

hp OpenView

reporter



HP OpenView Reporter Troubleshooting Guide

Key Product Number: J5333WA

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**HP OpenView Software Division
Application Services Management
Hewlett-Packard Company
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Product related file locations

Binaries and Libraries	<InstallDir>\bin
Status and Trace files	<InstallDir>\Data
Report package (SRP)	<InstallDir>\newconfig\packages
Report templates	<InstallDir>\Data\reports
Reports web page location	<InstallDir>\Data\webpages
Help files	<InstallDir>\Help\reporter\c
On-Demand Reports	<InstallDir>\HPOV_IOPS\cgi-bin
Release notes	<InstallDir>\Releasenotes

Reporter Tracing

In general the status.Reporter file should be the first level of diagnosis for any problem. Trace files provide an in-depth look at what the internals of Reporter are doing and will be helpful in quickly resolving difficult problems.

Below is a summary of the different tracing levels for Reporter:

- 0 is off (no tracing),
- 1 is minimal tracing,
- 9 is maximum tracing.

Tracing level can be set using configure reporter options.

Recommended tracing levels:

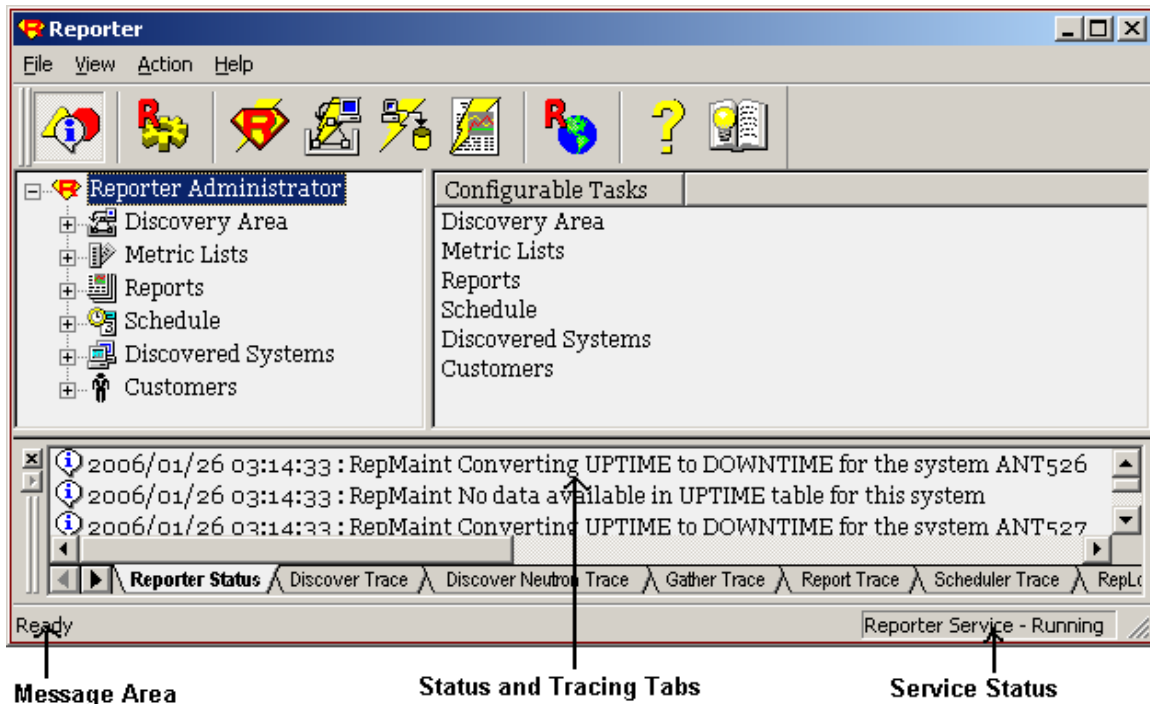
Level 1 provides some additional information that might be interesting to advanced users. Examples of this are that Discovery will list non-DCE MeasureWare/OVPA Agents it finds.

Level 3 is the setting for a cautious user who wants tracing on "just in case" an intermittent problem is occurring and that information will be trapped in the trace file when the error occurs.

Level 5 produces many messages and is the highest level that is typically used.

Levels 6 - 9 produce large volumes of internal information. Only go to level 6-9 if you will be sending the trace files back to your support representative for investigation.

Reporter GUI



Reporter components

Ø Discovery

The *discovery* program searches for installed MeasureWare/OVPA/OVO Agents in the network and adds the information to the Reporter database.

Command line parameters:

Parameter	Function
-long	Use fully qualified system names.
-short	Use short system names
-b "<FileName>"	Bulk Discovery: Use the text file as a list of systems names to discover.
-s "<Network>" "<Domain>" "<System>"	Discover a single system
-d "<Network>" "<Domain>"	Discover all systems in a domain
-n "<Network>"	Discover all systems in a Network
-q	Quiet: It suppresses normal start-up and status messages. This flag may be used with any other

	options.
<None>	Discover systems using: <ul style="list-style-type: none"> • Systems found with OVO agents • Systems/Networks/Domains in the Discovery Area

Ø Discover_ITO

The *discover_ito* program searches/queries the OVOU database for managed systems through the configured DSN *ov_net*.

Command line parameters:

Parameter	Function
<None>	Discover from the "OpenView" database, automatically detects OVO version 7 and above
7	The OVO is version 7.x. If used, this parameter must be the first parameter entered.
8	The OVO is version 8.x. If used, this parameter must be the first parameter entered.
<database>	The name of the OVO database as entered in the Reporter's Configure-Databases section.

Ø Discover_Neutron

The *discover_neutron* program searches/queries the OVOW Management server.

Command line parameters:

Parameter	Function
<None>	Contact OVOW Management server, collect managed node information.

Ø Gather / GatherCODA

The *gather* program collects data from MeasureWare Agents.

The *gatheCODA* program collects data from OVO Agents.

Data may be summarized and is subsetting during this process. In case the collection tables do not exist in the Reporter database, then Gather or GatherCODA builds the missing table definition.

Command line parameters:

Parameter	Function
-h	Stop gathering data at the end of the previous

	summarization interval. Without this parameter, data available until the previous night is gathered.
<systemname>	The system to gather data from and the name must match with the Discovered Systems list in the Reporter database.

Ø Gather_ITO

The *gather_ito* program extracts data from OVOU database into the Reporter database. Gathered data will be summarized and subsetted during this process.

Command line parameters:

Parameter	Function
<None>	Gather from the "openview" database and automatically detect OVO 7 and above.
7	The OVO is version 7.x. If used, this parameter must be the first parameter entered.
8	The OVO is version 8.x. If used, this parameter must be the first parameter entered.
<database>	The name of the database as entered in the Reporter's Configure-Databases section.

Ø RepMaint

The *RepMaint* program performs various maintenance activities on the data in the Reporter database and is scheduled between data gather and report generation cycles. RepMaint can remove systems, metric lists, calculate downtime from uptime table and update group calculations. The data trim is carried performed based on the retention days for each metric list.

Command line parameters:

Parameter	Function
<none>	Remove old data from the database, according to the "retain days" parameter for each metric list. Remove data from the special tables "Completed" and "Downtime" based on the Retain Days value for the "GLOBAL" metric list.
-s <System> -S <System>	Check to see if this system is marked as "Excluded" in the Systems Information area. If so, then remove all data for this system from the database, except for the entry in the Systems table. (Leave the systems table entry, marked as "Excluded").
-t	Process the data tables and recalculates the shift

-T	and downtime information. This applies any new rules from the Shifts and Holidays tables.
-g	Process the Automatic Grouping Specifications. Add systems to groups if they are not already present. Do not remove any systems from groups to which they currently belong.
-G	Remove all groups (except the ALL group). Then Process the Automatic Grouping Specifications. Add systems to groups as indicated.
-r <metriclist> -R <metriclist>	Remove all data from one database table. <metriclist> must match a metric list name in the Reporter database.
-remove <system> -REMOVE <system>	Remove all data for a system from the database. This option will also remove the system from the systems table, leaving no trace of the system in the database. Note: If this system is re-discovered, it will be added back into the database. This is not true if the system is "Excluded", see the -s option.
-clean	Remove all .png files created while generating reports. This option is only available with version 3.6
-AddCustomer <ProductCode> <CustomerName>	Add the product's interest for a customer. Also add all customer enabled reports to this customer. <i>ProductCode = 'R' for Reporter. 'I' for OVIS.</i>
-RemoveCustomer <ProductCode> <CustomerName>	Remove this product's interest for this customer. Remove the customer from the tables if no other products are interested. <i>ProductCode = 'R' for Reporter. 'I' for OVIS.</i>
-trace <TraceLevel>	Sets the trace level to decimal value trace level.

