HP OpenView Operations

Reporting and Database Schema

Software Version: A.08.10

UNIX

Manufacturing Part Number: None

September 2004

Legal Notices

Warranty.

Hewlett-Packard makes no warranty of any kind with regard to this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Hewlett-Packard shall not be held liable for errors contained herein or direct, indirect, special, incidental or consequential damages in connection with the furnishing, performance, or use of this material.

A copy of the specific warranty terms applicable to your Hewlett-Packard product can be obtained from your local Sales and Service Office.

Restricted Rights Legend.

Use, duplication or disclosure by the U.S. Government is subject to restrictions as set forth in subparagraph (c) (1) (ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013.

Hewlett-Packard Company
United States of America

Rights for non-DOD U.S. Government Departments and Agencies are as set forth in FAR 52.227-19(c)(1,2).

Copyright Notices.

Trademark Notices.

Adobe® is a trademark of Adobe Systems Incorporated.

HP-UX Release 10.20 and later and HP-UX Release 11.00 and later (in both 32 and 64-bit configurations) on all HP 9000 computers are Open Group UNIX 95 branded products.

Intel386, Intel80386, Intel486, and Intel80486 are U.S. trademarks of Intel Corporation.

Contents

Contents

Printing History

The manual printing date and part number indicate its current edition. The printing date will change when a new edition is printed. Minor changes may be made at reprint without changing the printing date. The manual part number will change when extensive changes are made.

Manual updates may be issued between editions to correct errors or document product changes. To ensure that you receive the updated or new editions, you should subscribe to the appropriate product support service. See your HP sales representative for details.

First Edition: February 1999

Second Edition: September 1999

Third Edition: June 2000

Fourth Edition: January 2002

Fifth Edition: May 2004

Sixth Edition: September 2004

Conventions

The following typographical conventions are used in this manual.

Table 1 Typographical Conventions

Font	Meaning	Example
Italic	Book or manual titles, and man page names	Refer to the *OVO Administrator's Reference* and the *opc(1M)* manpage for more information.
	Emphasis	You *must* follow these steps.
	Variable that you must supply when entering a command	At the prompt, enter **`rlogin`** ***`username`***.
	Parameters to a function	The *`oper_name`* parameter returns an integer response.
Bold	New terms	The **HTTPS agent** observes...
`Computer`	Text and other items on the computer screen	The following system message displays: `Are you sure you want to remove current group?`
	Command names	Use the `grep` command ...
	Function names	Use the `opc_connect()` function to connect ...
	File and directory names	`/opt/OV/bin/OpC/`
	Process names	Check to see if `opcmona` is running.
	Window/dialog box names	In the `Add Logfile` window ...
	Menu name followed by a colon (`:`) means that you select the menu, then the item. When the item is followed by an arrow (`->`), a cascading menu follows.	Select `Actions: Filtering -> All Active Messages` from the menu bar.

Table 1 Typographical Conventions (Continued)

Font	Meaning	Example
Computer Bold	Text that you enter	At the prompt, enter **ls -l**
Keycap	Keyboard keys	Press **Return**.
[Button]	Buttons in the user interface	Click [OK].

OVO Documentation Map

HP OpenView Operations (OVO) provides a set of manuals and online help that help you use the product and understand the concepts underlying the product. This section describes what information is available and where you can find it.

Electronic Versions of the Manuals

All manuals are available as Adobe Portable Document Format (PDF) files in the documentation directory on the OVO product CD-ROM.

With the exception of the *OVO Software Release Notes*, all manuals are also available in the following OVO web server directory:

`http://<management_server>:3443/ITO_DOC/<lang>/manuals/*.pdf`

In this URL, <*management_server*> is the fully qualified hostname of your management server, and <*lang*> stands for your system language, for example `C` for English and `japanese` for Japanese environments.

Alternatively, you can download the manuals from the following website:

`http://ovweb.external.hp.com/lpe/doc_serv`

Watch this website regularly for the latest edition of the OVO Software Release Notes, which gets updated every 2-3 months with the latest news such as additionally supported OS versions, latest patches and so on.

OVO Manuals

This section provides an overview of the OVO manuals and their contents.

Table 2 OVO Manuals

Manual	Description	Media
OVO Installation Guide for the Management Server	Designed for administrators who install OVO software on the management server and perform initial configuration. This manual describes: • Software and hardware requirements • Software installation and de-installation instructions • Configuration defaults	Hardcopy PDF
OVO Concepts Guide	Provides you with an understanding of OVO on two levels. As an operator, you learn about the basic structure of OVO. As an administrator, you gain insight into the setup and configuration of OVO in your own environment.	Hardcopy PDF
OVO Administrator's Reference	Designed for administrator's who install OVO on the managed nodes and are responsible for OVO administration and troubleshooting. Contains conceptual and general information about the OVO DCE/NCS-based managed nodes.	PDF only
OVO DCE Agent Concepts and Configuration Guide	Provides platform-specific information about each DCE/NCS-based managed node platform.	PDF only
OVO HTTPS Agent Concepts and Configuration Guide	Provides platform-specific information about each HTTPS-based managed node platform.	PDF only
OVO Reporting and Database Schema	Provides a detailed description of the OVO database tables, as well as examples for generating reports from the OVO database.	PDF only
OVO Entity Relationship Diagrams	Provides you with an overview of the relationships between the tables and the OVO database.	PDF only

Table 2 OVO Manuals (Continued)

Manual	Description	Media
OVO Java GUI Operator's Guide	Provides you with a detailed description of the OVO Java-based operator GUI and Service Navigator. This manual contains detailed information about general OVO and Service Navigator concepts and tasks for OVO operators, as well as reference and troubleshooting information.	PDF only
Service Navigator Concepts and Configuration Guide	Provides information for administrators who are responsible for installing, configuring, maintaining, and troubleshooting the HP OpenView Service Navigator. This manual also contains a high-level overview of the concepts behind service management.	Hardcopy PDF
OVO Software Release Notes	Describes new features and helps you: • Compare features of the current software with features of previous versions. • Determine system and software compatibility. • Solve known problems.	PDF only
OVO Supplementary Guide to MPE/iX Templates	Describes the message source templates that are available for MPE/iX managed nodes. This guide is not available for OVO on Solaris.	PDF only
Managing Your Network with HP OpenView Network Node Manager	Designed for administrators and operators. This manual describes the basic functionality of HP OpenView Network Node Manager, which is an embedded part of OVO.	Hardcopy PDF
OVO Database Tuning	This ASCII file is located on OVO management server on the following location: `/opt/OV/ReleaseNotes/opc_db.tuning`	ASCII

Additional OVO-related Products

This section provides an overview of the OVO-related manuals and their contents.

Table 3 Additional OVO-related Manuals

Manual	Description	Media
HP OpenView Operations for UNIX Developer's Toolkit If you purchase the HP OpenView Operations for UNIX Developer's Toolkit, you receive the full OVO documentation set, as well as the following manuals:		
OVO Application Integration Guide	Suggests several ways external applications can be integrated into OVO.	Hardcopy PDF
OVO Developer's Reference	Provides an overview of all available application programming interfaces (APIs).	Hardcopy PDF
HP OpenView Event Correlation Designer for NNM and OVO If you purchase HP OpenView Event Correlation Designer for NNM and OVO, you receive the following additional documentation. Note that HP OpenView Event Correlation Composer is an integral part of NNM and OVO. OV Composer usage in the OVO context is described in the OS-SPI documentation.		
HP OpenView ECS Configuring Circuits for NNM and OVO	Explains how to use the ECS Designer product in the NNM and OVO environments.	Hardcopy PDF

OVO Online Information

The following information is available online.

Table 4 OVO Online Information

Online Information	Description
HP OpenView Operations Administrator's Guide to Online Information	Context-sensitive help system contains detailed help for each window of the OVO administrator Motif GUI, as well as step-by-step instructions for performing administrative tasks.
HP OpenView Operations Operator's Guide to Online Information	Context-sensitive help system contains detailed help for each window of the OVO operator Motif GUI, as well as step-by-step instructions for operator tasks.
HP OpenView Operations Java GUI Online Information	HTML-based help system for the OVO Java-based operator GUI and Service Navigator. This help system contains detailed information about general OVO and Service Navigator concepts and tasks for OVO operators, as well as reference and troubleshooting information.
HP OpenView Operations Man Pages	Manual pages available online for OVO. These manual pages are also available in HTML format. To access these pages, go to the following location (URL) with your web browser: `http://<management_server>:3443/ITO_MAN` In this URL, the variable <*management_server*> is the fully qualified hostname of your management server. Note that the man pages for the OVO HTTPS-agent are installed on each managed node.

1 The OVO Database Schema

In This Chapter

This chapter introduces the OVO database schema. It explains the areas that this book covers and describes how to use the information provided to write and display your own reports in OVO.

Introduction

This chapter provides information about the definitions and contents of the OVO database tables. You can generate reports or perform queries via any report tools compatible with the Oracle database.

NOTE

All of the tables defined in this manual are considered read-only. You can query the tables at any time for report generation, but you must not write to the tables. *Writing to the tables directly is not supported by Hewlett-Packard.*

Also, tables and fields may change in future releases of OVO. *Hewlett-Packard does not guarantee that the reports you develop will work with future releases of OVO.*

Table 1-1 gives an overview of the organization of the information in this manual.

Table 1-1 The OVO Database

Chapter	Data
Message Tables	All data regarding OVO messages.
User Tables	All data regarding OVO users.
Node Tables	All data regarding OVO managed nodes.
Template Tables	All data regarding message source templates.
Condition Tables	All data regarding conditions of message source templates.
Other Tables	For example, data regarding OVO message groups and temporary data.
Secondary Indexes	Secondary indexes.
Foreign Keys	Foreign keys.

General Conventions

Most indexing key fields are implemented as 36-byte character Universal Unique Identifiers (UUIDs) to make key generation easier and be consistent with the object identifiers used by other OpenView databases.

OVO uses a special null ID that consists of 36 zeros, except for foreign keys which use Oracle null values.

Enumerated types are implemented as integer fields. The possible values are given in the Description column. The values for Yes/No are 1/0.

The Constraint column describes the constraints of each table column. See Table 1-2 on page 24 for the constraints that are used:

Table 1-2 Notation of the Constraint Field

Short Form	Constraint	Description
P	Primary Key	Values in primary key columns may never be null. The primary key identifies a row and therefore must be unique. If several columns in a table belong to the primary key, the combination of the primary keys has to be unique.
F	Foreign Key	A foreign key column references the primary key of another table.
N	Not Null	Not null columns must contain a value. Note that Oracle interprets an empty string as NULL. String columns that cannot contain empty strings are NOT NULL.
U	Unique Constraint	The unique column or the combination of unique columns must be unique. Note, however, that all or some columns of the unique constraint may be NULL. NULL is considered for uniqueness.

Performing Queries

OVO supports the following query methods:

- **OVO user interface**

  OVO reports that are called from the OVO user interface. OVO provides the following report types:

  - *Report programs*

    You can add your own programs as described in the section “Adding a Program Report” on page 26.

  - *SQL reports using SQL*Plus*

    You can add your own SQL reports as described in the section “Adding an SQL*Plus Report” on page 28.

  - *OVO internal reports*

    These reports use internal C functions and, consequently, may not be added or modified.

- **Reporting tools accessing the database directly**

  Reports generated by any reporting tool that can access the Oracle database.

- **Service Reports**

  OVO-specific service reports are included in the HP OpenView Reporter product and can be viewed over the web. For more information on how to add new service reports and how to go about modify existing ones, see the HP OpenView VantagePoint Reporter documentation.

Adding Your Own OVO Reports

This section gives you an idea of how to add your own reports to the list of reports already available to OVO users in the OVO GUI. It covers the following general areas:

- ❏ Adding a Program Report
- ❏ Using Variables as Parameters for Reports
- ❏ Adding an SQL*Plus Report

Adding a Program Report

If you have a program that you want to make accessible to the OVO users as a report from the GUI, you need to carry out the following steps:

1. Decide whether the report should be accessible by the administrator, by the operators, or both. Administrator reports are registered in the following file:

   `/etc/opt/OV/share/conf/OpC/mgmt_sv/reports/<LANG>/\`
   `admin.rpts`

   Operator reports are registered in the following file:

   `/etc/opt/OV/share/conf/OpC/mgmt_sv/reports/<LANG>/\`
   `oper.rpts`

2. Open the appropriate file and add or modify the following lines. The example below creates an OS user report that displays the `/etc/passwd` file:

```
REPORTNAME   OS user report
REPORTTYPE   PGM
DESCRIPTION  Show all OS users configured on this system
             (in /etc/passwd)
REPORTFILE   /bin/cat
PARM         /etc/passwd
```

Using Variables as Parameters for Reports

OVO provides a number of predefined variables that allow you to run a report about an object that is selected in the GUI, for example nodes or message groups. Table 1-3 on page 27 shows which variables are available in the administrator GUI. “Adding an SQL*Plus Report” on page 28 contains examples of the variables in use.

Table 1-3 Available OVO Variables in the Administrator GUI

Variable	Description
$node	node name of a selected managed node
$nodegrp	node group ID of the selected node group
$msggrp	name of the selected message group
$application	application ID of the selected application
$operator	user ID of the selected OVO user
$template	name of the selected template or template group

Table 1-4 on page 27 shows which variables are available in the operator GUI and from the administrator’s Message Browser.

Table 1-4 Available OVO Variables in the Operator GUI and Administrator Message Browser

Variable	Description
$message_active	message ID of selected active message
$message_pending	message ID of selected pending message
$message_history	message ID of selected history message
$operator	user ID of the OVO user that calls the report

Adding an SQL*Plus Report

This section illustrates the steps for defining a report that allows OVO users to query data from the OVO database. It uses SQL*Plus to run an SQL script. The example described creates an administrator's report that shows which users are responsible for a selected message group and what the corresponding node groups are. You will need to carry out the following steps:

1. Decide which data you need for the report. The OVO database tables and their relationships are described in the following sections of this manual.

   For this example, the table `opc_op_realm` contains details of the responsibilities of the OVO users and, in addition, the message group name that is specified as a parameter. The table `opc_user_data` lists the OVO users. The link between `opc_op_realm` and `opc_user_data` is the `user_id`, namely `opc_op_realm.user_id` -> `opc_user_data.user_id`. The table `opc_node_groups` lists the node group names and is linked to `opc_op_realm` by means of the `node_group_id`, namely `opc_op_realm.node_group_id` -> `opc_node_groups.node_group_id`.

2. Create the SQL statement that extracts the information you need. As a test, set a fixed value for the message-group name, for example:

   ```
   select distinct u.name, g.node_group_name
   from   opc_user_data u, opc_op_realm r, opc_node_groups g
   where  r.user_id        = u.user_id
   and    r.node_group_id  = g.node_group_id
   and    r.msg_group_name = 'OS'
   order  by 1,2;
   ```

   You can use, for example, SQL*Plus to test the SQL statement. You will be asked for the `opc_report` password, then enter the following command:

   `$ORACLE_HOME/bin/sqlplus opc_report@ov_net`

   To exit SQL*Plus enter: **`quit`**

3. Format your report to look like an OVO report: the formatting is done by selecting the text from the Oracle dummy table, `dual`. Since OVO reports write to the file `/tmp/rep.lst`, you have to add a corresponding spool statement: **`spool /tmp/rep`** (SQL*Plus automatically appends `.lst` to this).

SQL*Plus allows you to pass parameters. In the SQL*Plus script, the first parameter is referred to as &1. Since the parameter in the example is a string, it has to be enclosed in single quotes: ‘&1’

The name of the report in this example is msggrp_users.sql. It resides in the directories specified in “Adding a Program Report” on page 26. You can copy an existing report and modify the header as appropriate. The report in this example, msggrp_users.sql, is as follows:

```
REM various SQL*Plus settings, e.g. to suppress terminal
output
set heading off
set termout off
set echo off
set linesize 79
set pagesize 0
set feedback off
set newpage 0;
set Verify Off
set arraysize 5
ttitle off;
REM OVO reports write to the file /tmp/rep.lst
REM (.1st may be omitted)
spool /tmp/rep

REM Print a report header like the other OVO reports
select ‘ ‘  from dual;
select ‘                              OVO Report‘ from dual;
select ‘                              ----------‘ from dual;
select ‘ ‘  from dual;
select ‘Report Date: ‘,sysdate from dual;
select ‘ ‘  from dual;
select ‘Report Definition:‘ from dual;
select ‘‘ from dual;
select ‘  User:          opc_adm‘ from dual;
select ‘  Report Name:   Message group users‘ from dual;
select ‘  Report Script: msggrp_users.sql‘ from dual;
select ‘ ‘  from dual;
select ‘ ‘  from dual;

REM Add a header for the selected columns
select ‘User name            Node group name‘ from dual;
```

```
select
'-----------------------------------------------' from
dual;

REM Our SQL statment; the message group name is passed as
REM parameter &1
select distinct u.name, g.node_group_name
from   opc_user_data u, opc_op_realm r, opc_node_groups g
where  r.user_id        = u.user_id
and    r.node_group_id  = g.node_group_id
and    r.msg_group_name = '&1'
order  by 1,2;

REM Finally, exit SQL*Plus
quit
```

4. Test the report using the OVO report script, `call_sqlplus.sh`. It connects as user `opc_op` to the OVO database and runs the report script using SQL*Plus. Note that the file type `.sql` is *not* specified. Enter the following command:

   `/opt/OV/bin/OpC/call_sqlplus.sh msggrp_users OS`

   For more information see the man page *call_sqlplus.sh(1)*.

5. Decide whether the report should be accessible by the administrator, by the operators, or by both. See "Adding a Program Report" on page 26 for information on what to do once you have made the decision. Since the report in this example is only available to the administrator, add the following lines to the file, `admin.rpts`:

```
REPORTNAME   Message group users
REPORTTYPE   PGM
DESCRIPTION  Users responsible for a selected message
             group
REPORTFILE   /opt/OV/bin/OpC/call_sqlplus.sh
msggrp_users
PARM         $msggrp
```

Adding Your Own OVO Service Reports

OVO-specific service reports use information taken directly from the OVO database and may be viewed using HP OpenView Reporter. You can add new service reports and modify the existing reports to suit the demands of your own particular environment. For more information about what you need to be able to edit OVO-specific service reports and how to go about doing it, see the HP OpenView Reporter product documentation.

HP OpenView Service Navigator Reports

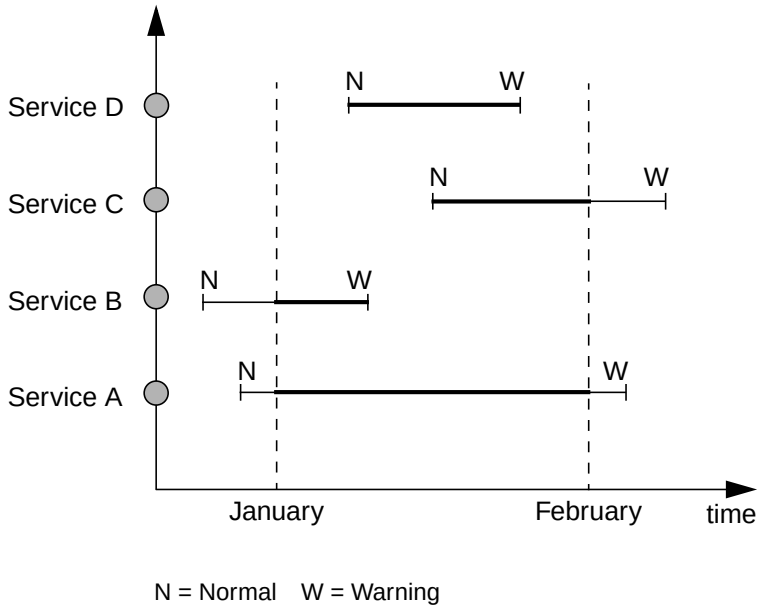
HP OpenView Reporter also comes with several reports for Service Navigator. They display information about the monitored services in statistical or graphical format, for example, the general availability of services over time, the number of messages received for each service over time, or the services with the highest number of messages.

To write your own reports, you need to query the tables `opc_service` and `opc_service_log`, see Table 8-8 on page 216 and Table 8-9 on page 217 respectively. `opc_service` contains basic information about each service, for example, the label of a service. `opc_service_log` contains the status logs which consist of the severity and the duration of the severity status. Both tables are empty, if logging is not enabled or disabled.

When you query `opc_service_log` to generate a report about the status of a service within a time interval, for example, how often and how long a service was in a warning status during a particular month, make sure that your query takes into account the fact that the start and end time of

the severity status can be outside of the queried time interval. Figure 1-1 on page 32 shows how the time when a service entered or left a certain severity status can affect service reporting.

Figure 1-1 Reporting on Service Status Duration



The following situations must be considered:

- **Start time is outside the interval**

  See `Service A` and `Service B` in Figure 1-1: both services change from normal to warning before the start of the queried time interval.

- **End time is outside the interval**

  See `Service A` and `Service C` in Figure 1-1: both services cease to be in the warning status outside the queried time interval.

- **Start and end time are outside the interval**

  See `Service A` in Figure 1-1.

Make sure that your report considers the actual start and end time of the severity duration in case they happen to be outside the queried time interval.

2 Entity Relationship Diagrams

In This Chapter

This chapter contains the entity relationship diagrams for the OVO database.

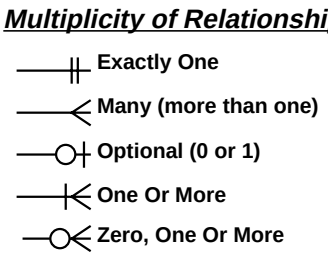
Entity Relationship Diagrams

Entity relationship diagrams show the relationship between the tables in the OVO database.

