Reports Process

Data Center Planner

Installer/User Guide

Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures. Visit https://www.VertivCo.com/en-us/support/ for additional assistance.

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1 OVERVIEW

Avocent® Data Center Planner supplies a collection of predesigned report templates that allow you to produce important profiles of your managed data center. These reports utilize the information stored in the relational PostgreSQL database that is a component of the Data Center Planner server architecture.

Using Microsoft® Open Database Connectivity (ODBC) technology, the report templates must be executed in a Microsoft® Windows® environment that includes a licensed installation of Crystal Reports® 2008. Because ODBC allows for remote connections, the reporting system can be used on any computer that meets the requirements. It is important to note that any firewalls must be open to allow connections between the reporting machine and the Data Center Planner server on port 5432.

You can also create custom reports that are derivatives of the supplied templates or use the power of the Crystal Reports® software to create reports that match your own business needs.

NOTE: The schema upon which the reports are based is subject to change with updates of the Data Center Planner product. These changes will be accommodated with new releases of the report templates, but the validity of user-created reports cannot be guaranteed.

The only feature supported update mechanisms for the Data Center Planner database are the Microsoft® Excel® 2003 import and the direct manipulation of the Data Center Planner client. Any other update paths may violate the referential integrity of the database and cause corruption of the application and its data.

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2 PREREQUISITES

2.1 Getting Started

The following information provides configuration requirement details for reporting and instructions for using the predefined reports.

2.1.1 Configuring the PostgreSQL® database (v8.2 on Microsoft® Windows®)

If the Crystal Reports® software is installed on a machine that is not the Microsoft® Internet Explorer® server, the PostgreSQL database on that server must be configured to allow communications with the client.

To configure the PostgreSQL v 8.2 database on Windows:

1. Select *C: Program Files (x86) - PostgreSQL - 8.2 - data* and open the *postgresql.conf* file.
2. Find the #listen_addresses - 'localhost' line, change it to **listen_addresses - '*'** and disable the comment.
3. Select *C: Program Files (x86) - PostgreSQL - 8.2 - data* and open the *pg_hba.conf* file.
4. Add the following line to the end of the file: **host AMPDB postgres (remote_host)/32 md5**, and replace "(remote_host)" with the IP address of the machine/or virvual machine (VM) where the Crystal Reports® software is running.

   -or-

   To allow any other machine to connect with the Crystal Reports® software, add the following line to the end of the file: **host all all 0.0.0.0/0 md5**.

5. Add the following line to the end of the file: **host All All (db_host)/32 md5**, and replace "(db_host)" with the IP address of the machine/VM where the database is running and click *Save*.

To reload the configuration, stop/start Postgres using the following steps:

1. Select *Start - Programs - PostgreSQL 8.2 - Reload configuration.*
2. Select *Start - Programs - PostgreSQL 8.2 - Stop service.*
3. Select *Start - Programs - PostgreSQL 8.2 - Start service.*

NOTE: In all cases during initial setup, use the Views.sql file to create the necessary views in the database to run the reports.

To create the views in the database:

1. In the Crystal Reports® software, open *PG ADMIN III* and navigate to the database.
2. Click the *Run SQL query* button displayed as the pen writing on a piece of paper.
3. Copy the contents of the views.sql file into the query screen.
4. Click the *Execute Query* button displayed as the green, right-facing arrow.

NOTE: In all cases where the Crystal Reports® software is running, the Postgres ODBC driver must be configured.

To configure the ODBC driver:

1. Download the PostgreSQL ODBC driver from the following site: http://wwwmaster.postgresql.org/download/mirrorsftp/odbc/versions/msi/psqlodbc_08_03_

0400.zip.