Ø RepCrys

The *RepCrys* program generates reports using the Crystal Reports™ run-time report engine.

Command line parameters:

Parameter	Function
<none>	Prepare the web page linking to all reports, then prepare each report as specified in the Reporter database.
<ReportName>	Prepare a single report. <ReportName> must match a report definition in the Reporter database. <u>Note:</u> The report definition must include an ALL

	template for this parameter.
<ReportName> -g <GroupName>	Prepare a single report for a specified group <GroupName>. <u>Note:</u> The report definition must include a GROUP template for this parameter.
<ReportName> -s <System>	Prepare a single report for a specified system <System>. <u>Note:</u> The report definition must include a SYSTEM template for this parameter.
<Report Name> -c <customer name>	Generates the reports assigned to the customer mentioned in command line
-link	Build the links and control pages only
-schedule	Build the links and control pages, guarantee (add if necessary) there is a schedule entry for each report to be generated.

Ø NewDB

The *newDB* program creates a new Reporter database or insures the existing database contains the required schema. It is capable to expanding column width or adding indexes if need be.

Note: *newDB* will not delete any existing data.

Command line parameters:

Parameter	Function
<none>	Create a new Reporter database (according to the ODBC definition for the System Data Source Name "Reporter"). Take care that ODBC is pointing to a supported database or errors may occur.
-xml <FileName>	Read the XML content and build the tables/views described in it.

Ø RepLoad

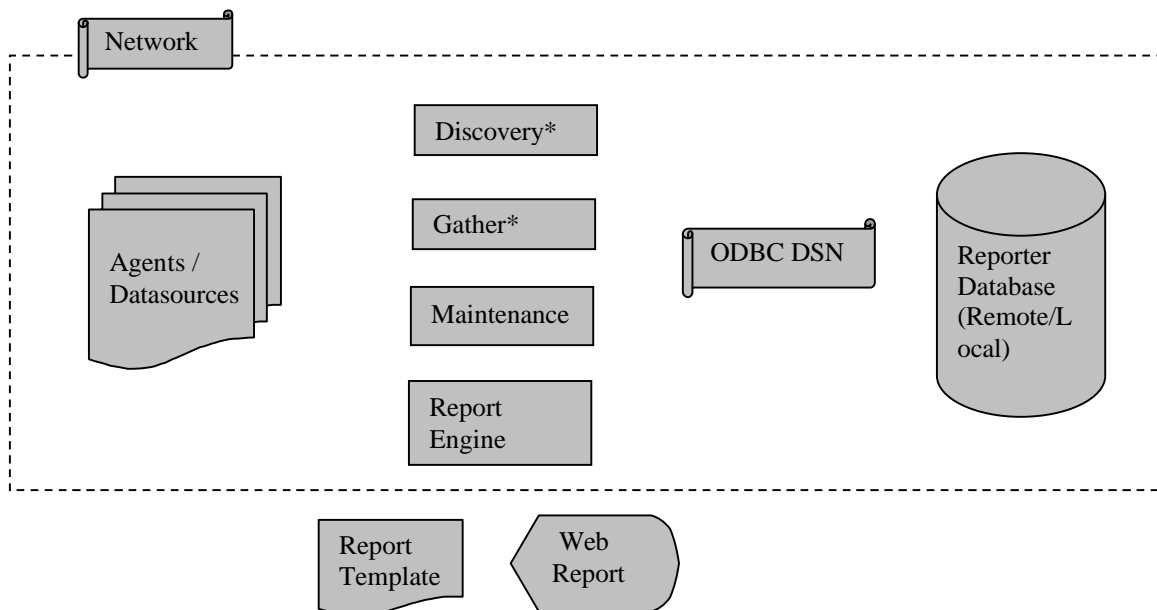
The *replod* loads/saves Reporter configuration into/from the Reporter database. Replod is generally not used by the user, but is internally launched by NewDB or Reporter.exe.

Command line parameters:

Parameter	Function
<templatefile>	Load information from the <templatefile> into the Reporter database. Avoid adding duplicate

	information or modifying any information currently in the database.
-save <templatefile> -SAVE <templatefile>	Create the <templatefile> file based on the current contents of the Reporter database. ⚠ Any current <templatefile> will be overwritten!
-remove <templatefile>	Removes configuration specified in the templatefile from Reporter database.

Which part of Reporter is failing?



Ø Discovery Problems

- ü Check the 'Discover Trace' tab for errors.
- ü Make sure that MeasureWare/OVPA/OVO agent is running on the system you are trying to discover.
- ü Make sure name resolution from Agent to Reporter and Reporter to Agent happens properly.

If your environment has DNS configured, nslookup will help in name resolution. If DNS is not configured, please make sure that 'hosts' file on Agents and Reporter has to be configured accordingly.

Following commands can be used to verify the connectivity and name resolution, from **both** Agent to Reporter and Reporter to Agent:

nslookup <SystemName / IPAddress> (If DNS Server is configured).

Ping <SystemName / IPAddress>

- ü Verify the DCE/NCS bindings on the Agent.
- ü Try binding RPC to single IPAddress if agent is of type MeasureWare, and having multiple interfaces.
- ü If the Embedded Performance Component (EPC/Coda) is configured to use the HTTPS protocol, Reporter 3.5/3.6 fails to make a connection to the Embedded Performance Component on OVO8.x/OVPA4.5 HTTPS agents and are unable to collect performance metrics.

However, these applications can connect to and collect performance metrics, if the Embedded Performance Component is configured to use the HTTP protocol.

To determine if the EPC is configured to use the HTTP protocol or the HTTPS protocol, run the command on agent:

```
<OV_DIR>/bin/ovconfget coda SSL_SECURITY
```

where <OV_DIR> is the directory where EPC is installed.

If the output is ALL or REMOTE, then EPC is configured to use the HTTPS protocol. If the output is NONE, then EPC is configured to use the HTTP protocol.

To configure EPC to use the HTTP protocol, run the command:

```
<OV_DIR>/bin/ovconfchg -ns coda -set SSL_SECURITY NONE
```

Ø Gather Problems

- ü Check the ‘Gather Trace’ tab for errors.
- ü Make sure that MeasureWare/OVPA/OVO agent is running on the system you are trying to discover.
- ü Make sure name resolution from Agent to Reporter and Reporter to Agent happens properly.

If your environment has DNS configured, nslookup will help in name resolution. If DNS is not configured, please make sure that ‘hosts’ file on Agents and Reporter has to be configured accordingly.

Following commands can be used to verify the connectivity and name resolution, from **both** Agent to Reporter and Reporter to Agent:

nslookup <SystemName / IPAddress> (If DNS Server is configured).

Ping <SystemName / IPAddress>

- ü Verify the DCE/NCS bindings on the Agent.
- ü Try binding RPC to single IPAddress if agent is of type MeasureWare, and having multiple interfaces.

- ü Try drawing graphs using perfview/OVPM (if available)
- ü Extract data on the agent – verify if data is collected or not, in case of MWA agent.
- ü Use the command “codautl –dumpds <ds>” or “ovcodautl –dumpds <ds>” to verify if data is collected or not, in case of Coda agent.
- ü If you observe differences in data being collected, and agents and Reporter live in different time zones, enquire with support team for hotfix
- ü Unable to collect SPI data. Please ensure the corresponding SPI templates are configured to log data into EPC/Coda and have been deployed on the agents.
- ü If the Embedded Performance Component (EPC/Coda) is configured to use the HTTPS protocol on OVO8.x/OVPA4.5 agents, follows the steps provided under ‘Discovery Problems’ section.

Ø RepMaint Problems

- ü Check the ‘Maintenance Trace’ tab for errors.
- ü Verify the shifts.
- ü Verify the database user used in Reporter has delete privileges to trim old data.
- ü If you observe time outs while trimming huge tables, please contact support for hotfix.
- ü If the GMTOFFSET field is ‘NULL’ in the SYSTEMS table for a System, RepMaint process may end with an Exception. Please re-discover the systems as a workaround.