The following figures are also available full-size in PDF format in the OVO documentation software fileset and can be printed on DIN A3 or Tabloid (11 x 17 inches) paper. See the *OVO Installation Guide for the Management Server* for more information about installing the OVO product bundles.

See Figure 2-1 on page 35 for an explanation of the notation that is used in the diagrams.

Figure 2-1 Diagram Notation



NOTE The entity relationship diagrams only show the tables relating to users, nodes, templates, conditions and messages. They do not represent the entire OVO database.

Many tables contain references to the opc_symbols table via the symbol_type_id column. For reasons of space however, the opc_symbols table does not always appear.

Links normally use the same column name in both tables. In such cases, the links are not labelled. If links involve more than one column, all these are named.

Relationships that cannot be described using the notation are described in free text.

Figure 2-2 Multiplicity Example 1

Figure 2-2 shows that a user in the opc_user_data table has zero, one, or more saved browser settings in opc_op_browser_set. In other words, a user may save one or more browser settings, but does not have to.

Each browser setting belongs to exactly one user. Since no name appears on the relationship line, the relationship is based on the common key, user_id.

Figure 2-3 Multiplicity Example 2

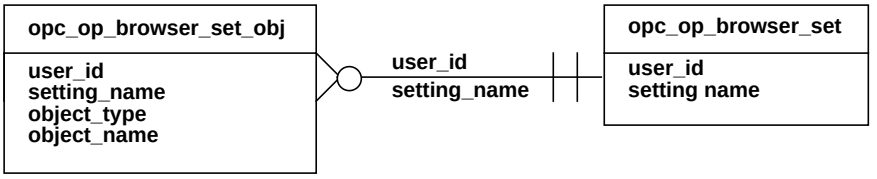


Figure 2-3 shows that a browser setting may have zero, one, or more selected objects, for example selected nodes. Each of the selected objects in opc_op_browser_set_obj belongs to exactly one browser setting. To

show that the tables are related by a combination of user_id and setting_name, both these column names appear next to the relationship line.

Figure 2-4 Multiplicity Example 3

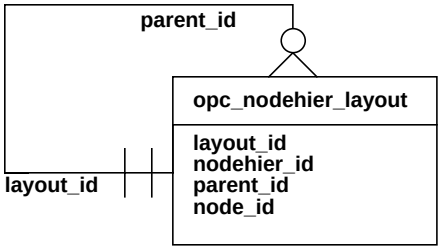


Figure 2-4 shows that the table opc_nodehier_layout represents a hierarchy of nodes through a relationship with itself. If a hierarchy element (represented by layout_id) has no parent hierarchy, the parent_id is null. Otherwise, the parent_id points to the layout_id of the layout element that contains this one.

A layout element may contain zero, one, or more other layout elements.

Entity Relationship Diagrams

Figure 2-5 User Tables

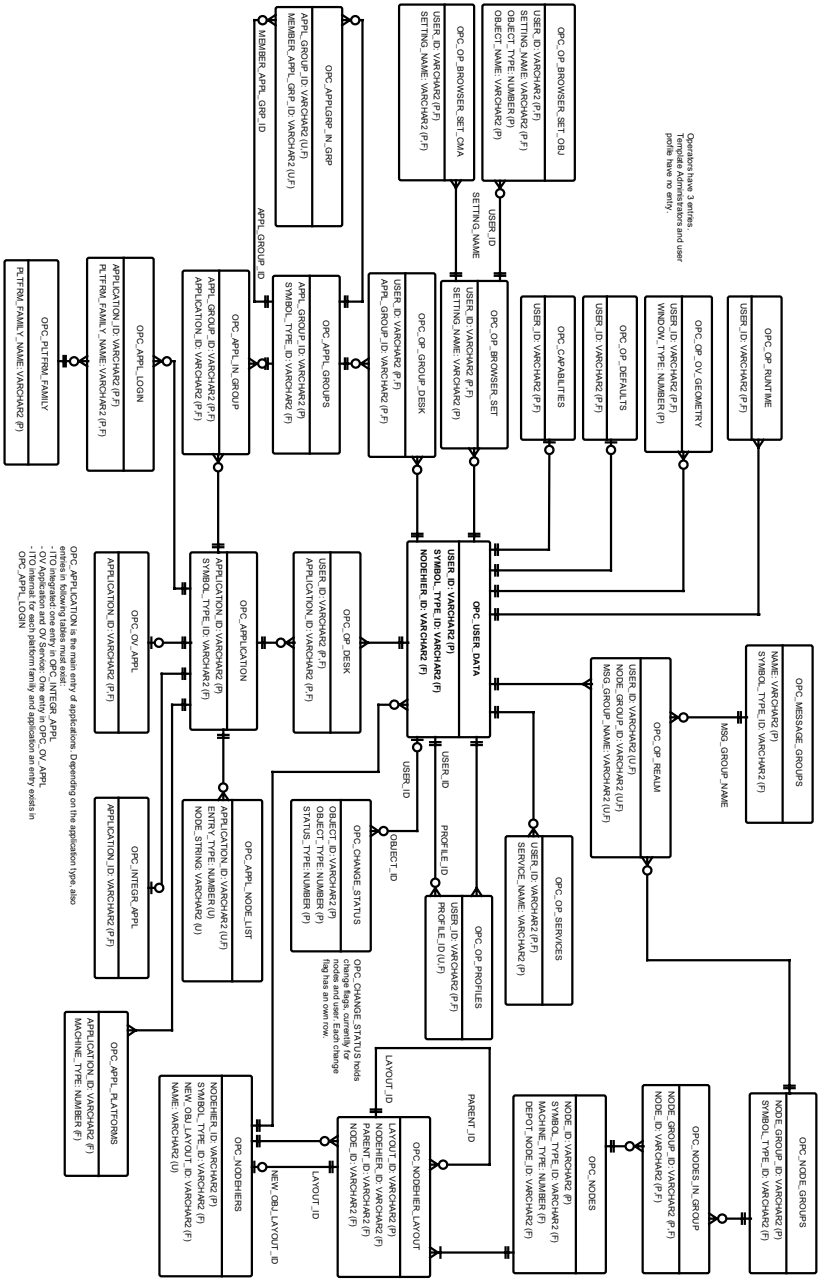


Figure 2-6 **Node Tables**

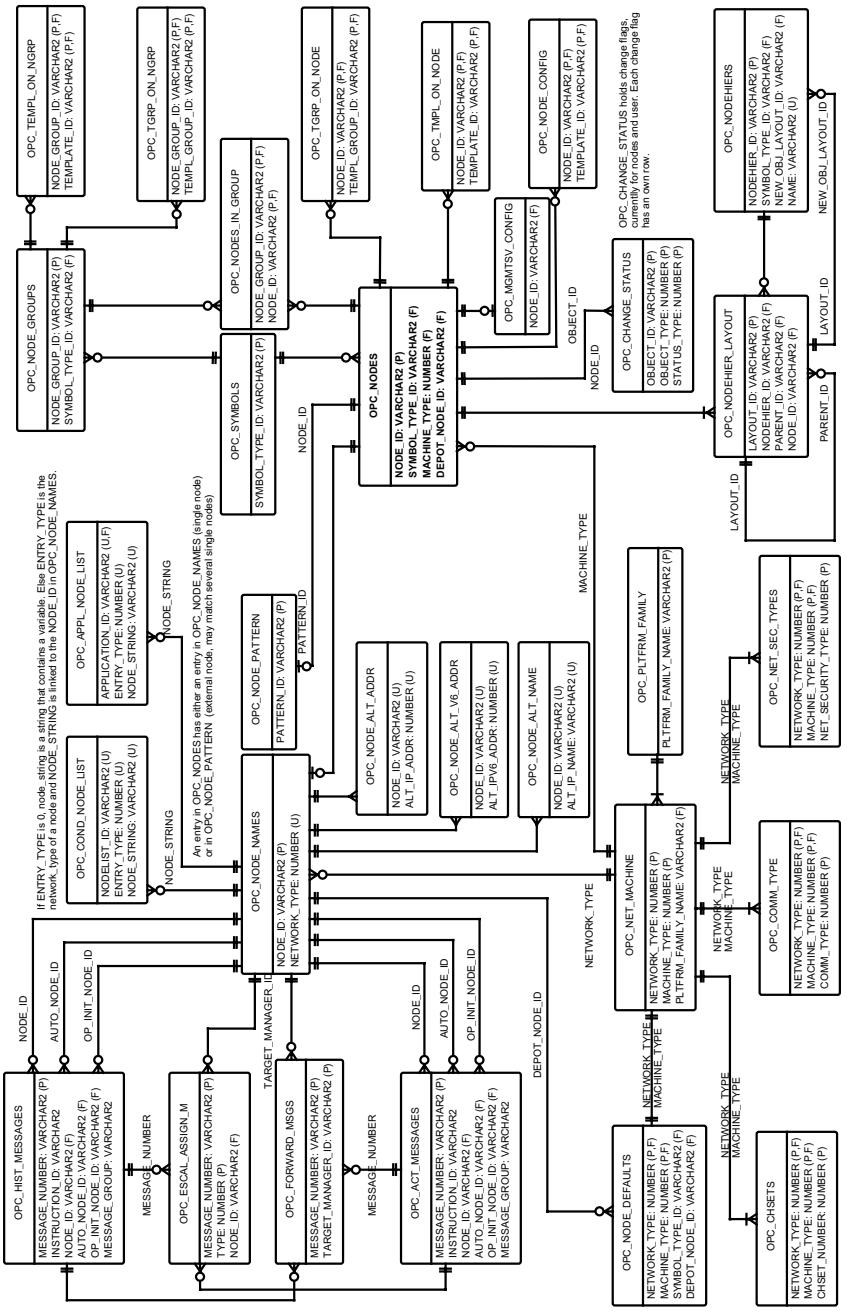


Figure 2-7 Template Tables

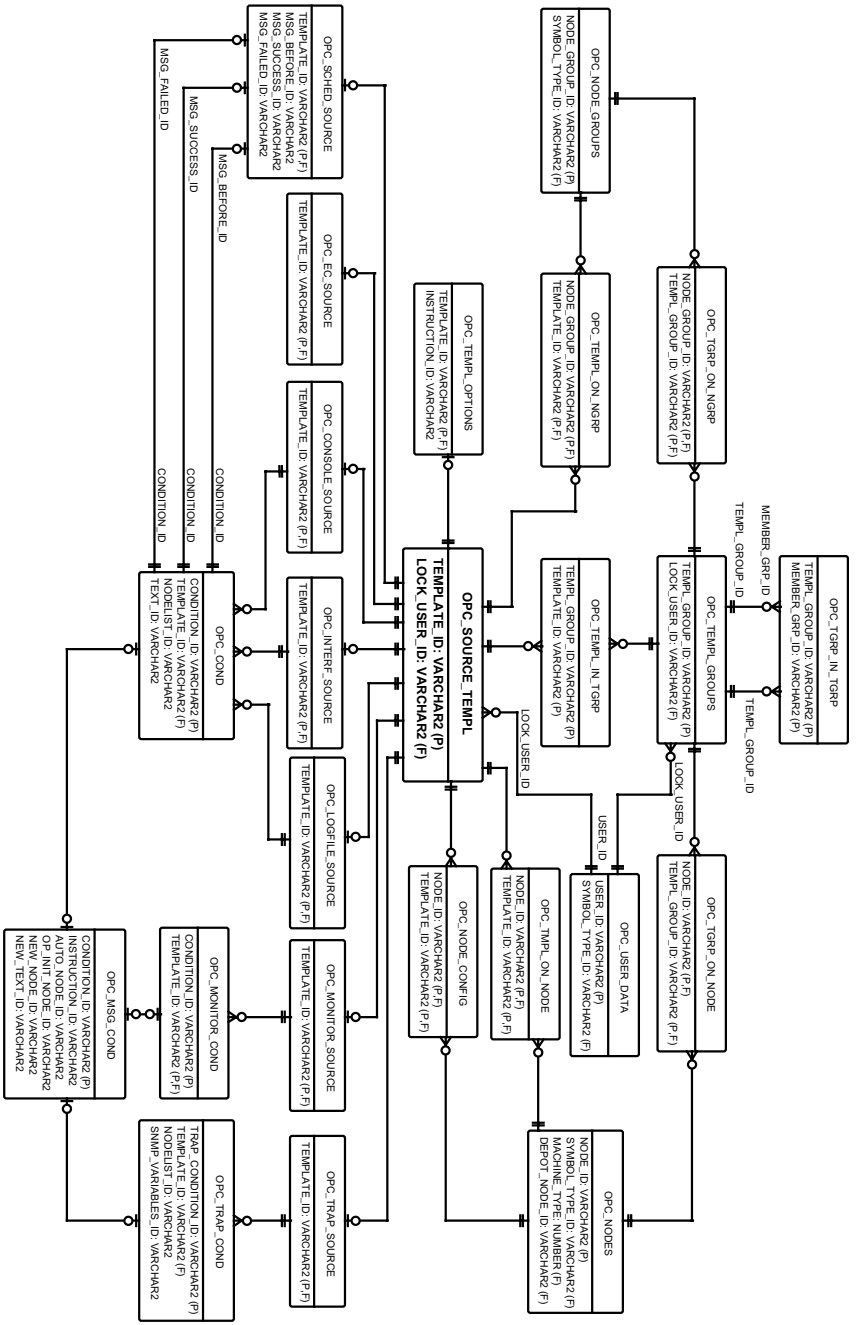
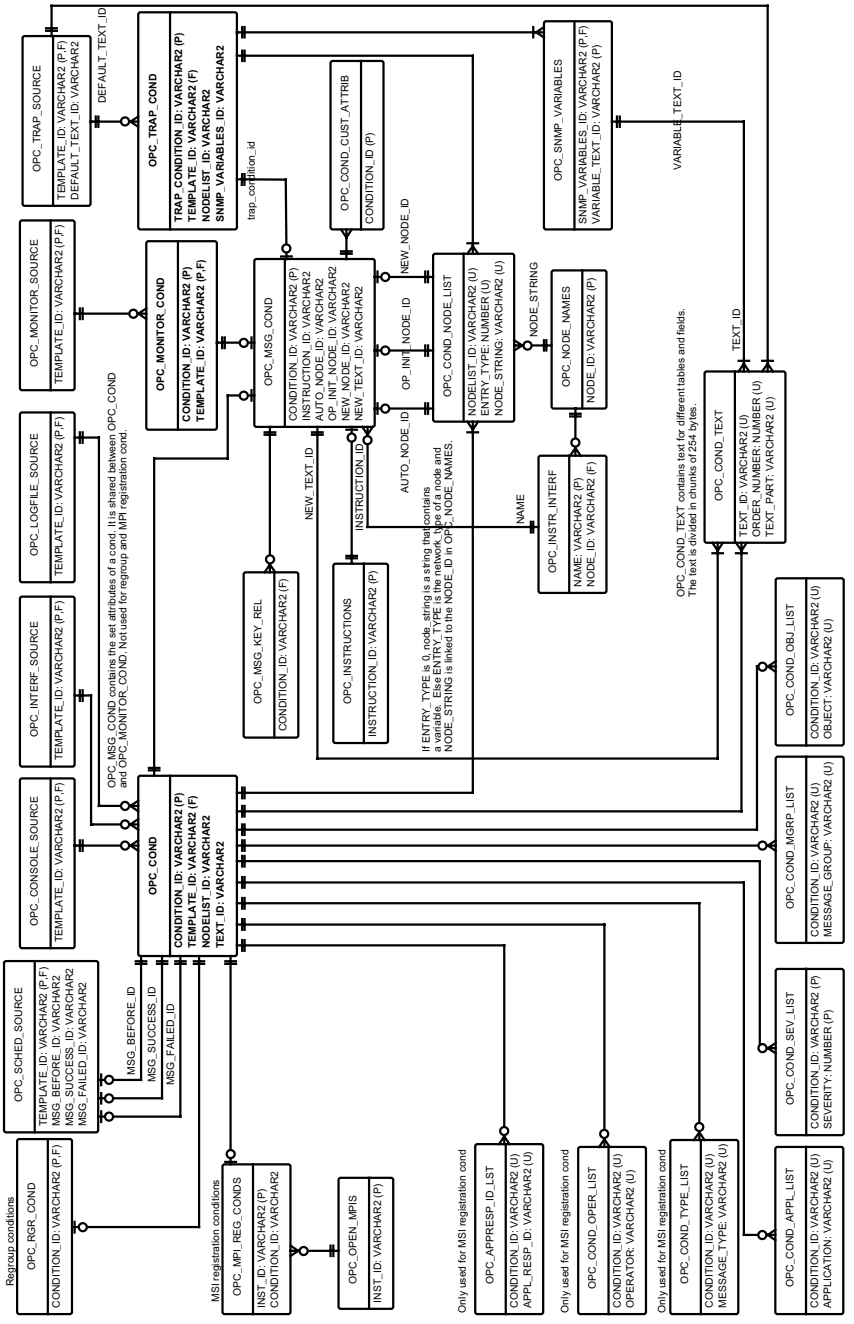


Figure 2-8 Condition Tables



Entity Relationship Diagrams

Figure 2-9 Message Tables

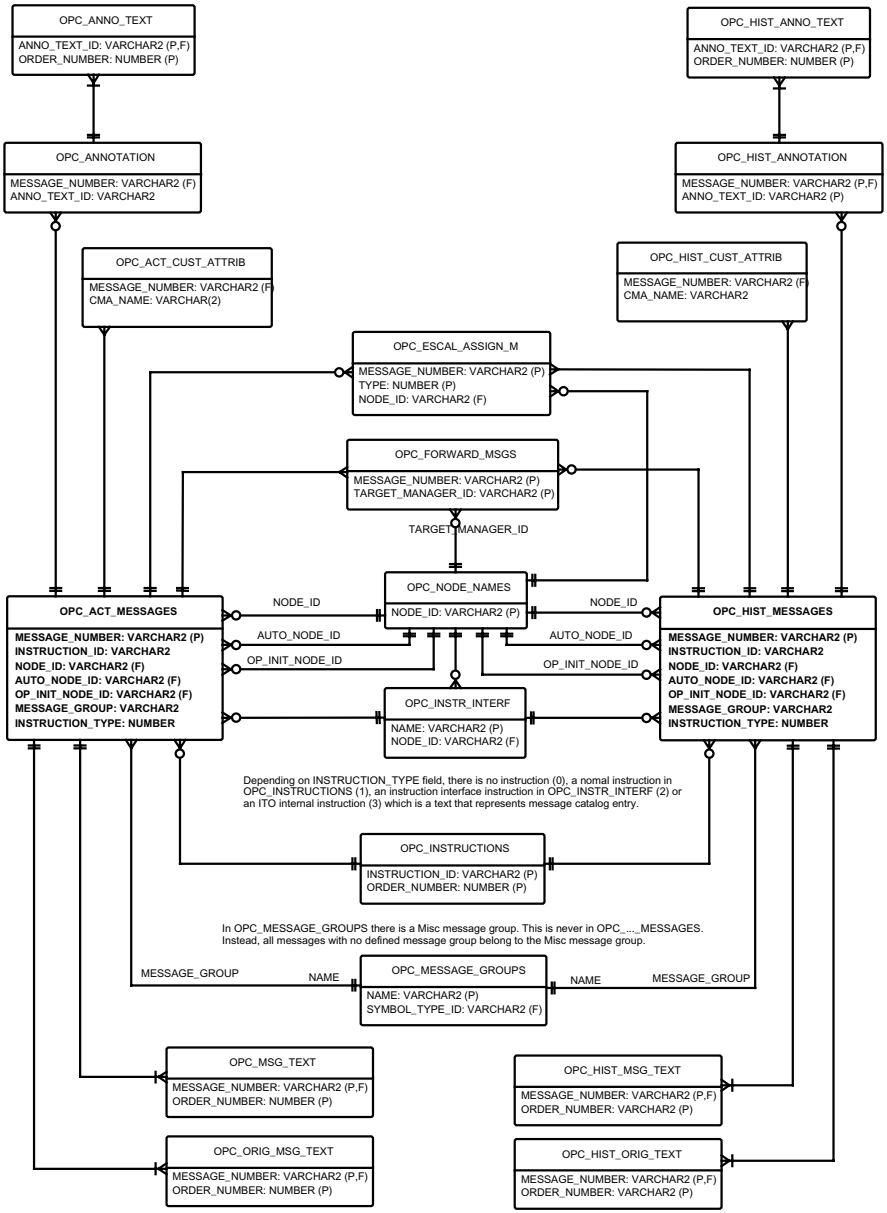
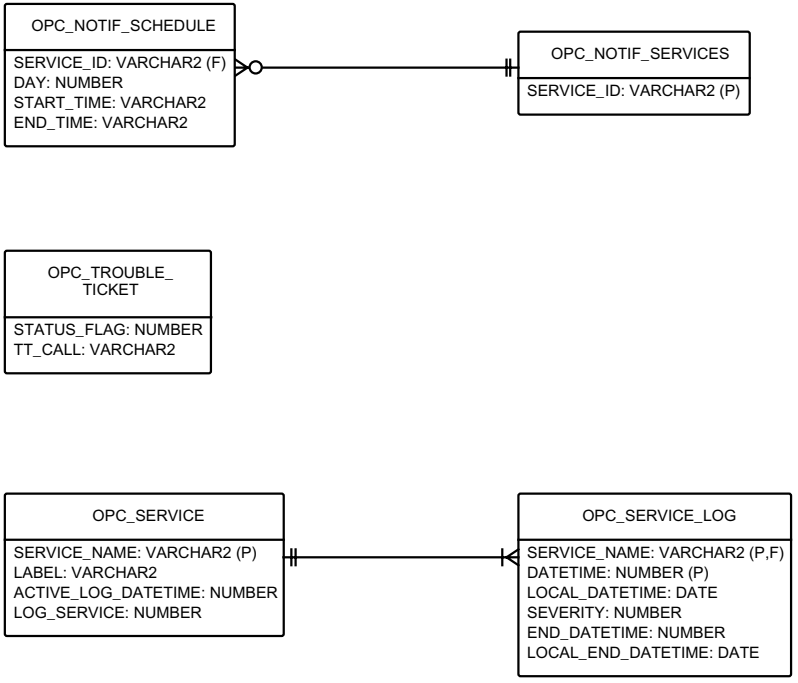


Figure 2-10 Other Tables



Entity Relationship Diagrams

3 User Tables

In This Chapter

This chapter contains the user tables.

opc_appl_groups Table

This table represents application groups.

