

HP Operations Manager Target Connector Check Utility



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Introduction

This document describes the usage of the HP Operations Target Connector license check utility.

HP introduced the HP Operations Target Connector (TC) License-to-Use in late 2007 for the HP Operations Manager products. Affected products are:

- HP Operations Manager version 8.10 and higher for UNIX® (HPOM for UNIX)
- HP Operations Manager version 8.00 and higher for Windows® (HPOM for Windows)

The HP Operations Target Connector License-to-Use definitions also apply for HP Operations Manager version 9.00 for UNIX® and HP Operations Manager version 9.01 on Linux, and higher versions.

The HP Operations Target Connector license check utility is designed to provide structured assistance to determine the correct number of TC licenses that your installation requires. Because it is not always possible to programmatically determine when a Target Connector LTU is required, this tool cannot be considered as license accounting or auditing tool. It provides assistance only. For all nodes in the Operations Manager database that do not have an HP Operations Agent installed, you need to determine yourself if a TC license is required. If required, set the “TCL needed” flag to “yes”. Your user settings are honored the next time the TC check utility runs.

The HP Operations Target Connector definition with a detailed description of use cases in which the LTU is required and which exceptions exist can be found in the document *Additional License Restrictions for HP Operations Center Software products*. This document can be downloaded from <http://support.openview.hp.com/licenses.jsp> under “Additional License Restrictions” checking for *Operations Center*.

If you manage many nodes in HP Operations Manager configured as “external nodes” via a node name or IP address pattern or as “message allowed” nodes, the TC check utility eases the determination of potential TC systems that can then be evaluated by you as a system that requires a TC license, or not.

In case not explicitly listed, comments in this document for HP Operations Manager for UNIX also apply to HP Operations Manager on Linux.

Disclaimer

The HP Operations Target Connector license check tool cannot be used as the sole mechanism for verifying that your licensing and deployed configuration are legally compliant.

The tool is intended to assist you in undertaking the checks necessary to ensure compliance – but it is not a replacement for manual validation processes.

Structure of This Document

The document is structured in various chapters. You only need to read the relevant portion depending on whether you run this utility for HPOM for UNIX, HPOM on Linux, or HPOM for Windows.

- Target Connector License Check Utility Overview
 - HPOM for UNIX or Linux Specific Aspects
 - HPOM for Windows Specific Aspects
- Download and Installation
 - HPOM for UNIX or Linux Specific Aspects
 - HPOM for Windows Specific Aspects
- Troubleshooting

Information about how to request and install Target Connector license keys on your HPOM server is found in the latest revision of the following documents:

- HPOM for UNIX Release Notes (version 8.33 or higher, version 9.00 or higher)
- HPOM on Linux Release Notes (version 9.01 or higher)
- HPOM for Windows online help (version 8.00 or higher)

Audience

This paper is intended to be used by HP Software consultants, HP Software partners and customers involved in ordering and auditing HP Software licenses.

The document assumes a general knowledge of:

- HP Operations Manager for UNIX, HP Operations Manager on Linux, or HP Operations Manager for Windows
- HP's License Key Management Software AutoPass
- HP's Password Ordering and Delivery Process
- For HPOM for UNIX and HPOM on Linux: Oracle Client Software

Latest Version of This Document

The latest version of this document can be downloaded from

<http://support.openview.hp.com/selfsolve/manuals>

- product "Operations Manager for UNIX" version "8.0" or "9.00"¹
- product "Operations Manager for Windows" version "7.50" and "8.10".

¹ This category also includes the HP Operations Manager on Linux documents.

Supported Versions of HP Operations Manager

The Target Connector check utility supports the following versions of the HP Operations Manager:

HPOM for UNIX:

- 8.2x, 8.3x (using Oracle 10 or Oracle 11)
- 9.0x (using Oracle 11)

HPOM on Linux:

- 9.0x

HPOM for Windows:

- 7.5x² (using SQL Server 2000, 2005 and SQL Server Express 2000)
- 8.1x (using SQL Server 2000, 2005, 2008 and SQL Server Express 2005)

² Although the Target Connector license is only required for HPOM version 8 and higher, you can run the TC check utility already against HPOM for Windows 7.5 so that you can plan pro-actively for your TC license needs.

Target Connector Check Utility Overview

The Target Connector Check utility determines the actual number of nodes configured and known by the HP Operations Manager database. The HPOM database does not need to run on the same system as the TC check utility as long as a remote connection can be established via SQL. The HPOM server processes do not need to run, but the database must be running when executing the TC check utility.

Because the number of required Target Connector licenses might vary significantly over time, it is recommended to run the TC check utility regularly.

For every system you add that, according to your assessment, does not require a TC license, it is highly recommended that you add a corresponding comment to the target connector results file (see example below) – for example, printer, router, managed by HP software SiteScope / Network Node Manager, and so on. You can add a comment at the end of each node entry starting with the number sign (#). NOTE: lines starting with a number (#) will be removed when the next TC check utility is run.

If an HP Operations Agent is installed on a node, the TC check utility will mark this accordingly in the TC results file. No additional TC license is needed for nodes that are running a licensed agent.

The TC check utility treats currently disabled nodes as normal nodes, because “disabled” is only a temporary status for the managed node types “controlled”, “monitored-only”, and “message allowed”.

For identifying duplicate entries the combination of <hostname> and <IP_address> will be used. This means, in case you have (by accident) configured a node with short hostname and a long hostname – each with the same IP address – the TC check utility will list both entries.

The TC check utility does not use any dynamic name resolution (for example querying to a DNS server or evaluating /etc/hosts on UNIX) nor does it perform an actual HP Operations agent installation status check. Only the data stored in the HPOM database will be evaluated. If you have performed a domain change or IP address change, this might not yet be reflected in the HPOM database and requires your manual configuration change. The TC check utility can help you to detect such inconsistencies.