Ø RepCrys Problems

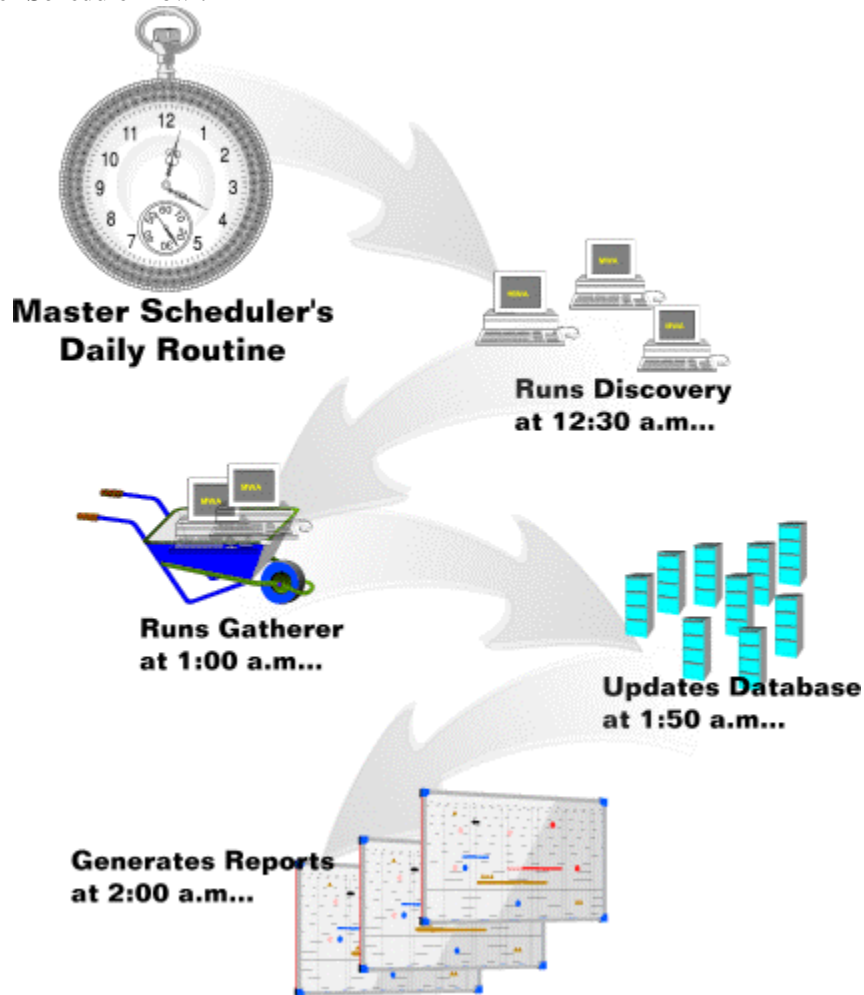
- ü Check the ‘Report Trace’ tab for errors.
- ü Please verify the return codes given below.
- ü Make sure in Reporter’s report configuration, Database Name, Date Range are selected correctly.
- ü For “failed to open rowset” errors (Reporter 3.6),
If the Report templates are HP’s out-of-the-box templates, Please download the appropriate templates from <ftp://ftp.hp.com/pub/ovreporter>
If the templates are custom templates, please refer to Reporter 3.6 Release Notes – “*Known Problems and Workarounds for existing Crystal 8.5 Templates*”.
- ü For “Error detected by database DLL” errors (Reporter 3.5), it could be because of:
 1. Invalid shifts configured in Reporter.
 2. Error Returned by ODBC Driver
 3. Null Value Passed to Subreport

4. Installation Issues. There have been instances where multiple copies of Crpe32.dll on the same web server computer has caused the error.
 5. Severed Database Connections
 6. Dynamic Change of Database
 7. Stored Procedure Parameters
 8. Database Driver Consistency
 9. System Locale settings.
 10. Verify the list of Crystal DLLs (with version) mentioned in the Release Notes.
- Ü If you observe temporary files are not deleted properly after Report generation cycle, please contact Support team for hotfix.
- Ü For SPI Reports / Custom Reports
1. Make sure data is being collected on the agent.
 2. Make sure Gather process is collecting data for corresponding MetricLists.
 3. In case of Custom templates, make sure you are referring to proper database/table/fields.

Ø Reporter Service/Scheduler Problems

- Ü Please make sure that Reporter Service is running.
- Ü Please make sure that 'Log On' setting for Reporter Service has enough privileges. Ideally it should be 'LocalSystem'.
- Ü If the default schedules are deleted accidentally/intentionally, you may see inconsistent reports.

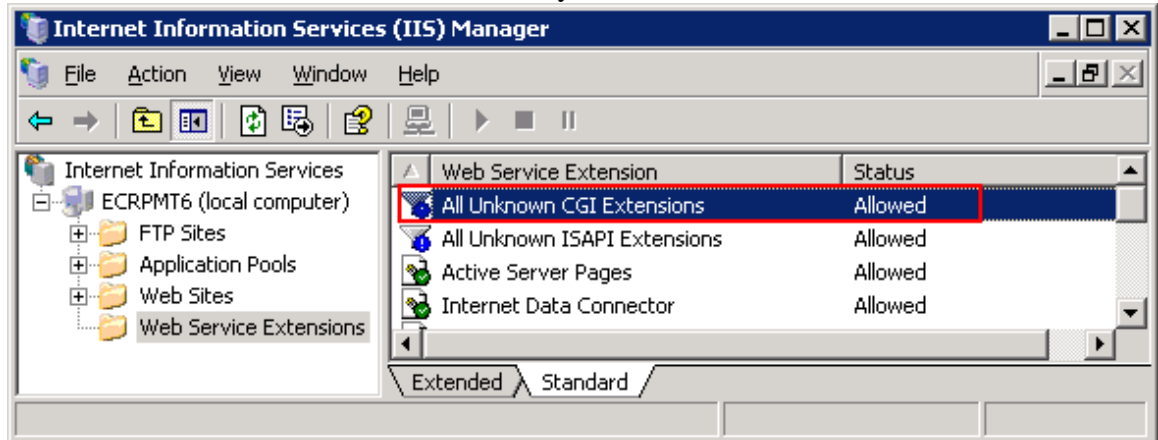
Reporter Schedule Flow :



Ø On Demand Reports Problems

- ü Verify the output of: http://<Reporter_Server>/hpov_iops/cgi-bin/AnalyzerTest.exe?verbose for error messages.
- ü Verify the output of: http://<Reporter_Server>/hpov_iops/cgi-bin/Analyzer.exe?-info, for error tag.
Here <Reporter_Server> is the name of your Reporter server
- ü URLScan/IISLockd: The URLScan filter prevents web server requests that match certain patterns from reaching the web server for processing. If used, the URLScan filter must have its parameters set to allow the requests to Analyzer.exe (allow .exe extensions). These settings are changed by editing the "urlscan.ini" file. See Microsoft's documentation for more information on using URLScan.
<http://www.microsoft.com/technet/security/tools/urlscan.mspx>

- ü On Windows 2003 servers, make sure that you have allowed CGI Extensions.



- ü If all the systems do not appear under “System Names” list, delete/rename the file %OVDDataDir%\VPI_Cache.txt and refresh the On Demand Reports page in the browser.

Ø Installation Problems

- ü Remote Installations:

Remote installations are supported on Terminal Services in “*Remote Administrator mode*” from a CD or local disk. Reporter *can not* be installed remotely for Terminal Services in “*Application mode*” or remotely from mapped network drive.

Remote installations are also supported over VNC, Dameware.

- ü Reporter fresh installation or upgrade from 3.5 to 3.6 fails in SQL Server environment.

For this problem, workaround notes are available at:

<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN019894>

- ü Installing Reporter 3.5 on Windows 2003.

Before installing Reporter 3.5 on Windows 2003, stop the Terminal Server service, install Reporter and start Terminal Services. The reason for this is, Reporter 3.5 used an older version of InstallShield that conflicts with Terminal Server.

Ø Time out Problems

Reporter provides “time-out” capability to kill programs that run longer than practical (default setting or user controlled).

1. Master Scheduler

The Master Scheduler program monitors each program it creates to determine if it exceeds its configured maximum run time. If a program doesn't finish in time, the master scheduler will kill it and indicate it has "timed out".

