

# Open Interface API Guide Prospect®



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Printed in USA.

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# 1 About This Documentation

The *Open Interface API Guide* provides instructions for using the Open Interface tool of Prospect® software. This guide tells you how to use the tool to better access information about peg counts and scenarios stored in the project database. This document also provides information about writing scripts to retrieve data from a single field.

This guide was last updated 31 May 2006.

Please see the current release notes on this product for a list of revision dates for all Prospect publications.

## **Audience**

The intended audience for this guide are those with a working knowledge of UNIX, and include experienced system administrators, system engineers, database administrators, installers, or supervisors who are responsible for setting up and configuring the Open Interface. In general, the reader of this guide is referred to as "*you*." By contrast, "*we*" refers to the Prospect development and technical staff who support this product.

## **Required Skills and Knowledge**

Some implementations may require knowledge of relational databases (for example, Oracle), or other third-party systems, such as performance databases.

This guide assumes that you are familiar with the following:

- UNIX basics (such as file structures, text editing, and permissions).
- A UNIX-based text editor, such as *vi* or *emacs*.
- Shell and *awk* scripting.
- UNIX system administration.
- High-level concepts of object-oriented systems such as objects, classes, and inheritance.

This guide also assumes that you are familiar with your company's network and with procedures for configuring, monitoring, and solving problems on your network.

## Document Conventions

This document uses the typographical conventions shown in the following table:

**Table 1:** General Document Conventions

<i>Format</i>	<i>Examples</i>	<i>Description</i>
ALL UPPERCASE	<ul style="list-style-type: none"><li>• GPS</li><li>• NULL</li><li>• MYWEBSERVER</li></ul>	Acronyms, device names, logical operators, registry keys, and some data structures.
<u>Underscore</u>	See <a href="#">Document Conventions</a>	For links within a document or to the Internet. Note that TOC and index links are not underscored. Color of text is determined by browser settings.
<b>Bold</b>	<ul style="list-style-type: none"><li>• <b>Note:</b> The busy hour determiner is...</li></ul>	Heading text for Notes, Tips, and Warnings.
SMALL CAPS	<ul style="list-style-type: none"><li>• The STORED SQL dialog box...</li><li>• ...click VIEW...</li><li>• In the main GUI window, select the FILE menu, point to NEW, and then select TRAFFIC TEMPLATE.</li></ul>	Any text that appears on the GUI.
<i>Italic</i>	<ul style="list-style-type: none"><li>• A <i>busy hour</i> is...</li><li>• A web server <i>must</i> be installed...</li><li>• See the <i>User Guide</i></li></ul>	New terms, emphasis, and book titles.
Monospace	<ul style="list-style-type: none"><li>• <code>./wminstall</code></li><li>• <code>\$ cd /cdrom/cdrom0</code></li><li>• <code>/xml/dict</code></li><li>• <code>http://java.sun.com/products/</code></li><li>• <code>addmsc.sh</code></li><li>• <code>core.spec</code></li><li>• Type OK to continue.</li></ul>	Code text, command line text, paths, scripts, and file names.  Text written in the body of a paragraph that the user is expected to enter.
<b>Monospace Bold</b>	<pre>[root] # pkginfo   grep -i perl system Perl5 On-Line Manual Pages system Perl 5.005_03 (POD Document- tation) system Perl 5.005_03</pre>	For contrast in a code example to show lines the user is expected to enter.
<Mono- space italics>	<ul style="list-style-type: none"><li>• <code># cd &lt;oracle_setup&gt;</code></li></ul>	Used in code examples: command-line variables that you replace with a real name or value. These are always marked with arrow brackets.
[square bracket]	<code>log-archiver.sh [-i] [-w] [-t]</code>	Used in code examples: indicates options.



## User Publications

Prospect software provides the following user publications in HTML or Adobe Portable Document Format (PDF) formats.

**Table 2:** Prospect User Documentation

<b>Document</b>	<b>Description</b>
<i>Administration Guide</i>	Helps an administrator configure and support Prospect core server software to analyze network performance and perform other network or database management tasks.
<i>Administrator's Quick Reference Card</i>	Presents the principal tasks of a Prospect core server administrator in an easy-to-use format.
<i>Expressions Technical Reference</i>	Provides detailed information about expressions used in special calculations for reports.
<i>Installation Guide</i>	Instructions for installing and configuring the Prospect software.
<i>Open Interface API Guide</i>	Describes how the Open Interface tool enhances your access to information about database peg counts and scenarios.
<i>Performance Data Reference</i>	Provides detailed information including entity hierarchies, peg counts, primitive calculations, and forecast expressions specific to your organization.
<i>Release Notes</i>	Provides technology-specific and late-breaking information about a given Prospect release and important details about installation and operation.
<i>Server Preparation Guide</i>	Provides instructions for installing and setting up Solaris and Oracle software before you install Prospect software.
<i>Server Sizing Tool Guide</i>	Helps an administrator use the sizing tool to calculate the system space needed for the Prospect software and database.
<i>User Guide</i>	Provides conceptual information and procedures for using Prospect software for performance and trending analysis.

## Viewing the Desktop Client Help Publications

If you have installed the desktop client, you can view some of the publications with your browser. Using the Prospect graphical user interface, you can select a guide from the HELP menu or press F1 for context-sensitive Help. To update the Help files, click the HELP menu on the Prospect Explorer, and select UPDATE ALL HELP FILES.

## Viewing the Publications in PDF

All of the user publications are available in Adobe Portable Document Format (PDF). To open a PDF, you need the Adobe Acrobat Reader; a copy is included on your documentation CD-ROM. If you have a browser, you can also download Adobe Acrobat Reader free of charge from the Adobe Web site. For more details about the Acrobat Reader, see the Adobe Web site <http://www.adobe.com/>.

