TCR

Note: Be sure to run the prereq scanner. It will look for required system libs, file handles, disk space, etc. It's in the first paragraph:

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/index.jsp?topic=%2Fcom.ibm.tivoli.tcr.doc_211%2Ftcr_soft_and_hard_reqs.html

- Configuring a data source in TCR

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_config_db.html

Resources

- Installing Framework Manager

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_installing_fm.html

- Configuring Framework Manager to point to TCR

Basically you can either 1. enter the URL's in FM's config, or 2. copy page the URL's from TCR's config to FM's config

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_configure_frameworkmgr.html

- Creating a data model – A very basic example from start to finish:

<http://www.youtube.com/watch?v=jUc6eFr0ihQ>

- Importing Reports

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_import.html

Other Post-install TCR Activities

- **Configuring Email**

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_emailing.html

- **Adding LDAP/AD**

Note: Be sure to add your repository to TCR's federated repository

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_config_ldap.html

- **Locking down report security**

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_config_sec_main.html

Whitepaper:

<https://www.ibm.com/developerworks/mydeveloperworks/files/form/anonymous/api/library/56745ad5-b3f0-4d4a-9a35-58f9bfe4a3bf/document/4548d264-211a-443d-a57a-cafdbf4eb632/media/Security%20Permissions%20in%20TCR%202.x.pdf>

- **Moving to a enterprise database for the TCR Content Store (houses TCR reports and reporting information)**

http://publib.boulder.ibm.com/infocenter/tivihelp/v3r1/topic/com.ibm.tivoli.tcr.doc_211/tcr_reconf_db.html