Avaya Operational Analyst

Release 6.1

Reports Reference

Document # 585-248-506
Issue 1.0
August 2003

Notice

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Preventing toll fraud

"Toll fraud" is the unauthorized use of your telecommunications system by an unauthorized party (for example, anyone who is not a corporate employee, agent, subcontractor, or person working on your company's behalf). Be aware that there may be a risk of toll fraud associated with your system and that, if toll fraud occurs, it can result in substantial additional charges for your telecommunications services.

Avaya fraud intervention

If you suspect that you are being victimized by toll fraud and you need technical assistance or support, call Technical Service Center Toll Fraud Intervention Hotline at +1-800-643-2353 for the United States and Canada. For additional support telephone numbers, see the Avaya Web site:

http://www.avaya.com

Select **Support**, then select **Escalation Lists**. This Web site includes telephone numbers for escalation within the United States. For escalation telephone numbers outside the United States, select **Global Escalation List**.

Providing telecommunications security

Telecommunications security (of voice, data, and video communications) is the prevention of any type of intrusion to (that is, either unauthorized or malicious access to or use of) your company's telecommunications equipment by some party.

Your company's "telecommunications equipment" includes both this Avaya product and any other voice/data/video equipment that could be accessed via this Avaya product (that is, "networked equipment").

An "outside party" is anyone who is not a corporate employee, agent, subcontractor, or person working on your company's behalf. Whereas, a "malicious party" is anyone (including someone who may be otherwise authorized) who accesses your telecommunications equipment with either malicious or mischievous intent.

Such intrusions may be either to/through synchronous (time-multiplexed and/or circuit-based) or asynchronous (character-, message-, or packet-based) equipment or interfaces for reasons of:

- Use (of capabilities special to the accessed equipment)
- Theft (such as, of intellectual property, financial assets, or toll-facility access)
- Eavesdropping (privacy invasions to humans)
- Mischief (troubling, but apparently innocuous, tampering)
- Harm (such as harmful tampering, data loss or alteration, regardless of motive or intent)

Be aware that there may be a risk of unauthorized intrusions associated with your system and/or its networked equipment. Also realize that, if such an intrusion should occur, it could result in a variety of losses to your company (including, but not limited to, human and data privacy, intellectual property, material assets, financial resources, labor costs, and legal costs).

Your responsibility for your company's telecommunications security

The final responsibility for securing both this system and its networked equipment rests with you, an Avaya customer's system administrator, your telecommunications peers, and your managers. Base the fulfillment of your responsibility on acquired knowledge and resources from a variety of sources, including, but not limited to:

- Installation documents
- System administration documents
- Security documents
- Hardware-/software-based security tools
- Shared information between you and your peers
- Telecommunications security experts

To prevent intrusions to your telecommunications equipment, you and your peers should carefully program and configure:

- Your Avaya-provided telecommunications systems and their interfaces
- Your Avaya-provided software applications, as well as their underlying hardware/software platforms and interfaces
- Any other equipment networked to your Avaya products.

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Avaya support

Avaya provides a telephone number for you to use to report problems or to ask questions about your contact center. The support telephone number is 1-800-242-2121 in the United States. For additional support telephone numbers, see the Avaya Web site:

http://www.avaya.com

Select **Support**, then select **Escalation Lists**. This Web site includes telephone numbers for escalation within the United States. For escalation telephone numbers outside the United States, select **Global Escalation List**.

Comments

To comment on this document, send e-mail to crminfodev@avaya.com.

Acknowledgment

This document was written by the CRM Information Development group.

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Release 6.1
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Contents

Preface

Avaya Operational Analyst Release 6.1 (OA) allows businesses to perform operational reporting for a multimedia contact center. OA is a required component of Avaya Interaction Center 6.1 (IC), functioning as its operational data store and contact center performance analysis system. OA is also an optional add-on to Avaya Call Management System (CMS) for extended, online historical data storage and multi-site analysis.

This section includes the following topics:

Purpose of this document

The purpose of this document is to describe the reporting capabilities of Operational Analyst. Both Basic Reports and Advanced Reports are described with suggestions for how they may be used to help manage a multimedia contact center.

Intended users of this document

This document is written for:

- Contact Center managers and supervisors
- Contact Center system administrators

Users of this document should have a working knowledge of Avaya Interaction Center (IC) or Avaya Call Management System (CMS), or both, and how they interact with Operational Analyst.

Overview of this document

This document includes the following topics:

- Operational Analyst report features on page 13 - Introduces Operational Analyst reports and the Customer Interaction Repository.
- Basic Reports on page 23 - Identifies the provided Basic Reports and offers suggestions on how you can use Basic Reports in your Contact Center environment.
- Advanced reports on page 83 - Explains cubes and Advanced Reports, and how they can help you monitor your Contact Center.
- Optional support tasks for Advanced Reports on page 119 - Provides information about some optional tasks you may perform to enhance the operation of Advanced Reports.
- Glossary on page 137 – Defines terms, including abbreviations and acronyms, used in this document.
- Index on page 151 – Lists topics covered in this document, giving page numbers where each topic is mentioned.

Safety labels

If you see any of the following safety labels in this document, take careful note of the information presented.

⚠ **CAUTION:**
Caution statements call attention to situations that can result in harm to software, loss of data, or an interruption in service.

⚠ **WARNING:**
Warning statements call attention to situations that can result in harm to hardware or equipment.

⚠ **DANGER:**
Danger statements call attention to situations that can result in harm to personnel.

⚠ **SECURITY ALERT:**
Security alert statements call attention to situations that can increase the potential for unauthorized use of a telecommunications system.

Reasons for reissuing this document

This is the first issue of this document. However, much of the content was previously issued in *Avaya Operational Analyst Release 6.0 Reporting Tools Guide*. That information has been updated to reflect the current functionality provided by Operational Analyst Release 6.1.

Availability of this document

Copies of this document are available from one or both of the following sources. Although there is no charge for documents obtained through the Avaya Web site, documents obtained through the Avaya Publications Center must be purchased.

- The Avaya online support Web site, http://www.avayadocs.com.
- The Avaya Publications Center:

Voice: +1-207-866-6701
+1-800-457-1764 (Toll-free, U.S. and Canada only)

Fax: +1-207-626-7269
+1-800-457-1764 (Toll-free, U.S. and Canada only)

Write: Globalware Solutions
200 Ward Hill Avenue
Haverhill, MA 01835 USA
Attention: Avaya Account Manager

E-mail: totalware@gwsmail.com

Related documentation

You might find the following documentation useful.

Avaya documentation:

Avaya documentation is available through the Avaya online support Web site, http://www.avayadocs.com.

- *Avaya Operational Analyst Release 6.1 Installation Planning and Prerequisites,* Issue 1.0, August 2003, Avaya document number 585-248-118.
- *Avaya Operational Analyst Release 6.1 Installation and Configuration,* Issue 1.0, August 2003, Avaya document number 585-248-119.
- *Avaya Operational Analyst Release 6.1 Maintenance and Troubleshooting,* Issue 1.0, August 2003, Avaya document number 585-248-120.
- *Avaya IC Installation and Configuration*, Issue 1.1, August 2003, Avaya document number 585-248-102.
- *Avaya Database Designer Application Reference,* Issue 1.1, August 2003 Avaya document number 585-248-215.
- *IC 6.1 Administration Volume 1: Servers & Domains*, Issue 1.1, August 2003, Avaya document number 585-248-503.

Other documentation:

- Troubleshooting information associated with the server you are using. Such information is typically part of an administration manual.

Operational Analyst report features

OA reports provide real-time and historical views of contact center statistics. The data from which the statistics are computed resides in the Customer Interaction Repository. This section introduces you to the repository and the reports.

This section includes the following topics:

Customer Interaction Repository

The multichannel Customer Interaction Repository features a common catalog of detailed customer data that can contain multichannel data from Avaya Interaction Center (IC) and voice data from Avaya Call Management System (CMS). The term Customer Interaction Repository refers to a collection of database tables that is used to record summarized information about activities in your contact center. Refer to the data model (located at **`docs/Data_Models/index.html`** on the Operational Analyst Release 6.1 product CD) for a complete description of the shared repository used to support IC and OA.

Before you can use various Business Intelligence capabilities, you must install the corresponding database(s) by:

1. Installing the Design files defining the database(s).
2. Configuring the database(s) in Database Designer.
3. Importing the phone, email, and web application mappings for contact data storage.
4. Generating the Avaya application(s) in Database Designer.

For complete instructions on installing the Customer Interaction Repository and IC application databases, see *Avaya IC Installation and Configuration*. For detailed instructions on use of Database Designer, see *Avaya Database Designer Application Reference*.

Basic reports

Operational Analyst Basic Reports are designed for contact center supervisors with performance and task-level priorities. A browser-based interface provides reporting across all channels. Data is presented in clear, compelling three-dimensional graphics or sortable tables. Available reports include:

- Predefined historical reports across IC and CMS (including External Call History and summary interval data).
- Real-time monitoring and historical performance analysis for agents, service classes, queues and jobs.

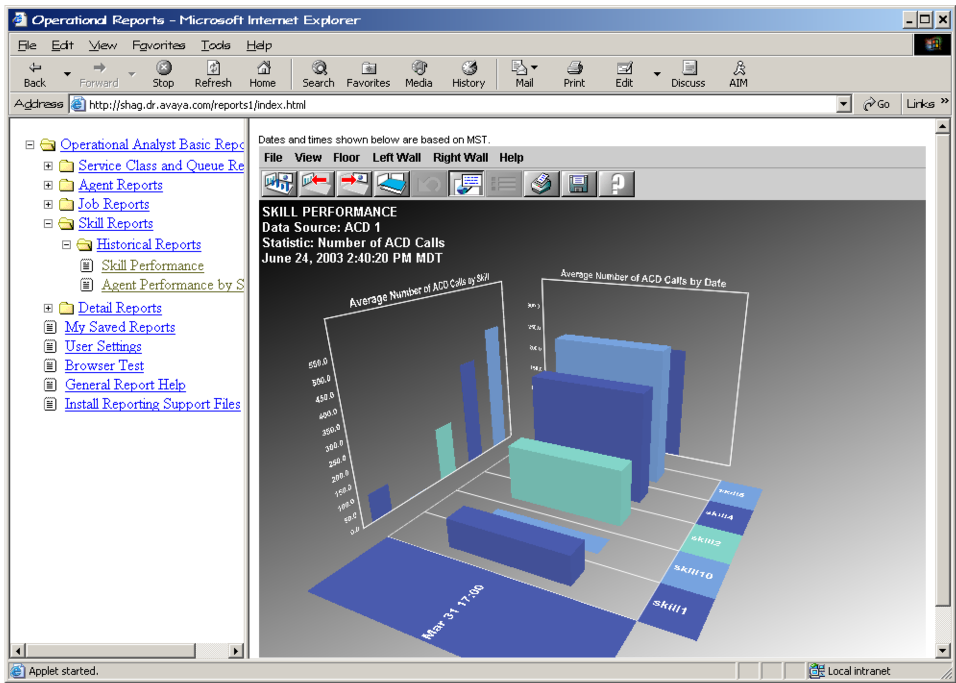
This section includes the following topics:

- Graphical reports on page 15
- Tabular reports on page 17
- Real-time reports on page 17
- Historical reports on page 17

Graphical reports

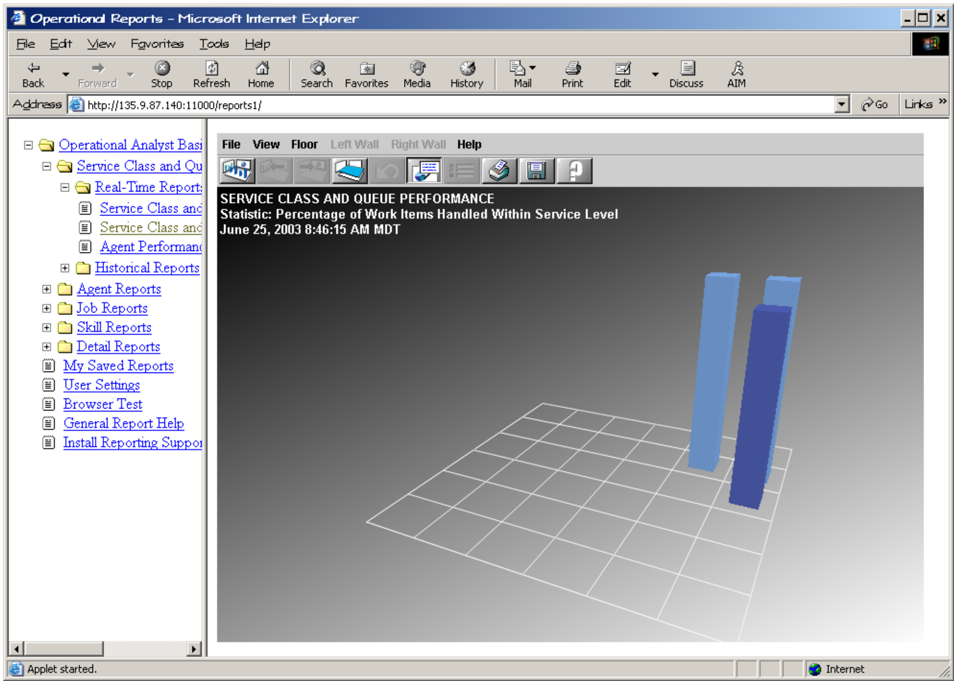
Graphical reports present real-time and historical data in a three dimensional, interactive landscape that helps you to better visualize the data in the report and to more easily recognize anomalies and trends.

The following illustrates one such report.



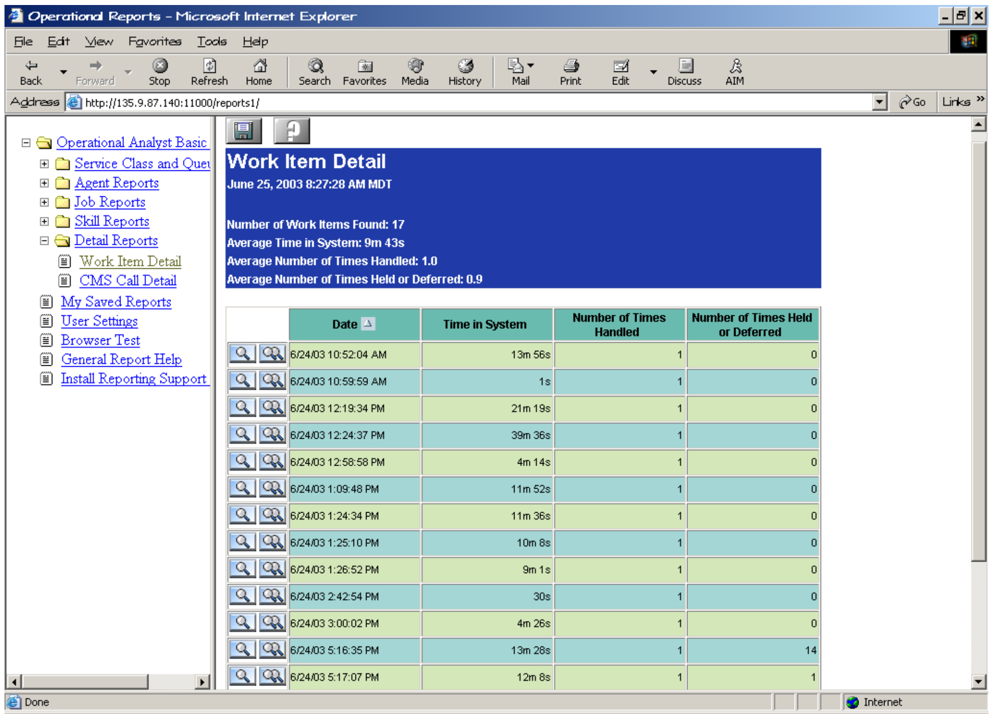
Operational Analyst report features

Some real-time reports, like Agent Performance and Service Class and Queue Performance, do not contain wall regions as the following illustration shows.



Tabular reports

Tabular reports present data in sortable tables.



Real-time reports

The real-time reporting capabilities of Basic Reports:

- Permit supervisors and contact center managers to track real-time agent and contact activity across Interaction Center channels.
- Permit managers to determine bottlenecks and quickly adjust agent schedules accordingly.

Historical reports

The historical reporting capabilities of Basic Reports:

- Permit long-term trending and analysis of contact center performance.

- Provide predefined reports across all channels.
- Provide multi-site, multi-channel IC reporting.
- Provide long-term analysis of multi-site CMS voice contact data, as a valuable add-on to the CMS system.
- Provide integrated reports across IC and CMS contact data.

Advanced reports

Operational Analyst Advanced Reports are designed for sophisticated users and business analysts who need to track key performance indicators and trends for operational improvement. A browser-based interface provides data in analytical “cubes” - multi-dimensional graphic representations of data. Cubes may be manipulated with a straightforward graphical tool to produce various perspectives on the data and on-screen performance metrics illustrate the business value of each interaction.

Advanced Reports include predefined business value OLAP (online analytical processing) reports and ad hoc querying. The ability to select graphic elements to drill down to supporting transaction detail allows you to perform sophisticated business analysis.

Advanced Reports provide historical analysis on each IC channel as well as reporting for the IC Business Applications. Advanced Reports also provide the ability to create custom reports and insert custom calculations.

Note:

You should have at least a basic knowledge of Cognos to successfully interact with Advanced Reports.