TC Results File Example

```
# opctc run: 02/18/2009 14:45:24
# opctc run on system: omusv1.subneta.mycorp.com
# number of nodes with "Agent installed" flag set to yes: 3
# number of nodes with "Agent installed" flag set to no and flag "TCL needed" set to yes: 1
# number of nodes with "Agent installed" flag set to no and flag "TCL needed" set to no: 3
# number of nodes with "Agent installed" flag set to no and flag "TCL needed" set to ?: 2
# FQDN                IP Address      date found  Agent      TCL      Comment
#                   installed      needed
# -----
node1.subneta.mycorp.com    10.40.23.09    02/18/2009  yes        no
omusv1.subneta.mycorp.com  10.40.23.68    02/18/2009  yes        no
node2.subneta.mycorp.com   10.40.23.25    02/18/2009  yes        no
fileserver2.subneta.mycorp.com 10.40.23.30    02/18/2009  no         yes      # managed by non-HP SW X
hpprinter17.subnetb.mycorp.com 10.103.03.44  02/18/2009  no         no       # HP Printer
corprouter4.subnetb.mycorp.com 10.103.03.48  02/18/2009  no         no       # Router
webserver1.subneta.mycorp.com 10.40.03.42    02/18/2009  no         no       # monitored by SiteScope
node4.subnetc.mycorp.com    10.69.04.39    02/18/2009  no         ?
node5.subnetc.mycorp.com    10.69.04.11    02/18/2009  no         ?
```

The TC Results file header portion is re-written each time you run the TC check utility.

The “date found” field helps you to identify when a node was found the last time in the HPOM database. An old entry could mean that the system is no longer managed by HPOM. You can delete such entry manually. Conversely, if you are sure that a system is no longer managed by HPOM, but that system is still detected by the TC check utility, you may want to check your HPOM configuration and, if necessary, clean up the database accordingly. See also the troubleshooting section of this document for more details about this scenario.

NOTE: as valid entries for “Agent installed” and “TCL needed” only the words “no” and “yes” can be used, abbreviations and upper case are not allowed.

After each run of the TC check utility, you should assess all new “?” entries to determine if a TCL is needed. It is highly recommended to add a comment for each entry at the end of each line starting with #, explaining why or why not a TC license is needed (see example above).

Your settings per node entry will be honored when the TC check utility is run again.

NOTE: additional comment lines will not be kept by the next TC check utility run.

If you have configured a node of type “non IP” for HPOM for UNIX or HPOM on Linux, the IP Address field will show 0.0.0.0. You should keep such entries.

NOTE: the IP address field is always empty for HPOM for Windows. There is no need to fill in the corresponding IP addresses manually.

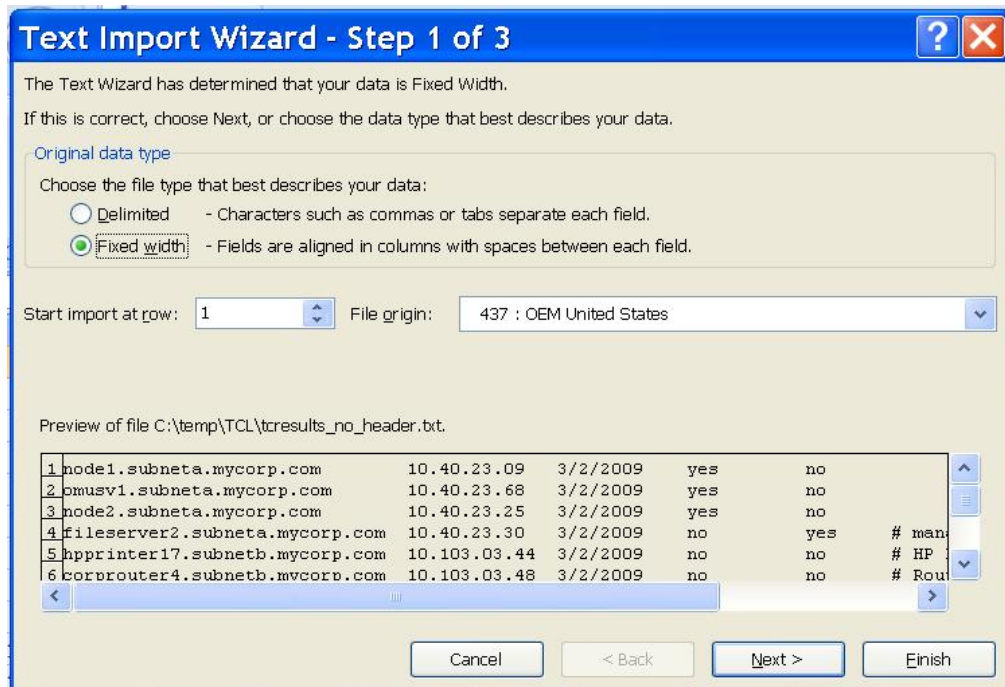
Editing the TC Results File with a Spreadsheet Tool