2. Click in the appropriate location and click *Save* to download the .zip file to your desktop.
3. Open the .zip file and extract the following files:
   - Upgrade.bat
   - Readme.txt
   - psqlodbc.msi
4. Close the .zip file.
5. Open the *psqlodbc.msi* file that was extracted and click *Next* on the psqlODBC Setup dialog box.
6. Click the Enable the License Agreement checkbox and click *Next*.
7. Select the *psqlODBC* file at the top of the tree and click *Next - Install - Finish*.
8. Select *Start - Settings - Control Panel - Administrative Tools*.
9. Double-click *Data Sources (ODBC)*.
10. Click the *System DSN* tab and click *Add*.
11. Select *PostgreSQL ANSI* from the list and click *Finish* to open the PostgreSQL ANSI ODBC Driver Setup.
12. Enter the following information in the Setup dialog box and click *Save*:
    - Data Source - PostgreSQL30. It is critical that the data source name match the database name specified in the report templates. This is the default name used in all report templates.
    - Database - AMPDB
    - Server - Server name where Data Center Planner is running.
    - User Name - postgres
    - Description - Data Center Planner or enter any name
    - SSL Mode - Disable
    - Port - 5432
    - Password - Used when the database was installed.
13. Click *OK* on the ODBC Data Source Administrator screen. The Crystal Reports® software is ready.

NOTE: After configuring the Postgres database on a Windows 2008 server, the services should be restarted using the Services Console.

2.1.2 Configuring the PostgreSQL® database (v8.4.2 on Microsoft® Windows®)

If the Crystal Reports® software is installed on a machine that is not the Microsoft® Internet Explorer® server, the PostgreSQL database on that server must be configured to allow communications with the client as follows.

To configure the PostgreSQL database, version 8.4.2:

1. Select *C: Program Files (x86) - PostgreSQL - 8.4.2 - data* and open the *postgresql.conf* file.
2. Find the #listen_addresses - 'localhost' line, change it to **listen_addresses - '*'** and disable the comment.
3. Select *C: Program Files (x86) - PostgreSQL - 8.4.2 - data* and open the *pg_hba.conf* file.

4. Add the following line to the end of the file: **host AMPDB postgres (remote_host)/32 md5**, and replace "(remote_host)" with the IP address of the machine/VM where the Crystal Reports® software is running.

   -or-

   To allow any other machine to connect with the Crystal Reports® software, add the following line to the end of the file: **host all all 0.0.0.0/0 md5**.

5. Add the following line to the end of the file: **host All All (db_host)/32 md5**, and replace "(db_host)" with the IP address of the machine/VM where the database is running and click *Save*.

To reload the configuration, stop/start Postgres by using the following steps:

1. Select S*tart - Programs - PostgreSQL 8.4.2 - Reload configuration*.
2. Select *Start - Programs - PostgreSQL 8.4.2 - Stop service*.
3. Select *Start - Programs - PostgreSQL 8.4.2 - Start service*.

NOTE: In all cases during initial setup, use the Views.sql file to create the necessary views in the database to run the reports.

To create the views in the database:

1. In the Crystal Reports® software, open *PG ADMIN III*, connect and navigate to the database.
2. Click the *Run SQL query* button displayed as the pen writing on a piece of paper.
3. Copy the contents of the views.sql file into the query screen.
4. Click the *Execute Query* button displayed as the green, right-facing arrow.

NOTE: In all cases where the Crystal Reports® software is running, the Postgres ODBC driver must be configured.

To configure the ODBC driver:

1. Download the PostgreSQL ODBC driver from the following site: http://wwwmaster.postgresql.org/download/mirrorsftp/odbc/versions/msi/psqlodbc_08_03_0400.zip.
2. Click in the appropriate location, and click *Save* to download the .zip file to your desktop.
3. Open the .zip file and extract the following files:
   - Upgrade.bat
   - Readme.txt
   - psqlodbc.msi
4. Close the .zip file.
5. Open the *psqlodbc.msi* file that was extracted and click *Next* on the psqlODBC Setup dialog box.
6. Click the Enable the License Agreement checkbox and click *Next*.
7. Select the *psqlODBC* file at the top of the tree and click *Next - Install - Finish*.
8. Select *Start - Settings - Control Panel - Administrative Tools*.
9. Double-click *Data Sources (ODBC)*.
10. Click the *System DSN* tab and click *Add*.