This section includes the following topics:

- Multidimensional cubes on page 18
- Multidimensional reports on page 19
- Ad-Hoc reports on page 21
- Cognos tools on page 22

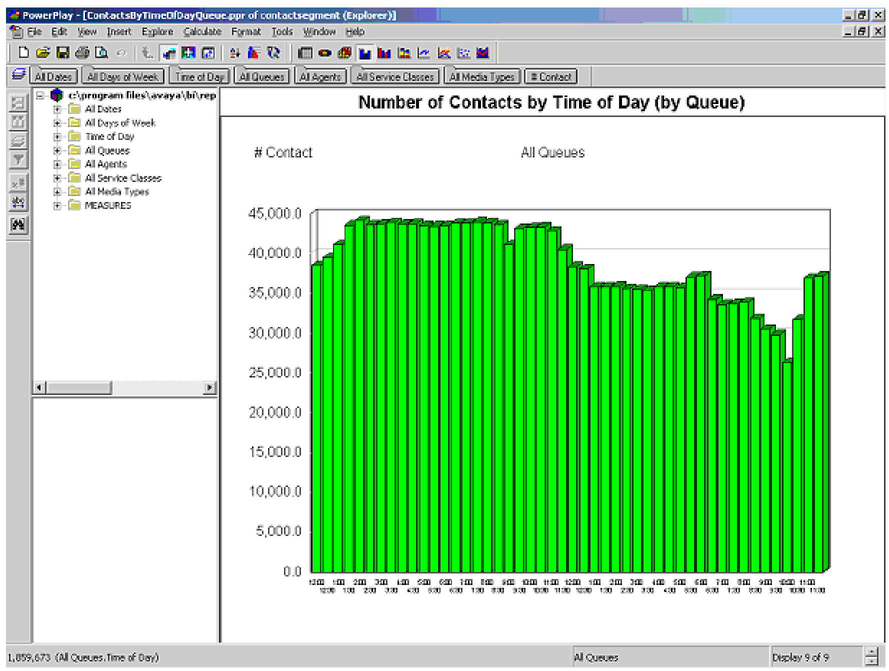
Multidimensional cubes

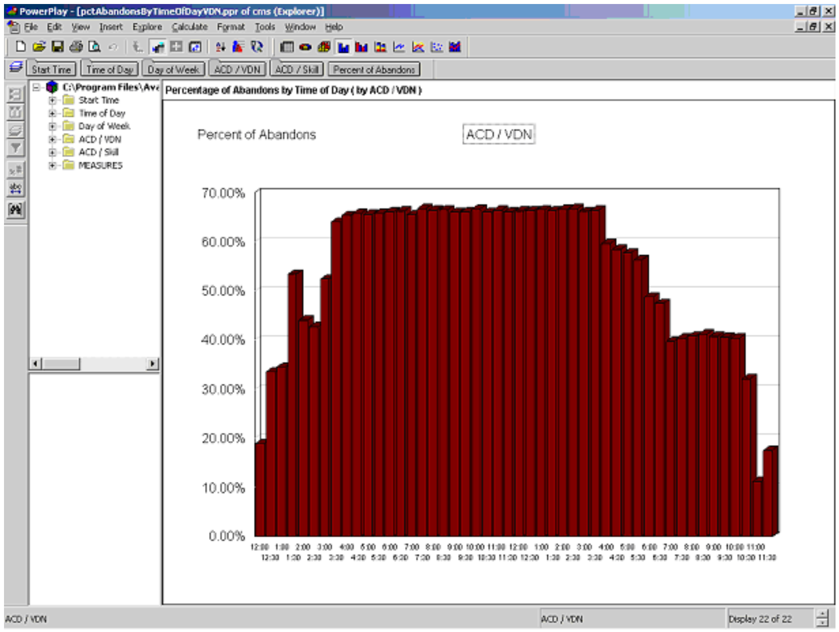
Multidimensional cubes are built using Cognos Transformer. Cubes contain information on multichannel contact center statistics and trends. Cubes present a predefined set of measures and dimensions you may select for viewing. You may select the graphical display method, for example, pie chart, cross tab, or bar graph. You can easily generate new reports by graphically selecting measures and dimensions from the cube you wish to view in a report.

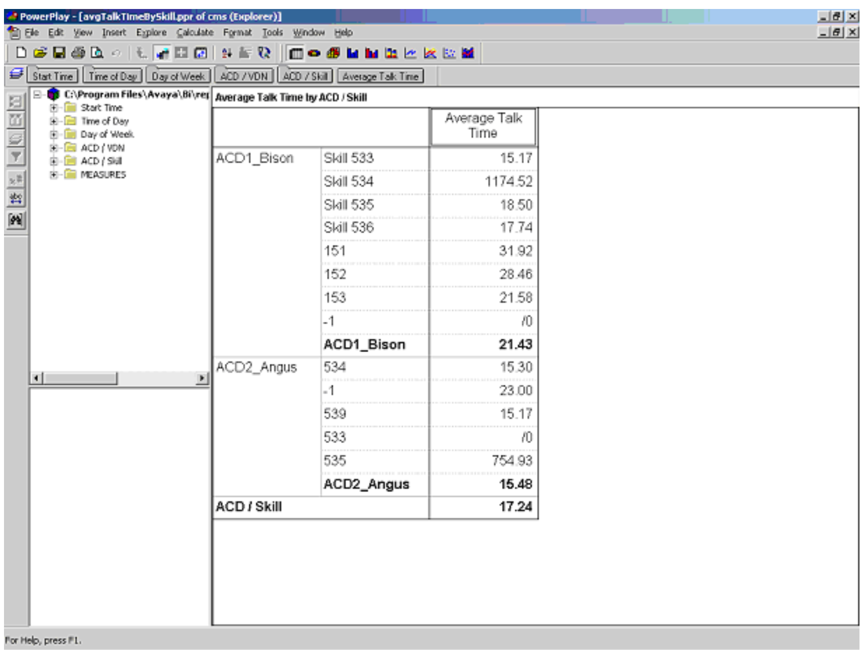
Multidimensional reports

Predefined multidimensional reports, built using Cognos PowerPlay, run against cubes and provide easy analysis and long-term trending of data. Multidimensional cubes and associated reports are typically updated on a nightly basis drawing from data in the Customer Interaction Repository.

Here are some sample PowerPlay reports:



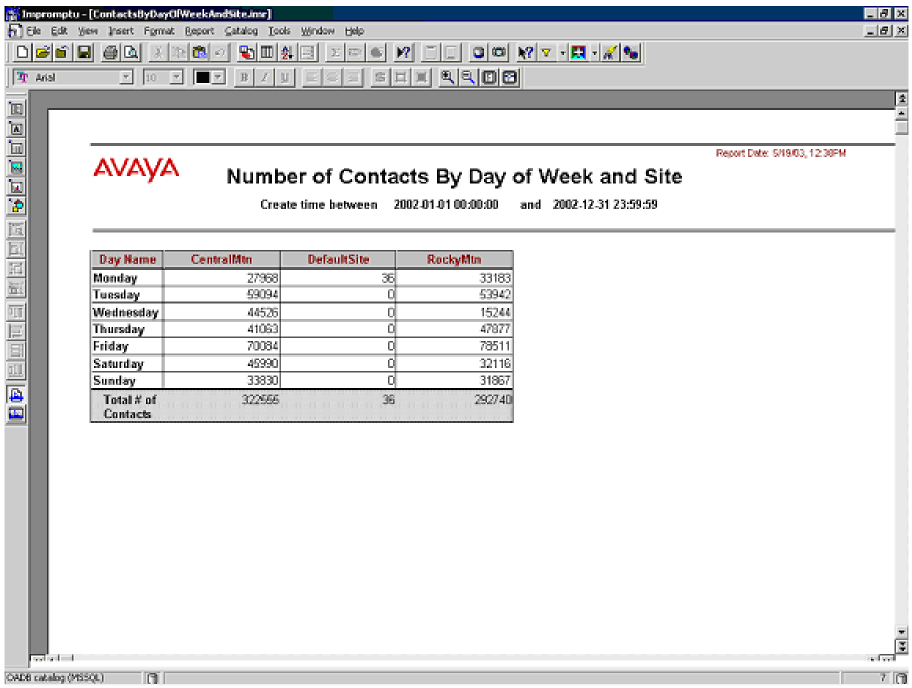

PowerPlay - [pctAbandonsByTimeOfDayVDN.ppr of cms (Explorer)]
Start Time
Time of Day
Day of Week
ACD / VDN
ACD / Skill
Percent of Abandons
C:\Program Files\Ava
MEASURES
Percentage of Abandons by Time of Day (by ACD / VDN)
Percent of Abandons
ACD / VDN
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Display 22 of 22

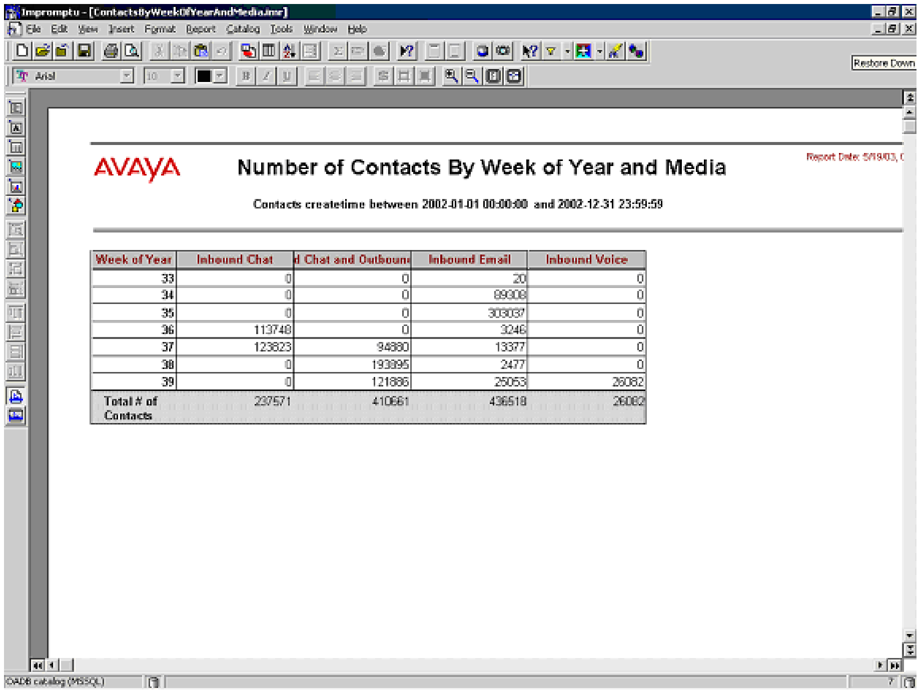

PowerPlay - [avgTalkTimeBySkill.ppr of cms (Explorer)]
Start Time
Time of Day
Day of Week
ACD / VDN
ACD / Skill
Average Talk Time
C:\Program Files\Avaya\Bi\re
MEASURES
Average Talk Time by ACD / Skill
Average Talk Time
ACD1_Bison
Skill 533 15.17
Skill 534 1174.52
Skill 535 18.50
Skill 536 17.74
151 31.92
152 28.46
153 21.58
-1 /0
ACD1_Bison 21.43
ACD2_Angus
534 15.30
-1 23.00
539 15.17
533 /0
535 754.93
ACD2_Angus 15.48
ACD / Skill 17.24
For Help, press F1.

Ad-Hoc reports

Ad-Hoc reports, built using Cognos Impromptu, are detailed reports that allow sophisticated users the ability to generate ad-hoc queries against the data in the Customer Interaction Repository.

Here are two sample Impromptu reports:





Cognos tools

Advanced Reports use the following tools from Cognos:

- Impromptu Administrator to set up the Advanced reports environment, generate query files, and build ad-hoc reports.
- Transformer to create and modify cubes.
- PowerPlay to view cubes and reports.
- Power Play Enterprise Server for publishing multidimensional cubes and PowerPlay reports on the Web.
- Impromptu Web Report for publishing Impromptu Reports.

A standard installation of Advanced Reports includes only Impromptu and PowerPlay. If you decide to install more of the available Cognos tools, please contact your Avaya representative.

Basic Reports

Operational Analyst Basic Reports feature 3-D visualization for real time monitoring and historical reporting. Real time performance monitoring is provided across Interaction Center channels, including monitoring real time routing statistics. Predefined historical reports deliver start-to-end reporting across IC and CMS External Call History data and 30-minute CMS summary interval data.

This section includes the following topics:

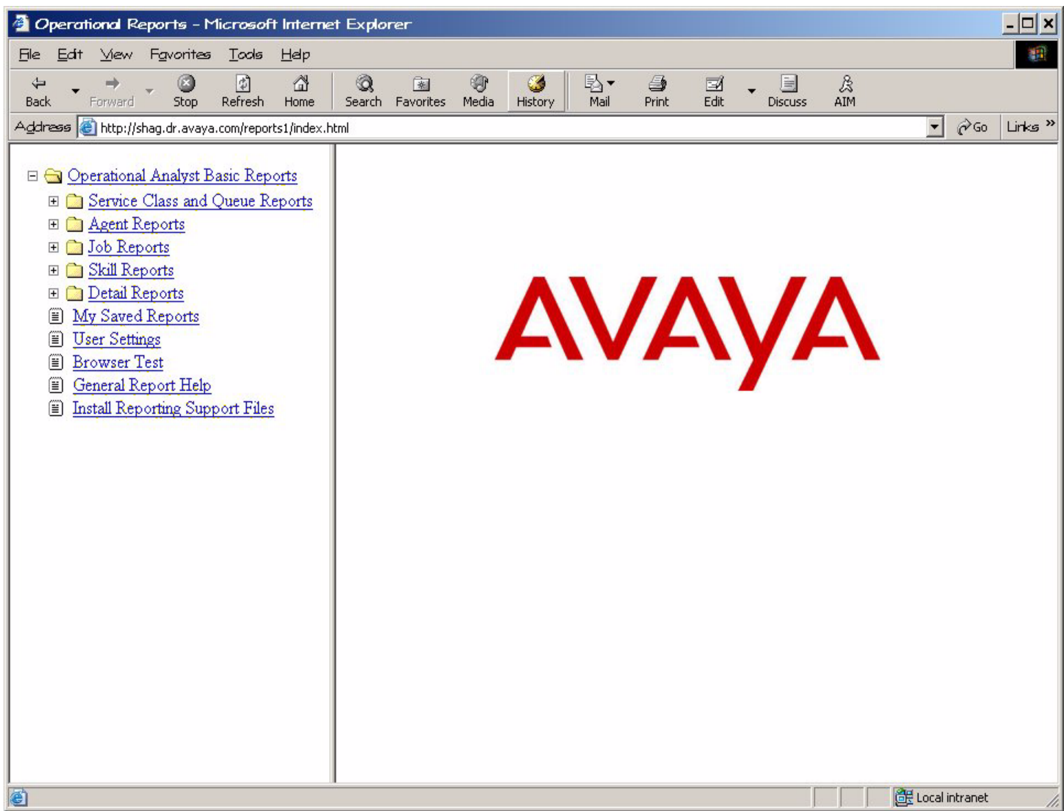
Launching a report

Basic reports are launched and displayed in a Web browser, by linking to a URL (Uniform Resource Locator) provided by your system administrator. The URL will be similar to this:

http://<*fully qualified hostname*>:<*port number if needed*>/reports1

This illustration shows the default browser window. The left frame of the browser window contains a tree-view of reports, followed by **My Saved Reports**, **User Settings**, **Browser Test**, **General Report Help** and **Install Reporting Support Files**.

> **Note:**
> The tree-view may be altered for your particular installation of Operational Analyst.



The first time you run Basic reports, you must download and install the Java Runtime Environment (JRE) and the report client files. To download the necessary files, select **Install Reporting Support Files** from the tree-view in the left frame. The files are installed automatically when the download completes.

Note:

Even if a version of JRE is already installed on your system, you should download and install it from **Install Reporting Support Files** to ensure the correct version is installed.

You also must set your preferred time-zone information by selecting **User Settings** from the tree-view. When this is set, all reports will display the date-information according to this setting.

To run a report, select the report's name from the tree-view. This action causes an **Input Page** for that report to appear in the right frame. Each **Input Page** contains a **Help** button you can select to learn more about the input options available for that page.

Note:

Most, but not all, Basic reports have two **Input Pages**.

Click the right mouse button on a report name to launch an instance of that report in a new browser window that does not contain the tree-view frame. You can run multiple reports simultaneously by opening another browser window for each report.

CAUTION:

OA performance is degraded as more browser windows are opened. Be sure to monitor OA performance when running multiple Basic reports.

Saving a report configuration

This feature allows you to save the input parameters you have entered for a report. This lets you avoid having to re-enter information each time you want to generate that report. It also allows you to save different versions of the same report with different settings.

Some of the settings you can save this way include input criteria, sorting specifications, and water plane settings. Note that this feature saves only the configuration of the report, not the data in the report.

To save a report to the **My Saved Reports** page:

1. From the report page, select **Save Report Configuration**, select the Save Report Configuration icon, select **File >Save Report Configuration** from the menu, or press **Ctrl-S**. The **Save Report Configuration** page appears in a new browser window.

   Tip:

   To enable short-cut key combinations like **Ctrl-S**, you must click in the button bar area of the report. This shifts the browser "focus" from the report area of the browser window to the command area of the window.

2. Enter a unique name in the **Report Name** field. Report names can be up to 100 characters long (longer names are truncated at 100 characters). The name you give your report should be meaningful enough to help you remember what the report is about. Some examples of useful saved report names are:
   - Last week's activity for Advocate service classes
   - Last month's activity for all my agents
   - Jane Doe's statistics for today
   - Chicago contact center
3. Optionally enter a report description in the **Report Description** field. The description can be up to 500 characters long (longer descriptions are truncated at 500 characters).

   The report name and report description you enter on this page are displayed in a table on the **My Saved Reports** page.
4. Select **Save Report Configuration**.

When the report is saved, you see a confirmation message: **Your report configuration has been saved.** If a report configuration with the same name already exists, you are prompted to change the name.

To stop Save Report Configuration and close the browser, select **Cancel**.

Troubleshooting a report

When an error occurs that makes it impossible to generate a report, Basic reports display a page containing information about the error. Please make a note of the information on the error page in case you need to report the problem to your system administrator.

Be careful to avoid setting up invalid combinations such as:

- Invalid date (for example, February 31) in historical report **Input Page 1**.
- **Start Date** and **Interval** the same as or later than the **End Date**.
- “Daily” **Aggregation Time Period** with **Date Range** of “Today.”
- “Weekly” **Aggregation Time Period** with **Date Range** of “Today” or “Yesterday” or “Week-To-Date.”
- “Monthly” **Aggregation Time Period** with **Date Range** of “Today” or “Yesterday” or “Week-To-Date” or “Month-To-Date.”
- “Monthly” **Aggregation Time Period** with any **Standard** date range.