This can be configured by the 'Run Time' option of a scheduled process.

2. Hang Timer

Sometimes killing scheduled processes through master scheduler may leave resources allocated and can eventually cause hangs. In order to avoid this problem, Reporter programs have internal hang detectors that will cause a hung program to "terminate itself" before it has to be "killed". It can clean up their resources better.

Increasing the Hang Timer value

Reporter 3.6

In 3.6 this can be configured under :
Reporter UI -> File Menu -> Configure -> Options.

Reporter 3.5

Run "regedt32" or "regedit" and add a new value under the path;
HKLM\SOFTWARE\Hewlett-Packard\The Reporter\CurrentVersion\

Name this value "Hang_Timer" and give it a type of "REG_DWORD".

CAUTION:

Setting the Hang Timer to longer values should only be done after all other causes for timeouts have been exhausted

Ø Database Problems

- ü Most of the Database related errors can be resolved by running the utility – NewDB.exe
- ü Verify database user and password used for Reporter (Reporter UI -> File -> Configure -> Databases) has ownership on all the Tables and Views of Reporter.
- ü For resetting the forgotten password for MSDE, please refer to the document:
<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN010959>

Database error messages that are frequently seen with Reporter.

(For database modifications, it is recommended that you consult your DBA)

Oracle Error codes:

Database Error	Module	Cause	Action
ORA-00942 : table or view does not exist	RepMaint.exe	MetricLists are not assigned to any Discovered Systems/Groups	Metric lists must be manually assigned to the Discovered Systems/Groups for this configuration to work. It is necessary to Gather data after adding and associating a new Metric list. Also refer to: http://www.openview.hp.com/ecare/getsupportdoc?docid=OV-EN011997
ORA-00942 : table or view does not exist	Other modules		Run NewDB.exe. Make sure all the necessary Reporter packages are installed. E.g., If “OV Operations for UNIX v” package is not installed, Discover_ITO module may throw this error.
ORA-01460 : unimplemented or unreasonable conversion requested	RepMaint.exe	problems with ODBC driver 9.02.00.54 accessing Oracle 9i	upgrade ODBC driver – to 9.2.0.6.0. contact oracle support for more details.
ORA-01658: unable to create INITIAL extent for segment in tablespace REPORTER		Missing space in the REPORTER Tablespace	Alter the REPORTER tablespace with more space
ORA-01659 : unable to allocate MINEXTENTS beyond 1 in tablespace REPORTER		Failed to find sufficient contiguous space to allocate MINEXTENTS for the segment being created.	Use ALTER TABLESPACE ADD DATAFILE to add additional space to the tablespace or retry with smaller value for MINEXTENTS, NEXT or PCTINCREASE
ORA-00903: invalid table name		A non English Oracle driver is used.	Please install the English ODBC driver
ORA-01400: cannot			http://www.openview.hp.com/ecare/getsupportdoc?docid=OV-EN011997

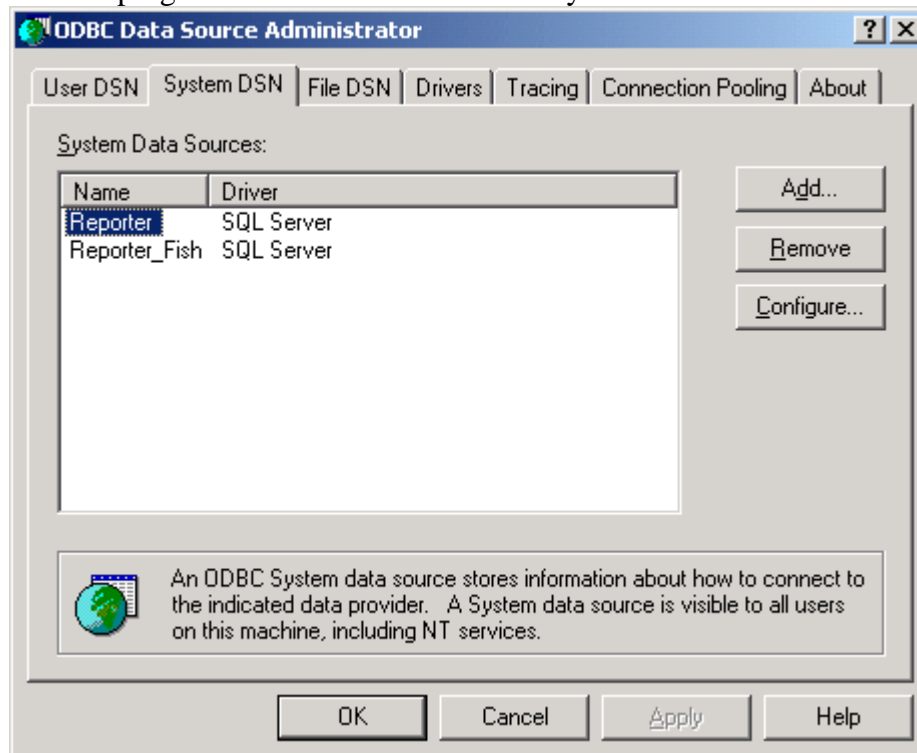
insert NULL into ("OPENVIEW"."COMPLETED"."ID")			com/ecare/getsupportdoc?docid=OV-EN008491
ORA-00904 invalid column name	Upgrade from Reporter 3.5 to 3.6	The Database user configured in Reporter could not access the Reporter database schema.	Either use the appropriate user who is the owner of the schema Or create a Synonym. E.g., CREATE OR REPLACE PUBLIC SYNONYM "SYSTEMS" FOR "SCHEMA"."SYSTEMS";
ORA-01031: insufficient privileges		The database user hasn't been setup with enough privileges	create user openview identified by openview default tablespace REPORTER; grant create session, create table, create view, create any index, create sequence, create procedure, create trigger, unlimited tablespace to openview; Refer to "Create Reporter tablespace, user, and privileges" in "Installation and Special Configurations Guide" - > Part D Or Part E
ORA-01013: user requested cancel of current operation			Go to System DSN and select Reporter. Select the Configure button. If the "Enable Query Timeout" option currently checked please uncheck it.
ORA-00911: invalid character Error -1; State:37000,Native:911,Origin:[Microsoft][ODBC driver for Oracle][Oracle]		Wrong ODBC driver("Microsoft ODBC for Oracle") is being used.	Install Oracle Client software on Reporter server and use the Oracle Driver, Not "Microsoft ODBC for Oracle".

SQLServer/MSDE Error codes:

Database Error	Module	Cause	Action
State:S0002,Native:208. Invalid object name	RepMaint.exe		Metric lists must be manually assigned to the Discovered Systems/Groups for this configuration to work. It is necessary to Gather data after adding and associating a new Metric list. Also refer to: http://www.openview.hp.com/ecare/getsupportdoc?docid=OV-EN011997
S0022,Native:207 Invalid column name			Run 'NewDB.exe'. This will create necessary database schema.
State:22003,Native:8115 Arithmetic overflow error converting IDENTITY to data type int		The problem is table's ID field reaching its size limit.	Change the data type of "ID" field in the TABLE from "INT" to "BIGINT" If this is still not sufficient take a backup and reset ID value for the table.
State:37000,Native:170 Incorrect syntax	RepCrys.exe		When Groups are added through Reporter UI. It does this validation for special characters. When Reporter is integrated with OVOW, Create group names in OVOW that doesn't have these special characters - %'"#\/:*? ><