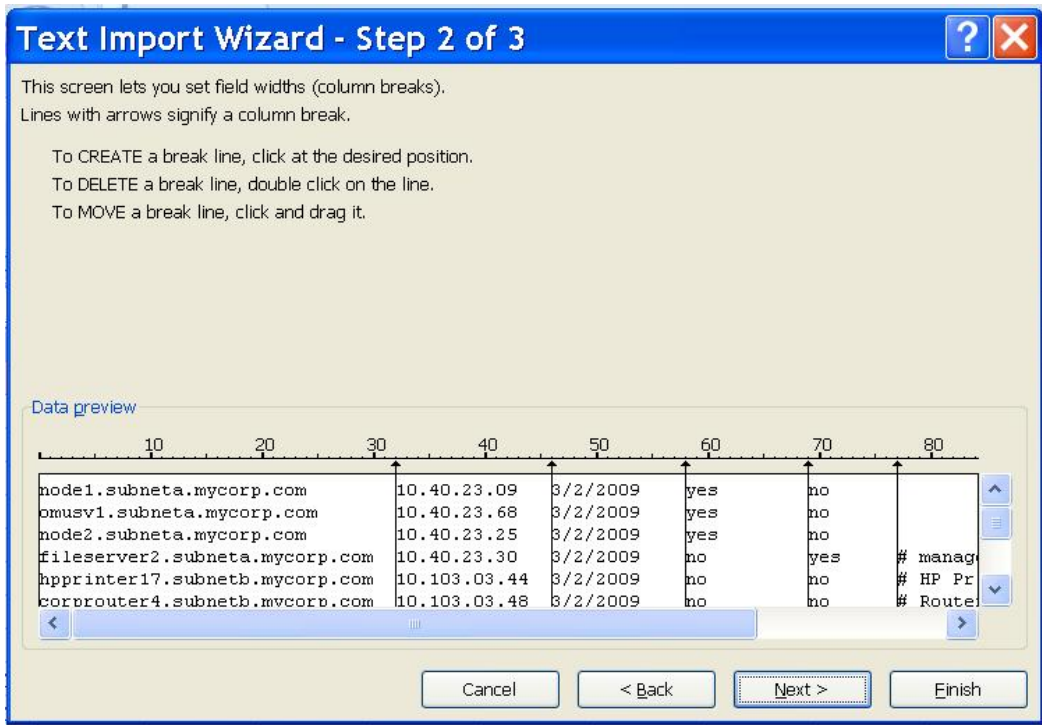
If many nodes must be manually assessed, it is highly recommended to load the TC results file (without the header) into a spreadsheet tool such as Microsoft Excel.

To use this modified file again for the next TC check utility run, you must save it again in the TC results file format (with or without header) as text file.

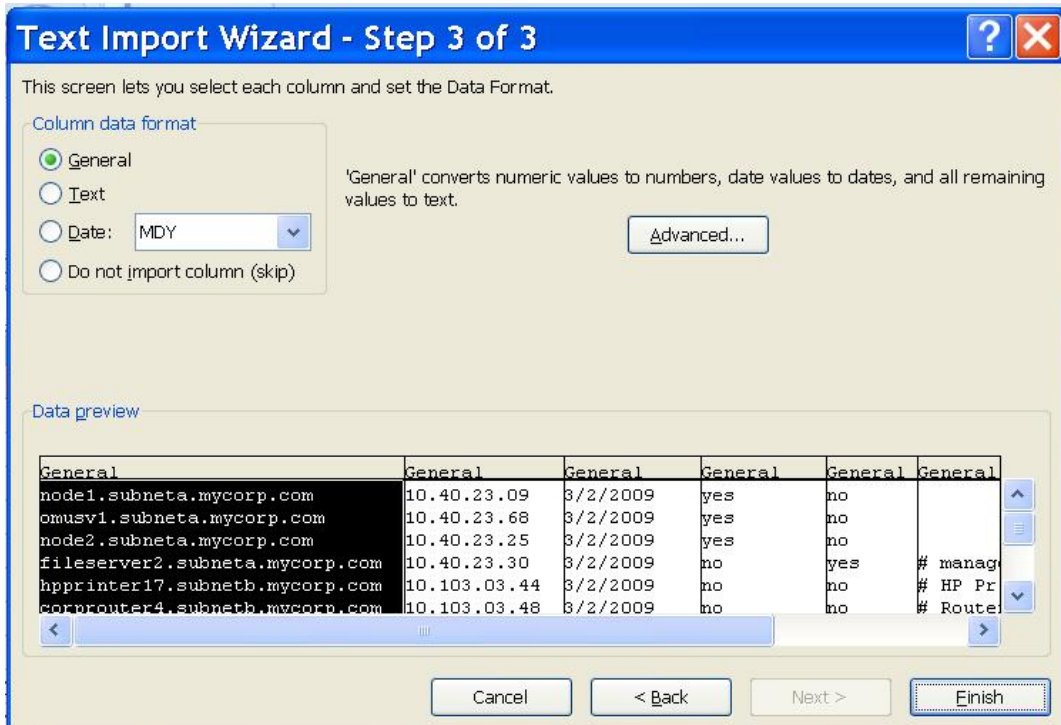
NOTE: you will get better results if you do not perform a copy & paste of the TC results node entries into a spreadsheet tool, but instead use the open text import wizard feature to set the appropriate column width.

For example, with Microsoft Excel 2007:





NOTE: carefully manage the column break lines even for parts in the data preview window that are not fully visible. The comment column is sometimes difficult to see. Ensure that the hash (#) character is always the first character in the comment cell of each row.



TC Check Utility Parameters for HPOM for UNIX or Linux

The TC check utility comes with several parameters options.

Please note that you need to type a blank space between the option character and the actual option value. For example `-o output.txt` instead of `-ooutput.txt`, otherwise, the option will be ignored.

To run the TC check utility for HPOM for UNIX or Linux, you must know a valid Oracle user/password combination. It is recommended to use the db user "opc_report" (which is created by default during the HPOM for UNIX or Linux installation), because this db user has only database read-access rights.