Certain other problems can cause your report not to appear as you expected. For information on how to fix problems with your reports, please refer to *Avaya Operational Analyst Release 6.1 Maintenance and Troubleshooting*.

User Interface

The section describes features of the user interface for the Basic Reports. The user interface consists of:

- HTML (Web) forms that gather information needed to generate the report (**Input Pages**).
- The generated report, which may be graphical or tabular. Graphical reports use color and graphical elements to display statistical information. Tabular reports list report elements in a table. Some elements contain hyperlinks to pages that contain expanded data.

This section includes the following topics:

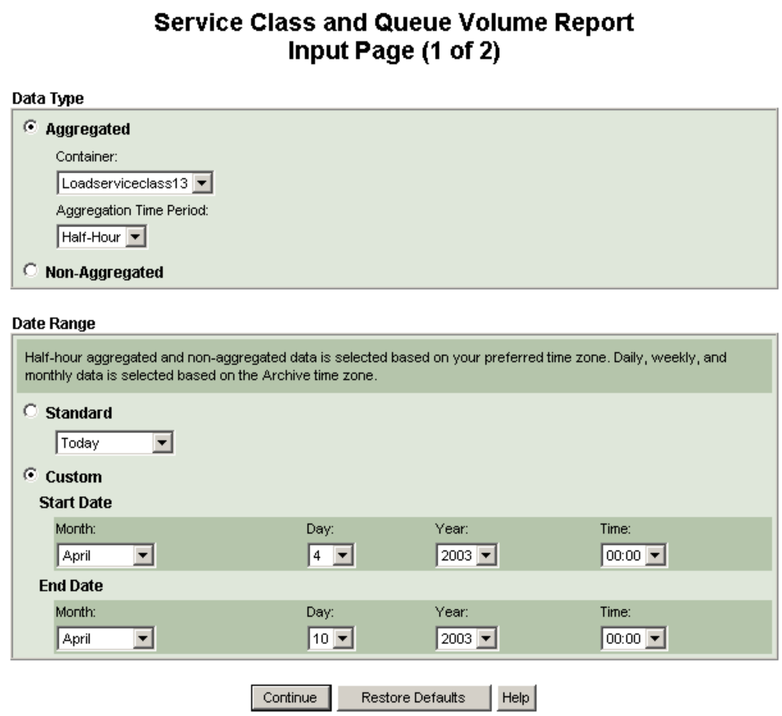
Input pages

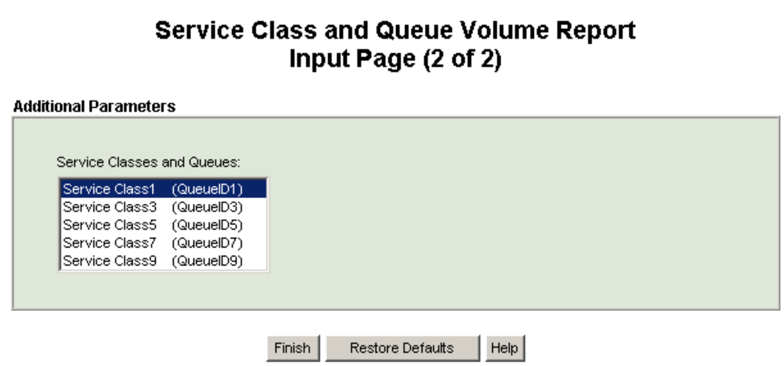
Each report gathers search parameters that define the database queries that retrieve the report data. Report **Input Pages** perform this function. Search parameters are gathered on one or more input pages.

This section describes these pages.

Historical reports

Historical reports collect search parameters on two **Input Pages**. The selections you make on **Input Page 1** determine the content of **Input Page 2** because database information is filtered based on the first input page selections. The following illustrations show typical **Input Pages** for historical reports:





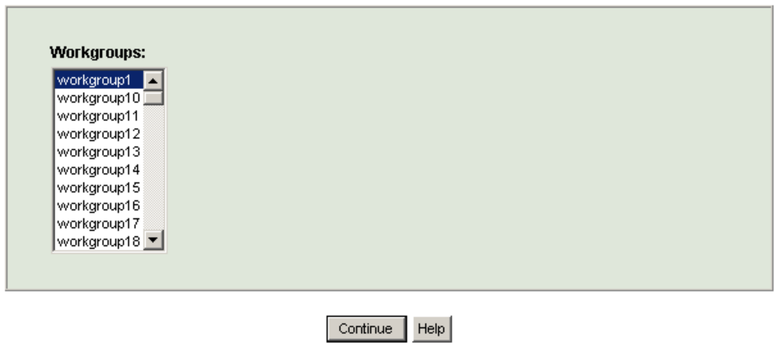
Note:

In **Input Page 2** for historical Service Class and Queue reports, queues display an additional ID after the item name. Service classes do not display the additional ID.

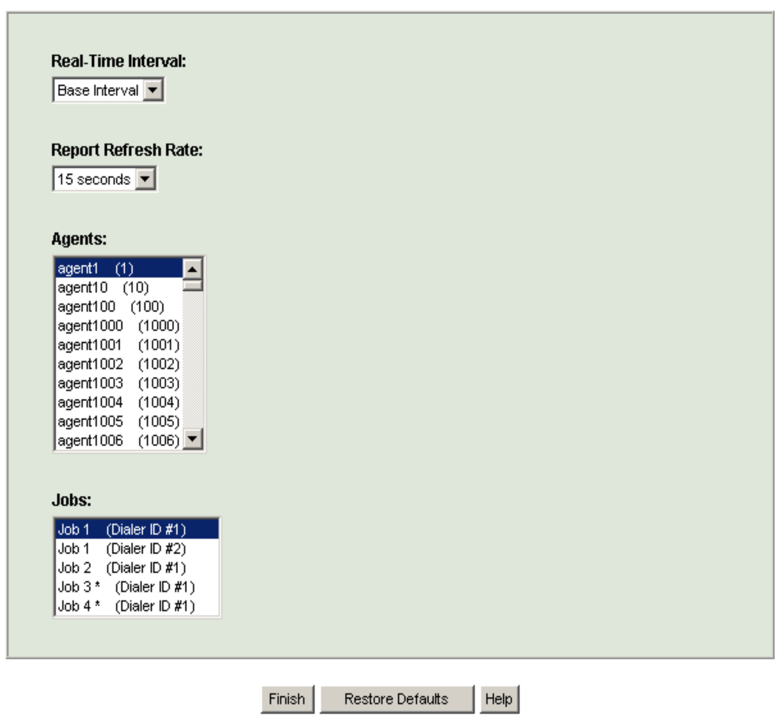
Real-time reports

Real-time reports use one or two **Input Pages**. The following illustrations shows examples of typical **Input Pages** for real-time reports.

Agent Performance by Job Report
Input Page (1 of 2)



Agent Performance by Job Report
Input Page (2 of 2)



Selection fields

Selection fields allow you to select one (single-select) or many (multi-select) items. Single-select fields display one value with an arrow you can select to display more values. Multi-select fields display a list of items, possibly accompanied by a scroll bar and scroll arrows when there are too many values to display in a short list.

To select a group of contiguous items from a multi-select field:

- Select the first item.
- Press and hold down **Shift** and select the last item.

To select a group of non-contiguous items from a multi-select field:

- Press and hold down **Control**.
- Select each item.

Finish

Select **Finish** to generate your report using the selections you made on the **Input Pages** for this report.

Restore defaults

The report **Input Pages** allow you to choose what data to use to create a report, with default values already selected. A default value is a setting that will be used if you do not specify a preference.

If you make a mistake with your selections and want to start over, select **Restore Defaults** to clear any choices you made on this screen. This action resets all selection fields to their default values.

Refresh rate

The refresh rate of a real-time report is independent of the data update rate of the server. You can modify the page refresh rate but not the data refresh rate, which is controlled by the server and not by individual users. For example: if the data update rate is once every minute and the report refresh rate is once every 15 seconds, then the report will refresh at least four times before the data in the report will change.

Graphical report initial display

When a graphical report is displayed for the first time, based on the number of data items you selected and the current statistic's title length, some of the graphical items are not completely rendered in the first view.

For example, if you selected 300 agents over 30 days worth of data and if the graphical representation of this report instance is scaled to fit inside a fairly small space, the individual items in the display will be scaled very small. In other cases, if you choose only a few items, only a part of the floor items are shown in the initial display.

The report still contains all the items you selected, even though they may not be visible on the initial display. You can zoom in or out to move about the report space to view the areas you want to focus on.

In tabular reports containing many data items, you can scroll around the window to view report data that does not fit within the window size. The graphical reports behave the same way as tabular reports in this sense. Using the key and mouse combinations described below, you can explore the three-dimensional space as necessary.

By default, the graphical reports will set the focus of the report to the left center. You can move around the report display area to zoom in and zoom out and examine the report content of interest to you. By moving around the graphical report space, you can focus on a specific region or the entire report content.

- To rotate the graphical components, hold the right mouse button down while moving the mouse in the clockwise or counterclockwise direction.
- To zoom in, press and hold **Ctrl** and the right mouse button at the same time, and drag the mouse from the top of the report toward the bottom of the report.
- To zoom out, press and hold **Ctrl** and the right mouse button, and drag the mouse from the bottom of the report toward the top of the report.

My Saved Reports page

The **My Saved Reports** page contains a list of all your saved report configurations, sorted by name. You can launch the report using your saved configuration, or you can delete the saved report from the list:

To launch a saved report, select the report you want to generate, then select **Launch Report**.

To delete a report, select the report you want to delete, then select **Delete Saved Configuration**.

Note:

This action deletes only your saved configuration. It does not delete the original report.

Calculations

The calculations described here are general to all or most Basic Reports. You can find report-specific calculations in *Avaya Operational Analyst Release 6.1 Maintenance and Troubleshooting*.

Average of averages

Many reports, especially historical, allow you to display on one of the walls the average of the floor data. When the floor data is an average itself, this can cause some confusion about how the calculation is done. The wall title will simply say Average of Average X by Y (where X is a statistic such as Number of Work Items Opened and Y is an entity such as Queue or Agent).

Most people are used to computing an average by summing a collection of values and then dividing by the number of values. In fact, this is how the floor statistics themselves are calculated. But when you calculate an average of these averages you need to use a different calculation. For example, suppose you had 3 averages displayed on the floor: 3/4, 1/2, and 1/4 representing the average wait time for a call (and the actual numbers behind these results were 75/100, 2/4, 10000/40000 in terms of total wait time divided by number of calls). The average of these three values is not simply 3/4 + 1/2 + 1/4 divided by 3 = 1/2. That gives far too much importance to the 2/4 data item. Instead, the correct calculation is 75 + 2 + 10000 divided by 100 + 4 + 40000 = 10077/40104 = 1/4.

Real-time durations

For durations, there are 2 categories. Here are the differences in calculating these cases.

- Case 1: Given an agent or a queue, how long has this person or item been in the current state?

For this, we measure over three data elements. (a) current interval start-time (b) state start-time (c) current time (when the data-set was last updated). With these, we apply the following function:

```
TotalDuration = c - MAX(a, b)
```

where MAX() returns the newest timestamp.

- Case 2: Given a particular target state (for example, agent idle, agent on break, service class in critical state, and so on), how long has this state been going on?

For instance, given a particular state, this calculation changes slightly. The data elements used here are: (a) current interval start-time, (b) base interval start-time, (c) state start-time, (d) current time, and (e) the target column (IdleAvailDur, OnBreakDur, etc.) associated with the current interval.

Note:
Given the interval type, the query statements will return different columns.

If you are interested in seeing the idle duration on a particular agent, then the following calculation is applied:

```
IF (the agent is indeed in Idle state right now) THEN
  durCurrentlyIn = e
```

where “e” corresponds to what has been accumulated during the interval if it is base interval. If it is daily, it corresponds to the value of what's been accumulated since the start of the daily interval until the last base interval.

```
ELSE
  durCurrentlyIn = 0


TotalDuration = [d - MAX(b, c)] + durCurrentlyIn
```

Time and dates

This section describes how time and dates are represented in the Basic reports user interface.

Current time

Current time in real-time reports is equal to the time stamp of the row of data being reported. The time stamp reflects the time of the server where the report subsystem is running, which may not be the same as the time of the client machine.

If you set your report to refresh at a rate faster than the rate at which the data set is updating, the current time reported may not change, even though the report is refreshed.

Date and time formats

Date and time formats depend on the data contained in the report and, in the case of historical reports, the level of data aggregation selected. The format also depends on your locale and time-zone settings, which are specified by selecting **User Settings** in the tree-view.

The ordering of date field display is determined by the relevant browser locale and time zone settings. For instance, in English, the date field is displayed as month, day, and year, but in German, the date field is displayed as day, month and year.

Date and time elements

In historical reports, the date and time elements displayed are based on the level of data aggregation selected on the input pages, as shown in the following table:

Data Aggregation Level	Time Elements Displayed
Non-Aggregated	Year, month, day, and time
Interval	Year, month, day, and time
Daily	Year, month, and day
Weekly	Year, month, and day
Monthly	Month and year based on the current user’s locale.

Historical report date ranges

Historical Basic reports process date range information differently depending on the **Date Range** and **Data Type** options you choose on the **Input Pages**. For convenience this discussion uses the following assumptions:

- The time zone used is Asia/Calcutta (GMT+5:30).
- Date-time information is displayed using JDBC's date-time format (yyyy-mm-dd HH:mm). For example, year 2003, month January, day 15, and time 1:23 PM is equivalent to 2002-01-15 13:23.
- When a date range is specified from start date to end date, the end date is exclusive and not inclusive.
- The current time is always based on the report server's clock.

Standard Date Range

Depending on the **Data Type** option you choose, the date range you select is interpreted differently.

- **Half-hour Aggregated** and **Non-aggregated** date range options:

  If you choose the **Standard** date range for either of these **Data Type** options, the date range is determined based on your time zone, from midnight to midnight. For instance, if the current date is 2003-01-15 9:35 and you select the **Yesterday** option for **Half-hour Aggregated**, **Today** is defined to be from 2003-01-15 00:00 to 2003-01-16 00:00, and **Yesterday** is defined to be from 2003-01-14 00:00 to 2003-01-15 00:00.

Note:

The database stores dates in UTC. Before the query is submitted, OA converts the date range to UTC, or 2003-01-13 18:30 to 2003-01-14 18:30 in this example. This reflects that the Asia/Calcutta time zone is 5 hours, 30 minutes ahead of GMT (GMT+5:30). When the records from a query return, OA converts the date range information from UTC to Asia/Calcutta.

Today, **Weekly**, and **Monthly** standard options are defined using the same rules except that the **Weekly** option is based on the start of week as administered from the Administration Client.

- All other date range options:

  For all other aggregated options (archived data such as **Daily**, **Weekly**, or **Monthly**) with the **Standard** date range, the start of day definition is factored into the date range determination. Start of day, which is also administered from the Administration Client, determines the start and end dates of the range.

  For example, assume the current time is 2003-01-15 9:35, you choose the **Daily** option for **Yesterday**, and that the start of day definition is 18:30 UTC (midnight in Asia/Calcutta time zone). OA determines **Today** using both the current time and the start of day values. Since a day begins at 18:30 UTC, and the current time converts to 2003-01-15 4:05 UTC, **Today** is determined to be from 2003-01-14 18:30 to 2003-01-15 18:30, and **Yesterday**'s date range to be from 2003-01-13 18:30 to 2003-01-14 18:30.   Since the start of day definition happens to match the your time zone, this particular date range matches that of the 30-minute interval data options.

  Conversely, assume the current time is 2003-01-15 9:35 in Asia/Calcutta time zone, the start of day definition is set at 3:30 (UTC), and the same options are chosen as before (**Daily** for **Yesterday**). In this case, **Today** is determined to be from 2003-01-15 3:30 to 2003-01-16 3:30, while **Yesterday** is from 2003-01-14 3:30 to 2003-01-15 3:30. This shows that the 30-minute interval data with the **Standard** date (**Yesterday**) does not necessarily match the daily-yesterday option if the start of day definition is different than your time zone.

  Important:

  You should be aware that such circumstances can exist when comparing results for similar date ranges.

Custom Date Range

When using the **Custom** date range, you explicitly specify the date range start and end dates. Other than converting the specified date range from your time zone to UTC, historical Basic reports apply no special rules.

For example, if you specify the **Custom** date range from 2003-01-10 14:30 to 2003-01-12 5:00, OA converts that date range to UTC (2003-01-10 9:00 to 2003-01-11 23:30). Then OA converts the data returned from this query back to your time zone.

Report fonts and colors

You may configure the fonts and colors displayed by your Basic reports.

This section includes the following topics:

- Resource bundles on page 37.
- Configuration examples on page 39.

Resource bundles

Basic report configuration information is maintained in files called resource bundles. You can change the default font and color configurations by editing the resource file associated with a particular report. Before attempting to edit any resource file, consider the following constraints:

- You must use a file editor that supports and preserves the UTF-8 file format.
- Do not add white spaces (tabs or blank spaces) at the end of a line you modify. Doing so affects report operation.
- Modified resource files are not preserved if you upgrade your reports installation or perform the OA repair procedure.
- Any modifications you make are visible to all Basic reports users.

The following table shows the resource files associated with each report or feature.