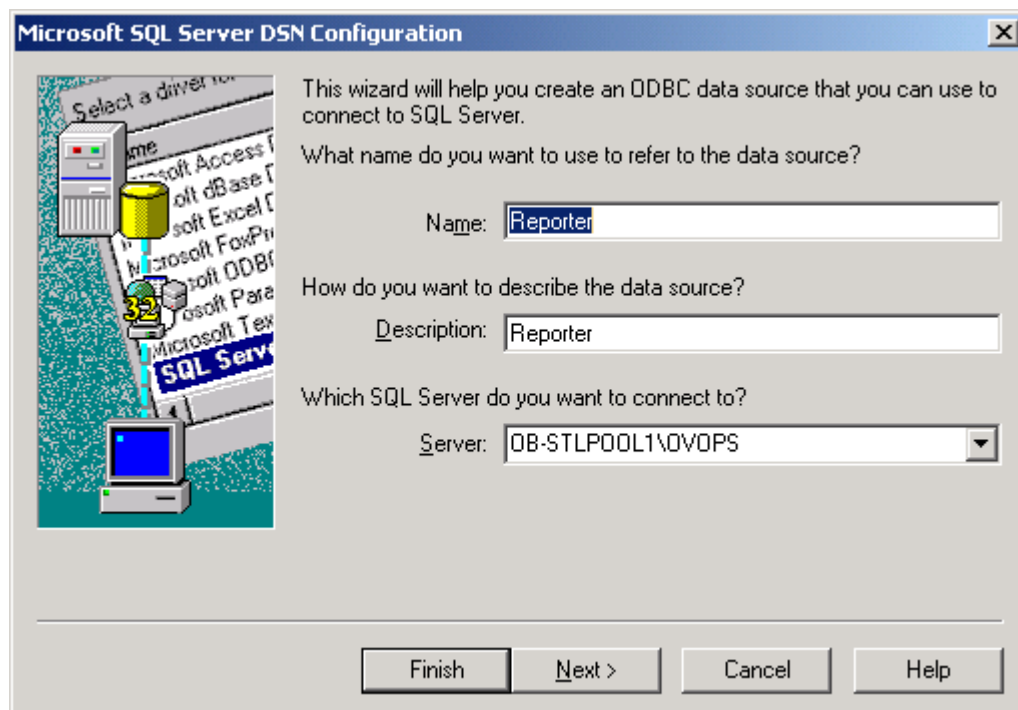
Ø DSN Settings

Run the program “odbcad32.exe”. Go to “System DSN” tab.

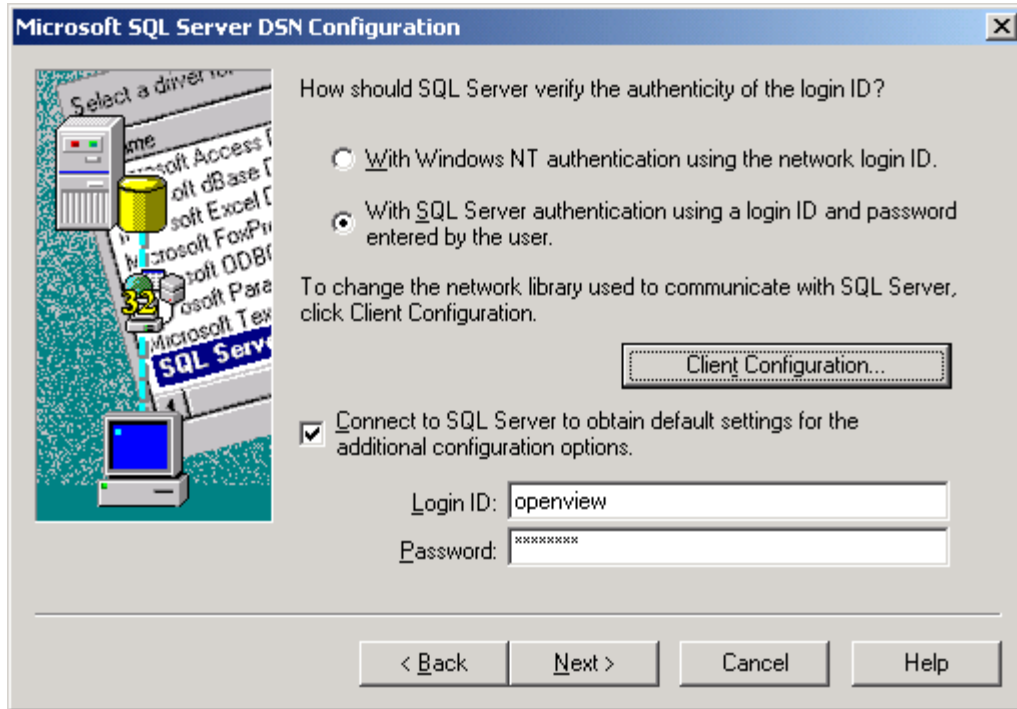


Select 'Reporter' DSN. Click 'Configure'. Verify it has following settings.

ü MS-SQL Server / MSDE as Database

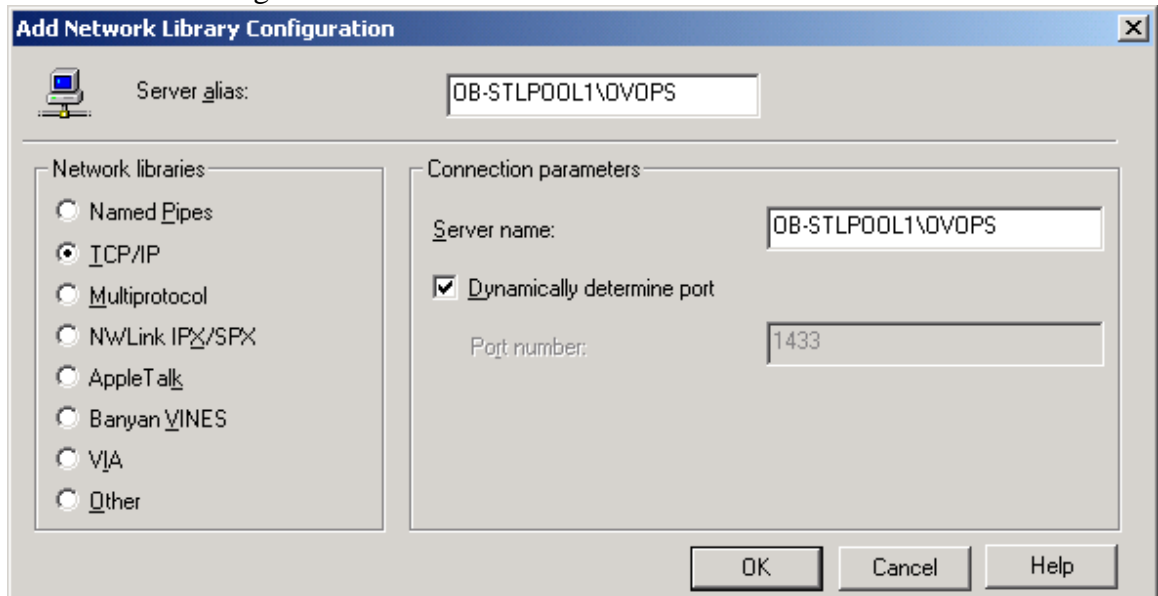


Click 'Next'

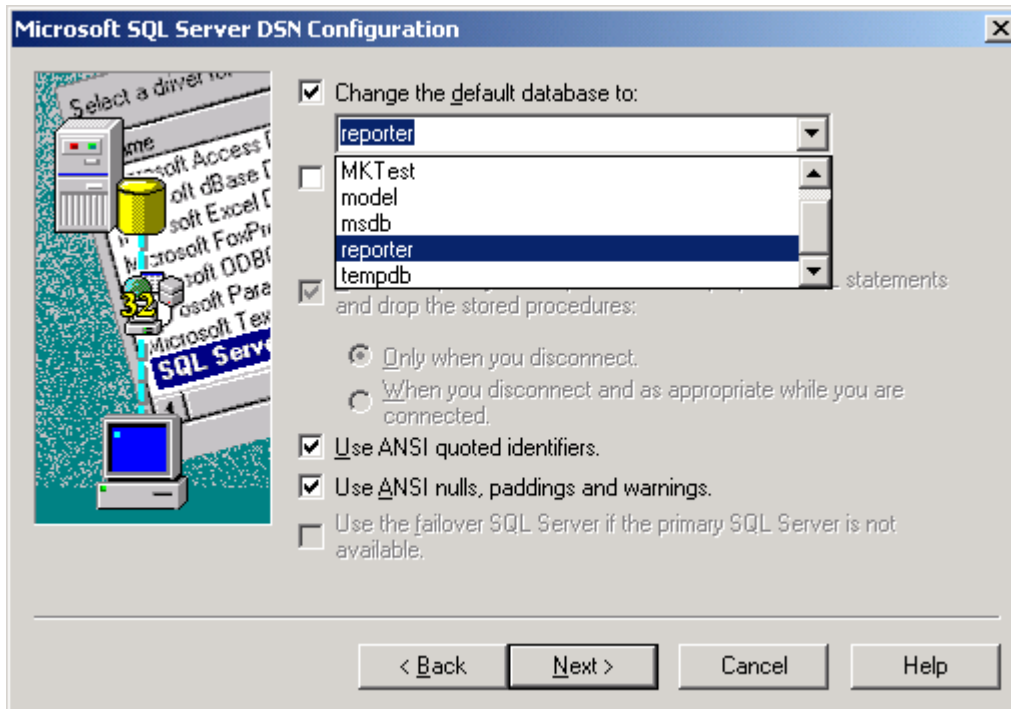


Select SQL Server authentication and enter login information.