**# opctc [-u db_user -p db_password -n host [-c port] [-s SID]]
[-h] [-v] [-o tcfiler] [-l logfile] [-e file,[file2, ...]] [-i]**

- h Prints the opctc usage information - incl. its actual version string.
- v Verbose mode.
Also helpful for initial troubleshooting to check which options / files get processed.
- u db_user Database user to access the HPOM for UNIX or Linux database.
- p db_password Password for database user to access the HPOM for UNIX or Linux database.
- n host System, where the remote HPOM for UNIX or Linux database is running.
Default: local system.
- c port Port of Oracle listener. Default: 1521
- s SID Oracle database SID. Default: openview
- o tcfiler TC input/results file. Default: tc.txt
In case this file does already exist, it will be used as input for further comparisons and its current version is saved as `<tcfiler>.<date>_<time>`.
`<date> ::= mm_dd_yyyy; <time> ::= hh_mm_ss`
See above chapter for an example of this TC input/results file.
- l logfile TC file containing the duplicate nodes having different settings in the column 'Agent installed' and/or 'TCL needed', which need to get resolved by the user.
Default: tc.log
- e file1,[file2,...] Instead of running a database query, the files file1, file2, ... will be compared.
If the results file (which has been specified with the `-o` parameter) exists, this file will be included in the comparison.
In case no `-o` parameter is specified but tc.txt exists, it will be used for the comparison as well.
The files file1, file2, ... are results files of previous TC check runs.
The new results file will be written as specified by the `-o` option.
In case the `-o` option has not been specified, the results will be written to tc.txt.
The `-e` option is especially helpful, if you like to consolidate also information from multiple HPOM servers.
- i Entries with the same hostname and with a valid or empty IP address will be treated as the same system. This option is required in case you like to compare result files from HPOM for UNIX with HPOM for Windows in the mixed MoM use case, because the IP address field is empty for HPOM for Windows.

In case mandatory parameters are missing, opctc will interactively prompt you.

Oracle Database Character Settings

The Oracle database for HPOM for UNIX version 8.33 or higher can be configured for different character sets, such as WE8ISO8859P15, EE8ISO8859P2, JA16SJIS, and AL32UTF8.

You can determine the actual Oracle database setting by running the following command on the HPOM for UNIX server:

```
# grep -i CHARACTER_SET /etc/opt/OV/share/conf/ovdbconf
```

The TC check utility does not need any kind of special settings to query Oracle databases configured for different locales.

HP Operations Agent Check Algorithm

The TC check utility determines if an HP Operations Agent is installed on a node by evaluating the CORE-ID set in the HPOM database. You can manually run this test on the HPOM for UNIX server with the following command:

```
# opcnode node_name=<node> -list_id
```

TC Check Utility Parameters for HPOM for Windows

The TC check utility comes with several parameters options.

Please note that you need to type a blank space between the option character and the actual option value. For example `-o output.txt` instead of `-ooutput.txt`, otherwise, the option will be ignored.

In case the `'-n'` parameter is not specified, it is assumed, that the HPOM for Windows database is running locally. All credential parameters (`-u`, `-p`) are ignored and `opctc` uses the Windows security context of the user who has started `opctc` to connect to the HPOM for Windows database running locally.

In case the `'-m'` parameter is not specified, it is assumed, that the HPOM for Windows server is running locally. All credential parameters (`-t -q`) are ignored and `opctc` uses the Windows security context of the user who has started `opctc` to connect to the HPOM for Windows database running locally.

**# opctc [-u db_user -p db_pwd [-s db_engine] -n db_host]
[-t os_user -q os_pwd [-w workgrp] -m omw_host]
[-h] [-v] [-o tcfile] [-l logfile] [-e file,[file2, ...]] [-i]**

| | |
|---------------------------|--|
| <code>-h</code> | Prints the <code>opctc</code> usage information - incl. its actual version string. |
| <code>-v</code> | Verbose mode. Also helpful for initial troubleshooting to check which options / files get processed. |
| <code>-u db_user</code> | Database user to access a remote HPOM for Windows database – meaning not running on the local system where <code>opctc</code> has been started. |
| <code>-p db_pwd</code> | Password for database user. |
| <code>-s db_engine</code> | Name of the database engine to connect to. Default: <code>ovops</code> |
| <code>-n db_host</code> | System where the HPOM for Windows database is running. In case a local HPOM for Windows database is queried, the security context of the current user who has started <code>opctc</code> is used and the specified OS user and database user parameters will be ignored. Default: local system. |
| <code>-t os_user</code> | Windows OS user name to connect to the remote Windows system, where the HPOM for Windows server is running. |
| <code>-q os_pwd</code> | Password for Windows OS user. |
| <code>-w workgroup</code> | Workgroup / domain name of the Windows user. This option must be set in case the Windows OS user account is a domain account and not the local one of the HPOM for Windows server. Default: no value |
| <code>-m omw_host</code> | System where the HPOM for Windows server is running. In case a local HPOM for Windows system is queried, the security context of the current user who has started <code>opctc</code> is used and the specified OS user and database user parameters will be ignored. Default: local system |
| <code>-o tcfile</code> | TC input/results file. Default: <code>tc.txt</code> If this file already exists, it will be used as input for further comparisons and its current version is saved as <code><tcfile>.<date>_<time></code> . <code><date> ::= mm_dd_yyyy; <time> ::= hh_mm_ss</code> See above chapter for an example of this TC input/results file. |
| <code>-l logfile</code> | TC file containing the duplicate nodes having different settings in the column 'Agent installed' and/or 'TCL needed', which need to get resolved by the user. Default: <code>tc.log</code> |

- e file1,[file2,...] Instead of running a database query, the files file1, file2, ... will be compared.
 - If the results file (which has been specified with the -o parameter) exists, this file will be included in the comparison.
 - In case no -o parameter has been specified but the tc.txt exists, it will be used for the comparison as well.
 - The files file1, file2, ... are results files of previous TC check runs.
 - The new results file will be written as specified by the -o option.
 - In case the -o option has not been specified, the results will be written to tc.txt.
 - The -e option is especially helpful, if you like to consolidate also information from multiple HPOM servers.
- i Entries with the same hostname where one entry has an empty IP address and another entry has a valid IP address will be treated as the same system. This means the entry with an empty IP address will be discarded. This option is required in case you like to compare result files from HPOM for UNIX or HPOM on Linux with HPOM for Windows in the mixed MoM use case, because the IP address field is empty for HPOM for Windows.