Table 3-1 opc_appl_groups Table

Column Name	Con-straint	Column Type	Description
appl_group_id	P	varchar2(36)	Key field to identify the application group.
symbol_type_id	N, F	varchar2(36)	Key field to identify the symbol type strings.
name	U, N	varchar2(254)	Name of the application group. The name must be unique.
label		varchar(32)	Displayed label of the application group.
description		varchar2(254)	Description of the application group.

opc_appl_in_group Table

This table represents the relationships of applications to application groups. Each application in each application group has an entry in this table.

Table 3-2 opc_appl_in_group Table

Column Name	Con-straint	Column Type	Description
appl_group_id	P, F	varchar2(36)	Key field to identify the application group.
application_id	P, F	varchar2(36)	Key field for identification of the application.

opc_appl_login Table

This table stores the name and password combinations for OVO internal applications for different platform families.

Table 3-3 opc_appl_login Table

Column Name	Con-straint	Column Type	Description
pltfrm_family_name	P, F	varchar2(32)	Unique name for platform family.
application_id	P, F	varchar2(36)	ID of internal application.
user_name		varchar2(254)	Actual user name.
password		varchar2(72)	Actual password.

opc_appl_node_list Table

This table contains details of the target nodes on which to execute applications. The administrator configures this in OVO.

Table 3-4 opc_appl_node_list Table

Column Name	Con-straint	Column Type	Description
application_id	P, F	varchar2(36)	Key field to identify the application.
entry_type	P	number(3)	Type of entry: node_id or string.
node_string	P	varchar2(254)	This field contains a string representing an object or a node_id (depending on the entry_type field). Possible values: 0...Variable (the node string contains text with pattern matching) 1...IP node (the node string contains the node's ID in opc_node_names) 2...non-IP node (the node string contains the node's ID in opc_node_names)

opc_appl_platforms Table

NOTE *Table 3-5 is reserved for future use.*

This table contains, for each application, a list of machine types where the application is available. The combination of application_id and machine_type must be unique.

Valid keys for machine types depend on Table 4-5, “opc_net_machine Table,” on page 84, and are linked to the entries found there.

Table 3-5 opc_appl_platforms Table

Column Name	Con-straint	Column Type	Description
application_id	U, N, F	varchar2(36)	Key field to identify the application; linked to `application_id` in table opc_application (see page 53).
machine_type	U, N	number(5)	Key field to identify the machine type; linked to `machine_type` in table opc_net_machine (see page 84).

opc_applgrp_in_grp Table

This table contains the assignments of application groups to application groups.

Table 3-6 opc_applgrp_in_grp Table

Column Name	Con-straint	Column Type	Description
appl_group_id	P, F	varchar2(36)	Key field to identify the application group.
member_appl_grp_id	P, F	varchar2(36)	Key field to identify the assigned application group.

opc_application Table

This table contains attributes that are common to all applications. Other details exist in different tables, depending on the application type:

- OVO internal applications have one entry per platform family in opc_appl_login (see page 49).
- OVO integrated applications have one entry in opc_integr_appl (see page 57).
- OpenView applications and services have one entry in opc_ov_appl (see page 75).

Table 3-2, “opc_appl_in_group Table,” on page 48 describes which application belongs to which application group.

Table 3-7 opc_application Table

Column Name	Con-straint	Column Type	Description
application_id	P	varchar2(36)	Key field to identify the application.
symbol_type_id	N, F	varchar2(36)	Key field to identify the symbol type strings.
application_type	N	number(3)	Type of application: OV-, OVO-integrated or internal. Possible values: 0…OVO internal application 1…Integrated application 2…OpenView application or service

Table 3-7 opc_application Table (Continued)

Column Name	Con-straint	Column Type	Description
target	N	number(3)	The target on which to start this application. Possible values: 0...Start on management server 1...Start on target nodes selected by operator 2...Start on target node list 3...Start on local GUI client 4...Start URL on local web browser
intern_appl_action	N	number(3)	Action for internal application: broadcast, open physical console, open virtual console. Possible values: 0...Virtual Terminal 1...Physical Terminal 2...Broadcast 3...Virtual Terminal on a PC
name	U, N	varchar2(254)	Name of the application. The name must be unique.
label		varchar2(32)	Displayed label of the application symbol.
description		varchar2(254)	Description of the purpose of this application.
appl_call		varchar2(4000)	The command that calls the application.
allow_customize	N	number(3)	*Reserved for future use.* Whether command customization is allowed for the application: Yes/No. Both this field and the `customize_appl` field in the `opc_capabilities` table must be set before command customization is allowed.

Table 3-7 opc_application Table (Continued)

Column Name	Con-straint	Column Type	Description
appl_license_flag		int2	If set to 1, apply execution confirmation dialog. If set to 0 (default), do not ask before execution.
appl_license_text		varchar2(2048)	Application confirmation text to be shown.

opc_capabilities Table

This table contains details of what a user is or is not allowed to do in OVO.

Table 3-8 opc_capabilities Table

Column Name	Con-straint	Column Type	Description
user_id	P	varchar2(36)	Key field to identify the user.
op_init_act_flag	N	number(3)	Whether the user can start operator-initiated actions: Yes/No.
acknowledge_flag	N	number(3)	Whether the user can acknowledge or unacknowledge messages: Yes/No.
change_msg_attr	N	number(3)	Whether the user can change message attributes: Yes/No.
own_flag	N	number(3)	Whether the user can own messages: Yes/No.
customize_appl	N	number(3)	*Reserved for future use.* Whether command customization capability is allowed: Yes/No. Both this field and the `allow_customize` field in the `opc_application` table must be set before command customization is allowed.

opc_integr_appl Table

This table contains details of OVO-integrated applications.

Table 3-9 opc_integr_appl Table

Column Name	Con-straint	Column Type	Description
application_id	P	varchar2(36)	Key field to identify the application.
start_in_term_flag	N	number(3)	Start application in terminal window. Possible values are: 0…No window 1…Window (input and output) 2…Window (output only)
parameters		varchar2(254)	Parameters for the program call.
user_name		varchar2(254)	The user name under which the program is started.
password		varchar2(52)	The appropriate password for the user_name.

opc_op_browser_set Table

This table contains the main entry of an operator's saved browser settings. These are the filters that specify which messages appear in the View and History Message browsers, and the Pending Messages Browser.

Table 3-10 opc_op_browser_set Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user.
setting_name	P	varchar2(32)	Key field to identify the browser setting.
selected_flag	N	number(3)	Display selected messages: Yes/No.
severity	N	number(3)	Display messages filtered by severity levels: Possible values: 1...Unknown 2...Normal 4...Warning 16...Minor 32...Major 8...Critical To filter for more than one severity, use a logical OR.
time_mode	N	number(3)	Time mode: Absolute/Relative time.
time_from	N	number(12)	Start date/time of message reception on the management server.
time_to	N	number(12)	Finish date/time of message reception on the management server.
creat_time_from	N	number(12)	*Reserved for future use.* Start date/time of message creation on the managed node.

Table 3-10 opc_op_browser_set Table (Continued)

Column Name	Con-straint	Column Type	Description
creat_time_to	N	number(12)	*Reserved for future use.* Finish date/time of message creation on the managed node.
ackn_time_from	N	number(12)	*Reserved for future use.* Start date/time of message acknowledgement.
ackn_time_to	N	number(12)	*Reserved for future use.* Finish date/time of message acknowledgement.
pattern		varchar2(254)	Text pattern to be used as message filter.
unmatched_flag	N	number(3)	Display only unmatched messages: Yes/No.
logonly_flag	N	number(3)	Filter out all but log only messages: Yes/No.
notification_flag	N	number(3)	*Reserved for future use.* Filter out all but notification messages: Yes/No.
trouble_tick_flag	N	number(3)	*Reserved for future use.* Filter out all but trouble ticket messages: Yes/No.
escalate_flag	N	number(3)	*Reserved for future use.* Filter out all but escalation messages: Yes/No.
forward_flag	N	number(3)	*Reserved for future use.* Filter out all but forwarded messages: Yes/No.
readonly_flag	N	number(3)	*Reserved for future use.* Filter out all but messages marked as read only: Yes/No.

Table 3-10 opc_op_browser_set Table (Continued)

Column Name	Con-straint	Column Type	Description
sort	N	number(3)	Sorting order of messages. Possible values: 0...Date/Time 1...Node 2...Message Group 3...Application 4...Severity
ownership	N	number(3)	Display messages filtered by own state. Possible values: 1...Unowned 2...Owned by me 4...Owned by someone else To filter for more than one type of ownership, use a logical OR.
sort_cma_name	N	varchar2(254)	*Reserved for future use.* Custom message attribute name to sort by, if set.
unbuffer_time_from		int4	Start of desired unbuffer time frame.
unbuffer_time_to		int4	End if desired unbuffer time frame.

opc_op_browser_set_cma Table

This table contains the object list of the custom message attribute name and value pairings for an operator's saved browser settings. There is one entry for each custom message attribute pairing within each browser setting.

Table 3-11 opc_op_browser_set_cma Table

Column Name	Con-straint	Column Type	Description
user_id	N	varchar2(36)	Key field to identify the user.
setting_name	N	varchar2(32)	Key field to identify the browser setting.
cma_name	N	varchar2(254)	Name of the custom message attribute.
cma_value	N	varchar2(1024)	Value of the custom message attribute.

opc_op_browser_set_obj Table

This table contains the object list of an operator's saved browser settings. There is one entry for each browser setting. This is the content of the `On Selected Symbols` listbox.

Table 3-12 opc_op_browser_set_obj Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user.
setting_name	P, F	varchar2(32)	Key field to identify the browser setting.
object_type	P	number(5)	Type of object. Possible values: 1...Node 8...Message Group 13...Service Name *(Reserved for future use.)* 14...Message Type *(Reserved for future use.)* 16...Application 64...Object 128...External Node
object_name	P	varchar2(254)	Name of the object.

opc_op_defaults Table

This table contains the default settings of browsers for individual OVO users. This includes details of the size and which columns are visible.

Table 3-13 opc_op_defaults Table

Column Name	Con-straint	Column Type	Description
user_id	P	varchar2(36)	Key field to identify the user.
act_browser_x	N	number(12)	Last onscreen x position of active message browser.
act_browser_y	N	number(12)	Last onscreen y position of active message browser window.
act_browser_heig	N	number(12)	Last onscreen height of active message browser.
act_browser_width	N	number(12)	Last onscreen width of active message browser window.
act_header_flag	N	number(3)	Header line visible: Yes/No.
act_sever_flag	N	number(3)	Severity column visible: Yes/No.
act_unmatch_flag	N	number(3)	Unmatched column visible: Yes/No.
act_instr_flag	N	number(3)	Instruction column visible: Yes/No.
act_auto_flag	N	number(3)	Automatic action status column visible: Yes/No.
act_oper_flag	N	number(3)	Operator-initiated action status column visible: Yes/No.
act_note_flag	N	number(3)	Annotation column visible: Yes/No.
act_date_flag	N	number(3)	Date column visible: Yes/No.
act_time_flag	N	number(3)	Time column visible: Yes/No.
act_node_flag	N	number(3)	Node column visible: Yes/No.
act_applic_flag	N	number(3)	Application column visible: Yes/No.

Table 3-13 opc_op_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
act_msggrp_flag	N	number(3)	Message group column visible: Yes/No.
act_object_flag	N	number(3)	Object column visible: Yes/No.
act_escal_flag	N	number(3)	Escalated: Yes/No.
act_assign_flag	N	number(3)	Assigned: Yes/No.
act_dupl_flag	N	number(3)	Duplicate count column visible: Yes/No.
hist_browser_x	N	number(12)	Last onscreen x position of history browser.
hist_browser_y	N	number(12)	Last onscreen y position of history browser.
hist_browser_heig	N	number(12)	Last onscreen height of history browser.
hist_browser_width	N	number(12)	Last onscreen width of history browser.
hist_header_flag	N	number(3)	Header line visible: Yes/No.
hist_sever_flag	N	number(3)	Severity column visible: Yes/No.
hist_unmatch_flag	N	number(3)	Unmatched column visible: Yes/No.
hist_instr_flag	N	number(3)	Instruction column visible: Yes/No.
hist_auto_flag	N	number(3)	Automatic action status column visible: Yes/No.
hist_oper_flag	N	number(3)	Operator initiated-action status column visible: Yes/No.
hist_note_flag	N	number(3)	Annotation column visible: Yes/No.
hist_date_flag	N	number(3)	Date column visible: Yes/No.
hist_time_flag	N	number(3)	Time column visible: Yes/No.
hist_node_flag	N	number(3)	Node column visible: Yes/No.
hist_applic_flag	N	number(3)	Application column visible: Yes/No.
hist_msggrp_flag	N	number(3)	Message group column visible: Yes/No.
hist_object_flag	N	number(3)	Object column visible: Yes/No.
hist_escal_flag	N	number(3)	Escalated: Yes/No.

Table 3-13 opc_op_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
hist_assign_flag	N	number(3)	Assigned: Yes/No.
hist_dupl_flag	N	number(3)	Duplicate count column visible: Yes/No.
view_browser_x	N	number(12)	Last onscreen x position of view browser .
view_browser_y	N	number(12)	Last onscreen y position of view browser.
view_browser_heig	N	number(12)	Last onscreen height of view browser.
view_browser_width	N	number(12)	Last onscreen width of browser window.
view_header_flag	N	number(3)	Header line visible: Yes/No.
view_sever_flag	N	number(3)	Severity column visible: Yes/No.
view_unmatch_flag	N	number(3)	Unmatched column visible: Yes/No.
view_instr_flag	N	number(3)	Instruction column visible: Yes/No.
view_auto_flag	N	number(3)	Automatic action status column visible: Yes/No.
view_oper_flag	N	number(3)	Operator-initiated action status column visible: Yes/No.
view_note_flag	N	number(3)	Annotation column visible: Yes/No.
view_date_flag	N	number(3)	Date column visible: Yes/No.
view_time_flag	N	number(3)	Time column visible: Yes/No.
view_node_flag	N	number(3)	Node column visible: Yes/No.
view_applic_flag	N	number(3)	Application column visible: Yes/No.
view_msggrp_flag	N	number(3)	Message group column visible: Yes/No.
view_object_flag	N	number(3)	Object column visible: Yes/No.
view_escal_flag	N	number(3)	Escalated: Yes/No.
view_assign_flag	N	number(3)	Assigned: Yes/No.
view_dupl_flag	N	number(3)	Duplicate count column visible: Yes/No.

Table 3-13 opc_op_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
pend_browser_x	N	number(12)	Last onscreen x position of pending message browser.
pend_browser_y	N	number(12)	Last onscreen y position of pending message browser.
pend_browser_heig	N	number(12)	Last onscreen height of pending message browser.
pend_browser_width	N	number(12)	Last onscreen width of pending message browser.
pend_header_flag	N	number(3)	Header line visible: Yes/No.
pend_sever_flag	N	number(3)	Severity column visible: Yes/No.
pend_unmatch_flag	N	number(3)	Unmatched column visible: Yes/No.
pend_instr_flag	N	number(3)	Instruction column visible: Yes/No.
pend_auto_flag	N	number(3)	Automatic action status column visible: Yes/No.
pend_oper_flag	N	number(3)	Operator-initiated action status column visible: Yes/No.
pend_note_flag	N	number(3)	Annotation column visible: Yes/No.
pend_date_flag	N	number(3)	Date column visible: Yes/No.
pend_time_flag	N	number(3)	Time column visible: Yes/No.
pend_node_flag	N	number(3)	Node column visible: Yes/No.
pend_applic_flag	N	number(3)	Application column visible: Yes/No.
pend_msggrp_flag	N	number(3)	Message group column visible: Yes/No.
pend_object_flag	N	number(3)	Object column visible: Yes/No.
pend_escal_flag	N	number(3)	Escalate: Yes/No.
pend_assign_flag	N	number(3)	Assign: Yes/No.
pend_dupl_flag	N	number(3)	Duplicate count column visible: Yes/No.

opc_op_desk Table

This table represents the application desktop of an OVO user. It contains the top-level applications that are directly assigned to that user.

Table 3-14 opc_op_desk Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user.
application_id	P, F	varchar2(36)	Key field to identify the application.

opc_op_group_desk Table

This table represents the application-group desktops of an OVO user. Only the top level application groups are shown. When an application group which contains other application groups is assigned to an operator, the operator inherits all these application groups.

The complete desktop of an operator is created with the tables opc_op_desk on page 67, opc_op_group_desk on page 68, opc_appl_in group on page 48, and opc_applgrp_in_grp on page 52.

Table 3-15 opc_op_group_desk Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user.
appl_group_id	P, F	varchar2(36)	Key field to identify the application group.

opc_op_ov_geometry Table

This table contains the geometry data of an OVO user's main OV submaps. This applies for Motif GUIs only.

Table 3-16 opc_op_ov_geometry Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	The user's ID.
window_type	P	number(12)	Number of the OV window. Possible values are: 3...Application Desktop Window 4...Managed Nodes Window 5...Message Groups Window
window_x	N	number(12)	The window's X position.
window_y	N	number(12)	The window's Y position.
window_height	N	number(12)	The window's height.
window_width	N	number(12)	The window's width.

opc_op_profiles Table

This table contains details of assignments between profiles and other profiles or users.

Table 3-17 opc_op_profiles Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user or user profile.
profile_id	P, F	varchar2(36)	Key field to identify the user profile assigned to the above user or user profile.

opc_op_realm Table

This table represents the responsibility matrix of the operators. The responsibility matrix is built by pairs of message groups and node groups.

Table 3-18 opc_op_realm Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user.
node_group_id	P, F	varchar2(36)	Key field to identify the node group.
msg_group_name	P, F	varchar2(32)	Key field to identify the message group.

opc_op_runtime Table

This table contains dynamic values that are required by OVO to keep track of active Motif GUI sessions. One entry is available for each active session. Since the administrator GUI has two active sessions, it also has two runtime entries.

NOTE This table does not represent API sessions and the Java GUI.

Table 3-19 opc_op_runtime Table

Column Name	Con-straint	Column Type	Description
user_id	P	varchar2(36)	Key field to identify the user.
name		varchar2(20)	OVO user name at the time the GUI starts.
session_key	N	number(12)	Dynamic session key used for user verification.
ip_address	N	number(12)	IP address of node the user has logged on.
mgmt_station	N	number(12)	Management station identity.
dr_id		varchar2(36)	Display receiver identity.
user_role	P	number(3)	User role of user (OVO administrator, template administrators, operators). This entry forms the second part of this table's key because the administrator has two entries. Possible values: 0...Operator 1...Administrator 2...Operator part of the administrator GUI 3...Template administrator
gui_pid	N	number(12)	Process ID of user interface.

Table 3-19 opc_op_runtime Table (Continued)

Column Name	Con-straint	Column Type	Description
ipv6_address		varchar2(39)	Address of the operator's station in case it is an IPv6 node.

opc_op_services Table

This table contains operator and service assignment combinations. The content of the table is dynamic, it exists only at runtime.

NOTE This table is for internal use only.

Table 3-20 opc_op_services Table

Column Name	Con-straint	Column Type	Description
user_id	P, F	varchar2(36)	Key field to identify the user.
service_name	P	varchar2(254)	Field to identify the service.

opc_ov_appl Table

This table contains the OpenView specific details for an OpenView application.

Table 3-21 opc_ov_appl Table

Column Name	Con-straint	Column Type	Description
application_id	P, F	varchar2(36)	Key field to identify the application.
registered_name		varchar2(254)	Application name as used in the application registration files.
action_identifier		varchar2(80)	Application identifier as used in the application registration files.

opc_user_data Table

This table contains the main details for configured users and user profiles.

Table 3-22 opc_user_data Table

Column Name	Con-straint	Column Type	Description
user_id	P	varchar2(36)	Key field to identify the user in other tables.
symbol_type_id	N, F	varchar2(36)	Key field to identify the symbol type.
nodehier_id	N, F	varchar2(36)	Node hierarchy assigned to this operator.
user_role	N	number(3)	Role of the user: operator, administrator. Possible values: 0...Operator 1...Administrator 3...Template administrator 4...User profile
name	U, N	varchar2(20)	OVO user or user profile name.
password		varchar2(40)	Hexadecimal representation of the encrypted password.
realname		varchar2(60)	The OVO user's real name.
description		varchar2(254)	Description of tasks and role assigned to this OVO user.
label		varchar2(32)	Label of the user (displayed in GUI).