Report or feature	Directory[1]	File[2]
Real-time reports		
Agent Time in State	/set1/rtagtstate	RtAgtState_xx.properties
Agent Performance (IC)	/set1/rtagtperf	RtAgtPerf_xx.properties RtAgtPerfApplet_xx.properties
Agent Performance by Service Class and Queue	/set1/rtagtbysvcque	RtAgtBySvcQue_xx.properties RtAgtBySvcQueApplet_xx.properties
Service Class and Queue Performance	/set1/rtsvcqueperf	RtSvcQuePerf_xx.properties RtSvcQuePerfApplet_xx.properties
Service Class and Queue Status	/set1/rtsvcquestatus	RtSvcQueStatus_xx.properties RtSvcQueStatusApplet_xx.properties
Agent Performance by Job	/set4/rtagtbyjob	RtAgtByJob_xx.properties RtAgtByJobApplet_xx.properties

Report or feature	Directory[1]	File[2]
Job Performance	/set4/rtjobperf	RtJobPerf_xx.properties RtJobPerfApplet_xx.properties
Agent Set Outcome Codes	/set4/rtagtcompcode	RtAgtCompCode_xx.properties
System Set Completion Codes	/set4/rtsyscompcode	RtSysCompCode_xx.properties
Telephone Number States	/set4/rtphonestate	RtPhoneState_xx.properties
Historical reports		
Agent Performance (IC)	/set1/htagtperf	HtAgtPerf_xx.properties HtAgtPerfApplet_xx.properties
Agent Performance by Service Class and Queue	/set1/htagtbysvcque	HtAgtBySvcQue_xx.properties HtAgtBySvcQueApplet_xx.properties
Service Class and Queue Volume	/set1/htsvcvol	HtSvcQueVol_xx.properties HtSvcQueVolApplet_xx.properties
Service Class and Queue Performance	/set1/htsvcqueperf	HtSvcQuePerf_xx.properties HtSvcQuePerfApplet_xx.properties
Agent Performance (CMS)	/set2/htagtperf	HtAgtPerf_xx.properties HtAgtPerfApplet_xx.properties
Agent Performance by Skill	/set2/htagtbyskill	HtAgtBySkill_xx.properties HtAgtBySkillApplet_xx.properties
Skill Performance	/set2/htskillperf	HtSkillPerf_xx.properties HtSkillPerfApplet_xx.properties
Agent Performance by Job	/set4/htagtbyjob	HtAgtByJob_xx.properties HtAgtByJobApplet_xx.properties
Job Performance	/set4/htjobperf	HtJobPerf_xx.properties HtJobPerfApplet_xx.properties
Agent Set Outcome Codes	/set4/htagtcompcode	HtAgtCompCode_xx.properties
System Set Completion Codes	/set4/htsyscompcode	HtSysCompCode_xx.properties
Detail reports		
CMS Call Detail Reports	/set3/calldetail	CallDetail_xx.properties

Report or feature	Directory[1]	File[2]
Work Item Detail Reports	/set3/wkitem	WkItemDetail_xx.properties
Other		
Common to server-side components	Common	ServerSideFonts_xx.properties
Save Reports Feature	/set3/savereport	SaveReport_xx.properties

1. The full path to the resource bundle directory includes the root directory where OA is installed. This path varies, depending on the platform you are using. See Configuration examples on page 39 for details.
2. Replace the "xx" in the file name with the 2-letter language name for your locale. For example, use "en" for English or "pt" for Portuguese.

Configuration examples

Follow this procedure to change the configuration for Basic report fonts or colors:

1. Locate the resource bundle you wish to modify:
   a. Refer the table in Report fonts and colors on page 37 to find the appropriate file for the report to be modified.
   b. Pre-pend the associated directory name from the table with the root directory that contains the resource bundle. The root directory varies according to the platform you are using:

Platform	Default root directory
MS Windows	**`$OADIR/stumbras/wepapp/reports1/properties/reports1`**
Solaris	**`$WEBDIR/webapp/reports1/lib/properties/reports1`**
AIX	**`$WASDIR/OAReports.ear/stumbras.war/WEB-INF/classes/reports1`**

   and where **`$OADIR`**, **`$WEBDIR`**, and **`$WASDIR`** represent the OA root directory for MS Windows, Solaris, and AIX respectively.

   Note:

   You may want to verify the directory location with your system administrator.

2. Open the file in a file editor that supports and protects the UTF-8 file format.
3. To modify fonts:

a. Look for a section of the file similar to this:

```
# Wall (left or right plane) Titles
RID_FONT_WALL_TITLE = sans
RID_FONT_SIZE_WALL_TITLE = 1.5
RID_FONT_STYLE_WALL_TITLE = BOLD

# Axis Title
RID_FONT_AXIS_TITLE = sans
RID_FONT_SIZE_AXIS_TITLE = 1
RID_FONT_STYLE_AXIS_TITLE = BOLD

# Left and Right Plane Labels
RID_FONT_WALL_LABEL = sans
RID_FONT_SIZE_WALL_LABEL = 1
RID_FONT_STYLE_WALL_LABEL = BOLD

# Floor Plane Labels
RID_FONT_FLOOR_LABEL = sans
RID_FONT_SIZE_FLOOR_LABEL = 1.5
RID_FONT_STYLE_FLOOR_LABEL = BOLD

# Slider labels
RID_FONT_SLIDER_LABEL = sans
RID_FONT_SIZE_SLIDER_LABEL = 2
RID_FONT_STYLE_SLIDER_LABEL = BOLD
```

b. Modify the desired properties.

Note:

Files ending with **`Applet_xx.properties`** are related to graphical reports. The font sizes in these files are specified in floating points understood by the graphics package OA uses. In all other files the font are specified in pixel points.

4. To modify colors:

a. Look for a section of the file similar to this:

```
# Alternating data colors (bar chart, pie chart, label background,
etc.)
# -- Navy blue
RID_DATA1_R = 50
RID_DATA1_G = 67
RID_DATA1_B = 149

# -- gray blue
RID_DATA2_R = 95
RID_DATA2_G = 138
RID_DATA2_B = 197

# -- aqua green
RID_DATA3_R = 106
RID_DATA3_G = 187
RID_DATA3_B = 175
```

b. Modify the desired properties.

Note:
All colors are specified in RGB values.

5. Save the file.

Important:
Do not add white spaces (tabs or blank spaces) at the end of a line you modify. Doing so affects report operation.

6. Restart the report server.

Important:
Old display attributes may continue to appear after changing the resource file. If this occurs, be sure to delete all locally cached files from your Web browser, close existing browser windows, launch a new browser and run the report again.

Item deletion indicator

In real-time and historical report input pages, an asterisk following an item in a selection field (for example: *agent name** or *job name**) indicates that the item was administratively deleted from the system.

Note:

In real-time reports the indicator identifies a pending physical deletion of the item from the database. In historical reports the records associated with the indicated item are retained over time.

You can change the default deleted symbol (*) to some other character or characters. To change the symbol, modify the label associated with identifier **RID_DELETED_SYMBOL** or **RID_DELETED** in the resource bundle associated with the relevant report. See Report fonts and colors on page 37 for more information on modifying resource bundles.

Predefined reports

OA R6.1 includes the following predefined Basic reports.

Note:

For most reports you can customize the input criteria and some report settings, then save those configurations for later use. See Saving a report configuration on page 26 for details.

Real-time Report Name	Report Description
Service Class and Queue Status	This report keeps you informed of the performance of a Service Class or Queue
Service Class and Queue Performance	This report allows you to compare statistics among Service Classes and Queues.
Agent Time in State	This report allows you to identify all agents in a particular state.
Agent Performance	This report provides a way to compare one or more statistics among selected agents.
Agent Performance by Service Class and Queue	This report allows comparison of agents across Service Classes and Queues.
Agent Performance by Job	This report provides a real-time view of how agents are performing with respect to the kind of outbound work that they are asked to do.
Agent Set Outcome Codes	This report provides a real-time view of the outcome codes being assigned to particular jobs by agents.
Job Performance	This report provides a real-time view of the performance of your outbound jobs.
System Set Completion Codes	This report provides a real-time view of what is happening to call attempts associated with a set of jobs.
Telephone Number States	This report provides a real-time view of how many telephone numbers are in a particular state for a set of jobs.

Historical Report Name	Report Description
Agent Performance by Service Class and Queue	This report allows historical comparison of agents within different Service Classes and Queues.
IC Agent Performance	This report provides a way to compare a statistic among selected agents.
Service Class and Queue Performance	This report allows you to compare statistics among Service Classes and Queues.
Service Class and Queue Volume	This report provides a way to assess whether more work is arriving than is being handled. This allows you to compare service classes and queues to see where obstructions are occurring.
Agent Performance by Skill	This report allows historical comparison of agents within different skills
Skill Performance	This report allows you to compare statistics among Skills.
CMS Agent Performance	This report provides a way to compare a statistic among selected agents
Agent Performance by Job	This report provides an historical view of the performance of outbound agents over a period of time.
Agent Set Outcome Codes	This report provides an historical view of the outcomes assigned by agents to outbound calls over a period of time.
Job Performance	This report provides an historical view of outbound job performance over a period of time.
System Set Completion Codes	This report provides an historical view of what happens to call attempts over a period of time.

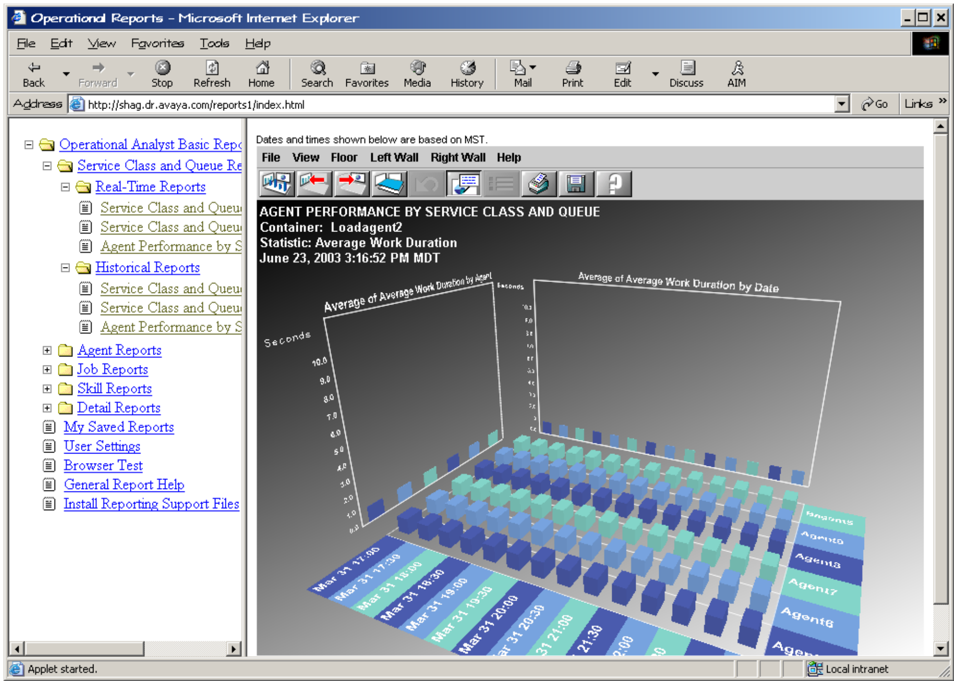
Detail Report Name	Report Description
CMS Call Detail	This set of drill-down reports presents CMS Call History data to show the "cradle to grave" history of a customer contact.
Work Item Detail	This set of drill-down reports integrates IC Repository Work Item data and CMS Call History data to show the "beginning-to-end" history of a customer contact.

Report descriptions

This section describes each of the available Basic reports.

This section includes the following topics:

Historical Agent Performance by Service Class and Queue



Report overview

The Historical Agent Performance by Service Class and Queue report provides an historical view of multiple agents and a single Service Class or Queue, or multiple Service Classes and Queues and a single agent, over time. An agent's performance can be compared to other agents working in the same service class or queue, or a single agent's performance can be compared when working in several service classes and queues. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

In this report, you can display:

- Average Work Duration
- Average Wrap-Up Duration
- Number of Work Items Opened
- Number of Work Items Completed
- Average Customer Hold Duration
- Average Deferred Duration

Data layout

The floor of the Historical Agent Performance by Service Class and Queue report displays absolute or average Agent performance data over time for the selected Agents or Service Classes and Queues, as chosen from the **Floor** menu.

Note:

Agent(s) may not be associated with a Service Class, resulting in empty rows in the report. This is not the same as having a zero value.

The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Agent or Service Class and Queue, over time, while the right wall shows floor data summarized across the displayed Agents, or Service Classes and Queues, for a given time period.

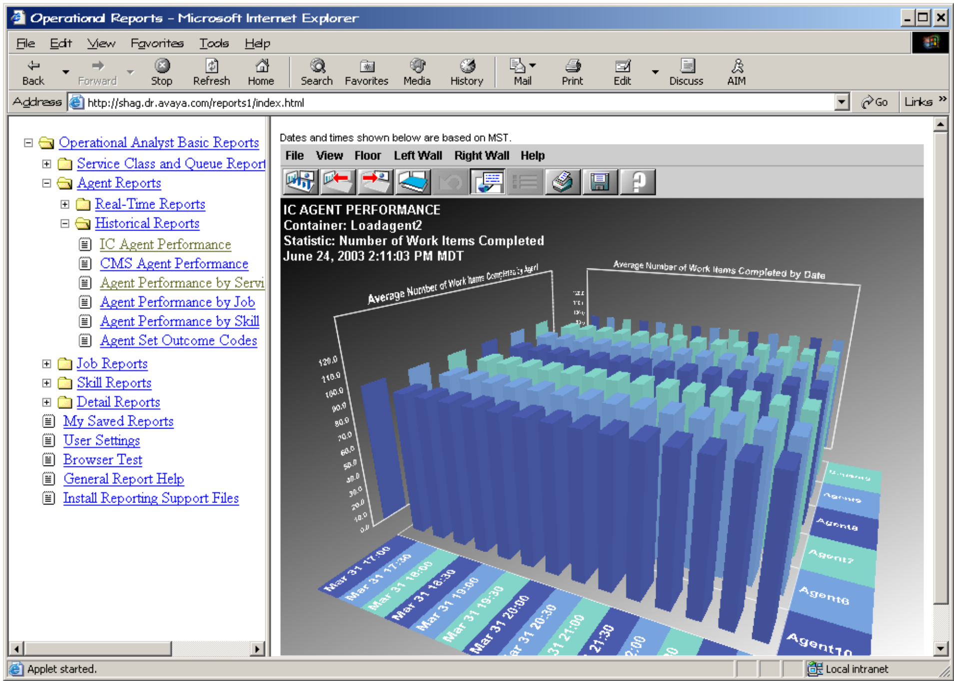
Note:

The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

Analyzing the report

This report answers the business question "How do agents within service classes and queues compare to each other historically?"

Historical IC Agent Performance



Report overview

The Historical Agent Performance report provides historical views of agent performance, allowing trend-based comparison of agents based on historical data. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

In this report, you can display:

- Number of Work Items Completed
- Number of Work Items Opened
- Average Work Duration
- Average Wrap-Up Duration

Data layout

The floor of the Historical Agent Performance report displays absolute or average Agent performance data over time for the selected Agents, as chosen from the **Floor** menu.

The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Agent over time, while the right wall shows floor data summarized across the displayed Agents for a given time period.

Note:

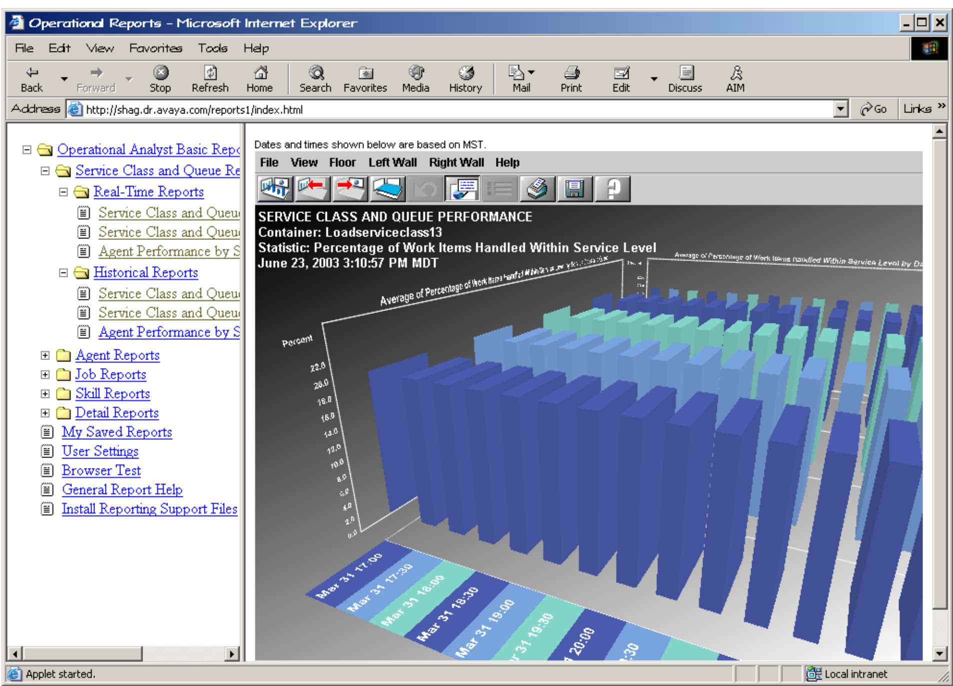
The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

Pausing the mouse cursor on a bar, column or label causes information about that element to be displayed.

Analyzing the report

This report answers the business question "Which Agents were most productive over a specified period of time?"

Historical Service Class and Queue Performance



Report overview

The Historical Service Class and Queue Performance report provides historical views of Service Class and Queue performance, allowing trend-based comparison of work item counts and average durations. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

In this report, you can display count and average-duration statistics for:

- Percentage of Work Items Handled Within Service Level
- Number of Work Items Offered
- Number of Work Items Completed
- Number of Abandoned Work Items
- Average Wait Time
- Average Time to Abandon

Data layout

The floor of the Historical Service Class and Queue Performance report displays absolute numbers of items or average numbers of items for the selected Service Classes and Queues, as chosen from the **Floor** menu.

The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Service Class and Queue over time, while the right wall shows floor data summarized across the displayed Service Classes and Queues for a given time period.