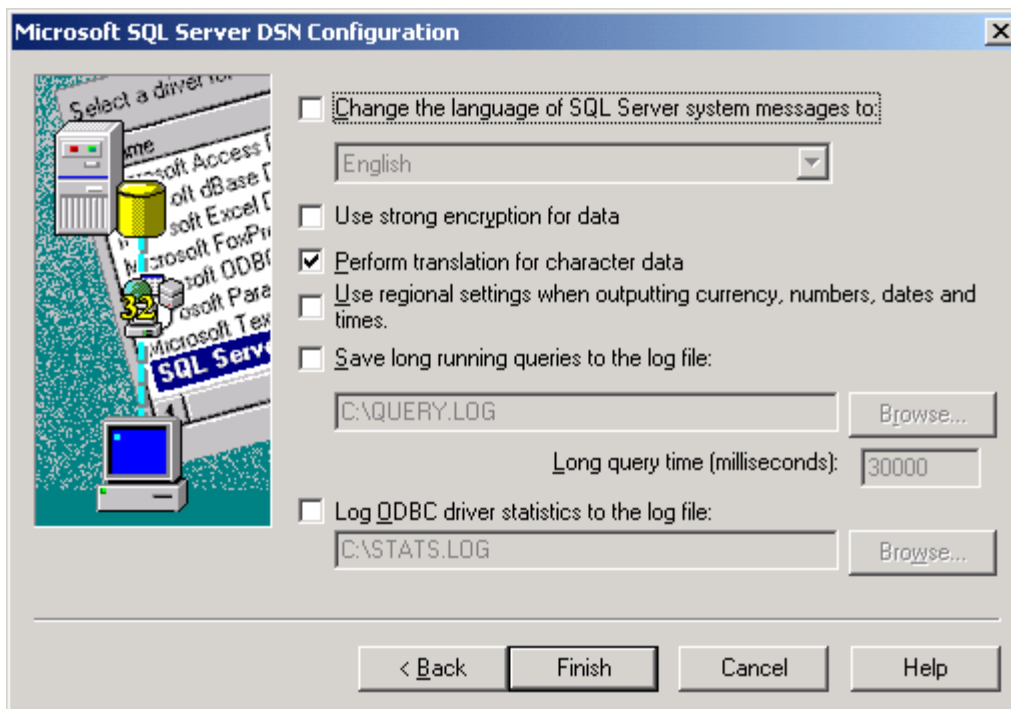
Click 'Client Configuration'.



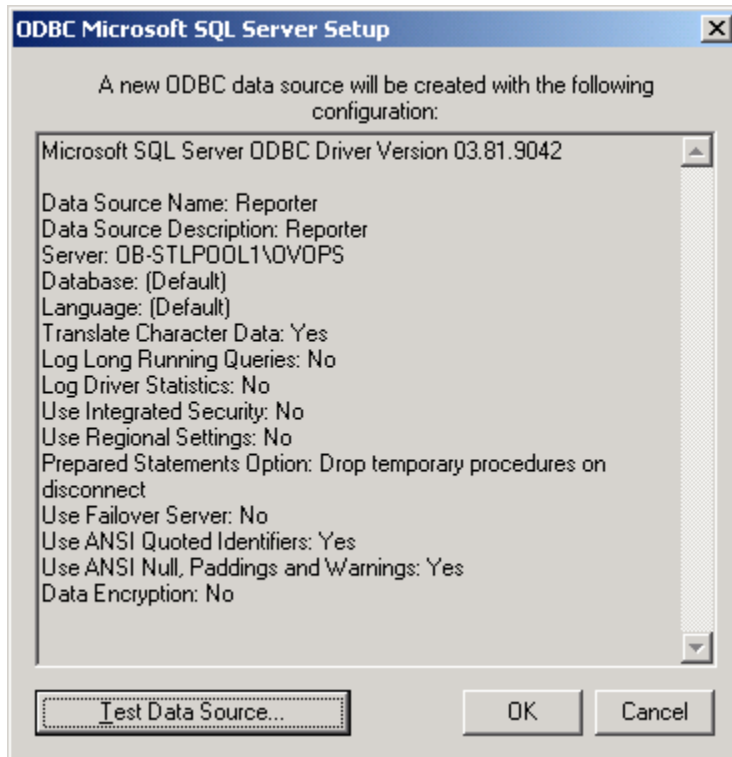
These are the default settings for the Client Configuration.



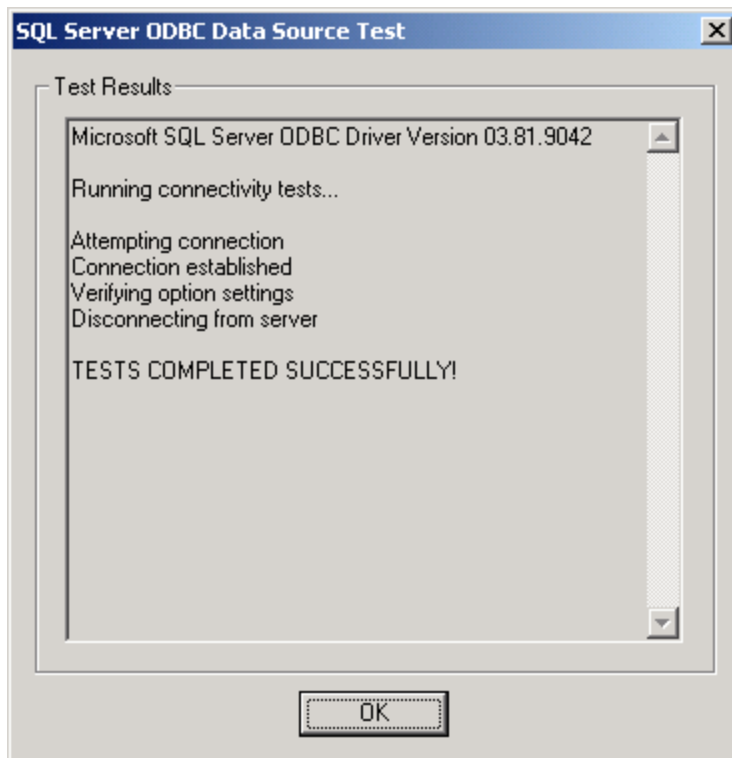
Please select the database explicitly (optional). Click Next.



Click 'Finish'.