4 Node Tables

In This Chapter

This chapter contains the node tables.

opc_chsets Table

This table stores the possible character sets of a platform. It belongs to the table opc_net_machine (see page 84) which contains the main entry for an agent platform.

Table 4-1 opc_chsets Table

Column Name	Con-straint	Column Type	Description
network_type	P, F	number(5)	Type of network the node resides in. Possible values: 0...No node 1...IP 5...Other
machine_type	P, F	number(5)	network_type and machine_type identify the platform. Several character sets are allowed for one platform.
chset_number	P	number(3)	Encoding of character set. Possible values are: 0...ASCII 1...ISO88591 2...ROMAN8 4...ACP1252 (NT ANSI code page for Western Europe (Latin)) 28...ISO885915 64...SJIS (Japanese SJIS) 65...EUCJP (Japanese EUC) 66...ACP932 (NT ANSI code page for Japan)

opc_cluster_map Table

This table holds the association between physical and virtual nodes.

Table 4-2 opc_cluster_map Table

Column Name	Con-straint	Column Type	Description
virtual_node-id	N, U	varchar2(36)	Node ID of the virtual node (link to opc_nodes table, field node_id).
physical_node_id	N, U	varchar2(36)	Allowed physical nodes that map to a single virtual one (link to opc_nodes table, field node_id).

opc_comm_type Table

This table stores the possible communication types of a platform. It belongs to the table opc_net_machine (see page 84) which contains the main entry for an agent platform.

Table 4-3 opc_comm_type Table

Column Name	Con-straint	Column Type	Description
network_type	P, F	number(5)	Type of network the node resides in. Possible values: 0...No node 1...IP 5...Other
machine_type	P, F	number(5)	Network_type and machine_type identify the platform. Several communication types are allowed for one platform.
comm_type	P	number(3)	Communication type. Possible values are: 0...Unspecified communication type 1...NCS 2...DCE TCP 3...DCE UDP 4...Sun RPC, TCP 5...SUN RPC, UDP 6...TCP Socket 7...UDP Socket 8...OPC Interface 9...RPC Local

opc_mgmtsv_config Table

This table contains the global configuration of the management server.

Table 4-4 opc_mgmtsv_config Table

Column Name	Con-straint	Column Type	Description
node_id	N, F	varchar2(36)	Key field for node identification of management server.
charset	N	number(3)	Management server character set which is set at installation time to an appropriate value for the language variant.
parallel_distrib	N	number(3)	Number of parallel distributions that may run at one time.
audit_level	N	number(3)	Level of auditing.
message_if_enable	N	number(3)	Message Stream Interface enabled: Yes/No.
msg_if_allow_aa	N	number(3)	Allow definition of automatic actions through Message Stream Interface: Yes/No.
msg_if_allow_oa	N	number(3)	Allow definition of operator-initiated actions through Message Stream Interface: Yes/No.
port_range		varchar2(80)	Port range for DCE communication.
glob_sec_level	N	number(12)	Global DCE Security level.
output_all_to_msi	N	number(3)	Output all messages to the MSI (not only those which are configured in the templates). Possible values: 0...No output 1...Output messages in divert mode 2...Output messages in copy mode
msg_dupl_counting	N	number(3)	Duplicate message suppression and counting is enabled: Yes/No.

Table 4-4 opc_mgmtsv_config Table (Continued)

Column Name	Con-straint	Column Type	Description
add_count_annotations	N	number(3)	Annotations of duplicate messages are added to the original message if duplicate suppression and counting is enabled: Yes/No.
user_login_auth	N	number(3)	*Reserved for future use.* The login authentication that is to be applied to all users. Possible values: 0...Internal (default) 1...UNIX only
ovou_licensing_flag		int2	If set to 1, apply GUI startup confirmation dialog. If set to 0, do not ask before execution.
ovou_license_text		varchar2(2048)	License agreement text to be shown.

opc_net_machine Table

This table contains the main details for agent platforms available on this management server. It is used by the OVO GUI, for example to display the platform name and to define possible values. The values are defined in the Agent Platform files which can be loaded using `opcagtdbcfg (1M)`.

The table also contains information about any proxy capabilities for a platform. (This information is reserved for future use.)

Table 4-5 opc_net_machine Table

Column Name	Con-straint	Column Type	Description
network_type	P	number(5)	Type of network the node resides in. Possible values: 0...No node 1...IP 5...Other
machine_type	P	number(5)	A unique identifier for a combination of hardware and operating system.
sw_install	N	number(3)	Software installation is possible: Yes/No.
sys_descr		varchar2(100)	Search string used to identify machine type under SNMP.
platform_selector		varchar2(45)	Platform selector in the format "vendor/hardware/OS". For example, "hp/s700/hp-ux10". This information is loaded through the Agent Platform Files. The platform selector identifies the platform when using `opcagtutil` or `opcagtdbcfg`.
network_type_str		varchar2(24)	Network name (for example "IP Network").
machine_type_str		varchar2(20)	Machine name (for example "Sun SPARCstation").

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
os_name		varchar2(20)	Operating system name (for example “Solaris”).
satellite_depot	N	number(3)	Indicates if platform supports satellite depots: Yes/No.
sd_installable	N	number(3)	Indicates if SD based installation is also available: Yes/No.
pltfrm_family_name	N, F	varchar2(32)	Name for group of platforms with the same login attributes. Currently used values are: MPE MS NetWare OS/2 (*For HP internal use only.*) UNIX New values can be loaded using the Agent Platform Files.
controlled_allowed	N	number(3)	CONTROLLED node type allowed: Yes/No.
monitored_allowed	N	number(3)	MONITORED node type allowed: Yes/No.
message_allowed	N	number(3)	MESSAGE_ALLOWED node type allowed: Yes/No.
node_name_in_path	N	number(3)	Combine path names with node name: Yes/No.
agent_type	N	number(5)	Description of licensing used.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
rlogin_method	N	number(3)	One of RLOGIN, TELNET, VT3K, LOGIN_SCRIPT. Possible values: 1...RLOGIN 2...TELNET 3...VT3K 4...LOGIN_SCRIPT
rlogin_script		varchar2(14)	Name of script.
restr_add_param	N	number(3)	Used when specifying additional path names for applications: Yes/No.
node_name_function		varchar2(14)	Used by MPE/iX for node name resolution.
custom_stream_cmd	N	number(3)	MPE/iX specific: when this value is set, MPE_JOB_STREAM is used: Yes/No.
login_prompt		varchar2(32)	Login prompt string used at remote login.
password_prompt		varchar2(32)	Password prompt used at remote login.
login_incorrect		varchar2(32)	Incorrect login prompt used at remote login.
conn_failed		varchar2(32)	Remote connection failed prompt used at remote login.
term_appl_path		varchar2(254)	Additional search paths for virtual terminal or input/output applications. These are added to the $PATH variable.
heartbeat_polling	N	number(3)	Indicates if heartbeat polling is possible: Yes/No.
agent_control	N	number(3)	Agents can be started remotely: Yes/No.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
templ_distr_method	N	number(3)	Method for distributing templates. Possible values are: 1...No template distribution 2...OVO method (default) 3...OPC_INTERFACE
templ_assignment	N	number(3)	Templates can be assigned: Yes/No.
logfile_templates	N	number(3)	LOGFILE templates can be assigned: Yes/No.
monitor_templates	N	number(3)	MONITOR templates can be assigned: Yes/No.
opcmsg_templates	N	number(3)	OPCMSG templates can be assigned: Yes/No.
trap_templates	N	number(3)	TRAP templates can be assigned: Yes/No.
console_templates	N	number(3)	CONSOLE templates can be assigned: Yes/No.
ecs_templates	N	number(3)	Event correlation circuits can be assigned: Yes/No.
ecs_gui	N	number(3)	Event correlation GUI available for this platform: Yes/No.
sched_templates	N	number(3)	Scheduled action templates can be assigned to nodes of this platform: Yes/No.
trapi_on_srv_only	N	number(3)	Event interceptor agent on management server only: Yes/No.
virtual_console	N	number(3)	Set when virtual terminal is possible: Yes/No.
physical_console	N	number(3)	Physical terminal is possible: Yes/No.
cmd_broadcast	N	number(3)	Command broadcasting is possible: Yes/No.
operator_actions	N	number(3)	Operator-initiated actions are possible: Yes/No.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
appl_input_output	N	number(3)	Applications of type input_output are possible: Yes/No.
appl_output_only	N	number(3)	Applications of type output_only are possible: Yes/No.
appl_no_output	N	number(3)	Applications of type no_output are possible: Yes/No.
interface_instance		varchar2(14)	Name of the interface if the communication type OPC_INTERFACE is used.
ov_application	N	number(3)	OV applications supported on platform: Yes/No.
depot_ftp_method	N	number(3)	Satellite Depot access by FTP: Yes/No.
depot_rcp_method	N	number(3)	Satellite Depot access by RCP: Yes/No.
depot_sd_method	N	number(3)	Satellite Depot access by SD: Yes/No.
ssh_method	N	number(3)	Access to managed node by SSH: Yes/No.
package_type		varchar2(80)	Directory extension to agent package for installation (for communication type dependent package).
agent_type_name		varchar2(32)	Name of the OVO agent type.
proxy_family		varchar2(16)	String to identify proxy family.
proxied_agent_type_name		varchar2(32)	Name of the proxied agent type.
proxied_family		varchar2(16)	String to identify proxy family.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
proxy_control	N	number(3)	Contains bitmask that defines the possible control operations of the proxy node. Possible values: 0...No 1...Start 2...Stop 4...Status 8...Update Any binary combination of the values is possible.
proxy_hbp	N	number(3)	Heartbeat polling to proxy node: Yes/No.
proxy_sw_install	N	number(3)	Software installation of proxy node from OVO manager possible: Yes/No.
proxy_communication	N	number(3)	Communication to proxy node configurable: Yes/No.
proxy_mom	N	number(3)	MoM functionality available on proxy node: Yes/No.
proxy_msi	N	number(3)	MSI available on proxy node: Yes/No.
proxy_logging	N	number(3)	Logging directory and size configurable for proxy: Yes/No.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
proxy_charset	N	number(3)	Character set of the proxy node. Possible values are: 0...ASCII 1...ISO88591 2...ROMAN8 4...ACP1252 (NT ANSI code page for Western Europe (Latin)) 28...ISO885915 64...SJIS (Japanese SJIS) 65...EUCJP (Japanese EUC) 66...ACP932 (NT ANSI code page for Japan)
proxy_need_nodeinfo	N	number(3)	Proxy node needs nodeinfo: Yes/No.
proxied_supported	N	number(3)	Does the platform support proxied nodes: Yes/No.
proxied_agent_type_nr	N	number(3)	Number to be used as agent type for the proxied node. Possible values: 0...OVO
proxy_supported	N	number(3)	Does the platform support proxy nodes: Yes/No.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
proxied_control	N	number(3)	Contains bitmask that defines the possible control operations of the proxied node. Possible values: 0...No 1...Start 2...Stop 4...Status 8...Update
proxied_hbp	N	number(3)	Heartbeat polling to proxied node possible: Yes/No.
proxied_sw_install	N	number(3)	Software installation of proxied node from OVO manager possible: Yes/No.
proxied_communication	N	number(3)	Communication to proxied node configurable.
proxied_mom	N	number(3)	MoM functionality available on proxied node: Yes/No.
proxied_need_nodeinfo	N	number(3)	Defines whether the proxied node needs a nodeinfo file: Yes/No.
proxied_msi	N	number(3)	MSI available on proxied node: Yes/No.
proxied_logging	N	number(3)	Logging directory and size configurable for proxies: Yes/No.
proxied_templ_distr_meth	N	number(3)	Method for distributing templates. Possible values are: 1...No template distribution 2...OVO method (default) 3...OPC_INTERFACE
proxied_templ_assignment	N	number(3)	Can templates be assigned: Yes/No.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
proxied_logfile_templ	N	number(3)	LOGFILE templates can be assigned: Yes/No.
proxied_monitor_templ	N	number(3)	MONITOR templates can be assigned: Yes/No.
proxied_opcmsg_templ	N	number(3)	OPCMSG templates can be assigned: Yes/No.
proxied_trap_templ	N	number(3)	TRAP templates can be assigned: Yes/No.
proxied_console_templ	N	number(3)	CONSOLE templates can be assigned: Yes/No.
proxied_ecs_templ	N	number(3)	Event correlation circuits can be assigned: Yes/No.
proxied_sched_templ	N	number(3)	Schedule Templates can be assigned to nodes of this platform: Yes/No.
proxied_virtual_console	N	number(3)	Virtual terminal possible: Yes/No.
proxied_physical_console	N	number(3)	Physical terminal possible: Yes/No.
proxied_cmd_broadcast	N	number(3)	Broadcast applications possible: Yes/No.
proxied_operator_actions	N	number(3)	OVO operator-initiated actions possible: Yes/No.
proxied_appl_in_out	N	number(3)	Applications of type input output possible: Yes/No.
proxied_appl_output_only	N	number(3)	Applications of type output only possible: Yes/No.
proxied_appl_no_output	N	number(3)	Applications of type no output possible: Yes/No.
proxied_binary_distr	N	number(3)	Distribution of action/cmd/monitor scripts possible: Yes/No.

Table 4-5 opc_net_machine Table (Continued)

Column Name	Con-straint	Column Type	Description
proxied_oa_sw_install	N	number(3)	Open agent installation methods supported: Yes/No.
proxied_oa_control	N	number(3)	Open agent control methods supported: Yes/No.
proxied_oa_send	N	number(3)	Open agent send data methods supported: Yes/No.
proxied_ctrl_allowed	N	number(3)	Node type CONTROLLED allowed for proxied nodes: Yes/No.
proxied_mon_allowed	N	number(3)	Node type MONITORED allowed for proxied nodes: Yes/No.
proxied_message_allowed	N	number(3)	Node type MESSAGE_ALLOWED possible for proxied nodes: Yes/No.
proxied_charset	N	number(3)	Character set of the proxied node. Possible values are: 0...ASCII 1...ISO88591 2...ROMAN8 4...ACP1252 (NT ANSI code page for Western Europe (Latin)) 28...ISO885915 64...SJIS (Japanese SJIS) 65...EUCJP (Japanese EUC) 66...ACP932 (NT ANSI code page for Japan)
proxied_action_exec	N	number(3)	Execution of actions allowed: Yes/No.
agent_type_number	N	number(3)	Number to be used as agent type for the OVO agent.
dhcp_allowed		int	0 = No (default. 1 = Yes.

opc_net_sec_types Table

This table contains a list of possible NSP (Network Security Protocol) security types for the platform identified by network_type and machine_type (link to opc_net_machine).

Table 4-6 opc_net_sec_types Table

Column Name	Con-straint	Column Type	Description
network_type	P	number(5)	Key field (part 1).
machine_type	P	number(5)	Key field (part 2).
net_security_type	P	number(3)	NSP security type. Possible values: 0...None 2...Secret key 3...*For HP internal use only.* 4...GSS_API_V2

opc_node_alt_addr Table

NOTE *Table 4-7 is reserved for future use.*

This table contains the alias or alternate IP addresses for a node. A node can use several alias or alternate IP addresses or several nodes can use the same alias or alternate IP address. However, each combination of node_id and alt_ip_addr must be unique.

Table 4-7 opc_node_alt_addr Table

Column Name	Con-straint	Column Type	Description
node_id	U, N	varchar2(36)	Key field to identify the node.
alt_ip_addr	U, N	number(12)	Alias or alternate IP address of the node.

opc_node_alt_name Table

NOTE *Table 4-8 is reserved for future use.*

This table contains the alias or alternate IP name for a node, if defined. A node can use several alias or alternate IP names or several nodes can use the same alias or alternate IP name. However, each combination of node_id and alt_ip_name must be unique.

Table 4-8 opc_node_alt_name Table

Column Name	Con-straint	Column Type	Description
node_id	U, N	varchar2(36)	Key field to identify the node.
alt_ip_name	U, N	varchar2(254)	The alias or alternate name for the node.

opc_node_alt_v6_addr Table

NOTE *Table 4-9 is reserved for future use.*

This table contains the alias or alternate IPv6 addresses for a node. A node can use several alias or alternate IPv6 adresses or several nodes can use the same alias or alternate IPv6 address. However, each combination of `node_id` and `alt_ip_addr` must be unique.

Table 4-9 opc_node_alt_v6_addr Table

Column Name	Con-straint	Column Type	Description
node_id	U, N, F	varchar2(36)	Key field to identify the node.
alt_ipv6_addr	U, N	varchar2(39)	Alias or alternate IPv6 address (full form) of the node.

opc_node_defaults Table

This table contains the default values of an agent platform, as given in the Agent Platform Files. These defaults can be changed using the GUI. They apply when a node of that platform type is added. The values are loaded together with the unalterable platform data using `opcagtdbcfg(1M)`.

Table 4-10 opc_node_defaults Table

Column Name	Con-straint	Column Type	Description
network_type	P	number(5)	Type of network the node resides in.
machine_type	P	number(5)	Type of machine hardware and operating system.
terminal	N	number(3)	Type of terminal connection used to access the node. Possible values are: 0...hpterm 1...xterm 2...dtterm 3...none
node_type	N	number(3)	Role of node within OVO. Possible values are: 1...Disabled 2...Controlled 3...Monitored 4...Message Allowed
auto_sw_inst_flag	N	number(3)	Distribute OVO software automatically: Yes/No.
auto_res_mod_flag	N	number(3)	Automatically update system resource files: Yes/No.
maximum_size	N	number(12)	Limit in KByte the logging information may occupy.

Table 4-10 opc_node_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
logging_directory		varchar2(254)	Path to directory where OVO stores local logging information.
console_path		varchar2(254)	Program call to establish connection to physical console port.
heartbeat_interval		varchar2(16)	Time interval between heartbeat polls. Format: 1h20m10s.
node_char_set	N	number(3)	Character set used for the node.
default_font		varchar2(132)	Font used for X Applications started from this node.
trace_flag	N	number(3)	Agent tracing.
ncs_pckg_size	N	number(12)	The NCS RPC package size used for communication with this node.
ncs_delay	N	number(3)	Delay between NCS RPC calls.
heartbeat_retry	N	number(3)	Polling frequency of the node.
mpe_job_stream		varchar2(80)	The name of the MPE Job Stream Facility used.
console_par1		varchar2(40)	1st physical console parameter.
console_par2		varchar2(40)	2nd physical console parameter.
console_par3		varchar2(40)	3rd physical console parameter.
resolve_mode	N	number(3)	IP address resolution mode. Possible values are: 0...auto 1...static
message_if_enable	N	number(3)	Message Stream Interface enabled: Yes/No.
msg_if_allow_aa	N	number(3)	Allow definition of automatic actions through Message Stream Interface: Yes/No.

Table 4-10 opc_node_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
msg_if_allow_oa	N	number(3)	Allow definition of operator-initiated actions through Message Stream Interface: Yes/No.
symbol_type_id	N	varchar2(36)	Symbol_type_id of default symbol type.
depot_node_id	N	varchar2(36)	Node where agent package is stored: management server name by default.
inst_method	N	number(3)	The method of installation. Possible values are: 0...OVO installation 1...SD installation 2...Asynchronous OVO installation 3...Asynchronous SD installation
depot_access_meth	N	number(3)	Default access method for satellite depots. Possible values are: 1...FTP 2...SD 3...RCP 4...SSH
package_name		varchar2(254)	Name of package for satellite depots. (This is not currently in use).
depot_name		varchar2(254)	Name of depot for SD installation.
compr_pkg_trans	N	number(3)	Use compressed package transfer with SD: Yes/No.
compr_pkg	N	number(3)	Use compressed packages for SD installation. (This is currently not in use.)
inst_user		varchar2(45)	The installation user is usually the root user. Can be modified by OVO administrator using the GUI.

Table 4-10 opc_node_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
comm_type	N	number(3)	Default communication method (NCS, DCE-TCP, DCE-UDP …).
port_range		varchar2(80)	Port range for DCE on managed node.
comm_attr	N	number(12)	Communication attributes. Possible values are: 0…None 1…Auth. connect 2…Auth. call 3…Auth. pkt 4…Pkt integer 5…Pkt encrypt
heartbeat_type	N	number(3)	Used heartbeat polling method. Possible values are: 0…None 1…RPC only 2…Ping only 3…Ping and RPC 4…From agent 5…From agent and RPC 6…From agent and ping 7…From agent and RPC and ping
security_type	N	number(3)	Used NSP security type. Possible values are: 0…None 2…Secret key 3…*For HP internal use only.* 4…GSS_API_V2

Table 4-10 opc_node_defaults Table (Continued)

Column Name	Con-straint	Column Type	Description
agent_type_number	N	number(3)	Number to be used as default agent type.
proxy_name		varchar2(32)	Name of the proxy node that is used to manage the proxied node.
buflim_enable	N	number(3)	Agent buffer size limitation enabled: Yes/No.
buflim_size	N	number(12)	Maximum size of the agent message buffer (in bytes).
buflim_severity	N	number(3)	Minimum severity of the messages to be buffered in case of buffer size conflicts. Possible values are: 0...None 2...Normal 4...Warning 16...Minor 32...Major 8...Critical

opc_node_groups Table

This table contains all node groups.