Note:

The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

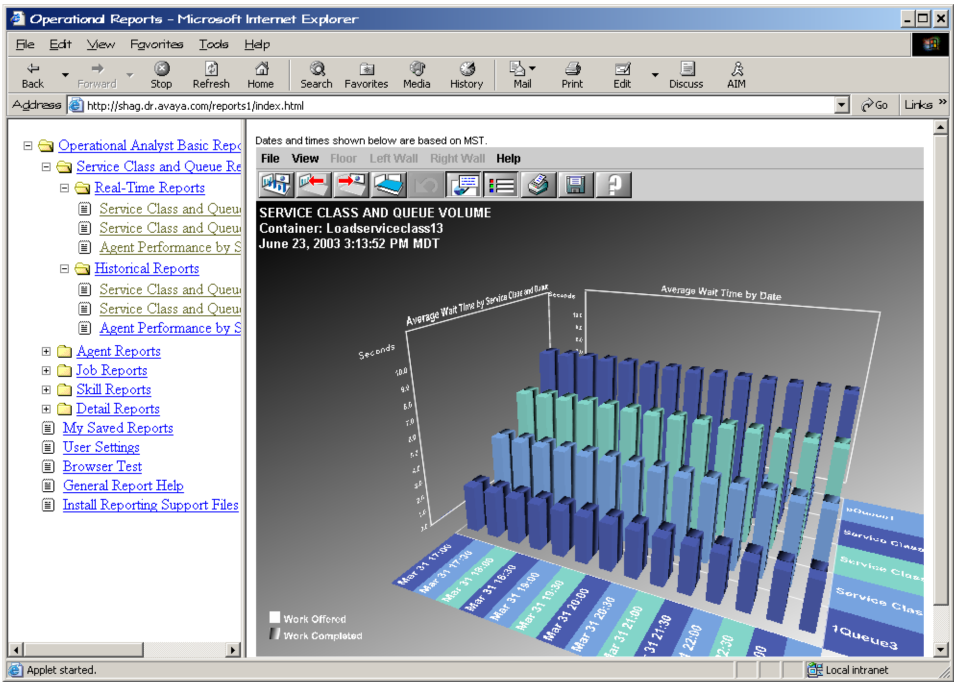
Pausing the mouse cursor on a bar, column or label causes information about that element to be displayed.

Analyzing the report

This report answers the business questions:

- Am I losing customers because they have to wait too long?
- Which Service Class or Queue had the greatest or least number of Work Items opened last week or last month?

Historical Service Class and Queue Volume



Report overview

Service Class and Queue Volume is a graphical historical report that provides a way to assess where the obstructions are in your processes. This report allows you to identify trends and patterns in the data by:

- Comparing new work items to departed work items by Service Class and Queue.
- Showing average wait time for Service Classes and Queues.
- Showing average wait time across all Service Classes and Queues for each time period.

You specify a set of Service Classes and Queues and a time period. The time period is the interval of time over which data has been collected. All Service Classes and Queues display data for the same time interval. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

Data layout

The report floor shows new work items offered versus completed work items for each Service Class and Queue.

The left wall shows the Average Wait Time for Service Classes and Queues over the selected time period.

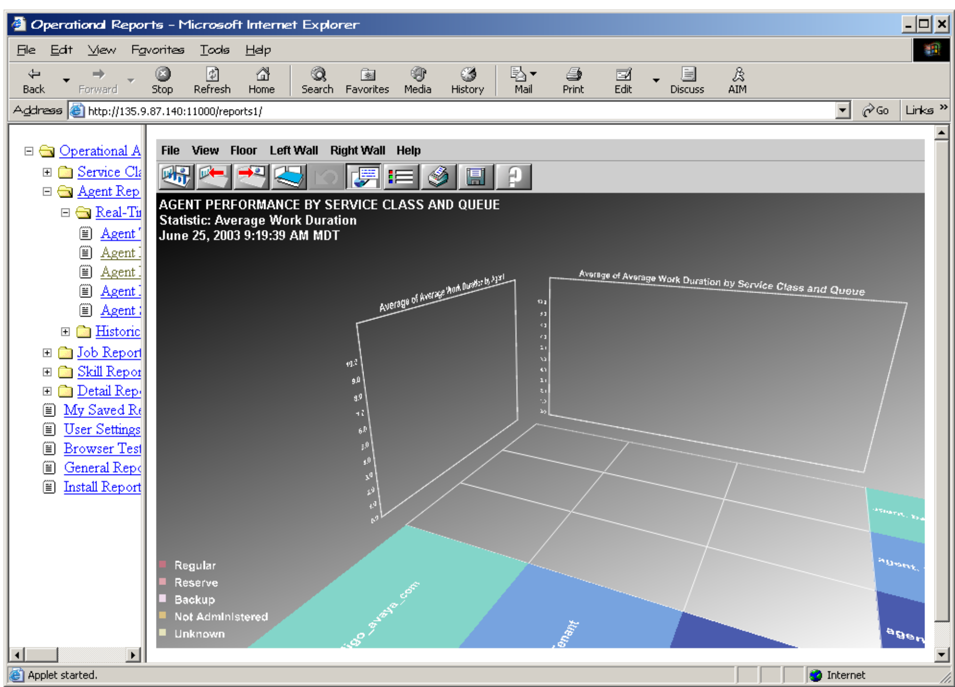
The right wall shows the Average Wait Time across all Service Classes and Queues for each time period displayed on the "time" axis.

Pausing the mouse cursor on a bar, column or label causes information about that element to be displayed.

Analyzing the report

This report answers the business question "Where are the obstructions in my work flow?"

Real-time Agent Performance by Service Class and Queue



Report overview

The Real-Time Agent Performance by Service Class and Queue report provides an operational view of multiple agents across multiple service classes and queues. An agent's performance can be compared to other agents working in the same service class and queue, or to that same agent’s performance when working in other service classes and queues.

In this report, you can display:

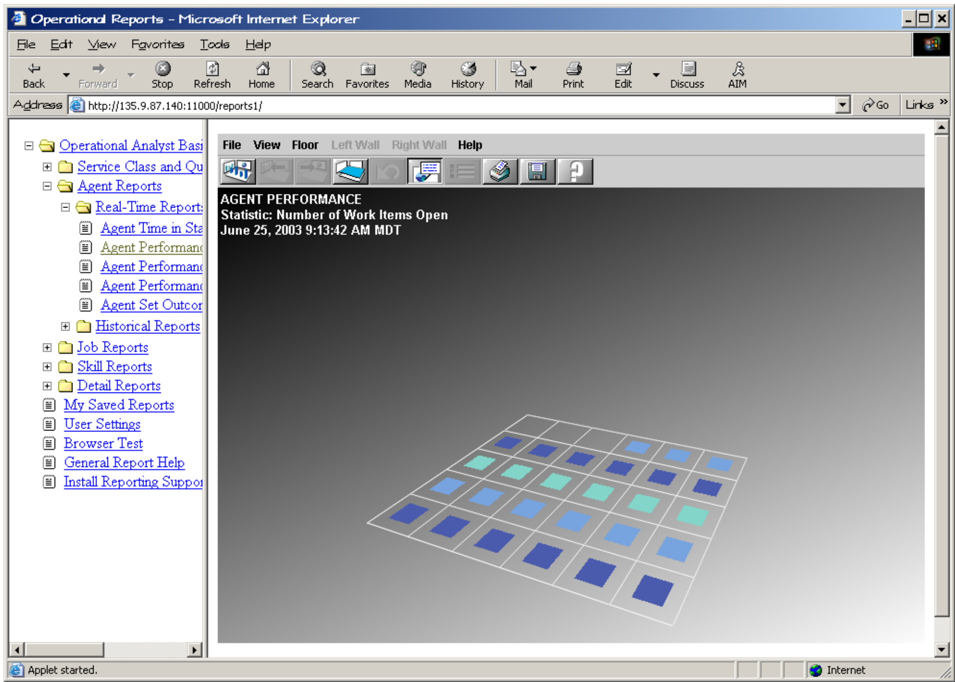
- Average Work Duration
- Average Wrap-Up Duration
- Number of Work Items Opened
- Number of Work Items Completed
- Average Customer Hold Duration
- Average Deferred Duration

Analyzing the report

This report answers the business questions:

- How well does an agent perform in each of his or her service classes and queues?
- How does an agent compare to other agents in the same service class or queue?
- How does an agent's work vary across several service classes and queues?

Real-time Agent Performance



Report overview

The Agent Performance report provides a view of individual agent work performance in real-time. An agent's performance numbers can either be compared to absolute targets or compared with other agents.

In this report, you can display:

- Number of Work Items that the agent currently has open
- Average amount of time the agent has spent working on items
- Average amount of time the agent has spent wrapping up work
- Amount of time the agent spent in the idle state while available during this interval
- Amount of time the agent has spent on break during this interval

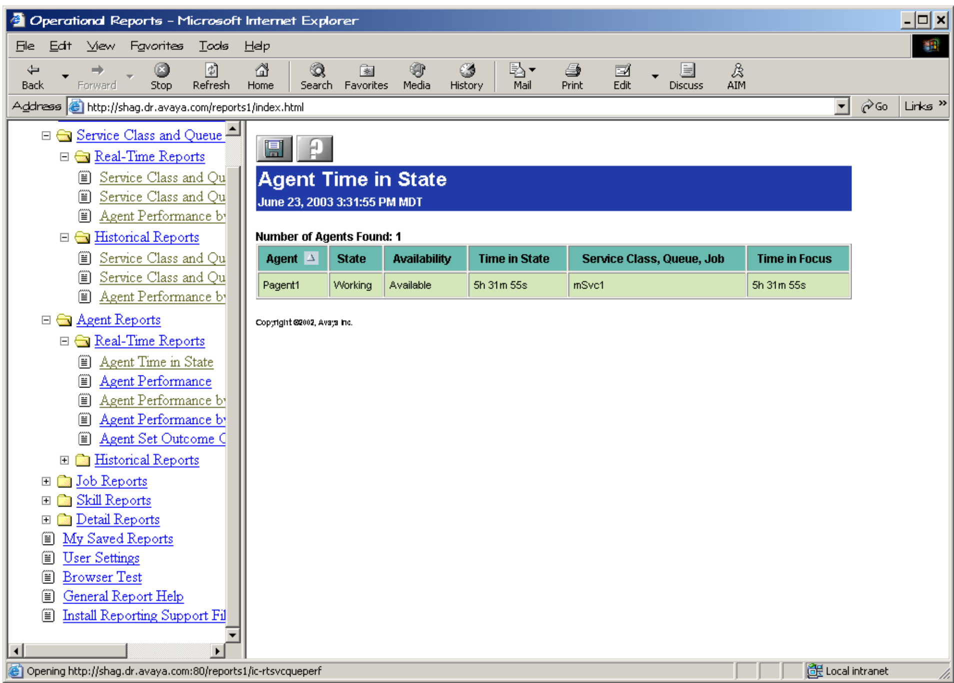
Analyzing the report

This report answers the business questions:

- How do my agents compare with each other?

- Which agents excel in specific areas?
- What agents are not measuring up in specific areas?

Real-time Agent Time in State



Report overview

The Agent Time in State report is a tabular real-time report that can be launched either from the reports tree-view or by clicking on a slice of a pie chart in the Service Class and Queue Status report. You can use this report to determine what state Agents are in, how long they have been in that state, what their role is relative to a Service Class, and whether they can be used to support other Service Classes or Queues.

Layout

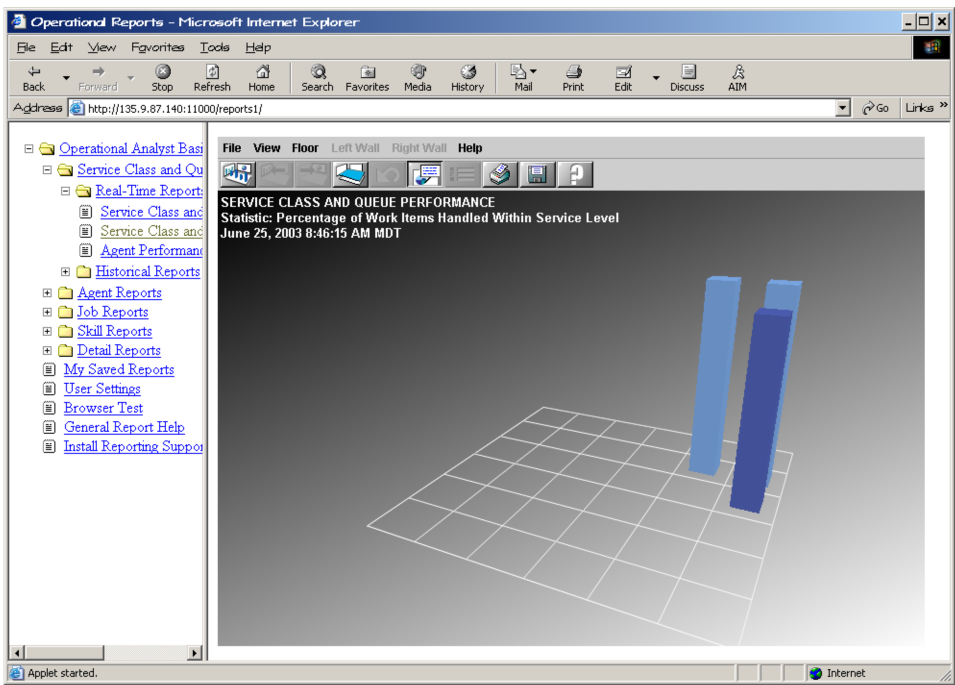
The Agent Time in State report contains columns named: **Agent**, **State**, **Availability**, **Time in State**, **Time in Focus**, **Service Class, Queue, Job**, and **Role**. Various combinations of columns appear depending on the values selected on the input pages.

Analyzing the report

This report answers the business questions:

- Who is in the best position to help me bring this service class or queue back into acceptable service levels?
- How long has a particular set of agents been in its current state and what is that state?

Real-time Service Class and Queue Performance



Report overview

The goal of this report is to inform you about the performance of Service Classes and Queues currently and over the last 30 minutes. The Service Class and Queue Status report lets you view Real-Time performance data for each Service Class and Queue you specify.

The Service Class and Queue Performance Real-time report provides a real-time view of how service classes and queues are performing on the basis of a statistic you select. Service class and queue performance can be compared either to absolute targets or to other service classes and queues.

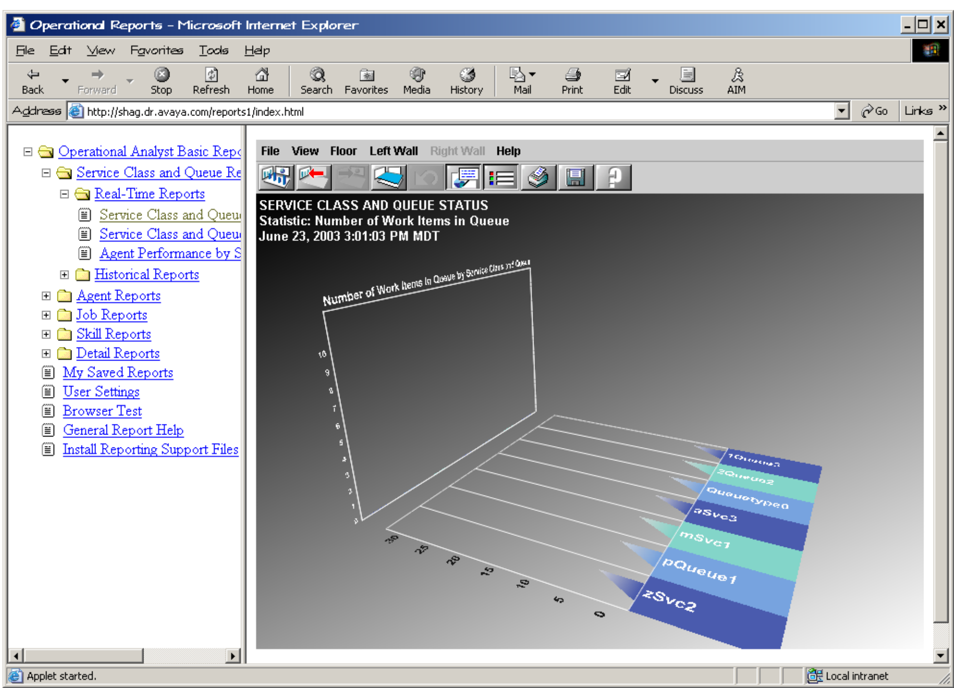
In this report, you can display:

- Percentage of Work Items Handled Within Service Level
- Number of Work Items in Queue
- Number of Work Items Offered
- Number of Work Items Completed
- Number of Abandoned Work Items
- Latest Average Wait Time
- Average Time to Abandon
- Percentage of Matched Work Items

Analyzing the report

This report answers the business question "Which Service Classes or Queues stand out, in either a good way or a bad way?"

Real-time Service Class and Queue Status



Report overview

The purpose of this report is to keep you informed about the performance of Service Classes and Queues currently and over the last 30 minutes. The Service Class and Queue Status report lets you view real- time performance data for each Service Class and Queue you select.

Data layout

Floor: The data displayed on the floor is determined by your selection from the **Floor/Statistic** menu. The graphic representation is determined by your selection from the **Floor/Display As** menu.

Left Wall: The data displayed as a vertical bar on the left wall is determined by your selection from the **Left Wall** menu.

Right Wall: The right wall appears when a Service Class label on the x-axis is selected. The right wall displays pie charts representing Agent Roles assigned to the Service Class, subdivided to show numbers of Agents in a particular state.