Example: Calling opctc with verbose option; HPOM for Windows server and SQL Server database are running locally on same system.

```

C:\WINDOWS\system32\cmd.exe
C:\temp\opctc_windows>opctc.exe -v
OS User:           Using context of current user
OS Password:       Using context of current user
OM host:           localhost
Workgroup:         Using context of current user
Database User:     Using context of current user
Database Password: Using context of current user
Database host:     localhost
Database engine:   ovops
Database:          openview
WMI Path:          root\hewlettpackard\openview\data
Input/Result file: ./tc.txt
Ignore 0.0.0.0 IPs:
Files to compare:

Checking if a result file ./tc.txt from a previous run exists.
File ./tc.txt not found. I will create a new one.

Connecting to WMI interface on localhost with security context of current user.
OU major version number is 8

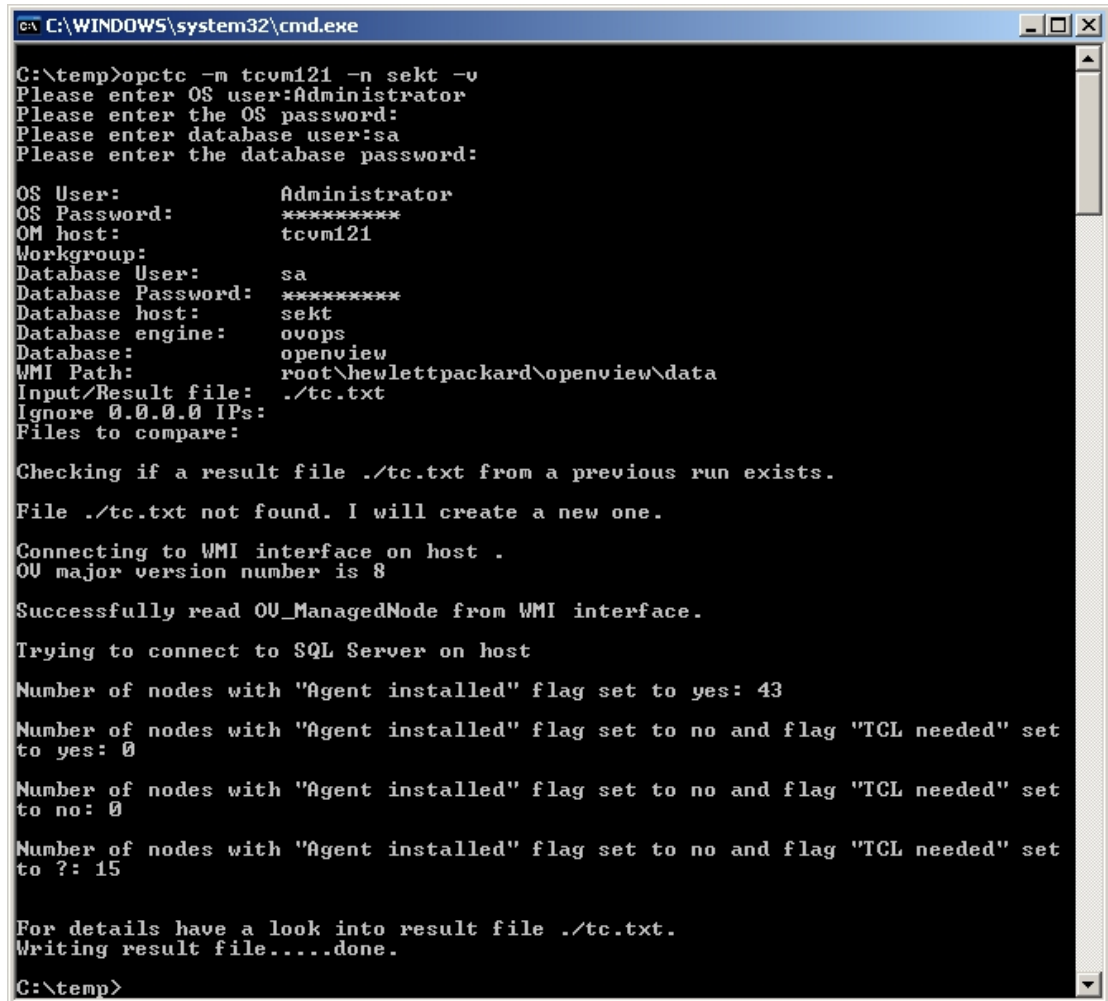
Successfully read OU_ManagedNode from WMI interface.

Trying to connect to SQL Server on host
Number of nodes with "Agent installed" flag set to yes: 6
Number of nodes with "Agent installed" flag set to no and flag "TCL needed" set
to yes: 0
Number of nodes with "Agent installed" flag set to no and flag "TCL needed" set
to no: 0
Number of nodes with "Agent installed" flag set to no and flag "TCL needed" set
to ?: 7

For details have a look into result file ./tc.txt.
Writing result file.....done.
C:\temp\opctc_windows>_

```

Example: Calling opctc with verbose option; HPOM for Windows server is running on node tcvm121 and SQL Server database is running node sekt.



```
C:\WINDOWS\system32\cmd.exe
C:\temp>opctc -m tcvm121 -n sekt -v
Please enter OS user:Administrator
Please enter the OS password:
Please enter database user:sa
Please enter the database password:

OS User:           Administrator
OS Password:       *****
OM host:           tcvm121
Workgroup:
Database User:     sa
Database Password: *****
Database host:     sekt
Database engine:   opovps
Database:          openview
WMI Path:          root\hewlettpackard\openview\data
Input/Result file: ./tc.txt
Ignore 0.0.0.0 IPs:
Files to compare:

Checking if a result file ./tc.txt from a previous run exists.
File ./tc.txt not found. I will create a new one.

Connecting to WMI interface on host .
OU major version number is 8

Successfully read OU_ManagedNode from WMI interface.

Trying to connect to SQL Server on host

Number of nodes with "Agent installed" flag set to yes: 43
Number of nodes with "Agent installed" flag set to no and flag "TCL needed" set
to yes: 0
Number of nodes with "Agent installed" flag set to no and flag "TCL needed" set
to no: 0
Number of nodes with "Agent installed" flag set to no and flag "TCL needed" set
to ?: 15

For details have a look into result file ./tc.txt.
Writing result file....done.
C:\temp>
```