Table 4-11 opc_node_groups Table

Column Name	Con-straint	Column Type	Description
node_group_id	P	varchar2(36)	Key field to identify node groups in other tables.
symbol_type_id	N	varchar2(36)	Key field to identify the symbol type string in opc_symbols.
node_group_name		varchar2(32)	Name of the node group.
description		varchar2(254)	Description of the node group.
label		varchar2(32)	Label of the node group that appears in the GUI.
invisible	N	number(3)	*Reserved for future use.* This flag indicates the visibility of a node group in the responsibility matrix of an operator. Possible values are: 0…Visible (default) 1…Invisible

opc_node_names Table

This table contains the IP addresses (if the node is in an internet network) and the identifying name of the nodes. It contains the addresses for normal nodes in opc_nodes (see page 108). It also contains the node addresses of messages that matched an external node. These are referenced from Table , “opc_act_messages Table,” on page 176 and Table , “opc_hist_messages Table,” on page 190.

Table 4-12 opc_node_names Table

Column Name	Con-straint	Column Type	Description
node_id	P, N	varchar2(36)	Key field to identify the node.
network_type	N	number(5)	Type of network the node resides in. Possible values: 0...No node 1...IP 5...Other 6...Unknown
ip_address	N	number(12)	IP address of the node if it is an IP node.
ipv6_address		varchar2(39)	*Reserved for future use.* IPv6 address (full form) of the node if it is an IPv6 node.
node_name		varchar2(1024)	Identifying name of the node. This is the name returned by the name service, ideally the fully qualified node name.

opc_node_pattern Table

This table contains pattern of nodes for external events.

Table 4-13 opc_node_pattern Table

Column Name	Con-straint	Column Type	Description
pattern_id	P	varchar2(36)	Key field for node pattern identification; linked to node_id in opc_nodes (see page 108).
node_type	N, U	number(3)	Node pattern type. Possible values are: 253...IP address pattern 254...Node name pattern for IP nodes 255...Node name pattern for non-IP nodes
pattern	U	varchar2(1024)	Node pattern.
ip_flags		int2	IP settings flag to hold static / DHCP defaults.

opc_nodehier_layout Table

This table contains the layout of the node hierarchies. It contains layout elements for both nodes and layout groups.

Table 4-14 opc_nodehier_layout Table

Column Name	Con-straint	Column Type	Description
layout_id	P	varchar2(36)	Key field to identify the layout element.
nodehier_id	N, F, U	varchar2(36)	Key field to identify the node hierarchy.
parent_id	F, U	varchar2(36)	Key field to identify the parent layout group. If the parent_id is null, this layout element is in the top level layout group.
symbol_type_id	F	varchar2(36)	Key field to identify the symbol type string in opc_symbols if the layout element is a layout group.
node_id	F, U	varchar2(36)	Key field used to identify the node. If null, this is a layout group.
name	U	varchar2(32)	Name of the layout element, if it is a layout group.
label		varchar2(32)	Label displayed in the GUI, if this is a layout group.
submap_title		varchar2(80)	Title of layout group's submap.
description		varchar2(254)	Description of the layout element.

opc_nodehiers Table

This table contains the node hierarchies and their specifications.

Table 4-15 opc_nodehiers Table

Column Name	Con-straint	Column Type	Description
nodehier_id	P	varchar2(36)	Key field to identify the node hierarchy.
symbol_type_id	N, F	varchar2(36)	Key field to identify the symbol type string in opc_symbols.
new_obj_layout_id	F	varchar2(36)	Key field to identify the new object holding area layout group (NULL, if toplevel).
name	N, U	varchar2(32)	Node hierarchy name.
label	N	varchar2(32)	Node hierarchy label.
description		varchar2(254)	Description of the node hierarchy.

opc_nodes Table

This table contains details of the nodes in the Node Bank for both external nodes and normal nodes.

Table 4-16 opc_nodes Table

Column Name	Con-straint	Column Type	Description
node_id	P	varchar2(36)	Key field to identify the node.
symbol_type_id	N	varchar2(36)	Key field to identify the symbol type strings (in opc_symbols).
agent_id	N	varchar2(36)	*Reserved for future use.*
machine_type	N	number(5)	Type of machine hardware and operating system.
terminal	N	number(3)	Type of terminal connection used to access the node. 0...hpterm 1...xterm 2...dtterm 3...None
maximum_size	N	number(12)	Limit in KByte the logging information may occupy.
node_type	N	number(3)	Role of node within OVO. Possible values are: 1...Disabled 2...Controlled 3...Monitored 4...Message-allowed
unmanaged_flag	N	number(3)	Node is currently disabled: Yes/No.
auto_sw_inst_flag	N	number(3)	Distribute OVO software automatically: Yes/No.

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
auto_res_mod_flag	N	number(3)	Automatically update system resource files: Yes/No.
sw_dist_req_flag	N	number(3)	OVO software status on this node. Possible values are: 0...No distribution required 1...Distribution required (no software installed yet) 2...Distributing 4...Required (with Force Update) 5...Distributing (with Force Update) 6...Distribution required (old software is installed) 7...Distribution required (old software is installed; with Force Update) 8...Distributing (old software installed) 9...Distributing (old software is installed; with Force Update) 10...Deinstalling software
label		varchar2(32)	Name displayed as label in the GUI.
console_path		varchar2(254)	Program call to establish connection to physical console port.
logging_directory		varchar2(254)	Path to directory where OVO stores local logging information.

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
node_char_set	N	number(3)	Character set used for this node. Possible values are: 0...ASCII 1...ISO88591 2...ROMAN8 4...ACP1252 (NT ANSI code page for Western Europe (Latin)) 28...ISO885915 64...SJIS (Japanese SJIS) 65...EUCJP (Japanese EUC) 66...ACP932 (NT ANSI code page for Japan)
default_font		varchar2(132)	Font used for virtual terminals and input/output applications started on this node.
ncs_pckg_size	N	number(12)	The NCS RPC package size used for communication with this node.
ncs_delay	N	number(3)	Delay between NCS RPC calls.
heartbeat_retry	N	number(3)	Retry of failed heartbeat polls.
mpe_job_stream		varchar2(80)	Name of the MPE Job Stream Facility used.
console_par1		varchar2(40)	1st physical console parameter.
console_par2		varchar2(40)	2nd physical console parameter.
console_par3		varchar2(40)	3rd physical console parameter.
license_type	N	number(5)	Is the managed node license counted on this manager (backup server) A license is used when software is installed. If the node license is counted on another manager, it can be reset.

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
resolve_mode	N	number(3)	IP address resolution mode. Possible values: 0...Auto 1...Static
message_if_enable	N	number(3)	Output to Message Stream Interface enabled/disabled: Yes/No.
msg_if_allow_aa	N	number(3)	Allow definition of automatic actions through Message Stream Interface: Yes/No.
msg_if_allow_oa	N	number(3)	Allow definition of operator-initiated actions through Message Stream Interface: Yes/No.
depot_node_id	N	varchar2(36)	Node where agent package is stored: management server by default.
inst_method	N	number(3)	The method for installation. Possible values: 0...OVO installation (use OVO install methods) 1...SD installation (use SD for installation) 2...OVO installation (asynchronous) (use OVO install methods with asynchronous install) 3...SD installation (asynchronous) (use SD for installation with asynchronous install)
depot_access_meth	N	number(3)	Access method for satellite depots. Possible values: 1...FTP 2...SD 3...RCP 4...SSH

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
package_name		varchar2(254)	Name of package for satellite depots. (Not currently used.)
depot_name		varchar2(254)	Depending on `opc_net_machine.satellite_depot` and `opc_nodes.inst_method` it contains the source/target directory for the agent depot.
compr_pkg_trans	N	number(3)	Use SD's compressed package transfer: Yes/No.
compr_pkg	N	number(3)	Use compressed package for SD installation. (Not currently used.)
inst_user		varchar2(45)	Installation user; can be modified by the OVO administrator using the GUI.
comm_type	N	number(3)	Communication method. Possible values are: 0...Unspecified communication type 1...NCS 2...DCE TCP 3...DCE UDP 4...Sun RPC, TCP 5...SUN RPC, UDP 6...TCP Socket 7...UDP Socket 8...OPC Interface 9...RPC Local
port_range		varchar2(80)	Port range for DCE on managed node.
proxy_name		varchar2(32)	If the attribute is_proxy is set, this is the logical name of the proxy node. If it is not set and this node is proxied, this is the logical name of the proxy node that is used to manage the node.

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
comm_attr	N	number(12)	Communication attributes (DCE security level). Possible values: 0...None 1...Auth. connect 2...Auth. call 3...Auth. pkt. 4...Pkt. Integer 5...Pkt. crypt
agent_version	N	number(12)	Control agent RPC interface version.
heartbeat_flag	N	number(3)	Switches heartbeat polling on or off. Possible values are: 0...Heartbeat polling on 1...Heartbeat polling off
heartbeat_type	N	number(3)	Used heartbeat polling method. Possible values are: 0...None 1...RPC only 2...Ping only 3...Ping + RPC 4...From agent 5...From agent + RPC 6...From agent + Ping 7...From agent + RPC + Ping
heartbeat_interval		varchar2(16)	Time interval between heartbeat polls. Format: 1h20m10s.

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
security_type	N	number(3)	Used Network Security Protocol security type. Possible values: 0...None 2...Secret key 3...*For HP internal use only.* 4...GSS_API_V2 128...Interim
security_version	N	number(3)	NSP crypt algorithm version.
agent_type_number	N	number(3)	Number to be used as default agent type. Possible values: 0...OVO
is_proxy	N	number(3)	Node is a proxy node: Yes/No.
buflim_enable	N	number(3)	Agent buffer size limitation enabled: Yes/No.
buflim_size	N	number(12)	Maximum size of the agent message buffer (in bytes).
buflim_severity	N	number(3)	Minimum severity of the messages to be buffered in case of buffer size conflicts. Possible values are: 0...None 2...Normal 4...Warning 16...Minor 32...Major 8...Critical

Table 4-16 opc_nodes Table (Continued)

Column Name	Con-straint	Column Type	Description
ip_flags	N	number(5)	*Reserved for future use.* This field indicates if an alternate or alias IP address or name are available for the node. The values can be combined through a logical OR. Possible values are: 0x0000...None 0x0001...IP obsolete 0x0002...Static IP 0x0010...IP received by agent 0x0020...IP set on input server 0x0100...Alternate IP addresses available 0x0200...Alternate IP names available
new_sec_type		int	When changing the security type of a node. this field is set to the new value as the request is being sent. When confirmed, the old sec_type field is set to the same value.
certificate_state		int	Describes the certificate status: UNDEFINED, PENDING, GRANTED, INSTALLED.
agt_inst_time		int4	Time when the agent was installed and started.
agt_inst_dir		varchar2(254)	Location of the agent on the managed node.
cluster_package		varchar2(254)	Name of the package assigned to a virtual node (HARG name).
is_virtual		int	If the entry represents a virtual node, this is set to 1.
last_instr_distrib		int4	The last time an instrumentation distribution took place.

opc_nodes_in_group Table

This table represents the relationships of nodes in node groups. For each node in each node group an entry can be found in this table.

Table 4-17 opc_nodes_in_group Table

Column Name	Con-straint	Column Type	Description
node_group_id	P	varchar2(36)	Key field to identify the node group.
node_id	P	varchar2(36)	Key field to identify the node.

opc_pltfrm_family Table

This table stores the information for a platform family.

Table 4-18 opc_pltfrm_family Table

Column Name	Con-straint	Column Type	Description
pltfrm_family_name	P	varchar2(32)	Unique name for platform family. Currently used values are: MPE MS NetWare OS/2 (*For HP internal use only.*) UNIX
user_name_length	N	number(3)	Length of the user name.
password_length	N	number(3)	Length of the password.

5 Template Tables

In This Chapter

This chapter contains the template tables.

The templates are defined by several tables. Table 5-8, “opc_source_templ Table,” on page 134 is the main table. This table contains the template_id that is used to identify the according entries in other tables. Depending on the message source type specified in this table, additional tables are used to complete the template.

opc_console_source Table

This table contains fields that are specific to MPE/iX console templates.

Table 5-1 opc_console_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
default_case_flag	N	number(3)	Use case sensitive pattern matching for this template: Yes/No.
default_severity	N	number(3)	Template default for the severity of the generated message. Possible values are: 0...Unchanged 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
default_applic		varchar2(254)	Template default for the application attribute of the message.
default_msggrp		varchar2(32)	Template default for the message group attribute of the message.
default_object		varchar2(254)	Template default for the object attribute of the message.
default_fieldsep		varchar2(16)	Template default for the field separators used for pattern matching.

Table 5-1 opc_console_source Table (Continued)

Column Name	Con-straint	Column Type	Description
default_supp_opt	N	number(3)	Template default for the suppression of duplicates. Possible values are: 0...No suppression 1...Match (suppress all messages that match the condition) 2...Identical Input (suppress input events) 3...Identical Output (suppress identical output messages)
default_supp_time		varchar2(16)	Template default for the time span within which duplicates are suppressed. Format: 1h10m0s.
default_supp_send		varchar2(16)	Template default for the resent message after time. Format: 1h10m0s.
default_supp_count		varchar2(16)	Template default for the suppress counter.
default_supp_reset		varchar2(16)	Template default for the reset time for suppress count.
default_supp_flag	N	number(3)	Template default for the suppress duplicates: Yes/No.

opc_ec_source Table

This table contains the fields specific to event correlation templates.

Table 5-2 opc_ec_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the ECS template.
verification_state	N	number(3)	Circuit is: 1…Unverified. 2…Verified
log_input	N	number(3)	Log the input of an ECS template: Yes/No.
log_output	N	number(3)	Log the output of an ECS template: Yes/No.
circuit_file_name		varchar2(254)	File name of the template's ECS circuit without the suffix (.ecs or .eco).

opc_interf_source Table

This table contains the fields specific to opcmsg templates.

Table 5-3 opc_interf_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
default_case_flag	N	number(3)	Use case sensitive pattern matching for this template: Yes/No.
default_severity	N	number(3)	Template default for the severity of the generated message. Possible values are: 0...Unchanged 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
default_msggrp		varchar2(32)	Template default for the message group attribute of the message.
default_fieldsep		varchar2(16)	Template default for the field separators used for pattern matching.
default_supp_opt	N	number(3)	Template defaults for the suppression of duplicates. Possible values are: 0...No suppression 1...Match (suppress all messages that match the condition) 2...Identical Input (suppress identical events) 3...Identical Output (suppress identical output messages)

Table 5-3 opc_interf_source Table (Continued)

Column Name	Con-straint	Column Type	Description
default_supp_time		varchar2(16)	Template default for the time span within which duplicates are suppressed. Format 1h10m0s.
default_supp_send		varchar2(16)	Template default for the resent message after time. Format 1h10m0s.
default_supp_count		varchar2(16)	Template default for the suppress counter.
default_supp_reset		varchar2(16)	Template defaults for the reset time for suppress count.
default_supp_flag	N	number(3)	Template defaults for the suppress duplicates: Yes/No.

opc_logfile_source Table

This table contains the fields specific to logfile templates.

Table 5-4 opc_logfile_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
default_node_id	N	varchar2(36)	Template default for the node, the message node attribute will show (in the opc_cond_node_list table).
characterset	N	number(3)	Character set of the logfile Possible values are: 0...ASCII 1...ISO88591 2...ROMAN8 3...EBCDIC 4...ACP1252 (NT ANSI code page for Western Europe (Latin)) 6...OEMCP850 7...OEMCP473 28...ISO885915 64...SJIS (Japanese SJIS) 65...EUCJP (Japanese EUC) 66...ACP932 (NT ANSI code page for Japan)
read_from_flag	N	number(3)	How to read logfile. Possible values: 0...Read from last file position 1...Read from begin (always) 2...Read from begin (first time)

Table 5-4 opc_logfile_source Table (Continued)

Column Name	Con-straint	Column Type	Description
msg_no_file_flag	N	number(3)	Generate message if logfile does not exist: Yes/No.
close_after_flag	N	number(3)	Close logfile after read operations: Yes/No.
default_case_flag	N	number(3)	Use case sensitive pattern matching for this template: Yes/No.
default_severity	N	number(3)	Template default for the severity of the generated message. Possible values are: 0...Unchanged 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
logfile		varchar2(254)	Path and name of the logfile to be processed.
exe_file		varchar2(254)	Path and name of the file to be executed.
read_file		varchar2(254)	Path and name of the file to be read.
polling_interval		varchar2(16)	Time between two checks of the logfile. Format: 10h05m45s.
default_applic		varchar2(254)	Template default for the application attribute of the message.
default_msggrp		varchar2(32)	Template default for the message group attribute of the message.
default_object		varchar2(254)	Template default for the object attribute of the message.
default_fieldsep		varchar2(16)	Template default for the default field separators used for pattern matching.

Table 5-4 opc_logfile_source Table (Continued)

Column Name	Con-straint	Column Type	Description
default_supp_opt	N	number(3)	Template defaults for the suppression of duplicates. Possible values are: 0...No suppression 1...Match (suppress all messages that match the condition) 2...Identical Input (suppress identical events) 3...Identical Output (suppress identical output messages)
default_supp_time		varchar2(16)	Template defaults for the time span within duplicates are suppressed. Format: 1h10m0s.
default_supp_send		varchar2(16)	Template defaults for the resent message after time. Format: 1h10m0s.
default_supp_count		varchar2(16)	Template defaults for the suppress counter.
default_supp_reset		varchar2(16)	Template defaults for the reset time for suppress count.
default_supp_flag	N	number(3)	Template defaults for the suppress duplicates: Yes/No.

opc_monitor_source Table

This table contains the fields specific to threshold monitor templates.

Table 5-5 opc_monitor_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
monitor_type	N	number(3)	Type of monitored value (program, MIB, external). Possible values: 0...Program 1...MIB 2...External
treshold_type	N	number(3)	Type of threshold monitoring (minimum, maximum). Possible values: 0...Max. threshold 1...Min. threshold
msg_generation	N	number(3)	Type of message generation for crossed thresholds. Possible values: 0...Once with reset 1...Once without reset 2...Always

Table 5-5 opc_monitor_source Table (Continued)

Column Name	Con-straint	Column Type	Description
severity	N	number(3)	Template default for the severity attribute (used if a new condition is added) Possible values: 0...Unchanged 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
application		varchar2(254)	Template default for the application attribute.
message_group		varchar2(32)	Template default for the message group attribute.
object		varchar2(254)	Template default for the object attribute.
monitor_call		varchar2(254)	Depending on the monitor_type this field contains a program name (with path) or a MIB variable (with path).
polling_interval		varchar2(16)	Time between two checks of the monitored object, e.g. 0h10m0s.
monitor_node_id	N	varchar2(36)	Node to monitor (for MIB monitor).
new_node_id	N	varchar2(36)	Template defaults for the node attribute node ID.
default_case_flag	N	number(3)	Template default for case sensitive flag.
default_fieldsep		varchar2(16)	Template default for field separators.
automsgkey	N	number(3)	Message key and message key relation are generated automatically: Yes/No.

opc_node_config Table

Templates can be assigned directly to a node, or indirectly through template groups. Also, templates and template groups can be assigned to node groups. To avoid multiple distribution of the same template, this table contains all resolved template to node assignments.

Table 5-6 opc_node_config Table

Column Name	Con-straint	Column Type	Description
node_id	U	varchar2(36)	Key field used to identify the node. If an ECS template is assigned to the management server, this field is null.
template_id	P	varchar2(36)	Key field to specify the template that is assigned to this node.
status_flag	P	number(3)	Distribution of this configuration. Possible values: 0...No distribution required 1...Distribution required 2...Distributing
access_count	N	number(12)	The number of times that this node-template assignment occurs. If a new assignment results in the same node-template assignment, the access_count is increased, and the distribution status is unchanged. If an assignment is removed, the access_count is decreased. If the access_count reaches zero, the entry in opc_node_config is deleted.
package_name		varchar2(254)	Name of the HARG package installed.

opc_sched_source Table

This table contains the fields specific to a scheduled action template.

Table 5-7 opc_sched_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
minute		varchar2(170)	Minute(s) of scheduled action.
hour		varchar2(62)	Hour(s) of scheduled action.
monthday		varchar2(94)	Day(s) of month of scheduled action.
month		varchar2(27)	Month(s) of scheduled action.
weekday		varchar2(14)	Weekday(s) of scheduled action.
year	N	number(5)	Year of scheduled action.
execute_as_user		varchar2(36)	Command is executed as this user.
cmd		varchar2(254)	Command of scheduled action.
local_logging_on	N	number(3)	Log locally.
send_output	N	number(3)	Send output of scheduled action.
msg_before_id	N	varchar2(36)	Condition ID (in opc_cond and related tables) of message sent before the start of the action. None if NULL ID.
msg_success_id	N	varchar2(36)	Condition ID (in opc_cond and related tables) of message sent after successful action.
msg_failed_id	N	varchar2(36)	Condition ID (in opc_cond and related tables) of message sent after failed action.
timezone_type	N	number(3)	Time zone type (not yet used).
timezone_value		varchar2(64)	Value of time zone (not yet used).

Table 5-7 opc_sched_source Table (Continued)

Column Name	Con-straint	Column Type	Description
cmd_type		number(3)	*Reserved for future use.* Type of script that will be executed. Possible values are: 0...External script (default) 1...Internal Perl script 2...Internal VisualBasic (Microsoft)
embed_script		CLOB	*Reserved for future use.* Embedded script buffer.
time_interval		varchar2(16)	*Reserved for future use.* Time increment string for after the initial restart.

opc_source_templ Table

This table contains the fields common to all template types. The combination of source_type_id and template_name is unique.