Analyzing the report

This report answers the business questions:

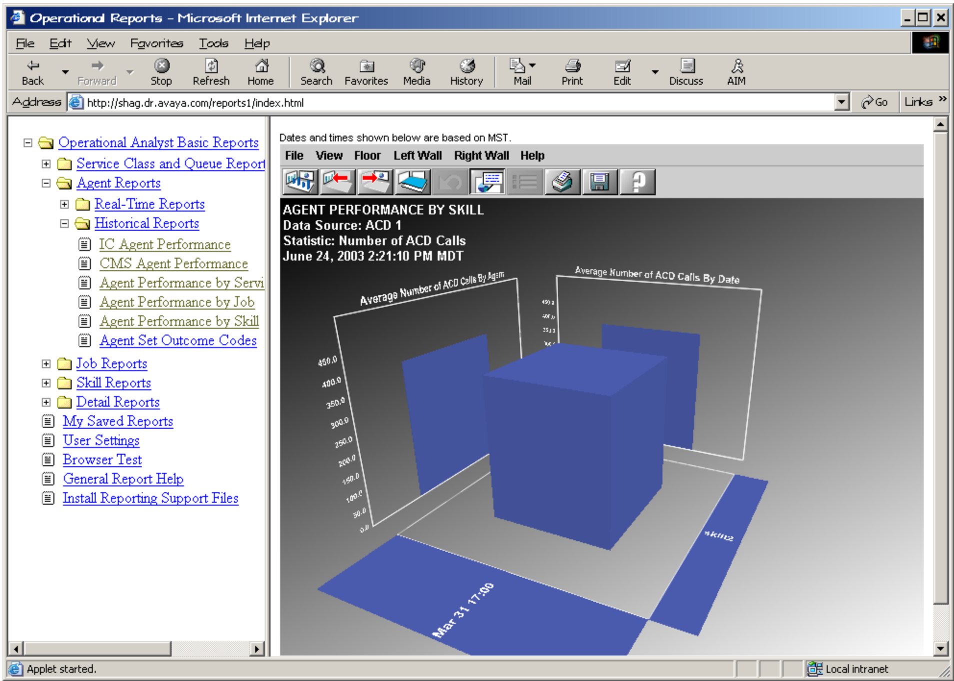
- Which Service Classes and Queues are in trouble?
- Which Service Classes and Queues are in trouble over a period of time?
- How long will a customer wait in queue before their questions are answered (Expected Wait Time)?

When a Service Class or Queue is in trouble, the Service Class and Queue Status report visually alerts you to the problem. For Service Classes, you can identify specific agents who are available to help a Service Class that is performing below the desired service levels. You can identify those agents by following links to the Agent Time in State real time report.

The floor of the report displays the performance trend of a Service Class or Queue over a 30-minute interval. The trending information displayed on the floor allows you to determine which Service Classes or Queues are in trouble, and how long the Service Class or Queue performance has been deteriorating or improving over a period of time. The left wall includes the total number of queued work items and expected wait time. For Service Classes, the right wall displays agent state information using a series of pie charts. Agent state information is organized by agent role. The right wall is only displayed when a single Service Class is selected, hiding all other Service Classes and Queues.

Pausing the mouse cursor on a label, bar, or pie slice causes information about that element to be displayed.

Historical Agent Performance by Skill



Report overview

The Historical Agent Performance by Skill report provides an historical view of multiple agents and a single Skill, or multiple Skills and a single agent, over time. An agent's performance can be compared to the performance of other agents working in the same Skill, or a single agent's performance can be compared when working in several Skills. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

In this report, you can display:

- Number of ACD Calls
- Average ACD Duration
- Average ACW Duration

Analyzing the report

This report answers the business question "How do agents with the same skills compare to each other historically?"

The floor of the Historical Agent Performance by Skill report displays absolute or average Agent performance data over time for the selected Agents or Skills, as chosen from the **Floor** menu.

Note:

An Agent may not be associated with a Skill, resulting in an empty row in the report. This is not the same as having a zero value.

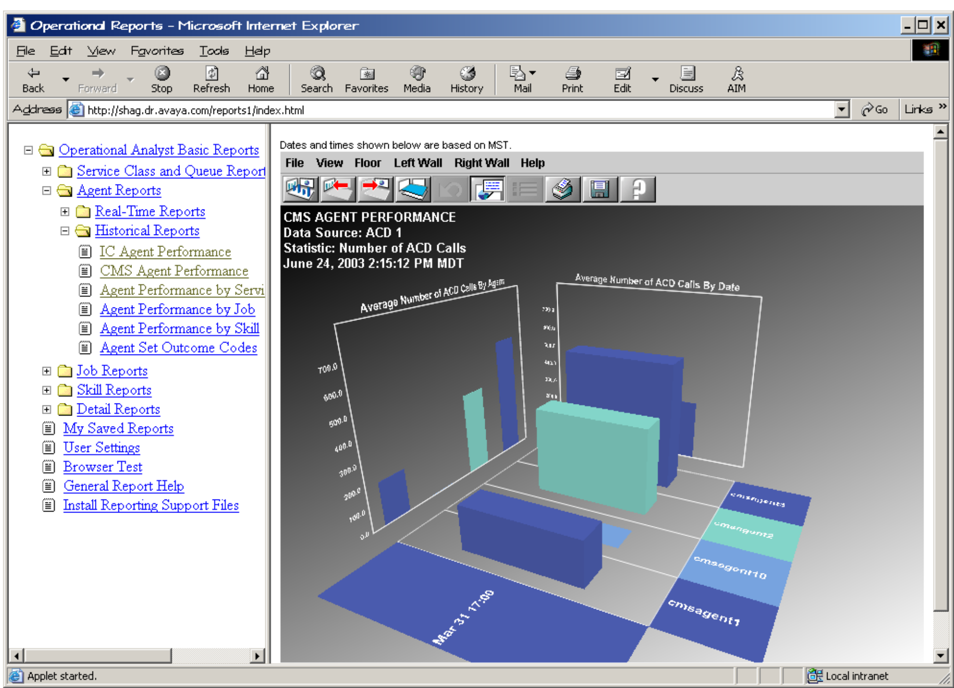
The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Agent or Skill over time, while the right wall shows floor data summarized across the displayed Agents or Skills for a given time period.

Note:

The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

Pausing the mouse cursor on a bar, column or label causes information about that element to be displayed.

Historical CMS Agent Performance



Report overview

The CMS Agent Performance report provides historical views of agent performance, allowing trend-based comparison of agents based on historical CMS data. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

In this report, you can display:

- Number of ACD Calls
- Average ACD Duration
- Average ACW Duration

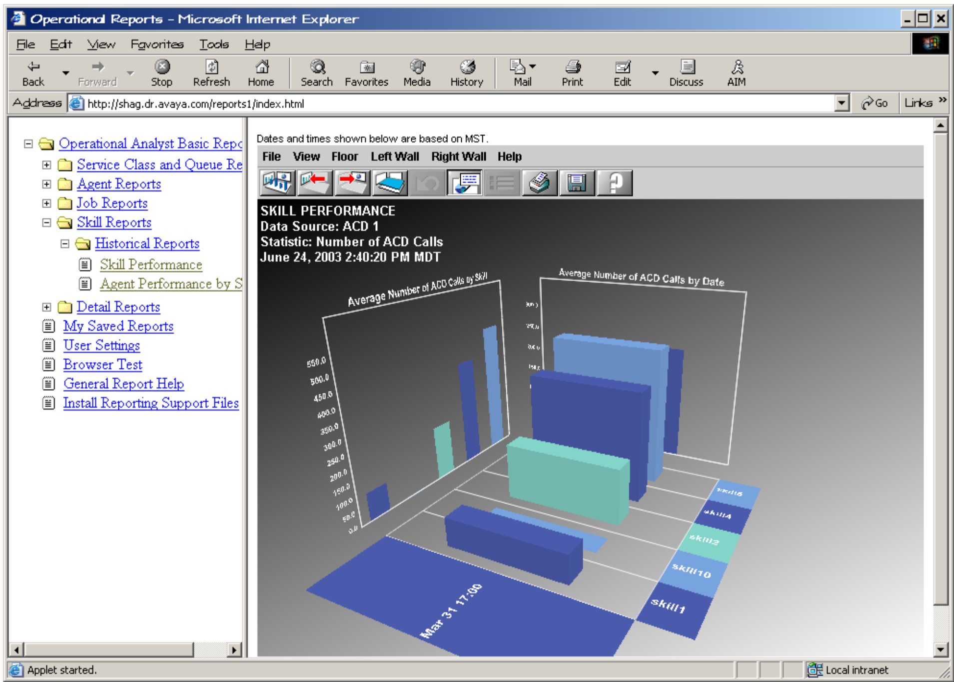
Analyzing the report

This report answers the business question "Which Agents were most productive over a specified period of time?"

The CMS Agent Performance report presentations a floor and two walls. You select which agents you would like to include in the report. The statistical data is displayed using three-dimensional columns that rise from the floor, with the value of the column representing the value of the statistic. Time extends from most recent to oldest along the "time" axis. The left and right walls summarize the data presented on the floor.

Pausing the mouse cursor on a bar, column or label causes information about that element to be displayed.

Historical Skill Performance



Report overview

The Skill Performance historical report provides historical views of Skill performance, allowing trend-based comparison of call counts and average durations. The source of data for this report is the containers in which OA stores historical data.

In this report, you can display count and average-duration statistics for:

- Number of ACD Calls
- Average Speed of Answer
- Number of Abandoned Calls
- Average Time to Abandon

Analyzing the report

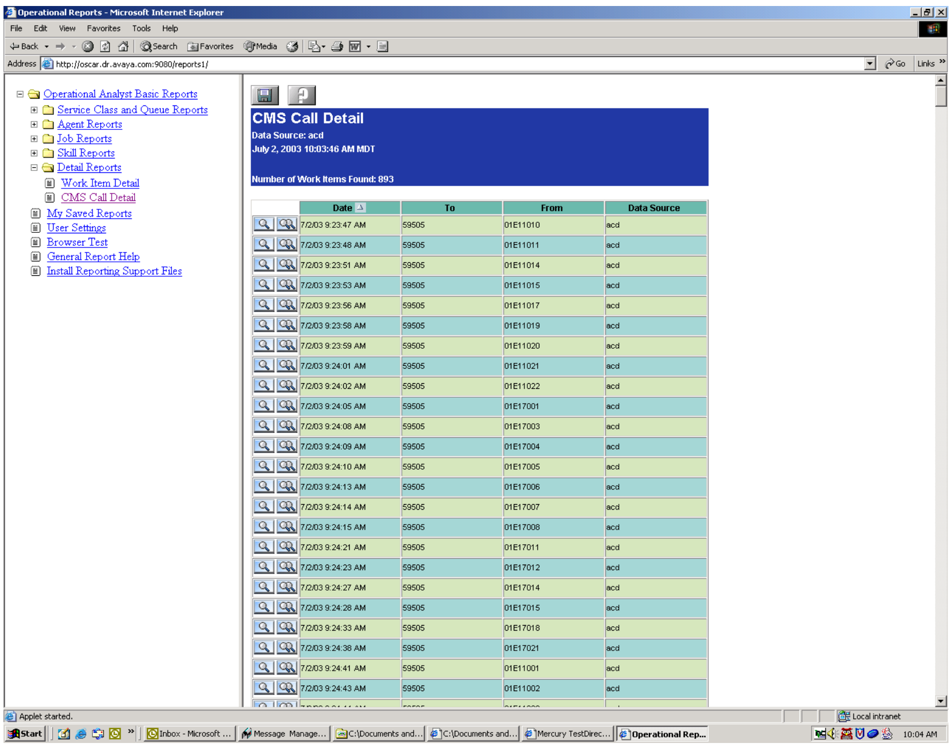
This report answers the business questions:

- Am I losing customers because they have to wait too long?

- Which Skills had the greatest or least number of Work Items opened last week or last month?

Pausing the mouse cursor on a bar, column or label causes information about that element to be displayed.

CMS Call Detail



Report overview

The CMS Call Detail reports consist of a CMS Call Detail report, a Segment Information report, and a Call Work Codes report. The reports act as a hierarchy with Call Detail reports displaying multiple calls, each with a corresponding Segment Information report. The Segment Information reports list multiple segments for a particular Call with each segment potentially having a corresponding Call Work Codes report. The Call Work Codes reports list multiple work codes for a particular Call segment.

This set of reports provide a "cradle-to-grave" record of all relevant segments of a given call.

This set of Call Detail reports answers the business questions:

- What was the customer experience when contacting my center?
- How many times was a call of a particular type put on hold?
- How long did the call wait in queue?
- What was the beginning-to-end history of a call?
- What Call Work Codes were used for this call?

Analyzing the report

The CMS Call Detail report displays columns labeled: **Date**, **To**, **From**, and **Data Source**. The To field displays the phone number of the Agent handling the first segment of the call. The From field displays the phone number of the person initiating the call.

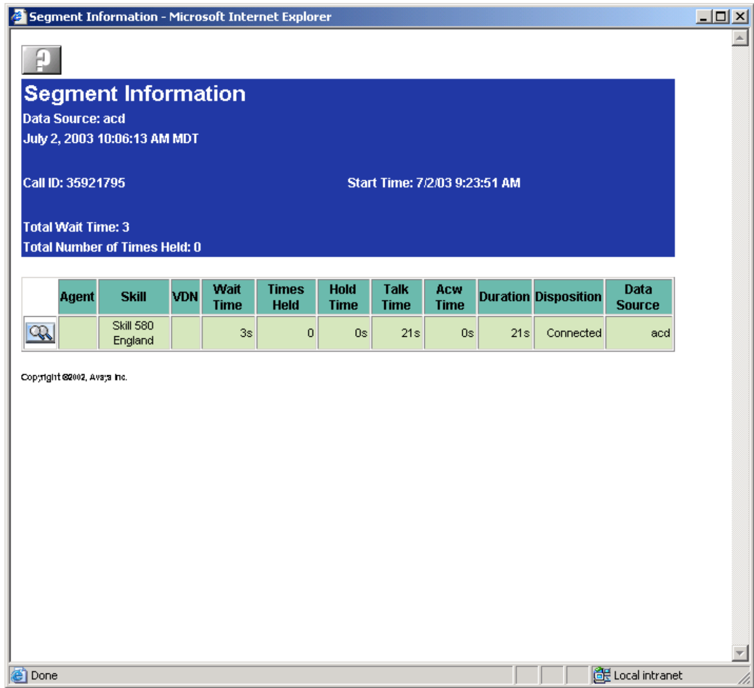
To launch the Segment Information Report for a call select the single magnifying glass icon.

To launch the Call Work Codes report for a call, select the double magnifying glass icon. The Call Work Codes report then displays all codes accumulated over the entire life of the call.

Note:

In cases where a call involves multiple switches, the call will appear in this report once for each switch involved. Drilling down to the Segment Information report from any of these rows will produce the same, complete Segment Information.

Segment Information



Report overview

The Segment Information report presents information about the set of call segments associated with a call. The life cycle of a call is composed of call segments, each representing time spent on the call while interacting with an Agent. Each row of the report represents a segment of the selected call.

This report is reached by drilling down from the CMS Call Detail report. To drill down to a segment report from a call detail report, select the single magnifying glass to the left of any call.

Note:

You cannot save a custom configuration for reports that are subsets of other reports.

Data layout

The Segment Information Report is a tabular report that contains rows of data that identify the details of each segment. Columns in the table are labeled: **Agent**, **Skill**, **VDN**, **Wait**

Time, **Times Held**, **Hold Time**, **Talk Time**, **ACW Time**, **Duration**, **Disposition** and **Data Source**. The header of the report identifies the call being reported on. A double magnifying glass icon is displayed to the left of any row that has a Call Work Codes report associated with a call segment in that row.

Note:

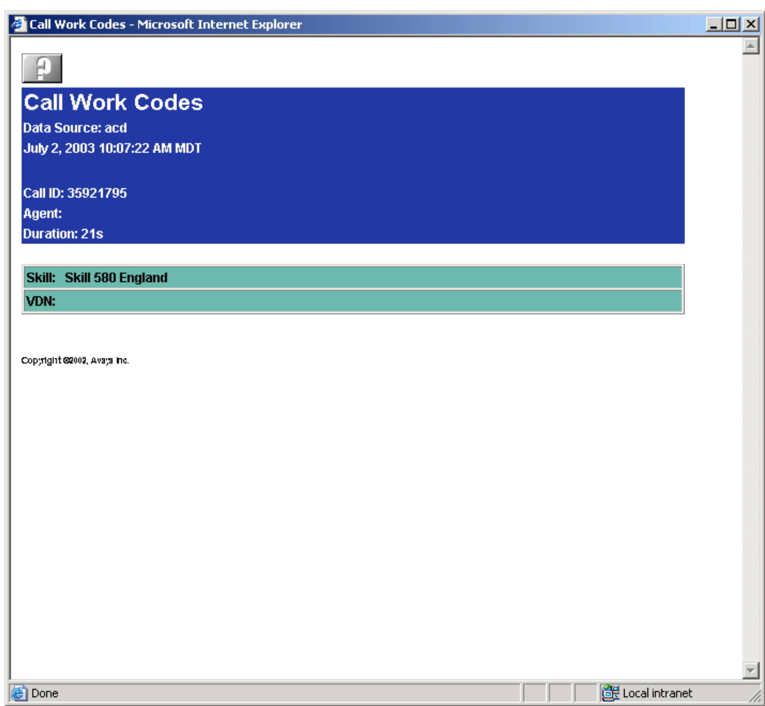
The **Duration** field is the combination of Agent's work time and wrap-up time. It does not include the time the customer spent in queue waiting to be served.

The table is sorted in chronological order, with the oldest segment at the top of the table and the most recent segment at the bottom. No further sorting is allowed.

Analyzing the report

To launch the associated Call Work Codes report in a separate browser window, select the double magnifying glass icon.

Call Work Codes



Report overview

The Call Work Codes report shows information about the call work codes (up to 6) that were entered by agents for that segment of the call. This report is reached as a drill down from the Segment Information report or as a drill down from the CMS Call Detail report.