11. Select *PostgreSQL ANSI* from the list and click *Finish* to open the PostgreSQL ANSI ODBC Driver Setup.
12. Enter the following information in the Setup dialog box and click *Save*:
    - Data Source - PostgreSQL30. It is critical that the data source name match the database name specified in the report templates. This is the default name used in all report templates.
    - Database - AMPDB
    - Server - Server name where Data Center Planner is running.
    - User Name - postgres
    - Description - Data Center Planner or enter any name
    - SSL Mode - Disable
    - Port - 5432
    - Password - Used when the database was installed
13. Click *OK* on the ODBC Data Source Administrator screen. The Crystal Reports® software is ready.

NOTE: After configuring the Postgres database on a Windows 2008 server, the services should be restarted using the Services Console.

2.1.3 Configuring the PostgreSQL® database (v9.1 on Microsoft® Windows®)

If the Crystal Reports® software is installed on a machine that is not the Microsoft® Internet Explorer® server, the PostgreSQL database on that server must be configured to allow communications with the client as follows.

To configure the PostgreSQL database v9.1 on Windows:

1. Select *C: Program Files (x86) - PostgreSQL - 9.1 - data* and open the *postgresql.conf* file.
2. Find the #listen_addresses - 'localhost' line, change it to **listen_addresses - '*'** and disable the comment.
3. Select *C: Program Files (x86) - PostgreSQL - 9.1 - data* and open the *pg_hba.conf* file.
4. Add the following line to the end of the file: **host AMPDB postgres (remote_host)/32 md5**, and replace "(remote_host)" with the IP address of the machine/VM where the Crystal Reports® software is running.

   -or-

   To allow any other machine to connect with the Crystal Reports® software, add the following line to the end of the file: **host all all 0.0.0.0/0 md5**.

5. Add the following line to the end of the file: **host All All (db_host)/32 md5**, and replace "(db_host)" with the IP address of the machine/VM where the database is running and click *Save*.

To reload the configuration, stop and start Postgres by using the following steps:

1. Select S*tart - Programs - PostgreSQL 9.1 - Reload configuration*.
2. Select *Start - Programs - PostgreSQL 9.1 - Stop service*.
3. Select *Start - Programs - PostgreSQL 9.1 - Start service*.

NOTE: In all cases during initial setup, use the Views.sql file to create the necessary views in the database to run the reports.

To create the views in the database:

1. In the Crystal Reports® software, open *PG ADMIN III*, connect and navigate to the database.
2. Click the *Run SQL query* button displayed as the pen writing on a piece of paper.
3. Copy the contents of the views.sql file into the query screen.
4. Click the *Execute Query* button displayed as the green, right-facing arrow.

NOTE: In all cases where the Crystal Reports® software is running, the Postgres ODBC driver must be configured.

To configure the ODBC driver:

1. Download the PostgreSQL ODBC driver from the following site: http://wwwmaster.postgresql.org/download/mirrorsftp/odbc/versions/msi/psqlodbc_08_03_0400.zip.
2. Click in the appropriate location, and click *Save* to download the .zip file to your desktop.
3. Open the .zip file and extract the following files:
   - Upgrade.bat
   - Readme.txt
   - psqlodbc.msi
4. Close the .zip file.
5. Open the *psqlodbc.msi* file that was extracted and click *Next* on the psqlODBC Setup dialog box.
6. Click the Enable the License Agreement checkbox and click *Next*.
7. Select the *psqlODBC* file at the top of the tree and click *Next - Install - Finish*.
8. Select *Start - Settings - Control Panel - Administrative Tools*.
9. Double-click *Data Sources (ODBC)*.
10. Click the *System DSN* tab and click *Add*.
11. Select *PostgreSQL ANSI* from the list and click *Finish* to open the PostgreSQL ANSI ODBC Driver Setup.
12. Enter the following information in the Setup dialog box and click *Save*:
    - Data Source - PostgreSQL30. It is critical that the data source name match the database name specified in the report templates. This is the default name used in all report templates.
    - Database - AMPDB
    - Server - Server name where DCP is running.
    - User Name - postgres
    - Description - Data Center Planner or enter any name
    - SSL Mode - Disable
    - Port - 5432
    - Password - Used when the database was installed
13. Click *OK* on the ODBC Data Source Administrator screen. The Crystal Reports® software is ready.

NOTE: After configuring the Postgres database on a Windows 2008 server, the services should be restarted using the Services Console.