Table 5-8 opc_source_templ Table

Column Name	Con-straint	Column Type	Description
template_id	P	varchar2(36)	Key field to identify the template.
source_type_id	U	number(12)	Type of the template. Possible values: 1...Console 2...Interface 4...Logfile 8...Monitor 16...SNMP 32...ECS 256...Schedule
template_name	U	varchar2(64)	Name of template.
template_descr		varchar2(254)	Description of template.
modified	N	number(3)	Whether the template was modified and must be redistributed: Yes/No.
templ_file_name		varchar2(14)	Name of distribution file (used to distribute changes only).
templ_version		varchar2(16)	Version of the template

opc_templ_groups Table

This table contains all configured OVO template groups.

Table 5-9 opc_templ_groups Table

Column Name	Con-straint	Column Type	Description
templ_group_id	P	varchar2(36)	Key field to identify the template group.
templ_group_name	N, U	varchar2(32)	Name of template group.
description		varchar2(254)	Description of template group.

opc_templ_in_tgrp Table

This table contains the templates that are assigned to a template group.

Table 5-10 opc_templ_in_tgrp Table

Column Name	Con-straint	Column Type	Description
templ_group_id	P, F	varchar2(36)	Key field to identify the template group.
template_id	P, F	varchar2(36)	Key field to identify the assigned templates.

opc_templ_on_ngrp Table

This table contains the template-to-node-group assignments.

Table 5-11 opc_templ_on_ngrp Table

Column Name	Con-straint	Column Type	Description
node_group_id	P, F	varchar2(36)	Key field to identify the node group.
template_id	P, F	varchar2(36)	Key field to identify the assigned templates.
assign_state		number(3)	*Reserved for future use.* Indicates whether a template is assigned to a node group, or not. Possible values are: 0...De-assigned 1...Assigned (default)
assign_exception		number(3)	*Reserved for future use.* Indicates any exceptions to the assignments listed above. Possible values are: 0...No exception (default) 1...Exception

opc_templ_options Table

This table contains the local logging options and defaults for the message source templates. The event correlation and scheduled action templates do not have entries in this table.

Table 5-12 opc_templ_options Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
log_matched_flag	N	number(3)	Locally log messages matched by a message condition: Yes/No.
log_suppress_flag	N	number(3)	Locally log messages matched by a suppress condition: Yes/No.
log_unmatched_flag	N	number(3)	Locally log messages not matched: Yes/No.
forw_unmatch_flag	N	number(3)	Forward unmatched messages to the management server: Yes/No.
log_only_flag	N	number(3)	Forward unmatched messages to the management server as log only messages: Yes/No.
def_mpi_output	N	number(3)	Template default for output to the Message Stream Interface on the management server: 0…No 1…Divert 2…Copy
def_imm_auto_action	N	number(3)	Template default for starting local automatic actions although Message Stream Interface is enabled: Yes/No.

Table 5-12 opc_templ_options Table (Continued)

Column Name	Con-straint	Column Type	Description
def_mpi_output_agt	N	number(3)	Template default for output to the Message Stream Interface on the agent: 0…No 1…Divert 2…Copy
instruction_type	N	number(3)	Template default for type of instruction. Possible values: 0…No instruction (no instructions at all) 1…Instruction text (use instruction text from the opc_instructions table) 2…Instruction interface (use instruction text interface)
instruction_id	N	varchar2(36)	Template default for instruction/instruction text interface ID.
instr_parameters		varchar2(254)	Template default for the parameters for instruction text interface.
def_service_name		varchar2(2048)	Template default for service name attribute.
def_msg_key		varchar2(2048)	Template default for message key attribute.

opc_templ_status Table

This table contains the distribution and activation status of the templates on the managed nodes.

Table 5-13 opc_templ_status Table

Column Name	Con-straint	Column Type	Description
node_id	N	varchar2(36)	Node hosting the template. Foreign key to opc_nodes.
template_id	N	varchar2(36)	Template assigned to the node. Foreign ket to opc_source_templ.
template_name	N	varchar2(64)	Template name. Foreign key to opc_source_templ.
template_version	N	varchar2(16)	Template version.
source_type_id	N	int4	Template type. Foreign key to opc_source_templ.
templ_status	N	int2	Flag word desribing the execution status of the template: 0 Undefined. 1 Assigned but not distributed. 2 Distributed. Unknown status. 3 Distributed. Disabled. 4 Distributed. Enabled.
templ_status_reason	N	varchar2(254)	Text describing the reason for the current status.
status_upd_tstamp	N	int4	Time stamp of the latest update of the templ_status field.
local_upd_tstamp	N	date	Time stamp of the latest update of the templ_status field, but as an ORACLE date field.

opc_tmpl_on_node Table

This table contains the direct template-to-node assignments. (The resolved assignments are in the opc_node_config table (see page 131).)

Table 5-14 opc_tmpl_on_node Table

Column Name	Con-straint	Column Type	Description
node_id	U, F	varchar2(36)	Key field to identify the node. If an ECS template is assigned to the management server itself, the node_id is null.
template_id	U, F	varchar2(36)	Key field to identify the assigned template.
assign_state		number(3)	*Reserved for future use.* Indicates whether a template is assigned to a node, or not. Possible values are: 0…De-assigned 1…Assigned (default)
assign_exception		number(3)	*Reserved for future use.* Indicates any exceptions to the assignments listed above. Possible values are: 0…No exception (default) 1…Exception

opc_tgrp_in_tgrp Table

This table contains the template groups that are assigned to a template group.

Table 5-15 opc_tgrp_in_tgrp Table

Column Name	Con-straint	Column Type	Description
templ_group_id	P, F	varchar2(36)	Key field to identify the template group.
member_grp_id	P, F	varchar2(36)	Key field to identify the assigned template group.

opc_tgrp_on_ngrp Table

This table contains the template-group-to-node-group assignments.

Table 5-16 opc_tgrp_on_ngrp Table

Column Name	Con-straint	Column Type	Description
node_group_id	P, F	varchar2(36)	Key field to identify the node group.
templ_group_id	P, F	varchar2(36)	Key field to identify the assigned template group.
assign_state		number(3)	*Reserved for future use.* Indicates whether a template group is assigned to a node group, or not. Possible values are: 0...De-assigned 1...Assigned (default)
assign_exception		number(3)	*Reserved for future use.* Indicates any exceptions to the assignments listed above. Possible values are: 0...No exception (default) 1...Exception

opc_tgrp_on_node Table

This table contains the template-group-to-node assignments.

Table 5-17 opc_tgrp_on_node Table

Column Name	Con-straint	Column Type	Description
node_id	U, F	varchar2(36)	Key field to identify the node. If a template group is assigned to the management server itself, the node_id is null.
templ_group_id	U, F	varchar2(36)	Key field to identify the assigned template group.
assign_state		number(3)	*Reserved for future use.* Indicates whether a template group is assigned to a node, or not. Possible values are: 0…De-assigned 1…Assigned (default)
assign_exception		number(3)	*Reserved for future use.* Indicates any exceptions to the assignments listed above. Possible values are: 0…No exception (default) 1…Exception

opc_trap_source Table

This table contains the fields specific to SNMP trap templates.

Table 5-18 opc_trap_source Table

Column Name	Con-straint	Column Type	Description
template_id	P, F	varchar2(36)	Key field to identify the template.
default_text_id	N	varchar2(36)	Key field to identify the default text which generated for an incoming trap (referencing the opc_cond_text table).
severity	N	number(3)	Template default for the severity of the generated trap. Possible values are: 0...Unchanged 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
default_case_flag	N	number(3)	Use case sensitive pattern matching for this template: Yes/No.
application		varchar2(254)	Template default for the application attribute of the message.
message_group		varchar2(32)	Template default for the message group attribute of the message.
object		varchar2(254)	Template default for the object attribute of the message.
default_fieldsep		varchar2(16)	Template default for the field separators used for pattern matching.

Table 5-18 opc_trap_source Table (Continued)

Column Name	Con-straint	Column Type	Description
default_supp_opt	N	number(3)	Template default for the suppress duplicates. Possible values are: 0...No suppression 1...Match (suppress all messages that match the condition) 2...Identical Input (suppress identical events) 3...Identical Output (suppress identical output messages)
default_supp_time		varchar2(16)	Template default for the time span within which duplicates are suppressed.
default_supp_send		varchar2(16)	Template default for the resent message after time. Format: 1h10m0s.
default_supp_count		varchar2(16)	Template default for the suppress counter. Format: 1h10m0s.
default_supp_reset		varchar2(16)	Template default for the reset time for suppress count.
default_supp_flag	N	number(3)	Template default for the suppress duplicates: Yes/No.

6 Condition Tables

In This Chapter

This chapter contains the condition tables for message source templates.

A condition consists of several parts, some of which are the same for logfile, opcmsg, MPE/iX console, and SNMP trap templates. Others parts are specific to each template type and therefore are stored in separate tables.

opc_appresp_id_lst Table

This table contains a list of the Application Response IDs of Message Stream Interface registration conditions.

Table 6-1 opc_appresp_id_lst Table

Column Name	Con-straint	Column Type	Description
condition_id	N, U	varchar2(36)	Key field to associate list entries with a Message Stream Interface registration condition (opc_mpi_reg_conds).
appl_resp_id	U	varchar2(36)	Application response ID of a Message Stream Interface registration condition.

opc_cond Table

This table contains the main entries for conditions of the message source type logfile, opcmsg, and MPE/iX console, as well as for registration conditions and regroup conditions.

Table 6-2 opc_cond Table

Column Name	Con-straint	Column Type	Description
condition_id	P	varchar2(36)	Key field to identify the condition.
template_id	N, F	varchar2(36)	Key field to identify the template. This field is null for regroup and registration conditions.
nodelist_id	N, F	varchar2(36)	Key field to identify the list of nodes that is used to check the node attribute of the incoming message. This refers to the table opc_cond_node_list (see page 154).
text_id	N, F	varchar2(36)	Key field to identify the corresponding text pattern in the table opc_cond_text (see page 159).
case_sens_flag	N	number(3)	Check the message text case sensitively: Yes/No.
order_number	N	number(5)	Number specifying the process and display order of the conditions.
condition_type	N	number(3)	Type of condition. Possible values: 0...Match condition 1...Suppress condition 2...Suppress unmatched condition
description	U	varchar2(254)	Text describing the condition. `opccfgupld` uses this to identify a condition, therefore it must be unique.
fieldseparator		varchar2(16)	Field separators used for pattern matching.

opc_cond_appl_list Table

This table contains lists of applications used in the conditions.

Table 6-3 opc_cond_appl_list Table

Column Name	Con-straint	Column Type	Description
condition_id	N, U, F	varchar2(36)	Key field to identify the condition.
application	U	varchar2(254)	Application name the incoming message must have.

opc_cond_cust_attrib Table

This table contains the custom message attribute computation rules assigned to the respective message conditions. The combination of condition_id and cma_name must be unique.

Table 6-4 opc_cond_cust_attrib Table

Column Name	Con-straint	Column Type	Description
condition_id	U, N, F	varchar2(36)	Key field to identify the condition.
cma_name	U, N	varchar2(254)	The name given to the custom message attribute.
cma_value_rule	N	varchar2(1024)	The method used to compute the actual value of a custom message attribute.

opc_cond_mgrp_list Table

This table contains a list of message groups for the conditions.

Table 6-5 opc_cond_mgrp_list Table

Column Name	Con-straint	Column Type	Description
condition_id	N, U, F	varchar2(36)	Key field to identify the condition.
message_group	U	varchar2(32)	Message group the incoming message must have.

opc_cond_node_list Table

This table contains lists of nodes used in the conditions.

Table 6-6 opc_cond_node_list Table

Column Name	Con-straint	Column Type	Description
nodelist_id	U	varchar2(36)	Key field to identify the list of nodes.
entry_type	N, U	number(3)	Type of node entry: node_id or node_parameter. Possible values: 0...Variable (the node string contains text with pattern-matching) 1...IP node (the node string contains the node ID of the node in opc_node_names) 5...non-IP Node (the node string contains the node ID of the node in opc_node_names)
node_string	U	varchar2(254)	This field contains a variable string or a node_id (depending on the entry_type field).

opc_cond_obj_list Table

This table contains lists of objects used in the conditions.

Table 6-7 opc_cond_obj_list Table

Column Name	Con-straint	Column Type	Description
condition_id	N, U, F	varchar2(36)	Key field to identify the condition.
object	U	varchar2(254)	Object name the incoming message must have.

opc_cond_oper_list Table

This table contains a list of operator names of Message Stream Interface registration conditions.

Table 6-8 opc_cond_oper_list Table

Column Name	Con-straint	Column Type	Description
condition_id	U, N, F	varchar2(36)	Key field to associate list entries with a Message Stream Interface registration condition (opc_mpi_reg_conds).
operator	U	varchar2(20)	Operator name for the Message Stream Interface registration condition.

opc_cond_sev_list Table

This table contains lists of severities used in the conditions.

Table 6-9 opc_cond_sev_list Table

Column Name	Con-straint	Column Type	Description
condition_id	P, F	varchar2(36)	Key field to identify the condition.
severity	P	number(3)	Severity the incoming message must have.

opc_cond_stat_var Table

This table holds the values of condition status variables for scheduled outages.

Table 6-10 opc_cond_stat_var Table

Column Name	Con-straint	Column Type	Description
name	P	varchar2(32)	Name and key of a condition status variable.
current_value	N	number(3)	Value of condition status variable: Yes/No.
default_value	N	number(3)	Default value of condition status variable: Yes/No.

opc_cond_text Table

This table contains the text patterns of conditions in templates, as well as the message text to set if the condition matches. The text is split into parts of 254 characters and assembled in the order determined by order_number.

Table 6-11 opc_cond_text Table

Column Name	Con-straint	Column Type	Description
text_id	N, U	varchar2(36)	Key field to identify the text.
order_number	N, U	number(5)	Order number of this text part.
text_part	U	varchar2(254)	Part of the text.

opc_cond_type_list Table

This table contains a list of message types for a Message Stream Interface registration condition.

Table 6-12 opc_cond_type_list Table

Column Name	Con-straint	Column Type	Description
condition_id	P, F	varchar2(36)	Condition ID from opc_cond_appl_list (see page 151).
message_type	P	varchar2(32)	Message type of registration condition.

opc_monitor_cond Table

This table contains the main entry of a monitor condition.

Table 6-13 opc_monitor_cond Table

Column Name	Con-straint	Column Type	Description
condition_id	P	varchar2(36)	Key field to identify the condition.
template_id	N, U, F	varchar2(36)	Key field to identify the template.
order_number	N	number(12)	Processing an display order of the condition within the template.
condition_type	N	number(3)	Type of condition: Possible values: 0...Match condition 1...Suppress condition 2...Suppress unmatched condition
case_sense_flag	N	number(3)	Case sensitive pattern matching: Yes/No.
object_pattern		varchar2(254)	Object pattern for object monitoring.
fieldseparator		varchar2(16)	Field separator for pattern matching.
description	U	varchar2(254)	Description of condition (used to identify the condition by `opccfgupld`).
threshold		varchar2(32)	Threshold against which the actual value is checked.
reset		varchar2(32)	Reset value used to generate messages.
duration		varchar2(16)	Period that the threshold has to be exceeded for. Format 1h10m0s

opc_mpi_reg_conds Table

This table contains the registration conditions of an active instance of the Message Stream Interface.

Table 6-14 opc_mpi_reg_conds Table

Column Name	Con-straint	Column Type	Description
inst_id	P, F	varchar2(36)	Message Stream Interface instance ID.
condition_nr	P	number(12)	Message Stream Interface registration condition number.
condition_id	N, F	varchar2(36)	Condition ID (for condition handling).

Table 6-14 opc_mpi_reg_conds Table (Continued)

Column Name	Con-straint	Column Type	Description
event_mask	N	number(12)	Event mask message change events. Possible values (which may be combined with a logical OR) are: 1...Acknowledge 2...Unacknowledge 4...Own 8...Disown 16...Message now has annotations 32...Last annotation deleted 64...Escalated to another server 128...Escalated from another server 256...Automatic action started 512...Automatic action finished 1024...Operator action started 2048...Operator action finished 4096...Highlight 8192...Buffer 16384...Unbuffer 32768...Modify message 65535...All events
msg_characterist	N	number(12)	Message characteristic of registration condition.

opc_msg_cond Table

This table contains the set attributes of a message condition for all template types.

Table 6-15 opc_msg_cond Table

Column Name	Con-straint	Column Type	Description
condition_id	P, F	varchar2(36)	Key field to identify the condition.
instruction_id	N	varchar2(36)	Key field to identify the instruction text or the name of the instruction text interface.
log_only_flag	N	number(3)	Log the message only on the management server: Yes/No. The message is log only (is put directly into the history database tables).
trouble_tick_flag	N	number(3)	Gener.ate trouble ticket for the message: Yes/No.
ackn_after_tt_flag	N	number(3)	Acknowledge message after generation of the trouble ticket.
notification_flag	N	number(3)	Trigger notification for the message: Yes/No.
auto_node_id	N, F	varchar2(36)	Key field to identify the entry in the opc_cond_node_list (see page 154) that specifies where the automatic action will run (indirection because value may be a parameter).
auto_anno_flag	N	number(3)	Automatic action generates annotation: Yes/No.
auto_ackn_flag	N	number(3)	Automatic action acknowledges message: Yes/No.
op_init_node_id	N, F	varchar2(36)	Key field to identify the entry in the opc_cond_node_list (see page 154) that specifies where the operator-initiated action will run (indirection because value may be a parameter).

Table 6-15 opc_msg_cond Table (Continued)

Column Name	Con-straint	Column Type	Description
op_init_anno_flag	N	number(3)	Operator-initiated action generates annotation: Yes/No.
op_init_ackn_flag	N	number(3)	Operator-initiated action acknowledges message: Yes/No.
auto_call		varchar2(254)	Program call for automatic action.
op_init_call		varchar2(254)	Program call for operator-initiated action.
supp_opt	N	number(3)	Suppress duplicates. Possible values: 0…No suppression 1…Match (suppress all messages that match this condition) 2…Identical (suppress only identical messages) 3…Suppress Identical Output Messages
supp_time		varchar2(16)	Time span within which duplicates are suppressed. Format: 1h10m5s.
supp_send		varchar2(16)	Time to resent message after. Format: 1h10m5s.
supp_count		varchar2(16)	Suppress counter.
supp_reset		varchar2(16)	Reset time for suppress count. Format: 1h10m5s.
supp_flag	N	number(3)	Suppress duplicates: Yes/No.
new_node_id	N, F	varchar2(36)	Key field to identify the entry in the opc_cond_node_list (see page 154) that specifies the message node (indirection because value may be a parameter).
new_text_id	N, F	varchar2(36)	ID of the message text in opc_cond_text (because message text may be longer than 254 characters).

Table 6-15 opc_msg_cond Table (Continued)

Column Name	Con-straint	Column Type	Description
new_severity	N	number(3)	Severity attribute of the generated message. Possible values are: 0...Unchanged 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
new_application		varchar2(254)	Application attribute of the generated message.
new_message_group		varchar2(32)	Message group attribute of the generated message.
new_object		varchar2(254)	Object attribute of the generated message.
message_type		varchar2(32)	Message type attribute for the Message Stream Interface.
mpi_output	N	number(3)	Using the Server Message Stream Interface. Possible values: 0...No 1...Divert 2...Copy
imm_auto_action	N	number(3)	Start local automatic actions although Message Stream Interface enabled.

Table 6-15 opc_msg_cond Table (Continued)

Column Name	Con-straint	Column Type	Description
mpi_output_agt	N	number(3)	Using the Agent Message Stream Interface. Possible values: 0…No 1…Divert 2…Copy
instruction_type	N	number(3)	Type of instruction. Possible values: 0…No instruction 1…Instruction text 2…Use instruction text interface
instr_parameters		varchar2(254)	Parameters for instruction text interface.
service_name		varchar2(2048)	Name of the service. (Used by the HP OV Service Navigator.)
msg_key		varchar2(2048)	Message key to identify messages that were triggered from particular events.

opc_msg_key_rel Table

This table contains the details of relationships between message keys and match conditions.

Table 6-16 opc_msg_key_rel Table

Column Name	Con-straint	Column Type	Description
condition_id	N	varchar2(32)	Key to link the message key relations to a message condition.
action	N	number(3)	Action for this relation. Possible values: 0...Increase counter 1...Acknowledge
case_sens_flag	N	number(3)	Check message key case sensitive: Yes/No.
fieldseparator		varchar2(16)	Field separator used for pattern matching.
msg_key_pattern		varchar2(2048)	Message key pattern of this relation

opc_open_mpis Table

This table contains runtime data about the Message Stream Interface instances.

Table 6-17 opc_open_mpis Table

Column Name	Con-straint	Column Type	Description
inst_id	P	varchar2(36)	Message Stream Interface instance ID.
type	N	number(12)	Type of Message Stream Interface instance as defined for OVO interfaces in `/opt/OV/include/opcsvapi.h`.
mpi_mode	N	number(12)	Mode of Message Stream Interface instance as defined in `/opt/OV/include/opcsvapi.h`.
max_entries	N	number(12)	Maximum number of entries in queue.
name	U	varchar2(13)	Name of Message Stream Interface instance.

opc_rgr_cond Table

This table specifies the regroup conditions (used for redirection of messages to another message group or another service name).

Table 6-18 opc_rgr_cond Table

Column Name	Con-straint	Column Type	Description
condition_id	P, F	varchar2(36)	Key field to identify the condition.
order_number	N	number(5)	Number specifying the process order of the conditions.
new_message_group		varchar2(32)	New message group attribute of the processed message.
service_name		varchar2(2048)	New service name attribute of the processed message.

opc_snmp_variables Table

This table contains lists of the contents of user-defined SNMP variables. SNMP variables are used for pattern matching instead of the message text used by other message sources.