More examples:

- HPOM for Windows server is running on node tcvm121, HPOM for Windows database is running locally:
opctc -m tcvm121
- HPOM for Windows server is running locally, HPOM for Windows database is running on node sekt:
opctc -n sekt
- HPOM for Windows server is running on node tcvm121, HPOM for Windows database is running locally and database engine name is management:
opctc -m tcvm121 -s management
- HPOM for Windows server is running locally, HPOM for Windows database is running on node sekt and database engine name is management:
opctc -n sekt -s management

Windows and SQL Server Access Information for Remote Queries

To run the TC check utility for HPOM for Windows for a remote HPOM for Windows server and a remote database you must specify in addition to a valid SQL server users/password also a valid Microsoft Windows operating system user/password combination as well as an appropriate workgroup / domain name.

The HPOM for Windows 7.5x database is queried using only the WMI access method, therefore no db_user/db_password is needed. The HPOM for Windows 8.10 or higher database is queried using WMI and SQL statements to be able to determine also nodes configured by the “external node” patterns.

Configuring SQL Server for remote access

The detailed configuration steps can be retrieved out of the Microsoft knowledge base article 914277:

<http://support.microsoft.com/kb/914277>

Multiple HPOM Server Aspects (MoM)

If you are using a flexible management setup (also known as Manager-of-Manager or MoM), you can run the TC check utility against different HPOM servers in a serial fashion applying the previous TC results file as input file for the next run.

Before doing any kind of manual assessment, it's recommended to run the TC check utility against all your HPOM servers and then consolidate the individual TC results files by using the "-e" option. This is especially helpful in situations, where not every node is configured as having an HPOM agent installed on each HPOM server, but maybe just configured as "message-allowed" or via an "external node" pattern on some HPOM servers.

Mixed HPOM Server Aspects (Mixed MoM)

In case you have a mixed HPOM environment, you can combine the TC results files for HPOM for UNIX or Linux and HPOM for Windows. They have exactly the same format.

In case some systems are configured for HPOM for UNIX or Linux and HPOM on Windows (for example, in a hierarchical MoM setup), you need to specify the additional opctc parameter -i to ignore the empty IP address fields as retrieved for the HPOM for Windows check. Using the -i option will treat entries with the same hostname with or without an IP address as the same host.

NOTE: the TC check utility for HPOM for UNIX or Linux can only assess Oracle databases and the TC check utility for HPOM for Windows can only assess SQL Server or SQL Server Express databases, but you can apply any version for running the "mixed MoM" check using the -e and -i options.

Download and Installation

The Target Connector check utility can be downloaded from the following location:

<ftp://ovweb.external.hp.com/pub/cpe/ito/tcl>

Different download packages (zip files) are provided for:

- HPOM for UNIX or HPOM on Linux: omu_opctc.zip (size: ~ 3MB)
- HPOM for Windows: omw_opctc.zip (size: ~3MB)

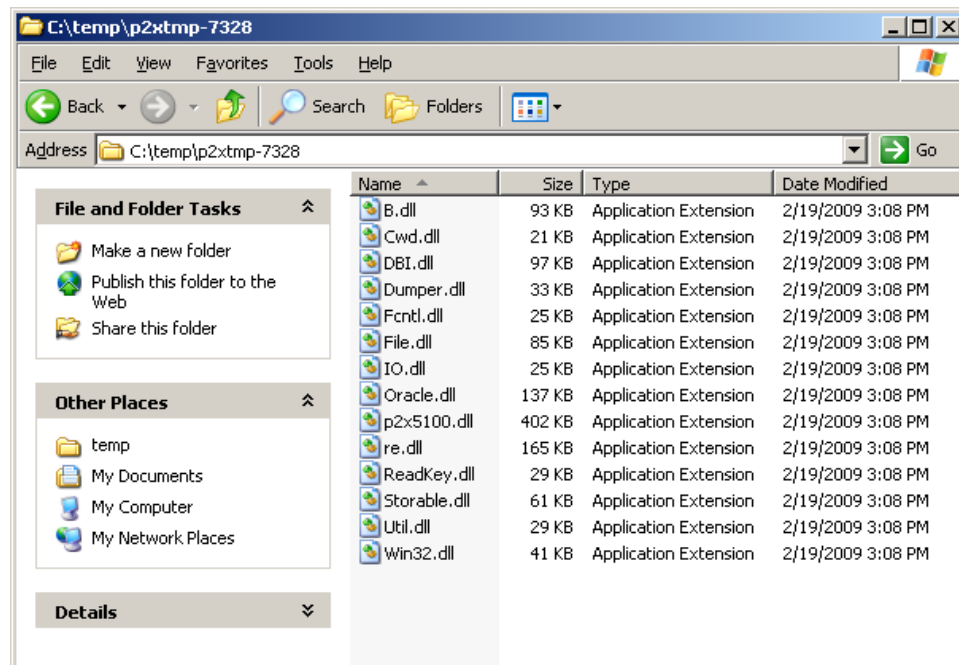
The TC check utility – provided as an executable – is based on Perl modules, so corresponding Perl DLLs are loaded as well. The zip file also contains the latest version of this document.