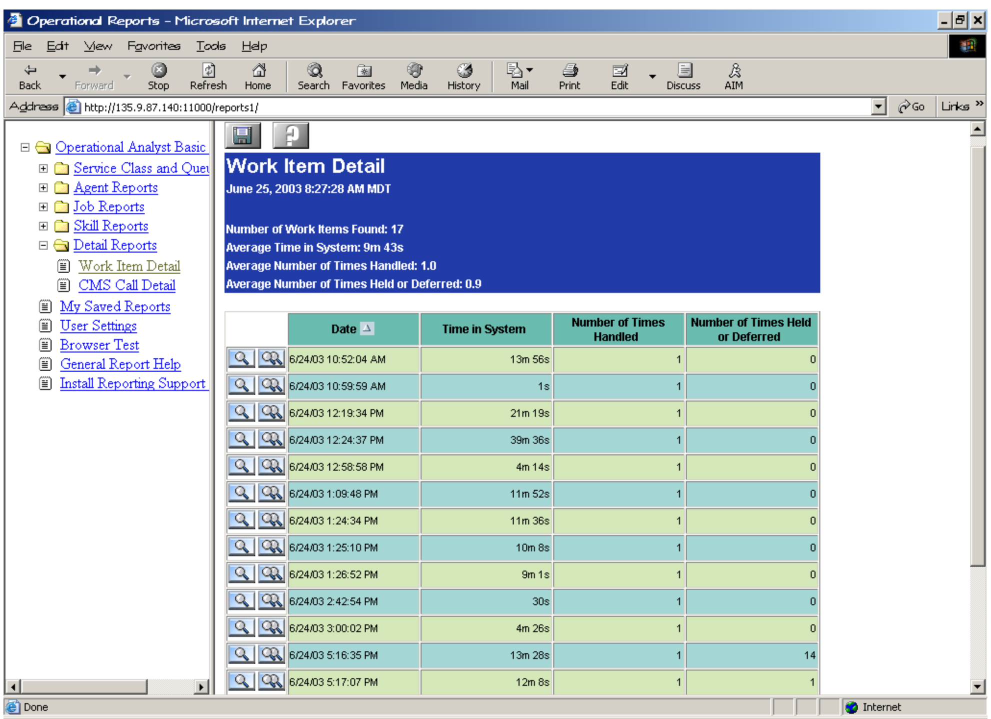
Data layout

This report displays data for a single segment of a single call or all segments of a single call, depending on how the report was reached.

Note:

You cannot save a custom configuration for reports that are subsets of other reports.

Work Item Detail



Report overview

The Work Item Detail reports consist of a Work Item Detail report, a Segment Information report, and a Wrap-Up Codes report. The reports act as a hierarchy with Work Item Detail reports displaying multiple work items, each with a corresponding Segment Information report. The Segment Information reports list multiple segments for a particular work item - with each segment having a corresponding Wrap-Up Codes report. The Wrap-Up Codes reports list multiple tasks for a particular work item segment.

This set of reports provide a "cradle-to-grave" record of all relevant segments of a work item.

The entries in the **To** and **From** fields relate to the telephone number or address of the Agent handling the contact or the party initiating the contact, respectively, depending on the channel of the contact.

Data layout

The Work Item Detail report displays a table with columns labeled: **Date**, **Time in System**, **Number of Times Handled**, and **Number of Times Held or Deferred**. (These columns correspond to the fields on the Input Page.) Icons displayed to the left of each row represent links to more detailed data:

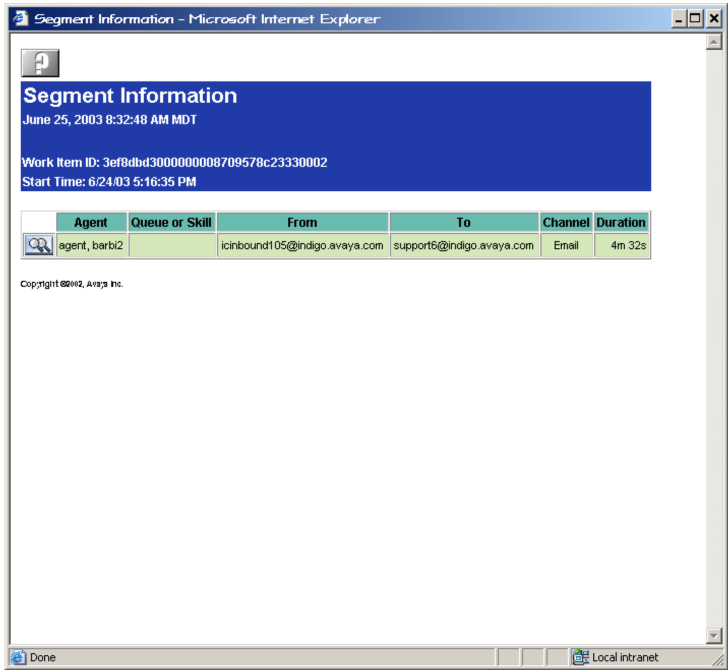
- Select the single magnifying glass icon to launch the associated Segment Information report.
- Select the double magnifying glass icon to launch the associated Wrap-Up Codes report.

Analyzing the report

This report answers the business questions:

- What was the customer experience when contacting my center?
- How many times on the average was a work item of a particular type handled, deferred, or put on hold?

Segment Information



Report overview

The Segment Information report presents information about the list of process segments associated with a work item. The life cycle of a work item is composed of a series of process segments, each representing time spent on the work item while interacting with an Agent.

This report displays data for a single work Item and may be reached only by drilling down from the Work Item Detail report.

Data layout

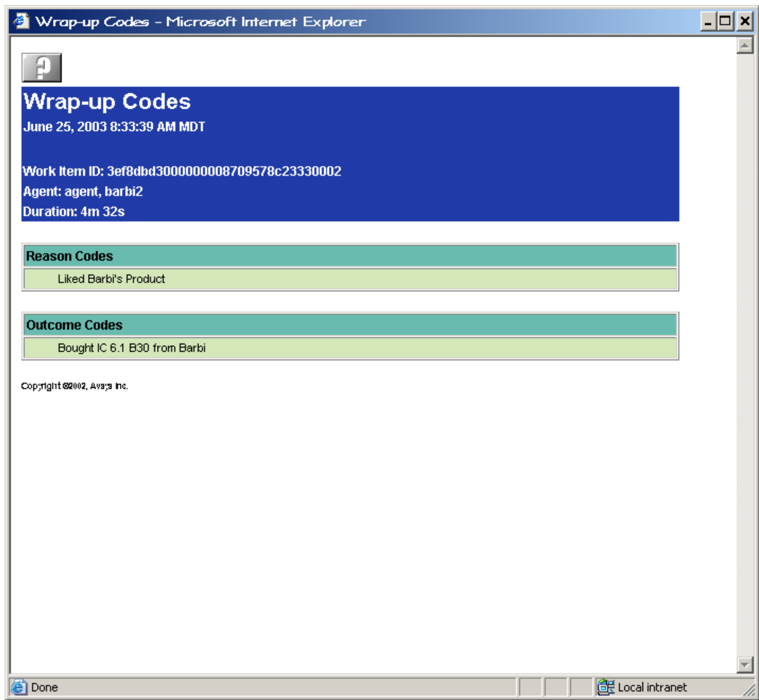
The Segment Information report is a tabular report that contains rows of data that identify the details of each segment. Columns in the table are labeled: **Agent**, **Queue or Skill**, **From**, **To**, **Channel**, and **Duration**. The header of the report identifies the Work Item being reported on. A magnifying glass icon is displayed to the left of any row that has a Wrap-Up Codes report associated with it. Rows representing automated interactions do not have associated Wrap-Up Codes reports.

The table is sorted with the oldest segment at the top of the table and the most recent segment at the bottom. No further sorting is allowed.

Analyzing the report

Select the double magnifying glass icon to launch the associated Wrap-Up Codes report in a separate browser window.

Wrap-Up Codes



Report overview

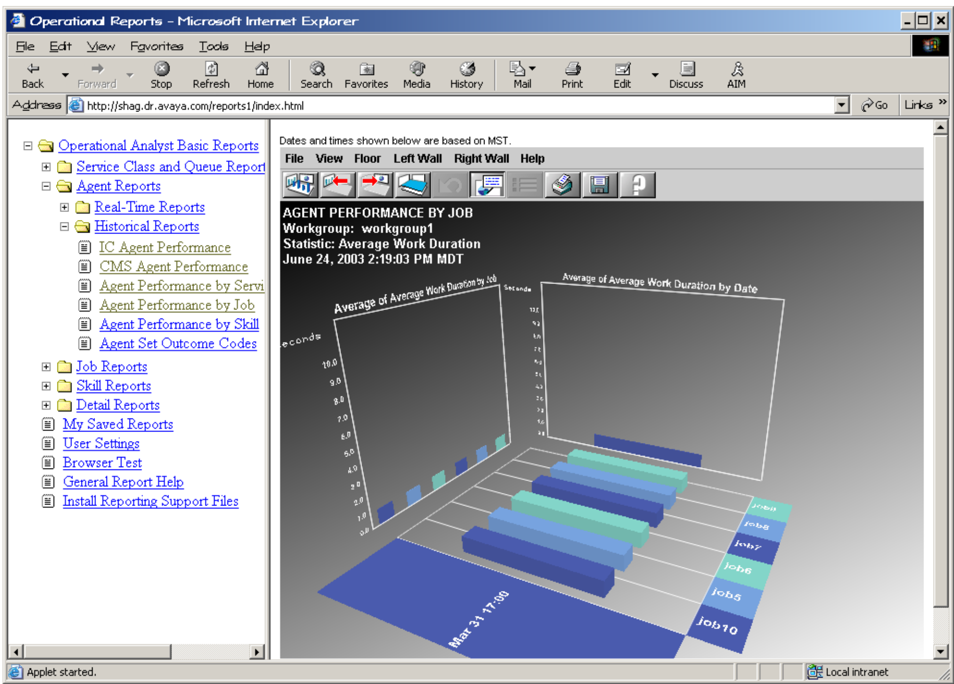
The Wrap-Up Codes report shows information about the **Category**, **Reason**, and **Outcome** codes that were entered by agents when they completed their work. Wrap-Up Codes reports are associated only with Routing Event segments, not with CMS Call History segments.

This report displays data for a single segment of a single work item and can be reached only by drilling down from the **Segment Information** report or from the **Work Item Detail** report.

Analyzing the report

Rows are sorted with all Category codes first, then all Reason codes, then all Outcome codes. Within a set of codes, the codes are sorted by code number. No further sorting of rows is supported for this report.

Historical Agent Performance by Job



Report overview

The Historical Agent Performance by Job report provides an historical view of multiple agents and a single job, or multiple jobs and a single agent, over time. This allows you to compare agent’s performance to other agents working in the same job, or a single agent’s performance over several job categories. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

You can select any one of the following statistics to display:

- Average Work Duration
- Average Wrap-Up Duration

- Total Work Duration
- Total Wrap-Up Duration
- Average Preview Duration
- Number of Work Items Completed
- Number of Work Items Rejected
- Number of Work Items Previewed

The floor of the Historical Agent Performance by Job report displays absolute or average Agent performance data over time for the selected Agents or Jobs, as chosen from the **Floor** menu.

Note:

One or more Agents may not be associated with a selected Job, resulting in an empty row in the report. This is not the same as having a zero value.

The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Agent, or Job, over time, while the right wall shows floor data summarized across the displayed Agents, or Jobs, for a given time period.

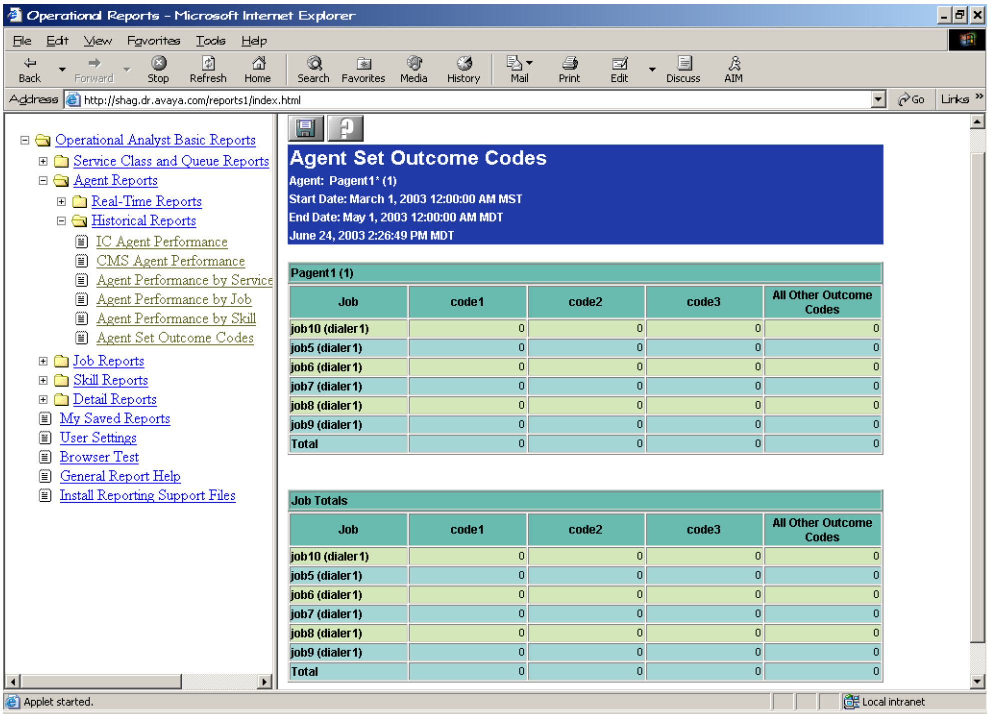
Note:

The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

Analyzing the report

You can determine an Agent's strengths and weaknesses by comparing performance over a number of jobs. Also, you can determine which of a number of Agents performs a particular job most efficiently. This information can be useful while balancing the work load in your contact center.

Historical Agent Set Outcome Codes



Report overview

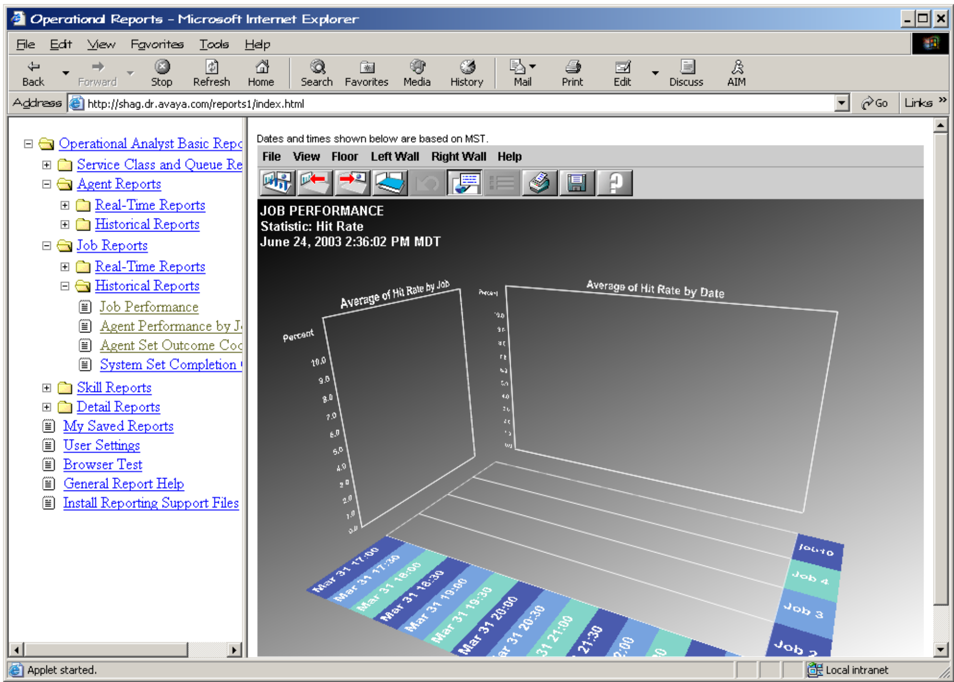
The Historical Agent Set Outcome Codes report provides an historical view of the distribution of outcome codes applied to specific jobs by specific agents over time. Any outcome codes not selected in the report input page are summed and reported together. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

Analyzing the report

The data in this report can help you determine:

- Which jobs have the most successful outcomes and at what particular times?
- What is the best time of day to call for a particular job?

Historical Job Performance



Report overview

The Job Performance report provides historical views of Job performance, allowing trend-based comparison of work item counts and average durations. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

In this report, you can display count and average-duration statistics for:

- Hit Rate
- Number of Work Items Completed
- Nuisance Call Rate
- Number of Nuisance Calls
- Number of Telephone Numbers Unreachable
- Maximum Number of Agents Subscribed
- Number of Telephone Numbers Loaded

The floor of the Job Performance report displays statistics for the selected Jobs, as chosen from the **Floor** menu.

The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Job over time, while the right wall shows floor data summarized across the displayed Jobs for a given time period.

Note:

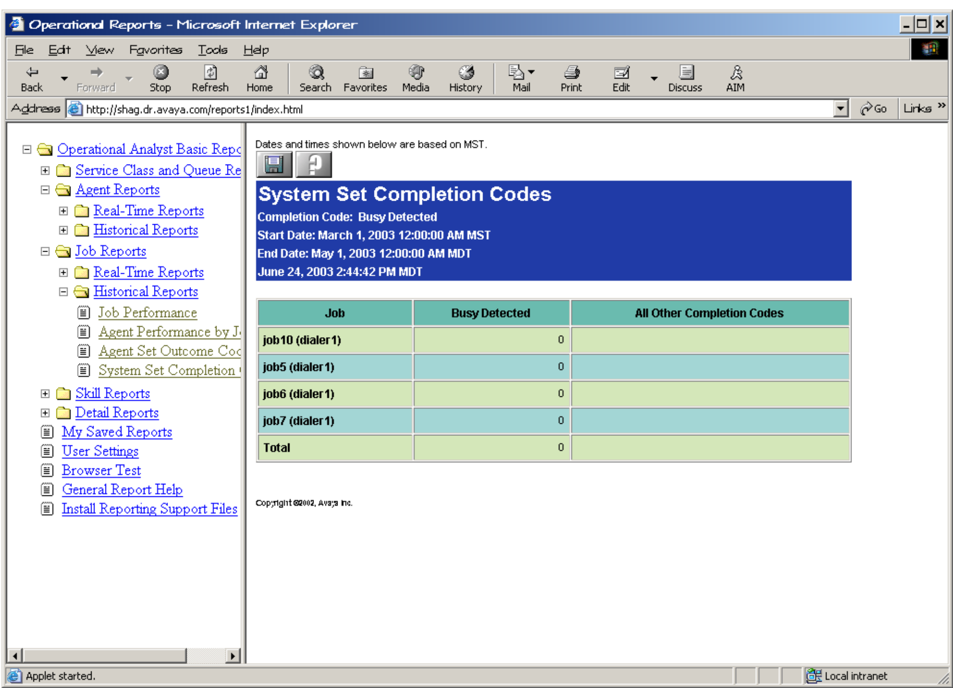
The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

Analyzing the report

This report provides data that indicate trends about any particular Jobs. For example, you could easily determine:

- Jobs with a historical trend with regard to hit rate or nuisance calls.
- Relationships between time of day and call rate.