Table 6-19 opc_snmp_variables Table

Column Name	Con-straint	Column Type	Description
snmp_variables_id	P	varchar2(36)	Key field to identify the SNMP variables.
variable_text_id	P	varchar2(36)	Key field to identify the text pattern in the opc_cond_text table (see page 159), used for checking the variable.
variable_number	P	number(5)	Order number of the variable (according to the $xx value).

opc_trap_cond Table

This table contains the match condition part of SNMP trap conditions.

Table 6-20 opc_trap_cond Table

Column Name	Con-straint	Column Type	Description
trap_condition_id	P	varchar2(36)	Key field to identify the condition.
template_id	N, F	varchar2(36)	Key field to identify the template.
order_number	N	number(5)	Number specifying the process and display order of the conditions.
condition_type	N	number(3)	Type of condition. Possible values: 1...Match condition 2...Suppress condition 3...Suppress unmatched condition
description		varchar2(254)	Text describing the condition.
nodelist_id	N	varchar2(36)	Key field to identify the list of nodes which is used to check the node attribute of the incoming trap in opc_cond_node_list (see page 154).
snmp_variables_id	N	varchar2(36)	Key field to identify the SNMP variables in opc_snmp_variables (see page 171).
case_sens_flag	N	number(3)	Check the SNMP variables case sensitive: Yes/No.
generic_trap	N	number(3)	Generic trap number the incoming trap must have.
specific_trap	N	number(12)	Specific trap number the incoming trap must have.
enterprise_id		varchar2(254)	Enterprise string the incoming trap must have.
fieldseparator		varchar2(16)	Field separators used for pattern matching.

7 Message Tables

In This Chapter

Although they have the same attributes, the active and history messages are kept in two different sets of tables because this:

- improves performance when loading active messages
- reduces the time it takes to insert new active messages

However, when acknowledging or unacknowledging messages, they must be moved between active and history tables. To reduce the impact that this has on the GUI, the messages are first marked, then moved in groups of 50 by an asynchronous process.

Also for performance reasons, the message text and original message text (which will be accessed seldom) are stored in separate text tables.

The actions specified in the conditions may contain parameters, which will be replaced by the matching algorithm. The matching condition is not reported to the management station. Therefore the actions (with the processed action call) become part of the message itself and are not referenced via the condition ID.

opc_act_cust_attrib Table

This table contains the actual custom message attribute pairs attached to the associated message. The combination of `message_number` and `cma_name` must be unique.

Table 7-1 opc_act_cust_attrib Table

Column Name	Con-straint	Column Type	Description
message_number	U, N, F	varchar2(36)	Key field to identify the associated message.
cma_name	U, N	varchar2(254)	The name of the custom message attribute.
cma_value		varchar2(1024)	The actual value of the custom message attribute.

opc_act_messages Table

This table contains the main entry for messages that are currently in the Message Browser window.

This table can also contain messages that are marked as acknowledged. When acknowledging a large number of messages, the messages are marked by setting the ackn_flag field to Yes. The opcdbmsgmv process runs on a regular basis to move all marked messages to the history tables.

Table 7-2 opc_act_messages Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key field to identify the message.
condition_id	N	varchar2(36)	Key field to identify the condition matching the message. (Not used.)
instruction_id		varchar2(36)	Key field to identify the instruction text/instruction text interface.
node_id	N	varchar2(36)	Key field to identify the node where the event occurred.
msg_gen_node_id	N	varchar2(36)	Key field to identify the node where the message was generated.
network_type	N	number(5)	Type of network the node resides in. Possible values: 1…IP 5…Other
log_only_flag	N	number(3)	Message was sent as log-only to the server: Yes/No.
unmatched_flag	N	number(3)	Message did not match any condition: Yes/No.

Table 7-2 opc_act_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
msg_source_type	N	number(12)	Message source type. Possible values: 1...Console 2...Interface 4...Logfile 8...Monitor 16...SNMP 256...Schedule 32...Server Message Stream Interface 64...Agent Message Stream Interface 128...Legacy Link Interface 4096...Internal message 8192...Subproduct message
notification_flag	N	number(3)	Message triggered notification: Yes/No.
trouble _tick_flag	N	number(3)	Message generated trouble ticket: Yes/No.
ackn_after_tt_flag	N	number(3)	Acknowledge message after generation of the trouble ticket: Yes/No.
msggrp_misc_flag	N	number(3)	Message belongs to message group Misc: Yes/No. (Assigned message group is not configured in OVO.) This flag is set when the message is added. It may therefore be wrong if the message group was added or deleted afterwards.

Table 7-2 opc_act_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
cma_flag	N	number(3)	Indicate if a custom message attribute is available for the message. Possible values: 0...No custom message attribute 2...Custom message attribute available (default)
creation_time	N	number(12)	Date and time the message was created on the managed node (in seconds since 00:00 GMT on 1 Jan 1970).
local_creation_time		date	Creation time on agent in server time zone in date format. This is for reporting purposes.
receiving_time	N	number(12)	Date and time the message was received on the management server, or when it was unbuffered (in seconds since 00:00 GMT on 1 Jan 1970).
local_receiving_time		date	Receiving time on server in date format using the server's time zone. This is for reporting purposes.
severity	N	number(3)	Severity attribute of the message. 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major

Table 7-2 opc_act_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
auto_status	N	number(3)	Status of the automatic action. Possible values: 2...Failed 8...Started 9...Finished 11...Defined 12...No action
auto_node_id	N	varchar2(36)	Key field to identify the node where the automatic action will run.
auto_anno_flag	N	number(3)	Automatic action generates annotation: Yes/No.
auto_ackn_flag	N	number(3)	Automatic action acknowledges message: Yes/No.
op_init_status	N	number(3)	Status of the operator-initiated action. Possible values: 2...Failed 8...Started 9...Finished 11...Defined 12...No action
op_init_node_id	N	varchar2(36)	Key field to identify the node where the operator initiated action will run.
op_init_anno_flag	N	number(3)	Operator-initiated action generates annotation: Yes/No.
op_init_ackn_flag	N	number(3)	Operator-initiated action acknowledges message: Yes/No.
msg_source_name		varchar2(32)	Name of the message source (template name).

Table 7-2 opc_act_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
application		varchar2(254)	Application attribute of the message.
message_group		varchar2(32)	Message group attribute of the message.
object		varchar2(254)	Object attribute of the message.
notify_services		varchar2(254)	Notification services used by this message.
auto_call		varchar2(2000)	Program call for automatic action.
op_init_call		varchar2(2000)	Program call for operator-initiated action.
message_type		varchar2(32)	Message type attribute for the Message Stream Interface. Used to filter messages in ECS.
escalate_flag	N	number(3)	Message is escalated. Possible values: 0...Not escalated 1...Escalated to 2...Escalated from
assign_flag	N	number(3)	An operator is working on a message and has owned this message. Possible values: 0...Not owned 4...Owned
instruction_type	N	number(3)	Type of instruction. Possible values: 0...No instruction 1...Instruction text 2...Use instruction text interface 3...Instruction for OVO internal errors
resolved_instr_par		varchar2(254)	Resolved parameters for instruction text interface.

Table 7-2 opc_act_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
service_name		varchar2(2048)	Service name attribute.
msg_key		varchar2(2048)	Message key to identify a certain type of message.
forward	N	number(3)	Message is forwarded to/from this manager. Possible values are: 0…Not forwarded 1…Forwarded from 2…Forwarded to
readonly	N	number(3)	Message is read-only: Yes/No.
original_msgid	N	varchar2(36)	message_number on source manager. Also set if an event generates more than one message.
buffer_flag	N	number(3)	Message is buffered because it is received outside of service hours: Yes/No.
unbuffer_time		number(12)	Time when message will be unbuffered (at start of service hours). Format: in seconds since 00:00 GMT on 1 Jan 1970. If a message is not buffered, this field is null.
local_unbuffer_time		date	Time at which the message has to be unbuffered (service hour start) in date format using the server's time zone. If a message is not buffered, this field is null.
time_diff	N	number(12)	Difference between GMT and the agent time zone where the message was created.
local_agt_creation_time		date	Creation time on the agent in date format using the agent's time zone. This is for reporting purposes only.
ackn_flag	N	number(3)	Message is acknowledged but not yet moved to the history tables: Yes/No.

Table 7-2 opc_act_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
ackn_time		number(12)	Acknowledge time of acknowledged (but not yet moved) message in seconds since 00:00 GMT on 1 Jan 1970. This is for reporting purposes only. If the message is not acknowledged, this field is null.
local_ackn_time		date	Acknowledge time in server time zone in date format (for reporting purposes). If the message is not acknowledged, this field is null.
ackn_user		varchar2(20)	User who acknowledged message. If the message is not acknowledged, this field is null. The user OpC in this field indicates that OVO acknowledged the message.
dupl_count	N	number(12)	Number of duplicates of this message.
last_time_received		number(12)	Date and time the last duplicate message of this message was received on the management server (in seconds since 00:00 GMT on 1 Jan 1970). If there aren't any duplicates, this field is null.
local_last_time_received		date	Date and time the last duplicate message of this message was received, in date format using the server's time zone (for reporting purposes). If there aren't any duplicates, this field is null.

opc_anno_text Table

This table contains the annotation text for messages in opc_act_messages (see page 176). To allow for sizes greater than 254, the annotation text is split into chunks of 254 characters.

Table 7-3 opc_anno_text Table

Column Name	Con-straint	Column Type	Description
anno_text_id	P	varchar2(36)	Key field to identify this text.
order_number	P	number(5)	Order number of this text part.
text_part	N	varchar2(254)	Text part.

opc_annotation Table

This table contains the main entry of message annotations for messages in opc_act_messages (see page 176).

Table 7-4 opc_annotation Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	First part of key used to identify the message.
anno_text_id	P	varchar2(36)	Second part of key used to identify the annotation text in opc_anno_text Table.
time	N	number(12)	Creation time of the annotation in seconds since 00:00 GMT on 1 Jan 1970.
local_time		date	Creation time of the annotation in the server time zone in date format (for reporting purposes).
anno_number		number(5)	Order number of the annotation.
author		varchar2(20)	Name of the OVO user who entered the annotation. The author is OpC if OVO generated the action.

opc_escal_assign_m Table

This table contains the message numbers of the owned messages, and messages that were escalated to or from another management server. This refers to messages in opc_act_messages (see page 176).

Table 7-5 opc_escal_assign_m Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key to identify the message.
type	P	number(3)	Message type: 1...Escalated to 2...Escalated from 4...Owned
node_id	N	varchar2(36)	Node ID of the node from/to which the message was escalated. (Null ID for owned messages.)
op_name		varchar2(32)	Name of the operator who escalated/owned the message.
time	N	number(12)	Time the message was escalated/owned.
local_time		date	Time of escalation or own in server time zone in date format This is for reporting purposes.

opc_forward_msgs Table

This table contains a list of messages that have been forwarded to other management servers. One message can be forwarded to more than one manager.

Table 7-6 opc_forward_msgs Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key field (part 1), associates entries with a message.
target_manager_id	P	varchar2(36)	Key field (part 2), node ID of the target manager.
new_message_number	N	varchar2(36)	New message number on the target manager.
type	N	number(12)	Type of the forwarded message (notification or full control).

opc_hist_anno_text Table

This table contains the annotation text for history messages in opc_hist_messages (see page 190). To allow for sizes greater than 254, the annotation text is split into chunks of 254 characters.

Table 7-7 opc_hist_anno_text Table

Column Name	Con-straint	Column Type	Description
anno_text_id	P	varchar2(36)	Key field to identify this text.
order_number	P	number(5)	Order number of this part of the text.
text_part		varchar2(254)	Text part.

opc_hist_annotation Table

This table contains the annotations of a history message in opc_hist_messages (see page 190). The annotation texts are in opc_hist_anno_text.

Table 7-8 opc_hist_annotation Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key to identify the message.
anno_text_id	P	varchar2(36)	ID to identify the annotation text in opc_hist_anno_text.
time		number(12)	Creation time of the annotation in seconds since 00:00 GMT on 1 Jan 1970.
local_time		date	Creation time of the annotation in the server time zone in date format. This is for reporting purposes.
anno_number		number(5)	Order number of the annotation.
author		varchar2(20)	Name of the OVO operator who entered the annotation.

opc_hist_cust_attrib Table

This table contains the actual custom message attribute pairs attached to the associated history message. The combination of message_number and cma_name must be unique.

Table 7-9 opc_hist_cust_attrib Table

Column Name	Con-straint	Column Type	Description
message_number	U, N, F	varchar2(36)	Key field to identify the associated message.
cma_name	U, N	varchar2(254)	The name of the custom message attribute.
cma_value		varchar2(1024)	The actual value of the custom message attribute.

opc_hist_messages Table

This table contains the main entry for history messages (messages that were acknowledged or are log-only). Some acknowledged messages may still be in opc_act_messages (see page 176).

Table 7-10 opc_hist_messages Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key field to identify the message.
condition_id	N	varchar2(36)	Key field to identify the condition matching the message. (Not used or set.)
instruction_id		varchar2(36)	Key field to identify the instruction text or instruction text interface.
node_id	N	varchar2(36)	Key field to identify the node where the event occurred.
msg_gen_node_id	N	varchar2(36)	Key field to identify the node where the message was generated.
network_type	N	number(5)	Type of network the node resides in. Possible values: 1...IP 5...Other
log_only_flag	N	number(3)	Message was sent as log-only to the management server: Yes/No.
unmatched_flag	N	number(3)	Message did not match any condition: Yes/No.

Table 7-10 opc_hist_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
msg_source_type	N	number(12)	Message source type. Possible values: 1...Console 2...Interface 4...Logfile 8...Monitor 16...SNMP 256...Schedule 32...Server Message Stream Interface 64...Agent Message Stream Interface 128...Legacy Link Interface 4096...Internal message 8192...Subproduct message
notification_flag	N	number(3)	Message triggered notification: Yes/No.
trouble_tick_flag	N	number(3)	Message generated trouble ticket: Yes/No.
ackn_after_tt_flag	N	number(3)	Acknowledge message after generation of the trouble ticket: Yes/No.
msggrp_misc_flag	N	number(3)	Message is assigned to Misc: Yes/No.
cma_flag	N	number(3)	Indicate if a custom message attribute is available for the message. Possible values: 0...No custom message attribute 2...Custom message attribute available (default)
creation_time	N	number(12)	Date and time the message was created on the managed node in seconds since 00:00 GMT on 1 Jan 1970.

Table 7-10 opc_hist_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
local_creation_time		date	Creation time on agent in server time zone in date format (for reporting purposes).
local_agt_creation_time		date	Creation time on agent in agent time zone in date format for reporting.
receiving_time	N	number(12)	Date and time the message was received on the management server.
local_receiving_time		date	Time the server received the message in date format using the server's time zone. This is for reporting purposes.
severity	N	number(3)	Severity attribute of the message. 1...Unknown 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
auto_status	N	number(3)	Status of the automatic action. Possible values: 2...Failed 8...Started 9...Finished 11...Defined 12...No action
auto_node_id	N	varchar2(36)	Key field to identify the node where the automatic action will run.
auto_anno_flag	N	number(3)	Automatic action generates annotation: Yes/No.

Table 7-10 opc_hist_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
auto_ackn_flag	N	number(3)	Automatic action acknowledges message: Yes/No.
op_init_status	N	number(3)	Status of the operator-initiated action. Possible values: 2...Failed 8...Started 9...Finished 11...Defined 12...No action
op_init_node_id	N	varchar2(36)	Key field to identify the node where the operator initiated action will run.
op_init_anno_flag	N	number(3)	Operator-initiated action generates an annotation: Yes/No.
op_init_ackn_flag	N	number(3)	Operator-initiated action acknowledges the message: Yes/No.
ackn_time	N	number(12)	Date and time the message was acknowledged in seconds since 00:00 GMT on 1 Jan 1970.
local_ackn_time		date	Acknowledge time in server time zone in date format. This is for reporting purposes.
application		varchar2(254)	Application attribute of the message.
auto_call		varchar2(2000)	Program call for automatic action.
op_init_call		varchar2(2000)	Program call for operator-initiated action.
ackn_user		varchar2(20)	Operator name who acknowledged the message (OpC if acknowledged by OVO).
msg_source_name		varchar2(32)	Name of the message source (template name).
message_group		varchar2(32)	Message group attribute of the message.

Table 7-10 opc_hist_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
object		varchar2(254)	Object attribute of the message.
notify_services		varchar2(254)	Notification services used by this message.
message_type		varchar2(32)	Message type attribute for the Message Stream Interface.
escalate_flag	N	number(3)	Message is escalated. Possible values: 0...Not escalated 1...Escalated to 2...Escalated from
assign_flag	N	number(3)	An operator is working on a message and has owned this message. Possible values: 0...Not owned 4...Owned
instruction_type	N	number(3)	Type of instruction. Possible values: 0...No instruction 1...Instruction text 2...Use instruction text interface 3...Instruction for OVO internal error
resolved_instr_par		varchar2(254)	Resolved parameters for instruction text interface.
service_name		varchar2(2048)	Service name attribute.
msg_key		varchar2(2048)	Message key to identify a certain type of message.

Table 7-10 opc_hist_messages Table (Continued)

Column Name	Con-straint	Column Type	Description
forward	N	number(3)	Message is forwarded to/from this manager. Possible values are: 0…Not forwarded 1…Forwarded to 2…Forwarded from
readonly	N	number(3)	Message is read-only: Yes/No.
original_msgid	N	varchar2(36)	message_number on source manager. Also set if an event generates more than one message.
time_diff	N	number(12)	Difference to GMT of the agent time zone when the message was created.
dupl_count	N	number(12)	Number of duplicates of this message.
last_time_received		number(12)	Date and time the last duplicate message of this message was received on the management server (in seconds since 00:00 GMT on 1 Jan 1970). If there aren't any duplicates, this field is null.
local_last_time_received		date	Date and time the last duplicate message of this message was received, in date format using the server's time zone (for reporting purposes). If there aren't any duplicates, this field is null.
unbuffer_time		int4	Unbuffer time from the active message table.
local_unbuffer_time		date	Date in local format.

opc_hist_msg_text Table

This table holds the message text (divided in 254 byte parts) of a history message in opc_hist_messages (see page 190).

Table 7-11 opc_hist_msg_text Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Part one of key used to identify the message.
order_number	P	number(5)	Part two of key, used for order of the text parts.
text_part		varchar2(254)	254 byte parts of the message text.

opc_hist_orig_text Table

This table holds the original message text (divided in 254 byte parts) of a history message in opc_hist_messages (see page 190).

Table 7-12 opc_hist_orig_text Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Part one of key used to identify the message.
order_number	P	number(5)	Part two of key, used for order of the text parts.
text_part		varchar2(254)	254 byte parts of the original message text.

opc_instr_interf Table

This table contains the definition of instruction text interfaces.

Table 7-13 opc_instr_interf Table

Column Name	Con-straint	Column Type	Description
name	P	varchar2(36)	Key field that contains the name of instruction interface. This name is written in the instruction_id of a condition or message.
description		varchar2(254)	Description of instruction interface.
instr_interf_call		varchar2(254)	Program call for instruction interface.
node_id	N	varchar2(36)	Node where program call is executed.
start_on_mgmt_sv	N	number(3)	Start instruction interface call on management server.
username		varchar2(45)	OS user of program call.
output_mode	N	number(3)	Output in Terminal/No Window Possible values: 0…No window 1…Input/output 2…Output only
resolve_for_ttns	N	number(3)	Resolve external instruction for trouble ticket or notification service: Yes/No.

opc_instructions Table

This table contains the text of normal instructions. To allow for a various text lengths, the text is split into chunks of 254 characters.

Table 7-14 opc_instructions Table

Column Name	Con-straint	Column Type	Description
instruction_id	P	varchar2(36)	Key field to identify the instruction text.
order_number	P	number(5)	Order number of this part of the text.
text_part		varchar2(254)	Text part.

opc_msg_text Table

This table contains the message text for messages in opc_act_messages (see page 176). To allow for a various text lengths, the text is split into chunks of 254 characters.

Table 7-15 opc_msg_text Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Part one of key to identify the message.
order_number	P	number(5)	Order number of this text part.
text_part		varchar2(254)	Text part.

opc_orig_msg_text Table

This table contains the original (unprocessed) text of messages in opc_act_messages (see page 176). To allow for a various text lengths, the text is split into chunks of 254 characters.

Table 7-16 opc_orig_msg_text Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Part one of key to identify the message.
order_number	P	number(5)	Order number of this text part.
text_part		varchar2(254)	Text part.

opc_service_msgs Table

This table supports reports that show all messages related to a given service.

Table 7-17 opc_service_msgs Table

Column Name	Con-straint	Column Type	Description
service_name		varchar2(2048)	Service name that is affected.
msg_service_name		varchar2(2048)	Service name as given in the messages affecting it.

8 Other Tables

In This Chapter

This chapter contains the tables that do not fall into any of the previous categories.

opc_agent_status Table

This table contains the status of the agents on the managed nodes.