The TC check utility has been tested on the following Microsoft Windows platforms only:

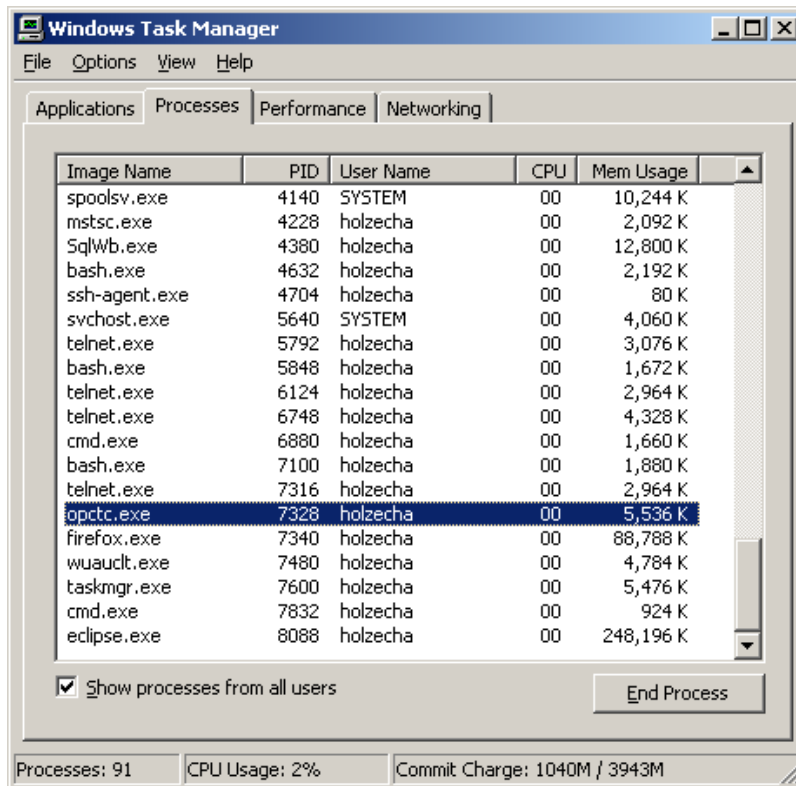
- Microsoft Windows XP SP3
- Microsoft Windows 2003 Server SP2
- Microsoft Windows Vista

Please check this ftp download location from time to time, to see if a newer version of the TC check utility is available.

NOTE: During opctc runtime, opctc will create a temporary sub-directory in the folder which is defined as system temp directory by the environment variable %temp% on Windows systems. During the execution some libraries are placed inside the directory %temp%\p2xtmp-<PID>. Required disk space is approximately 2 MB. This directory will be erased after successful termination of opctc.



Running the TC check utility opctc does not require a lot of memory.



Running the TC check utility opctc against HPOM for UNIX or Linux does normally take less than a minute, running opctc against HPOM for Windows might take several minutes.

In case the TC check utility runs pretty long, you can use the “-v” verbose option to monitor the processing steps.

Installation on Microsoft Windows for HPOM for UNIX or Linux

Since the TC check utility does support remote Oracle database queries, there is no need to install the TC check utility on the HPOM for UNIX or Linux server system. This also means that your current HPOM production environment remains completely untouched.

For HPOM for UNIX or Linux, the Oracle InstantClient package (~150 MB) must also be installed on the Microsoft Windows platform as well.

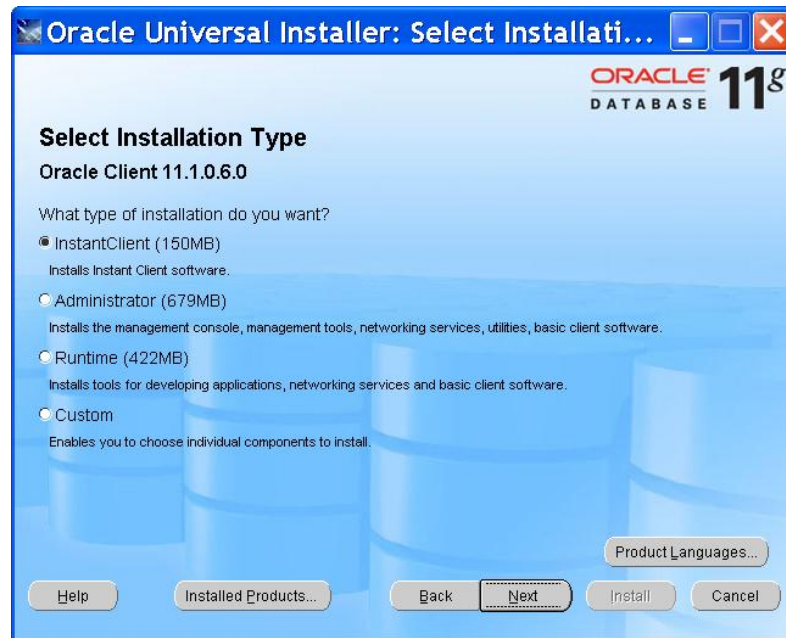
The following Oracle InstantClient package version has been tested:

- Oracle 11.1.0.6

If needed, the Oracle InstantClient package can be downloaded from:

<http://www.oracle.com/technology/software/products/database/index.html>.

NOTE: a new Oracle client can also connect to an older Oracle backend. For example, with the Oracle 11 InstantClient you can also query an Oracle 10g database.



Installation steps:

1. Create a new directory, for example, c:\temp\TCL
2. Unzip the omu_opctc.zip into that new directory
3. If the Oracle Client package needs to be installed, perform the following steps:
 - a. Create a new directory, for example. c:\temp\TCL\Oracle11_client
 - b. Run the Oracle setup.exe program and specify the new directory as the install location
 - c. Make sure that the ORACLE_HOME is set properly as system variable

Installation verification steps:

1. Switch to the directory where you installed the TC check utility package, for example c:\temp\TCL
2. Run "opctc -h" to verify that the tool is working

Installation on Microsoft Windows for HPOM for Windows

Since the TC check utility does not support remote database queries, there is no need to install the TC check utility on the HPOM for Windows server system, but you can do so as well. This means that your current HPOM for Windows production environment can remain completely untouched.

For querying the HPOM for Windows database, the SQL Server Native Client package (~4 MB) must also be installed on the Microsoft Windows platform where you like to run the TC check utility. In case you have already installed an SQL Server product on that Microsoft Windows system, you don't need to install SQL Native Client package anymore.