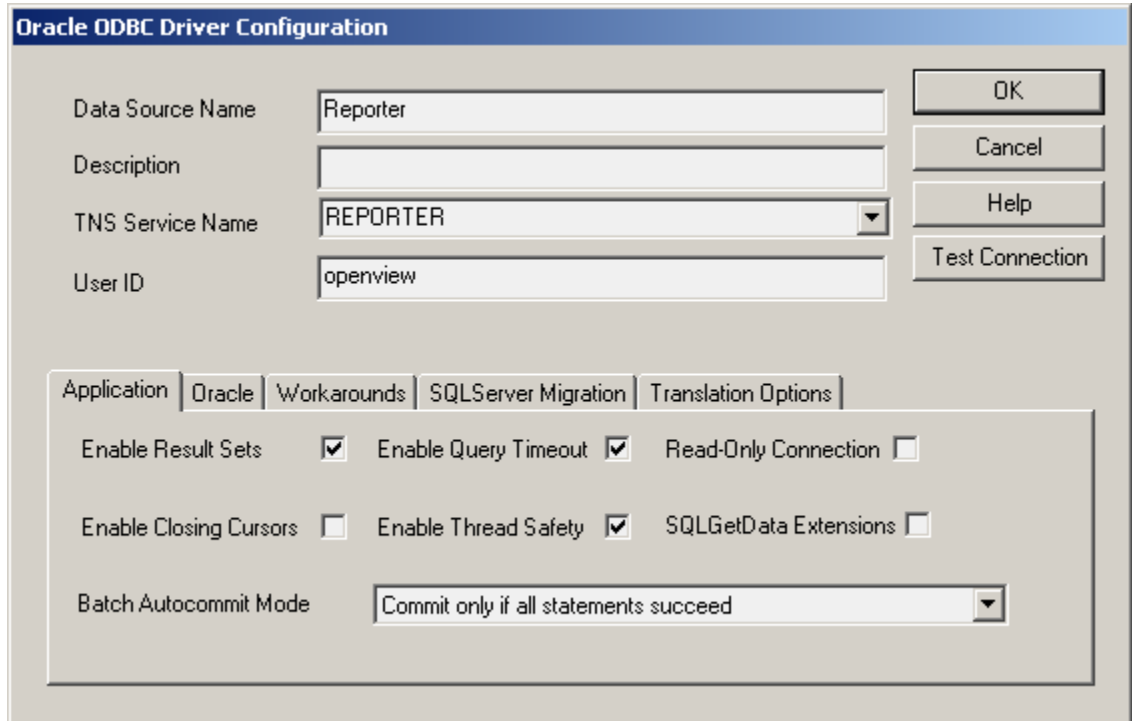


Click 'Test Data Source'.

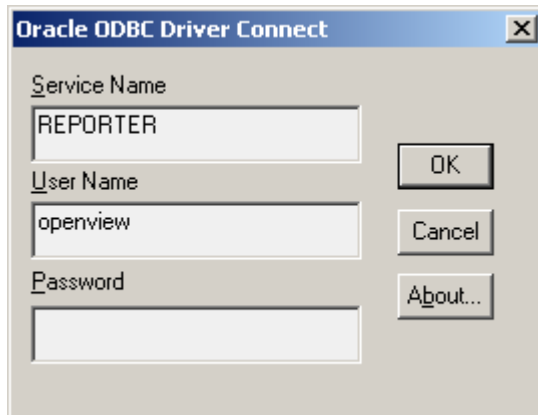


'TESTS COMPLETED SUCCESSFULLY!' message should appear. Say OK. And Close the DSN configuration application

ü Oracle as Database



Click on “Test Connection”.



Enter Password, click OK

You should get the following Successful message box.



Say OK. And Close the DSN configuration application.

Ø Firewall Settings

Reporter will connect to agents for performance data retrieval from OVPA/MWA using the following ports. The following table shows the necessary ports to be opened from Reporter to the agent.

Agent Type	Port settings
MWA(3.x)	Perflbd – 382 RPC/DCED - 135 Rep_server port range
OVO Agents / OVPA 4.x	Coda – 381 llbserver – 383

Also refer to the documents:

<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN019987>

<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN014769>

Reporter Integration with other OV products

Ø OVO/U (OVOpearations for Unix)

ü Refer to the documentation at:

“Installation and Special Configurations Guide” ->

Section 4: Oracle Database Setup ->

Part C (to generate reports on OVO-managed systems).

Reporter's Discover_ITO.exe program targets the OpenView Operations database.

Ø OVO/W (OVOpearations for Windows)

For Reporter 3.5, to integrate with OVOW, it has to be installed on the same system as OVOW.

Reporter 3.6 can integrate with Remote OVOW Server.

To enable this, open Reporter UI -> File -> Configure -> Options,

Under OVOW Settings, enter OVOW Management Server, User Name and Password Details.

ü User Name used for Reporter/OVOW integration should have Administrative Privileges on OVOW Management Server.

ü If Reporter 3.6 (Full) and OVOW exists on same system, refer to:

<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN020111>

- ü Remove discover_neutron program from scheduler if you are not integrating with remote OVOW management server

Ø OVPM

OVPM5.0 and OVPM/Unix4.5 integrates with Reporter through OVPMconfig.ini (refer to OVPM documentation).

- ü Refer to these documents if there are any problems with the integration:

<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN019901>

<http://openview.hp.com/ecare/getsupportdoc?docid=OV-EN019992>

Ø SPIs

Reporter packages which are compatible with Reporter 3.6 are available through OVSPI media shipped with OVOW7.5 (OR) <ftp://ftp.hp.com/pub/ovreporter>

Ø NNM

Existing Reporter NNM integration package is compatible with Reporter 3.5 only.

Reporter 3.6 compatible package will be released soon.

Reporter Settings

Ø MetricList Rules

Reporter uses Metric Lists to control what data is gathered from each Agent. The rules for metric lists are:

- ü The name of the metric list will become the name of the database table. It is strongly recommended that you avoid special characters and keep the entire metric list name in the uppercase. Avoid database keywords and SQL reserved words.

e.g.: DISK is a keyword in SQL Server/MSDE. Using this name to MetricList will cause errors if your database is SQL Server/MSDE.

- ü A metric list will gather data from exactly one class of data. Pattern matching is available to collect from multiple data sources, but the class must be unique.

- Ü Once the summarization level has been chosen for a metric list, it cannot be changed. You will not be allowed to mix different summarization levels in the same database table.
- Ü When a metric list is assigned to a system or group of systems, a data source name or pattern match must be provided. Only data sources that match this pattern and provide a class that exactly matches the metric list class will be gathered.

Ø Shift Rules

- Ü Shifts should not span across days.
- Ü Do not overlap the hours that are specified in different shifts.
- Ü Reporter 3.6 has these validations in Reporter UI. In Reporter 3.5 user has to take care of these.

Note: Hours that are not selected are noted as OFFSHIFT in the database and in reports.

Reporter Performance Tips

- Ü Read the Scalability Guide in the online Concepts Guide
- Ü Configure RepCrys to multiprocessing
RepCrys can be configured to schedule each report individually.

From the Reporter, change the RepCrys schedule entry to add a parameter of -schedule. Now run the RepCrys -schedule entry; this should add a bunch of RepCrys entries to the table.

The newly populated schedule table allows us two performance improvement options.

1. We can schedule expensive but rarely viewed reports to be generated weekly. This can be done from Reporter.exe.

2. We can get some report generation concurrency.

- Ü Increase the Gather concurrency (if very fast CPU and large memory size)
- Ü Discovery or Gather processes are effected by the speed of the network.
In a static environment, only discover once a week or month
- Ü Add memory and CPU speed to the Reporter server
- Ü Minimize groups and customers to the absolute minimum
- Ü Verify if any redundant reports assigned to Report Families.
You can verify redundant reports with the following sql query:

```

SELECT  REPORTNAME, COUNT(REPORTNAME) AS REPCOUNT
FROM    REPORTFAMILIES
GROUP BY REPORTNAME
HAVING COUNT(REPORTNAME) > 1
ORDER BY REPCOUNT;

```

- ü Review the 'All' group and verify that all systems add value to the reports.
If not, use On Demand Reporting to report occasionally
Use On Demand reporting to eliminate single system reports
- ü If possible, run with a local DB – can reduce processing time
- ü Cache small tables and sequence numbers:

Reporter has several rather small tables that are used frequently.
With your DBA's help, the following tables may be cached:
SYSTEMS
REPORTSPERGROUP
REPORTSPERSYSTEM
GROUPS

Also consider caching the Sequence numbers for the collection tables.