Table 8-1 opc_agent_status Table

Column Name	Con-straint	Column Type	Description
node_id	N	varchar2(36)	Node running the agent. Foreign key to opc_nodes.
agent_name	N	varchar2(254)	Name of the agent or subagent.
agent_status	N	int2	Flag word describing the execution status of the agent: 0 Undefined. 1 Running. 2 Stopped (regular). 3 Stopped (irregular).
agent_status_reason	N	varchar2(254)	Text describibg the reason for the current status.
status_upd_tstamp	N	int4	Time stamp of the latest update of the agent_status field.
local_upd_tstamp	N	date	Time stamp of the latest update of the agent_status field as an ORACLE date.

opc_audit Table

The opc_audit table is not published for security reasons. If you want to generate a report about auditing, use the `OVO Reports` window in the administrator GUI.

opc_audit_param Table

The opc_audit_param table is not published for security reasons. If you want to generate a report about auditing, use the `OVO Reports` window in the administrator GUI.

opc_change_status Table

This table contains the change flags for the OVO nodes and users.

Table 8-2 opc_change_statusTable

Column Name	Con-straint	Column Type	Description
object_id	P	varchar2(36)	Name and key of a condition status variable (linked to node_id or user_id).
object_type	P	number(5)	Type of object. Possible values: 1...Node 2...User
status_type	P	number(5)	Status flag type. Possible values: 1...(node) Node configuration (template) distribution status. 2...(node) Nodeinfo distribution status. 3...(node) Action script distribution status. 4...(node) Command script distribution status. 5...(node) Monitor script distribution status. 6...(user) Domain (node hierarchy) change flag. 7...(user) Realm (responsibility) change flag. 8...(user) Desktop (assigned applications) change flag. 9...(user) OV change application change flag.

Table 8-2 opc_change_statusTable (Continued)

Column Name	Con-straint	Column Type	Description
value		number(12)	Value of the change flag or change status. For the user change flags, the value is either 0 or 1. For nodes, possible values are: 0…Active (no distribution necessary) 1…Modified (distribution necessary) 2…Distribute (configuration is currently distributed) 3…Ignore 4…Modified force (distribution enforced) 5…Distribute force (enforced distribution in progress)

opc_cma_names Table

This temporary table holds the names of all available custom message attributes for selection in the Java GUI browser configuration.

Table 8-3 opc_cma_names Table

Column Name	Con-straint	Column Type	Description
cma_name	N	varchar2(254)	Custom message attribute name.

opc_db_maintenance Table

This table contains the database maintenance configuration for the OVO management server.

Table 8-4 opc_db_maintenance Table

Column Name	Con-straint	Column Type	Description
max_num_active	P	number(12)	Maximum number of active messages allowed. (Messages are generated if this value is exceeded.)
max_num_hist	N	number(12)	Maximum number of history messages allowed. (Messages are generated if this value is exceeded.)
max_num_audit	N	number(12)	Maximum number of audit entries allowed. (Messages are generated if this value is exceeded.)
send_msg_act_flag	N	number(3)	Send message if limit of active messages is exceeded: Yes/No.
send_msg_hist_flag	N	number(3)	Send message if limit of history messages is exceeded: Yes/No.
send_msg_aud_flag	N	number(3)	Send message if limit of audit entries is exceeded: Yes/No.
download_hist_flag	N	number(3)	Automatically download history messages: Yes/No.
hist_older	N	number(12)	Number of seconds to wait after acknowledgment of a message before downloading it into history tables.
hist_at_time		varchar2(32)	Download the messages at the specified time. Format: 00:00:00
hist_notific_flag	N	number(3)	Generate messages when downloading the history messages: Yes/No.
download_aud_flag	N	number(3)	Automatically download audit entries: Yes/No.

Table 8-4 opc_db_maintenance Table (Continued)

Column Name	Con-straint	Column Type	Description
audit_older	N	number(12)	Number of seconds to wait after creation of a message before downloading to audit tables.
audit_at_time		varchar2(32)	Download the audit entries at the specified time.
audit_notific_flag	N	number(3)	Generate messages when downloading the audit entries: Yes/No.
hist_into_file		varchar2(254)	Download history messages into the specified file.
audit_into_file		varchar2(254)	Download audit entries into the specified file.

opc_message_groups Table

This table contains the messages groups of the Message Group Bank.

This table does not contain an ID field for message groups because it may not always be possible to substitute the message group of an object (message, condition, ...) with an ID. The object may contain message group names which are unknown to the database at the time.

Table 8-5 opc_message_groups Table

Column Name	Con-straint	Column Type	Description
name	P	varchar2(32)	Key field to identify the message group.
symbol_type_id	N	varchar2(36)	Key field to identify the symbol type string in opc_symbols.
description		varchar2(254)	Description of the message group.
label		varchar2(32)	Label of the message group.

opc_notif_schedule Table

This table represents the schedule for the notification services.

Table 8-6 opc_notif_schedule Table

Column Name	Con-straint	Column Type	Description
service_id	N	varchar2(36)	Key field to identify the notification service.
day	N	number(3)	Day of the week. Possible values: 0...Sunday 1...Monday 2...Tuesday 3...Wednesday 4...Thursday 5...Friday 6...Saturday
start_time	N	varchar2(16)	Time when the notification service starts (internal format).
end_time	N	varchar2(16)	Time when the notification service stops (internal format).

opc_notif_services Table

This table represents the configured notification services.

Table 8-7 opc_notif_services Table

Column Name	Con-straint	Column Type	Description
service_id	P	varchar2(36)	Key field to identify the notification service.
service_name		varchar2(32)	Identifies and describes the name of the notification service.
notif_call		varchar2(254)	Program called for this notification service.

opc_service Table

This table contains basic information about services for which service logs are generated. It is used to map services names to service labels, so that reports are able to display the label rather than the name.

Table 8-8 opc_service Table

Column Name	Con-straint	Column Type	Description
service_name	P	varchar2(2048)	Key field to identify the service.
label	N	varchar2(254)	Label of the service, displayed in the GUI.
active_log_datetime	N	number(12)	Field to identify the currently active log in the opc_service_log table.
log_service	N	number(3)	Service is still actively logged: Yes/No.
original_id	N	varchar2(2048)	Original service ID as passed by the service engine.

opc_service_log Table

This table contains the service status logs (severity and duration).

Table 8-9 opc_service_log Table

Column Name	Con-straint	Column Type	Description
service_name	P, F	varchar2(2048)	Key field to identify the service.
datetime	P, N	number(12)	Start time of the status log; in seconds since 00:00 GMT on 1 Jan 1970.
local_datetime	N	date	Start time of the status log in date format using the server's time zone. For reporting purposes only.
severity	N	number(3)	Severity attribute of the status log. Possible values are: 2...Normal 4...Warning 8...Critical 16...Minor 32...Major
end_datetime		number(12)	End time of the status log; in seconds since 00:00 GMT on 1 Jan 1970. If the status log is active, this field is null.
local_end_datetime		date	End time of the status log in date format using the server's time zone. For reporting purposes only. If the status log is active, this field is null.

opc_symbols Table

This table contains the OpenView Windows symbol names used by OVO. Other configuration tables don't contain the symbol names directly but use the symbol_type_id as reference.

Table 8-10 opc_symbols Table

Column Name	Con-straint	Column Type	Description
symbol_type_id	P	varchar2(36)	Key field to identify the symbol type strings.
symbol_name		varchar2(80)	String representing the symbol type and shape used in OpenView Windows.

opc_temp_appl_list Table

Table for temporary data for filtering messages based on applications.

Table 8-11 opc_temp_appl_list Table

Column Name	Con-straint	Column Type	Description
name		varchar2(254)	Application name.

opc_temp_msgrp_list Table

Table for temporary data for filtering messages based on message groups.

Table 8-12 opc_temp_msgrp_list Table

Column Name	Con-straint	Column Type	Description
name	N	varchar2(32)	Message group name.

opc_temp_node_list Table

Table for temporary storage of node IDs. Used for filtering of messages based on nodes, for acknowledging messages of a deleted external node and for finding responsible operators.

Table 8-13 opc_temp_node_list Table

Column Name	Con-straint	Column Type	Description
node_id	N	varchar2(36)	Node ID.

opc_temp_object_list Table

Table for temporary data for filtering messages based on objects.

Table 8-14 opc_temp_object_list Table

Column Name	Con-straint	Column Type	Description
name		varchar2(254)	Object name.

opc_temp_service_list Table

Table for temporary data for filtering messages based on services.

Table 8-15 opc_temp_service_list Table

Column Name	Con-straint	Column Type	Description
service_name	N	varchar2(2048)	Service name.

opc_temp_templ Table

Table for temporary storage of template IDs.

Table 8-16 opc_temp_templ Table

Column Name	Con-straint	Column Type	Description
template_id	N	varchar2(36)	Template ID.

opc_tmp_filter_appl Table

Temporary table for improved selection of filtered applications.

Table 8-17 opc_tmp_filter_appl Table

Column Name	Con-straint	Column Type	Description
application	P	varchar2(254)	Key field to identify the application.

opc_tmp_filter_cma Table

Temporary table for improved selection of filtered custom message attributes.

Table 8-18 opc_tmp_filter_cma Table

Column Name	Con-straint	Column Type	Description
cma_name	P, N	varchar2(254)	Name of the custom message attribute.
cma_value	P, N	varchar2(1024)	Value of the custom message attribute.

opc_tmp_filter_msggrp Table

Temporary table for improved selection of filtered message groups.

Table 8-19 opc_tmp_filter_msggrp Table

Column Name	Con-straint	Column Type	Description
message_group	N	varchar2(32)	This field contains the message group of a message.

opc_tmp_filter_node Table

Temporary table for improved selection of filtered nodes.

Table 8-20 opc_tmp_filter_node Table

Column Name	Con-straint	Column Type	Description
node_name	N	varchar2(254)	This field contains the identifying name of a node.

opc_tmp_filter_obj Table

Temporary table for improved selection of filtered objects.

Table 8-21 opc_tmp_filter_obj Table

Column Name	Con-straint	Column Type	Description
object	P	varchar2(254)	Key field to identify the object.

opc_tmp_filter_pattern_node Table

Temporary table for improved selection of filtered external nodes.

Table 8-22 opc_tmp_filter_pattern_node Table

Column Name	Con-straint	Column Type	Description
node_id	N	varchar2(36)	This field contains the identifier of an external node.

opc_tmp_filter_service Table

Temporary table for improved selection of filtered services.

Table 8-23 opc_tmp_filter_service Table

Column Name	Con-straint	Column Type	Description
service_name	N	varchar2(2048)	Key field to identify the service name of a message.

opc_tmp_misc_msggrp Table

Temporary table for improved selection of the message group `Misc`.

Table 8-24 opc_tmp_misc_msggrp Table

Column Name	Con-straint	Column Type	Description
message_group	P	varchar2(32)	Key field to identify the message group `Misc` of a message.

opc_tmp_msg_id Table

Temporary table for improved selection of message IDs.

Table 8-25 opc_tmp_msg_id Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key field to identify the message.

opc_tmp_msg_id_service Table

Temporary table for improved selection of message IDs related to services.

Table 8-26 opc_tmp_msg_id_service Table

Column Name	Con-straint	Column Type	Description
message_number	P	varchar2(36)	Key field to identify the message.

opc_tmp_valid_msggrp Table

Temporary table for improved selection of valid message groups.

Table 8-27 opc_tmp_valid_msggrp Table

Column Name	Con-straint	Column Type	Description
message_group	P	varchar2(32)	Key field to identify the message group of a message.

opc_tmp_visible_msggrp Table

Temporary table for improved selection of visible message groups.

Table 8-28 opc_tmp_visible_msggrp Table

Column Name	Con-straint	Column Type	Description
message_group	P	varchar2(32)	Key field to identify the message group of a message.

opc_tmp_visible_node Table

Temporary table for improved selection of visible nodes.

Table 8-29 opc_tmp_visible_node Table

Column Name	Con-straint	Column Type	Description
node_id	N	varchar2(36)	Key field to identify the node.
node_group_id	N	varchar2(36)	Key field to identify the node group.

opc_tmp_visible_node2 Table

Second temporary table for improved selection of visible nodes.

Table 8-30 opc_tmp_visible_node2 Table

Column Name	Con-straint	Column Type	Description
node_id	N	varchar2(36)	Key field to identify the node.
node_group_id	N	varchar2(36)	Key field to identify the node group.

opc_tmp_visible_pattern Table

Temporary table for improved selection of visible patterns.

Table 8-31 opc_tmp_visible_pattern Table

Column Name	Con-straint	Column Type	Description
node_id	P, N	varchar2(36)	Key field to identify the node.
pattern_id	P, N	varchar2(36)	Key field for node pattern identification; linked to node_id in opc_nodes (page 108).

opc_tmp_visible_profile Table

Temporary table for improved selection of visible user profiles.

Table 8-32 opc_tmp_visible_profile Table

Column Name	Con-straint	Column Type	Description
user_id	P	varchar2(36)	Key field to identify the usr profile.

opc_tmp_visible_service Table

Temporary table for improved selection of visible services.

Table 8-33 opc_tmp_visible_service Table

Column Name	Con-straint	Column Type	Description
service_name	P	varchar2(2048)	Key field to identify the service name of a message.

opc_trouble_ticket Table

This table contains the actual status and program call to forward a message to a trouble ticket system.

Table 8-34 opc_trouble_ticket Table

Column Name	Con-straint	Column Type	Description
status_flag	N	number(3)	Trouble ticket interface enabled: Yes/No.
tt_call		varchar2(254)	Program which is called to forward a message to a trouble-ticket system.

9 Secondary Indexes

In This Chapter

This chapter contains the secondary indexes.

Secondary Indexes

Additionally to the primary keys, OVO uses the following secondary indexes to improve the performance of queries which are not using primary keys. Using secondary indexes also ensures the uniqueness of entries if this is not possible through the table definitions.

Table 9-1 Secondary Indexes

Index Name	On Table	Columns
opc_groups_of_node	opc_nodes_in_group	node_id node_group_id
opc_grp_in_realm	opc_op_realm	node_group_id msg_group_name user_id
opc_hmessage_msggrp	opc_hist_messages	message_group
opc_hmessage_nodes	opc_hist_messages	node_id
opc_mcond_by_tmpl	opc_monitor_cond	template_id order_number
opc_message_msggrp	opc_act_messages	message_group
opc_node_agent_id	opc_nodes	agent_id node_id
opc_node_full_name	opc_node_names	ip_address node_id network_type node_name
opc_node_ip	opc_node_names	ip_address node_id network_type node_name

Table 9-1 Secondary Indexes (Continued)

Index Name	On Table	Columns
opc_tcond_by_tmpl	opc_node_config	template_id trap_condition_id
opc_templ_on_node	opc_node_config	template_id node_id status_flag
opcx_ma_by_parent	opc_mgmt_areas	parent_id mgmtarea_id
opcx_msg_key_rel	opc_msg_key_rel	condition_id
opcx_nodehier_layout_1	opc_nodehier_layout	node_id nodehier_id
opcx_nodehier_layout_2	opc_nodehier_layout	parent_id

10 Foreign Keys

In This Chapter

This chapter contains the foreign keys.

Foreign Keys

Table 10-1 Foreign Keys

Table	Column	Referenced Table	Referenced Column
opc_act_cust_attrib	message_number	opc_act_messages	message_number
opc_appl_platforms	application_id	opc_application	application_id
opc_applgrp_in_grp	appl_group_id	opc_appl_groups	appl_group_id
opc_applgrp_in_grp	member_appl_grp_id	opc_appl_groups	appl_group_id
opc_cond_cust_attrib	condition_id	opc_msg_cond	condition_id
opc_hist_cust_attrib	message_number	opc_hist_messages	message_number
opc_node_alt_v6_addr	node_id	opc_nodes	node_id
opc_node_config	node_id	opc_nodes	node_id
opc_node_config	template_id	opc_source_templ	template_id
opc_nodehier_layout	node_id	opc_nodes	node_id
opc_nodehier_layout	nodehier_id	opc_nodehiers	nodehier_id
opc_nodehier_layout	parent_id	opc_nodehier_layout	layout_id
opc_nodehiers	new_obj_layout_id	opc_nodehier_layout	layout_id
opc_nodes_in_group	node_group_id	opc_node_groups	node_group_id
opc_nodes_in_group	node_id	opc_nodes	node_id
opc_op_desk	application_id	opc_application	application_id
opc_op_desk	user_id	opc_user_data	user_id
opc_op_group_desk	appl_group_id	opc_appl_groups	appl_group_id
opc_op_group_desk	user_id	opc_user_data	user_id
opc_op_profiles	profile_id	opc_user_data	user_id
opc_op_profiles	user_id	opc_user_data	user_id
opc_op_realm	msg_group_name	opc_message_groups	name

Table 10-1 Foreign Keys (Continued)

Table	Column	Referenced Table	Referenced Column
opc_op_realm	node_group_id	opc_node_groups	node_group_id
opc_op_realm	user_id	opc_user_data	user_id
opc_op_services	user_id	opc_user_data	user_id
opc_service_log	service_name	opc_service	service_name
opc_templ_in_tgrp	templ_group_id	opc_templ_groups	templ_group_id
opc_templ_in_tgrp	template_id	opc_source_templ	template_id
opc_templ_on_ngrp	node_group_id	opc_node_groups	node_group_id
opc_templ_on_ngrp	template_id	opc_source_templ	template_id
opc_tgrp_in_tgrp	member_grp_id	opc_templ_groups	templ_group_id
opc_tgrp_in_tgrp	templ_group_id	opc_templ_groups	templ_group_id
opc_tgrp_on_ngrp	node_group_id	opc_node_groups	node_group_id
opc_tgrp_on_ngrp	templ_group_id	opc_templ_groups	templ_group_id
opc_tgrp_on_node	node_id	opc_nodes	node_id
opc_tgrp_on_node	templ_group_id	opc_templ_groups	templ_group_id
opc_tmpl_on_node	node_id	opc_nodes	node_id
opc_tmpl_on_node	template_id	opc_source_templ	template_id
opc_user_data	nodehier_id	opc_nodehiers	nodehier_id

A Database Changes

Changes from OVO A.07.00 to A.08.10

This chapter lists the changes in the OVO database schema that occurred between version A.07.00 and A.08.10.

Table A-1 Changes between A.06.xx and A.08.10

Table	Description
opc_node_names Table	The field node_name of Table 4-12, “opc_node_names Table,” on page 104 has changed with OVOA.08.10.
opc_node_pattern Table	For Table 4-13, “opc_node_pattern Table,” on page 105, the field pattern has changed and the field ip_flags is new.
opc_nodes Table	Table 4-16, “opc_nodes Table,” on page 108 is new with OVO A.08.10.
opc_node_defaults Table	The following fields of Table 4-10, “opc_node_defaults Table,” on page 98 are new with OVO A.08.10: • agt_inst_dir • ip_flags
opc_net_machine Table	The field dhcp_allowed of Table 4-5, “opc_net_machine Table,” on page 84 is new with OVO A.08.10.
opc_node_config Table	The field package_name of Table 5-6, “opc_node_config Table,” on page 131 is new with OVO A.08.10.
opc_cluster_map Table	Table 4-2, “opc_cluster_map Table,” on page 80 is new with OVO A.08.10.
opc_op_browser_set Table	The following fields of Table 3-10, “opc_op_browser_set Table,” on page 58 are new with OVO A.08.10: • unbuffer_time_from • unbuffer_time_to

Table A-1 Changes between A.06.xx and A.08.10 **(Continued)**

Table	Description
opc_hist_messages Table	The following fields of Table 7-10, “opc_hist_messages Table,” on page 190 have changed with OVO A.08.10: • service_name • msg_key The following fields are new: • unbuffer-time • local_unbuffer_time
opc_application Table	The appl_call field of Table 3-7, “opc_application Table,” on page 53 has changed with OVO A.08.10. the following fields are new with OVO A.08.10: • appl_license_flag • appl_license_text
opc_mgmtsv_config Table	The following fields of Table 4-4, “opc_mgmtsv_config Table,” on page 82 are new with OVO A.08.10: • ovou_license_flag • ovou_license_text
opc_service Table	The field service_name of Table 8-8, “opc_service Table,” on page 216 has changed with OVO A.08.10. The field original_id is new.
opc_templ_options Table	The following fields of Table 5-12, “opc_templ_options Table,” on page 138 have changed with OVO A.08.10: • def_service_name • def_msg_key • service_name • msg_key
opc_rgr_cond Table	The field service_name of Table 6-18, “opc_rgr_cond Table,” on page 170 has changed with OVO A.08.10.

Table A-1 Changes between A.06.xx and A.08.10 **(Continued)**

Table	Description
opc_act_messages Table	The following fields of Table 7-2, “opc_act_messages Table,” on page 176 have changed with OVO A.08.10: • `service_name` • `msg_key`
opc_msg_key_rel Table	The field `msg_key_pattern` of Table 6-16, “opc_msg_key_rel Table,” on page 168 has changed with OVO A.08.10.
opc_op_services Table	The field `service_name` of Table 3-20, “opc_op_services Table,” on page 74 has changed with OVO A.08.10.
opc_service_log Table	The field `service_name` of Table 8-9, “opc_service_log Table,” on page 217 has changed with OVO A.08.10.
opc_tmp_visible_service Table	The field `service_name` of Table 8-33, “opc_tmp_visible_service Table,” on page 241 has changed with OVO A.08.10.
opc_temp_service_list Table	The field `service_name` of Table 8-15, “opc_temp_service_list Table,” on page 223 has changed with OVO A.08.10.
opc_tmp_filter_service Table	The field `service_name` of Table 8-23, “opc_tmp_filter_service Table,” on page 231 has changed with OVO A.08.10.
opc_service_msgs Table	Table 7-17, “opc_service_msgs Table,” on page 202 is new with OVO A.08.10.
opc_agent_status Table	Table 8-1, “opc_agent_status Table,” on page 205 is new with OVO A.08.10.

P