2.1.4 Configuring the PostgreSQL® database (v8.2 on Linux®)

To configure the PostgreSQL database v8.2 on Linux:

1. Log into the Data Center Planner server through the CLI as root and select *cd /var/lib/pqsql/data*.
2. Edit the postgresql.conf file with your text editor (vi, nano, pico).
3. Find the #listen_addresses - 'localhost' line, change it to **listen_addresses - '*'**, disable the comment and click *Save*.
4. Select *C: Program Files (x86) - PostgreSQL - 8.2 - data* and open the *open pg_hba.conf* file.
5. Add the following line to the end of the file: **host AMPDB postgres (remote_host)/32 md5**, and replace "(remote_host)" with the IP address of the machine where the Crystal Reports® software is running.

   -or-

   To allow any other machine to connect with the Crystal Reports® software, add the following line to the end of the file: **host all all 0.0.0.0/0 md5**.

6. Add the following line to the end of the file: **host All All (db_host)/32 md5**, and replace "(db_host)" with the IP address of the machine or virtual machine where the database is running and click *Save*.

To start and stop the service:

1. Run the command service postgresql 8.2 restart.
2. Copy the Views.sql file to /var/lib/pqsql/8.2/data/.
3. Run the command psql –U postgres –f Views.sql AMPDB.

2.1.5 Configuring the PostgreSQL® database (v8.4.2 on Linux®)

To configure the PostgreSQL database v8.4.2 on Linux:

1. Log into the Data Center Planner server through the CLI as root and select *cd /var/lib/pqsql/data*.
2. Edit the postgresql.conf file with your text editor (vi, nano, pico).
3. Find the #listen_addresses - 'localhost' line, change it to **listen_addresses - '*'**, disable the comment and click *Save*.
4. Select *C: Program Files (x86) - PostgreSQL - 8.4.2 - data* and open the *pg_hba.conf* file.
5. Add the following line to the end of the file: **host AMPDB postgres (remote_host)/32 md5**, and replace "(remote_host)" with the IP address of the machine where the Crystal Reports® software is running.

   -or-

   To allow any other machine to connect with the Crystal Reports® software, add the following line to the end of the file: **host all all 0.0.0.0/0 md5**.

6. Add the following line to the end of the file: **host All All (db_host)/32 md5**, and replace "(db_host)" with the IP address of the machine or virtual machine where the database is running and click *Save*.

To start and stop the service:

1. Run the command service postgresql 8.4.2 restart.
2. Copy the Views.sql file to /var/lib/pqsql/8.4.2/data/.
3. Run the command psql –U postgres –f Views.sql AMPDB.

2.1.6 Configuring the PostgreSQL® database (v9.1 on Linux®)

To configure the PostgreSQL database v9.1 on Linux:

1. Log into the Data Center Planner server through the CLI as *root* and select *cd /var/lib/pqsql/data*.
2. Edit the postgresql.conf file with your text editor (vi, nano, pico).
3. Find the #listen_addresses - 'localhost' line, change it to **listen_addresses - '*'**, disable the comment and click *Save*.
4. Select *C: Program Files (x86) - PostgreSQL - 9.1 - data* and open the *pg_hba.conf* file.
5. Add the following line to the end of the file: **host AMPDB postgres (remote_host)/32 md5**, and replace "(remote_host)" with the IP address of the machine where the Crystal Reports® software is running.

   -or-

   To allow any other machine to connect with the Crystal Reports® software, add the following line to the end of the file: **host all all 0.0.0.0/0 md5**.

6. Add the following line to the end of the file: **host All All (db_host)/32 md5**, and replace "(db_host)" with the IP address of the machine or virtual machine where the database is running and click *Save*.

To start and stop the service:

1. Run the command service postgresql 9.1 restart.
2. Copy the Views.sql file to: var /lib/pqsql/9.1/data/.
3. Run the command psql –U postgres –f Views.sql AMPDB.

2.1.7 Configuring the database on a Microsoft® SQL server

NOTE: In all cases during initial setup, use the ViewsSQLServer.sql file to create the necessary views in the database to run the reports.