When Help files are updated, they are downloaded automatically from the Prospect server to the Prospect client. A message box notifies you when this download occurs.

## *Training and Technical Support*

Both training and technical support are available for Prospect software. For technical support, contact us at [wmcustomersupport@vallent.com](mailto:wmcustomersupport@vallent.com). For training, contact us at [training@vallent.com](mailto:training@vallent.com).

## 2 Open Interface

The Open Interface Application Programming Interface (API) provides you with a view and a stored procedure that enhance your access to information about peg counts and scenarios stored in the project database. The Open Interface tool is automatically installed with Prospect software.

### Topics

[Raw Peg Counts](#)

[Access to Scenario Information](#)

[Sample Scripts](#)

### Raw Peg Counts

The Open Interface tool provides a view that allows you to write a query. The query returns the table name and then the table column name that contains raw peg counts loaded from the hourly Service Measurement files.

The following table lists and describes the `wmda_Field_Reference` view:

**Table 3:** The `wmda_Field_Reference` View

<i>Parameter</i>	<i>Description</i>
<b>Entity_ID</b>	ID value corresponding to Entity_Name.
<b>Entity_Name</b>	Name of the entity.
<b>Field_ID</b>	Identifier (ID) for field.
<b>Field_Name</b>	Name of the field.
<b>Table_Name</b>	Name of the Oracle table that contains the data.
<b>Table_Column</b>	Name of the column in the Oracle table that contains the data.
<b>Is_Time_Series</b>	'Y' = table has a <code>tstamp</code> field containing data and time.

Following is an example that contains the table name and table column name for the field "`DroppedCalls`" and the entity "`Cell`".

```
select Table_Name, Table_Column from wmda_field_reference where Field_Name  
= 'DroppedCalls' and Entity_Name = 'Cell'
```

---

The following is an example of a table name and column name values returned by the script.

**Table 4:** Query Results

<i>Table Name</i>	<i>Table Column</i>
ENT_BTS15_TAB	DRPCALLS

## Access to Scenario Information

The Open Interface tool provides a stored procedure that combines a scenario path name and an entity name to define the data that populates a temporary table. The temporary table is populated with the instance IDs for that entity scenario. With the view and the scenario combined, the tool allows you to write SQL code to return the raw peg counts for entities defined in a scenario.

Following is the description of the stored procedure:

```
wm_Dictionary_Schema.Scenario_Entity_Instances  
(pFolderPath, pScenarioName, pEntityName)
```

where:

- *pFolderPath* = Path to folder containing the scenario
- *pScenarioName* = Name of the scenario
- *pEntityName* = Name of entity to be resolved (case sensitive)

Running this procedure populates the global temporary table `wmda_Scenario_Instance_Tmp` with the instances for entity *pEntityName* that are in the scenario denoted by *pFolderPath* and *pScenarioName*. The temporary table's contents are unique to each Oracle session. The contents of the table are cleared at each COMMIT operation. The table has three columns, `entity_id`, `instance_id`, and `fullkey`. The `fullkey` column shows an ID for each row in an easily readable form.

Following is an example of the stored procedure:

```
EXEC wm_dictionary_Schema.Scenario_Entity_Instances  
('\Scenarios\user', 'active-50', 'MMSC');  
  
SELECT b.Fullkey, a.TStamp, DroppedCalls  
FROM ERC_TF_MMS_CDR_MMS1_TAB a, wmda_Scenario_Instance_Tmp b  
WHERE a.instance_id = b.instance_id
```

## Sample Scripts

You can also write scripts to retrieve data from a single field; for example `getdata.sh`, `sumdatatime.sh` or `sumdataent.sh`. These sample scripts for your use are located in `db/Oracle8i/schemaAPI`.

The syntax for using `getdata.sh` is as follows:

```
getdata.sh entity_name field_name 'scenario' 'start time' ['end time']
```

The `scenario` argument is path to scenario (for example, `'\Scenarios\ACTIVE-23'` ).

The start time and end time are expressed in cascading format — `dd-mon-yy hh`. The hours in the date and time information are expressed in 24-hour format (00 - 23). If only the start time is entered, the data for that hour alone is returned. If start and end times are entered, all hours from the start time to the end time are returned.

```
sumdatatime.sh entity_name field_name 'scenario'
'dd-mon-yy hh' ['dd-mon-yy hh']
```

This script adds the results by time stamp.

```
sumdataent.sh [-n] entity_name field_name 'scenario'
'dd-mon-yy hh' ['dd-mon-yy hh']
```

This script adds the results by entity ID. When `-n` is used, it ignores null values.

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## Contact Us

### Corporate Headquarters

13431 NE 20th Street  
Bellevue, WA 98005 USA  
Phone: +1 425 564 8000  
Fax: +1 425 564 8001

[www.vallent.com](http://www.vallent.com)

Email: [info@vallent.com](mailto:info@vallent.com)

### EMEA

5300 Cork Airport  
Business Park  
Kinsale Road  
Cork, Ireland  
Phone: + 353 21 730 6000  
Fax: + 353 21 730 6024

Spencer House  
23 Sheen Road  
Richmond  
Surrey, UK, TW9 1BN  
Phone: +44 (0)20 8332 7400  
Fax: +44 (0)20 8332 7403

### Asia Pacific

901B, Tower B, Uptown 5  
5 Jalan SS21/39,  
Damansara Uptown  
47400 Petaling Jaya  
Selangor, Malaysia  
Phone: +60 3 7712 7000  
Fax: +60 3 7726 7207