Even if you run an older SQL Server database, you can use the SQL 2008 Native Client to access the SQL Server backend.

If needed, the SQL Server Native Client package (sqlncli.msi) can be downloaded from:
<http://go.microsoft.com/fwlink/?LinkId=123717&clcid=0x409>

Installation steps:

4. Create a new directory, for example, c:\temp\TCL
5. Unzip the omw_opctc.zip into that new directory
6. If the SQLNCLI package still needs to get installed, run the corresponding MSI Installer package (sqlncli.msi).

Installation verification steps:

3. Switch to the directory where you installed the TC check utility package, for example c:\temp\TCL
4. Run "opctc -h" to verify that the tool is working

De-Installation

De-Installation on Microsoft Windows for HPOM for UNIX or Linux

De-Installation Steps:

1. If applicable, run the Oracle Universal Installer to remove the Oracle Client Instant package
2. Remove the entire directory, where you have installed the TC check utility, for example, c:\temp\TCL

De-Installation on Microsoft Windows for HPOM for Windows

De-Installation Steps:

1. If applicable, run the SQL Server Native Client Setup (sqlncli.msi) to remove this package. NOTE, sqlncli might update also other shared libraries used e.g. by Outlook or Internet Explorer. During the de-installation you get prompted, if you like to continue. To avoid any kind of problems, you might want to close those referenced applications before you finish the de-installation.
2. Remove the entire directory, where you have installed the TC check utility, for example, c:\temp\TCL

Troubleshooting and Support

NOTE: the Target Connector check utility is only a **contrib tool**, but HP will provide regular updates when needed.

In case of problems, you can log a change request at HP support, but HP is not required to provide you a solution according to the terms and conditions of your active HP support contract. In case you log a change request, please pro-actively provide a snapshot of your opctc run using verbose option.

You install this contrib package on your own risk.

In the following table, you will find some hints for the most common problems and scenarios known today:

| Problem / Symptom | Resolution / Workaround / Explanation |
|---|---|
| HPOM for UNIX / HPOM on Linux / HPOM for Windows Related Aspects | |
| TC results file still contains a node entry which is no longer managed by HPOM. Even after manually removing that entry from the TC results file, the TC check utility discovers this node again. | HPOM for UNIX: You can clean up the Oracle database by running the tool opcdbidx(1m). |
| TC results file contains entries with the same host name, but different IP addresses. | This could be a valid scenario in case multiple HPOM servers are assessed. It could be also mean, that a recent IP address change is not yet propagated to all HPOM servers. |
| TC results file contains entries with different host names, but same IP addresses. | This could be a valid "outsourcing" scenario if multiple HPOM servers are assessed. For example, multiple clients use the same non-restricted IP address subnet (for example, 10.*). |
| HPOM for UNIX / HPOM on Linux Only Related Aspects | |
| TC results file reports "no agent installed" for nodes still running the DCE agent. | Since 2008, DCE agents are no longer supported for HPOM for UNIX 8.xx. If you still have DCE agents in use and cannot migrate to the HTTPS agents, you can manually change the "Agent installed" flag to "yes" and "TCL needed" flag to "no" in the TC results file. Your settings will be honored in next TC check utility runs. |
| Oracle database user/password not known. | Contact your Oracle DBA to get the password for opc_report or opc_op database user. |
| HPOM for Windows only Related Aspects | |
| Connection to remote SQL Server database cannot be established. | Check the chapter "Remote Database Requirements" of <i>HPOM for Windows Installation Guide</i> version 8.10. The problem could be caused by disabled ports (UDP port 1434) or that SQL Server does not allow remote connections at all. Checking the current settings with the <i>SQL Server Surface Area Configuration Manager</i> might already help you pin pointing the problem. |

| | |
|--|---|
| <p>Connection to SQL Server database cannot be established</p> | <p>Make sure that you have specified the right SQL server user and password. Another reason might be that the local SQL Server instance does not use the default OVOPS name.</p> |
| <p>HPOM for Windows 8.10 or higher: "License Report for Remote Management" does report a different amount of systems requiring a Target Connector Licenses than the TC check utility opctc</p> | <p>opctc uses an enhanced algorithm in comparison to the HPOM for Windows 8.10 or higher built-in license reporting.</p> <p>Please also check the "external nodes" processing sequence in comparison to explicitly configured managed nodes in the HPOM for Windows MMC GUI, because a system could fall into both categories. In case such a system is matched first by an "external nodes" definition, it will get counted in the HPOM for Windows built-in license report as a system requiring a Target Connector license.</p> <p>Another reason for consistent numbers could be in the MoM environment use case, because the HPOM for Windows 8.10 or higher built-in license report ignores all HPOM messages from nodes, which are forwarded by another HPOM server. The opctc utility allows you to consolidate these numbers, by running the utility against multiple HPOM servers sequentially.</p> |

Appendix

Glossary

| | |
|------------------|--|
| HPOM | Abbreviation for the HP Operation Manager platform. |
| HPOM on Linux | HP Operations Manager on Linux; HP's System Management product on RedHat Linux. It is sometimes abbreviated as OML for technical aspects. OML is almost identical to OMU. |
| HPOM for UNIX | HP Operations Manager for UNIX, HP's System Management product on HP-UX and SUN SPARC Solaris. It is sometimes abbreviated as OMU for technical aspects. |
| HPOM for Windows | HP Operations Manager for Windows, HP's Software System Management product on Microsoft Windows. It is sometimes abbreviated as OMW in technical documentation |
| Perl | Practical Extraction and Report Language, a platform independent scripting language. |
| UUID | Universally Unique Identifier is an identifier standard used in software construction, standardized by the Open Software Foundation (OSF) as part of the Distributed Computing Environment (DCE). The intent of UUIDs is to enable distributed systems to uniquely identify information without significant central coordination. ¹ |

1) Glossary definition has being taken from <http://www.wikipedia.org>

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