Scheduler Return Codes

Return Code	Description
-1	Running
0	OK
2	Unable to communicate with System or MWA
3	Communication error with Agent
4	Unable to communicate with MWA
5	Old Agent version
6	RPC communications error
7	Can not set time range to collect
8	No metric list
9	Error writing data to DB
10	Fatal Error during gather
11	No rep_server running on agent
12	Unable to communicate with system
13	Connection refused – possible security violation
14	Can not communicate with Coda sub agent
15	Missing remote table
16	Can not validate table
128	OS specific error(High probability for this error is necessary libraries/dlls are missing. Run the erroneous module alone from command prompt to see which library is missing)

62000	Time Out
62001	Killed
62002	Unknown
62003	Failed
62004	Program terminated with an exception
62005	Invalid License
-1073741819 (C0000005)	OS specific error
-2147217394 (8004100E)	OS specific error

Crystal Print Engine Return Codes

Return Code	Description
0	Success
101	Expected a system ID in the report definition but found none
102	Make Report error
103	Unable to start print engine
104	report template file not found
105	Print Engine error
106	Invalid or missing run time parameters
107	Report name not specified on the command line
109	Group name processing encountered a memory exception
110	Can't connect to the database table
111	Can't get table info
112	Can't logon to the server
113	Cannot load a .dll
114	no data in the generated report
115	Crystal job not started
116	Crystal job failed
117	Crystal job cancelled
118	Too many data
500	There is not enough memory available to complete the call or an incorrect ODBC handle was specified.
501	You have specified a job number that does not exist.
502	You have specified a handle that does not exist.
503	The string you are calling with PEGetHandleString is too long for the buffer allocated. If returned by other routines, it means that the string does not end with a null byte.
504	You have specified a report that does not exist in the path.
505	You have made the PESTartPrintJob call without first specifying a print destination.
506	You have tried to set an Nth file name and the file number you

	specified is out of the existing range. $0 \leq \text{fileN} < N$ files.
507	There is an error in the file name you specified.
508	The field number you specified is out of the existing range. $0 \leq \text{fieldN} \leq N$ fields.
509	The program can not add the field name you specified.
510	The program can not add the formula name you specified.
511	Sort direction must be either PE_SF_DESCENDING or PE_SF_ASCENDING. You have specified a sort direction other than those allowed
512	The Report Engine must be open in order for the call to be successful. Your code is lacking a PEOpenEngine call.
513	The printer driver for the printer you specified is missing or there is no default printer installed.
514	The name you have specified for the export file already exists. You must delete the file and export again or specify a different file.
515	There is a formula error in the replacement formula text. Review the formula syntax and retry. This also returns the formula name and a formula message indicating the source of the error.
516	The group section you specified is now invalid in the report, i.e., a group is based on a formula field and the formula has changed so it is no longer suitable for basing a group on.
517	Only one application can access the Report Engine at one time. There is currently another application using the engine.
518	You have given a bad value as the section code for some function like PEGSetGroupCondition.
519	There is no print window available to make your call successful (for any call that depends on a print window already existing: PEGGetWindowHandle, PECloseWindow, PEPrintWindow).
520	You are trying to start a print job that has already been started. This can happen if you start a print job and then try to start printing again before the previous printing has finished.
521	The summary field specified as a group sort field is invalid or non-existent.
522	There are not enough Windows system resources to process the function.
523	You have specified an invalid group condition.
524	You tried to initiate printing while Crystal Reports was already printing a job.
525	There is something wrong with the report you are trying to open.
526	You have not specified a default printer. Specify a default printer via the Windows Control Panel.
527	Unable to connect to the Server or unable to successfully run

	<p>the SQL query. Some of the most common reasons for the error to occur are:</p> <ul style="list-style-type: none"> ◆ Database Driver DLLs can not be found ◆ LogOnInfo Parameters are not NULL terminated. ◆ Incorrect Logon Parameters. Ensure that the ServerName, DatabaseName, UserId, and Password are all valid for the server that you are trying to logon to. ◆ Incorrect structSize given for LogOnInfo Structure. If an incorrect value is given here, a SQL Server error may result. The correct value for the structSize is 514 ◆ Incorrect SQL Query or the query generated an ODBC error or server error.
528	You have specified an invalid line number.
529	When printing to file or when sorting, the program requires more room than is available on the disk.
530	In trying to print to file, the program is encountering another file problem besides disk full.
531	You have specified an incorrect password.
532	The database DLL is corrupt.
533	Something is wrong with the database you have specified. You may need to verify using the Database Verify Database command.
534	The database DLL is corrupt, missing or out of date.
535	You have attempted to log on using incomplete or incorrect session parameters.
536	You have attempted to log on using incomplete or incorrect log on parameters.
537	The table you have specified can not be found.
538	The structure size of the structure parameter has not been set correctly.
539	You have specified an invalid date using the PSESetPrintDate function.
540	The DLL required by your export call is either missing or out of date. This error can also be caused by an invalid export options parameter.
541	An export DLL has reported an error.
542	You are using the previous page control in the print window when you are already at the first page of the report.
543	You are using the next page control in the print window when you are already at the last page of the report.
544	Access to report file denied. Another program or user may be

	using it. If an OLE-based report is already open in CRW and you are trying to open it via CRPE, the call will fail.
545	The user clicked the cancel button.
546	The program can not open the report (which includes an OLE 2.0 object) because OLE 2.0 can not be loaded.
547	You have specified an invalid row or column field in your Cross-Tab report.
548	You are trying to run a Cross-Tab report without specifying a summarized field.
549	You have called PEDecodeExportOptions before first calling PEGetExportOptions.
550	You have used an invalid page number with PESHownNthPage.
552	Returned by PEsSetNthParam when there is no table in the current report that is based on a stored procedure.
553	The parameter you have specified does not exist in the stored procedure, or the value you have entered is not valid for the specified parameter.
554	The graph specified for the section does not exist.
555	The graph type you have indicated with PEsSetGraphType is not valid.
556	Returned by PEsSetGraphData if:n
557	Returned by PEsSetGraphData if the report is not a Cross-Tab, and colGroupN differs from the graph's current value for colGroupN.
558	Returned by PEsSetGraphText. The graph text structure PEGraphTextInfo contains an invalid entry.
559	Returned by PEsSetGraphOptions. The graph options structure, PEGraphOptions contains an invalid entry.
560	Returned by PEsSetMinimumSectionHeight. The section height specified is either negative or 0; it must be a value greater than 0..
561	Returned by PEsSetNthParameterField. The valueType specified in the PEPParameterFieldInfo structure is invalid for a parameter field. It must be one of the following: number, currency, Boolean, date, or string
562	Returned by PEsOpenSubreport. The subreport name passed does not exist.
564	Returned by PEsSetDialogParentWindow. The parent window handle specified is invalid.
565	Returned by PEsZoomPreviewWindow. The zoom factor passed in the level parameter is invalid. It must be 0, 1, 2 >= 25, <= 400, or one of the defined constants.
567	Returned if the total length of the page header and page footer is greater than the length allotted for a page.
568	Returned if GDI memory gets down to 10%. The program will

	give this message rather than GPF.
570	Returned when the user passes in an invalid group number. This can happen, for example, when the user passes an invalid group number to PEAddGroup.
572	Returned when the user passes in a negative value where a value greater than zero should be passed. This can happen, for example, when the user passes a negative section height to PEsSetMinimumSectionHeight.
573	Returned when the user passes in an invalid pointer, for example, an invalid structure pointer, an invalid string pointer, etc.
594	Returned when the user passes in an invalid parameter field number, for example, when the user passes an invalid parameter field number to PEsSetNthParameterField.
599	Returned when the user passes invalid information to PELogonServer, or PELogOffServer. This can happen, for example, if the user does not specify the server name.
692	Invalid export DLL or export format. Compare versions of existing crystal DLLs under all directories that are part of system PATH variable, with the versions mentioned in the Reporter release notes. Rename redundant/old Dlls, if found.
723	Failed to open a rowset. This error occurs when incompatible report templates are used. Please refer to the 'RepCrys Problems' section above.
998	This error occurs when the Report engine is trying to build a report (group) and there is no data available. This is generally because the Crystal DLLs are not in sync (Crystal 7 vs. Crystal 8). Solution: remove the DLLs that are listed in the release notes for the Crystal Runtime Engine in the <winsys/sys32> directory and the <winsys/crystal> directory, then re-install Reporter. DLL conflicts will be resolved.
999	Internal error.

Windows Specific Error Codes

http://msdn.microsoft.com/library/en-us/debug/base/system_error_codes.asp

Checklist Questions for Isolating Problems in Reporter

- What version of Reporter are you running?

- What version of SPI are you running? (DB-SPI, Exchange-SPI, SAP-SPI, etc.)
- Integration with other products – NNM, OVO, OVIS
- Which database and which version of the database are you using?
- What Service Pack is the system running?
- What version of Crystal Reports do you have installed (if applicable)?
- Is 'Tracing' turned on and do you have the trace files?
- Integration with DSI log file?
- What is the Gather interval?
- What is the displayed symptom? :
 - Error messages
 - No reports
 - Wrong reports
 - Reporter won't run

OpenView Knowledgebase

OpenView's award winning support site:

<http://support.openview.hp.com/support.jsp?fromOV=true>.

<http://support.openview.hp.com/selfsolve/do/search>

Among other things, you'll find patches, manuals, FAQs and a knowledge database of known problems and work-arounds.