To create the views:

1. Open the *SQL Server Management Studio,* connect and navigate to the database.
2. Click the *New Query* button.
3. Copy the contents of the views.sql file into the query screen.
4. Click the *Execute* button with the red exclamation mark.
5. If the Crystal Reports® software is running, configure the SQL Server ODBC driver.

To configure the ODBC driver:

1. Select *Start - Settings - Control Panel - Administrative Tools*.
2. Double-click *Data Sources (ODBC)*.
3. Click the *System DSN* tab and click *Add*.

4. Select *SQL Server* from the list.
5. Click *Finish* to open the SQL Server ODBC Driver Setup.
6. Enter the following information in the Setup dialog box:
    - Name - SQLServer. It is critical that the data source name match the database name specified in the report templates. This is the default name used in all report templates.
    - Description - Data Center Planner or enter any name.
    - Server - Enter the server IP address or name where DCP is running. Click *Next*.
7. Select *With SQL Server authentication* using a log in ID and password entered by the user.
8. Make sure the *Connect to SQL Server* checkbox is checked to obtain default settings for the additional configuration options:
    - Log in ID - Use the username created during installation that connects to the database.
    - Password - Use the password created during installation that connects to the database. Click *Next*.
9. Check *Change the default database to:* and select the appropriate database.
10. Make sure Use ANSI quoted identifiers is checked.
11. Make sure Use ANSI nulls, padding and warnings is checked. Click *Next*.
12. Everything should be unchecked except Perform Translation for Character Data. Click *Finish*.
13. Click *Test Data Source on the SQL Server Setup screen*. Click *OK* twice.
14. Click *OK* on the ODBC Data Source Administrator screen.

To run a report:

1. Open the Crystal Reports® software and select the report to run.
2. Click *Database - Set Datasource location* from the top file menu.
3. Select *SQLServer* in the top box, *SQLServer* in the bottom box and click *Update*.
4. Enter the connection information to match the information entered when the ODBC connection was created and click *Finish*.
5. If there is an SQL Server listed under Subreports in the top box, repeat step 3 and 4.
6. Close the window and save the report. The Crystal Reports® software is ready.

NOTE: When running the report, you may be prompted for your login information for the server.

2.1.8 Verify current database

All of the report templates were developed and tested against the current version of the application database. If the application has been updated to a later version, then check for a new or updated reports package. If no updated package is provided, then run the Verify Database function on the reports before executing or modifying them.

To verify the database:

1. Open the desired report in the Crystal Reports® software.
2. Select *Database* from the top menu, then select *Verify Database*.

In most cases, the database is up-to-date or the Crystal Reports® software will automatically compensate for any minor database changes. Major changes to the database require new templates from your Vertiv™ representative.

3 DESCRIPTIONS

The following table is a list of the reports and their descriptions.

Table 3.1 Report Descriptions

REPORT	DESCRIPTION
Assets by Manufacturer	This report provides a list of assets grouped by manufacturer for the selected plan and can be grouped by placed and unplaced. It shows the number of assets and total cost.
Assets by Manufacturer_Graphical	This report uses pie charts and summarized information to show the relative number of assets and their cost by manufacturer.
Assets by Manufacturer_Summary	This report is identical to the Assets by Manufacturer report except that the asset details are suppressed.
Assets by Plan_Graphical	This report uses pie charts and summarized information to show the relative number of assets and their cost by plan.
Asset Activity by Floor Plan	This report allows the user to compare capacity trends across floor plans for a given date. The report shows a chart for heat, space, weight, network ports and space.
Assets by User-Defined Properties_Date	This report provides a list of assets grouped by plan and a user-defined properties date field, based on the User-Defined field type (date range) and value the user selects. It shows the number of assets and their cost by the User-Defined field, location and grand total. It also shows placed and unplaced assets.
Assets by User-Defined Properties_Number	This report provides a list of assets grouped by plan and a user-defined properties number field, based on the User-Defined field type (number) and value the user selects. It shows the number of assets and their cost by the User-Defined field, location and grand total.
Assets by User-Defined Properties_String	This report provides a list of assets grouped by plan and a user-defined properties string field, based on the User-Defined field type (string) and value the user selects. It shows the number of assets and their cost by the User-Defined field, location and grand total. It also shows placed and unplaced assets.
Assets by User-Defined_ Summary_Date	This report is identical to the Assets by User-Defined_Date report except that the asset details are suppressed.
Assets by User-Defined_ Summary_Number	This report is identical to the Assets by User-Defined_Number report except that the asset details are suppressed.
Assets by User-Defined_ Summary-String	This report is identical to the Assets by User-Defined_String report except that the asset details are suppressed.
Assets by User-Defined_Graphical _Date	This report uses pie charts and summarized information to show the relative number of assets and their cost by a user-defined date range value entered by the user.
Assets by User-Defined_ Graphical_Number	This report uses pie charts and summarized information to show the relative number of assets and their cost by the user-defined number values entered by the user.
Assets by User-Defined_Graphical _String	This report uses pie charts and summarized information to show the relative number of assets and their cost by the user-defined string values entered by the user.
Capacities by Rack/Plan	This report provides a list of assets and their consumption, grouped by plan and rack and shows consumption versus capacity at the rack level and the plan level.
Capacities by Plan_Graphical	This report uses pie charts to show space, heat, power and weight capacity vs. consumption for the specified plan.
Capacities by Rack_Graphical	This report uses pie charts to show heat, power, space and weight capacity vs. consumption by rack for the specified plan.
Capacity Trends by Floor Plan (Historical/Future)	This report provides a list, which includes a summary of the capacity measurements over time, as well as a graphical depiction of the different capacity measurements vs. the maximum capacity.
Capacity Contributions by Project	This report provides capacity measurements across all projects, current and future.
Consumption by User-Defined_ Date	This report provides a list of assets and their consumption, grouped by a date field that the user can select from the User-Defined fields.
Consumption by User-Defined_ Number	This report provides a list of assets and their consumption, grouped by a number field that the user can select from User-Defined fields.

Table 3.1 Report Descriptions

REPORT	DESCRIPTION
Consumption by User-Defined_ String	This report provides a list of assets and their consumption grouped by a string field that the user can select from the User-Defined fields.
Floor Plan Comparison	This report provides comparison capacity measurements across floor plans for power, heat, weight, space and network connections.
Project Execution History	This report provides project execution history of the selected project. The report shows any conflict details that occurred.

4 PARAMETERS

All reports are parameter based. Therefore, it is necessary for you to understand the parameters and the appropriate values to enter when prompted.

The following table is a list of parameters' values that can be entered.

Table 4.1 Report Parameters

REPORTS	PARAMETER VALUES
Assets by Manufacturer Assets by Manufacturer_Graphical Assets by Manufacturer_Summary Assets by Plan_Graphical	Select one or more Plans. Select one or more Manufacturers. Select one or more Asset Classes.
Assets by User-Defined_Date Assets by User-Defined _Graphical _Date Assets by User-Defined_Summary _Date	Select one or more Plans. Select one or more User-Defined fields. Click the calendar to select a Start Range date. Click the calendar to select an End Range date. Select one or more Asset Classes. NOTE: If you enter the value in the User-Defined field, the spelling and case must exactly match the value in the application. If you enter an asterisk, all User-Defined field values are returned by the report.
Asset Activity by Floor Plan Capacity Trends by Floor Plan - Historical and Future	Select one or more Plans. Click the calendar to select a Start of Range date. Click the calendar to select an End of Range date. Select a Date Interval.
Assets by User-Defined_Number Assets by User-Defined_Graphical_Number Assets by User-Defined_Summarized	Select one or more Plans. Select one or more User-Defined fields. Enter value for a Start of Range number. Enter a value for an End of Range number. Select one or more Asset Classes.
Assets by User-Defined_String Assets by User-Defined _Graphical _String Assets by User-Defined _Summary String	Select one or more Plans. Select one or more User-Defined fields. Enter a User-Defined value. Select one or more Asset Classes.
Capacities by Plan_Graphical Capacities by Rack_Graphical Capacities by Rack or Floor Plan Comparison	Select one or more Plans.
Capacity Contributions by Project	None
Consumption by User-Defined_Date Consumption by User-Defined_Number Consumption by User-Defined_String	Select one or more User-Defined fields.
Project Execution History	Select one or more Projects.

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