Historical System Set Completion Codes



Report overview

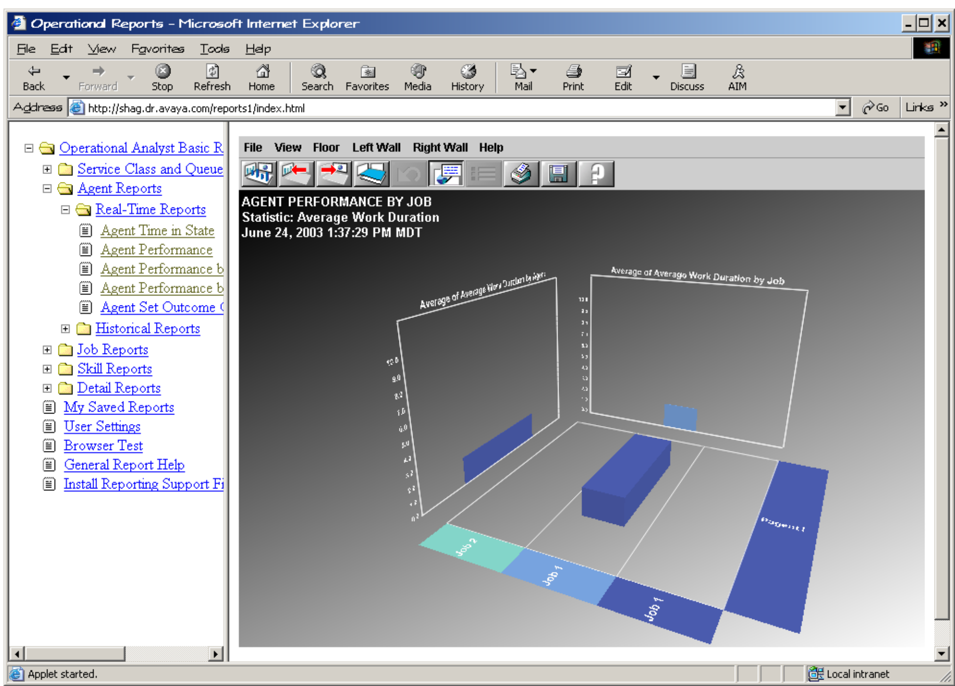
The Historical System Set Completion Codes report provides an historical view of the results of call attempts over time. Any completion codes not selected in the report input page are summed and reported together. The source of the data is the containers in which OA stores historical data or the non-aggregated interval data.

Analyzing the report

The data in this report can help you determine:

- What time of day is most likely to result in a call to an answering machine?
- What time of day is most likely to result in a nuisance call?

Real-time Agent Performance by Job



Report overview

The real-time Agent Performance by Job report provides an operational view of multiple agents across multiple jobs. This allows you to compare agent’s performance to other agents working in the same job, or a single agent's performance over several job categories.

You can select any one of the following statistics to display:

- Average Work Duration
- Average Wrap-Up Duration
- Total Work Duration
- Total Wrap-Up Duration
- Number of Work Items Completed
- Number of Work Items Rejected
- Number of Work Items Previewed

The floor of the Real-time Agent Performance by Job report displays the value for a statistic, chosen from the **Floor** menu, for a given Agent and a given Job.

Note:

If an Agent is not associated with a selected Job, the result is an empty spot in the floor. This is not the same as having a zero value.

The left and right walls display either average or total data for the floor data, as determined by the item selected from the respective **Wall** menu. The left wall shows floor data summarized by Agent, while the right wall shows floor data summarized across the displayed Jobs.

Note:

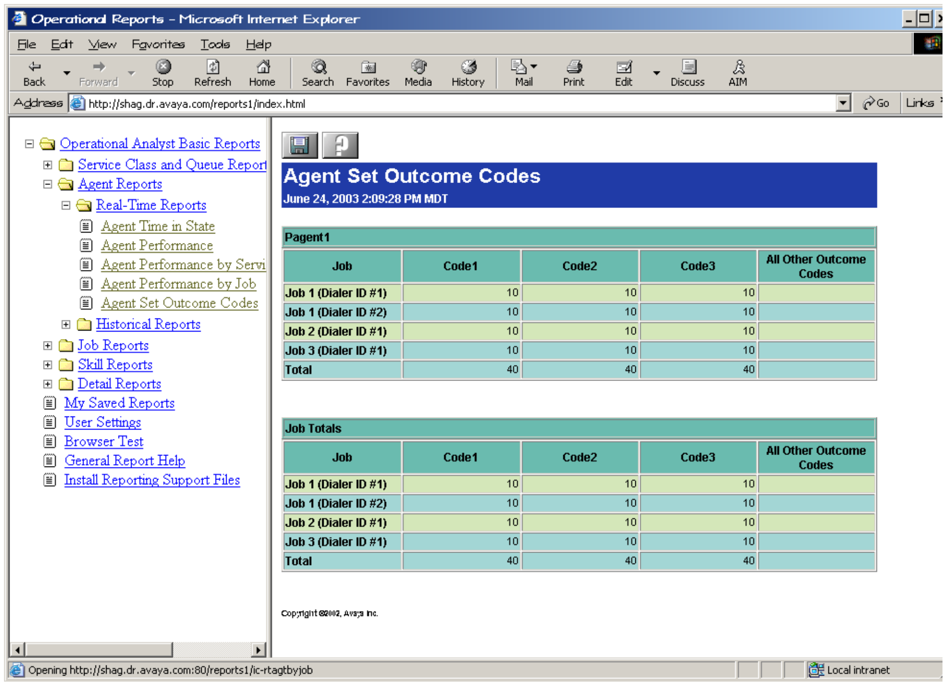
The statistic selected for the floor and the statistic available for the walls are related. For example, if you select average data for the floor, only average data may be selected for the walls.

Analyzing the report

The data provided by this report can help you determine situations like:

- Which Agent is taking the longest to perform a particular job.
- Who is most efficient at call wrap-up.
- Whether Agents are spending more time in preview or wrap-up for a particular job.

Real-time Agent Set Outcome Codes



Report overview

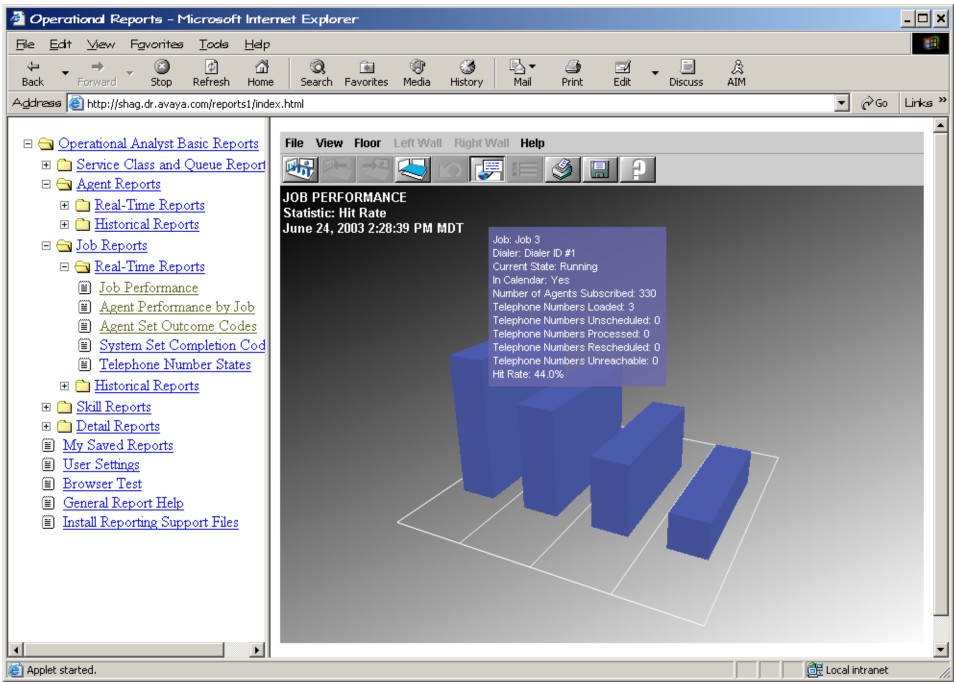
The real-time Agent Set Outcome Codes report provides an operational view of the distribution of outcome codes applied to specific jobs by specific agents for the current interval. Any outcome codes not selected in the report input page are summed and reported together.

Analyzing the report

The data in this report can help you determine:

- How are jobs performing with respect to the number and kind of outcomes that they are experiencing?
- Which agents are more effective in achieving successful outcomes?

Real-time Job Performance



Report overview

The real-time Job Performance report provides an operational view of how jobs are performing on the basis of a selected statistic. Performance can be compared to absolute targets or other jobs.

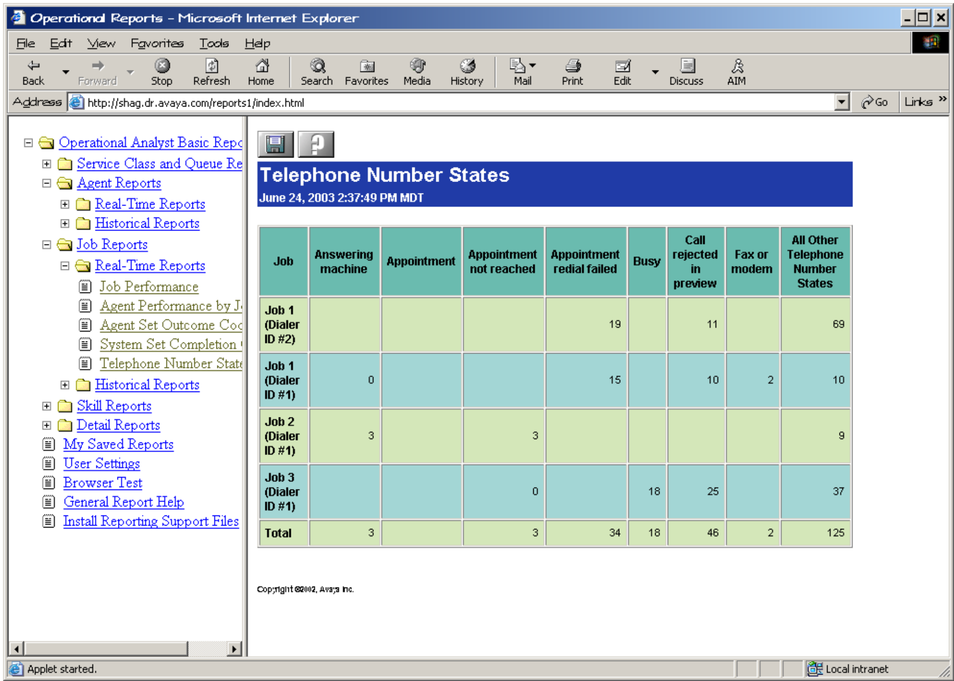
In this report, you can display:

- Hit Rate
- Average Work Duration
- Average Wrap-Up Duration
- Nuisance Call Rate

Analyzing the report

The data in this report can indicate if a particular job is experiencing more than a normal or target hit rate or call rate. It can also help identify jobs that are currently taking more or less time than expected.

Real-time Telephone Number States



Job	Answering machine	Appointment	Appointment not reached	Appointment redial failed	Busy	Call rejected in preview	Fax or modem	All Other Telephone Number States
Job 1 (Dialer ID #2)				19		11		69
Job 1 (Dialer ID #1)	0			15		10	2	10
Job 2 (Dialer ID #1)	3		3					9
Job 3 (Dialer ID #1)			0		18	25		37
Total	3		3	34	18	46	2	125

Report overview

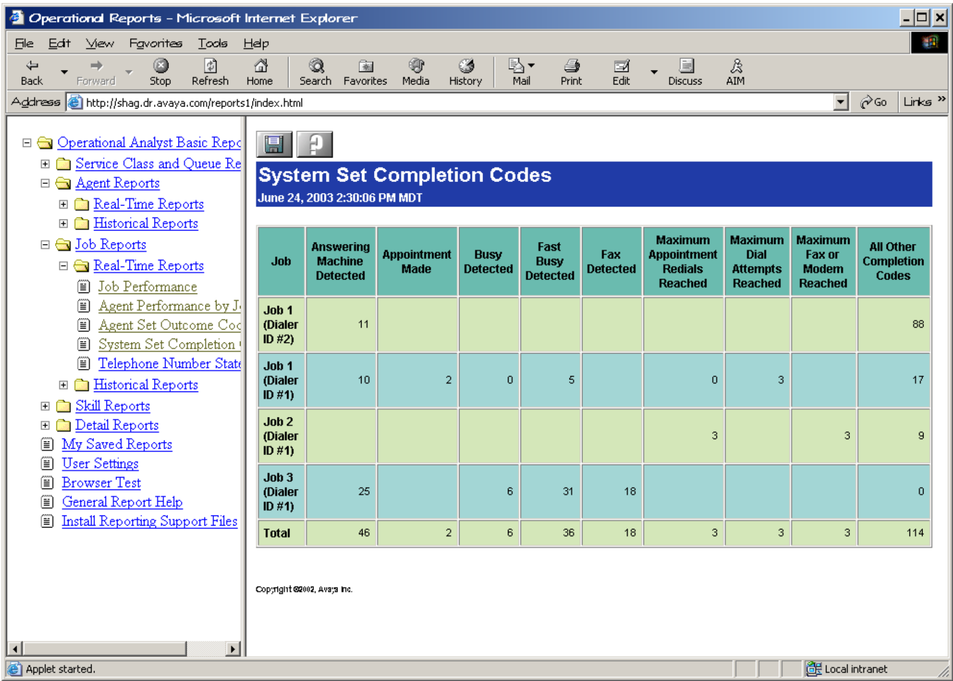
The Telephone Number States report provides a real-time view of how many telephone numbers are in a particular state for a set of jobs. Any states not selected in the report input page are summed and reported together.

Analyzing the report

The data in this report can help you determine:

- How many telephone numbers are considered unreachable for this job?
- How many telephone numbers are scheduled for a call back?

Real-time System Set Completion Codes



Report overview

The real-time System Set Completion Codes report provides an operational view of the results of call attempts in the current interval. Any completion codes not selected in the report input page are summed and reported together.

Analyzing the report

The data in this report can help you determine:

- How many calls are reaching answering machines?
- How many nuisance calls have occurred for each job?

Advanced reports

This section provides information you need to effectively apply the tools offered through Operational Analyst Advanced Reports.

This section includes the following topics:

General information

Advanced Reports must be installed correctly before you can use the tools.

This section includes the following topics:

Installation path

Advanced Reports can be installed only on **`C:\Program Files\Avaya\Bi`**. Cognos reports and cubes reference supporting files by hard coded absolute paths in the reports and cubes. Because reports and cubes are stored as binary files, they cannot be modified during installation, meaning that Advanced Reports cannot be installed in a variable location.

If you attempt to change the default directory during installation, the installation program will exit with an error message. Avaya further recommends installing Advanced Reports on a client machine rather than on the OA server, to avoid using excessive disk space on the server's "C" drive.

There are at least three types of files that reference supporting files by their absolute paths:

- All Impromptu Reports (**`*.imr`** and **`*.iqd`** files) hard code the paths of the Catalogs (**`*.cat`**) they use to access the database. Multiple Impromptu Reports point to one Catalog and typically there is one Catalog for each database (e.g., one for repository, one for ccq, etc.). Also, all Impromptu Reports reference the Avaya logo (**`avaya.bmp`**) using an absolute path.
- All Model Files (**`*.mdl`** files) hard code the paths of the data sources (**`*.iqd`**). Data sources are queries to define the input data for building Cubes.
- All PowerPlay Reports (**`*.ppr`** and **`*.ppx`** files) hard code the paths of the PowerCubes (**`*.mdc`**). PowerPlay Reports are essentially different views of a PowerCube, organized along different dimension and measures.

Default directory locations

The default directory locations for various Advanced Reports components are:

- Cognos Impromptu files:
  Program Files\Avaya\BI\reports\cognos\Impromptu. This folder contains five folders:
  - **CallCenterQ**
  - **CustQ**
  - **HrQ**
  - **qrepository**
  - **oadb**

  Each of these five folders represents an application and contain:
  - A catalog (**CAT**) file for the respective application.
  - Impromptu (**IMR**) reports and supporting files.

  CallCenterQ and **qrespository** folders contain:
  - Hotfiles that specify time ranges for viewing data.
  - Impromptu reports for drilling through from the contacts, tasks, and CallCenterQ cubes.

  oadb folder contains:
  - Hotfiles that specify time ranges for viewing data.
- Cognos Impromptu files for Chinese, Japanese, or Korean language reports:
  Program Files\Avaya\BI\reports\cognos\Impromptu_intl. This folder contains the same folders and files as
  Program Files\Avaya\BI\reports\cognos\Impromptu except that the files are built using Impromptu 6.1. To make the files in this folder available to Cognos:
  - Rename **Program Files\Avaya\BI\reports\cognos\Inpromptu** to **Program Files\Avaya\BI\reports\cognos\Impromptu_ver7**.
  - Rename **Program Files\Avaya\BI\reports\cognos\Impromptu_intl** to **Program Files\Avaya\BI\reports\cognos\Inpromptu**.
- PowerPlay files: **Program Files\Avaya\BI\reports\cognos\PowerPlay**. This folder contains five folders:
  - **CallCenterQ**
  - **qrepository**
  - **tasks**
  - **cms**

- **mma**

Each of these folders correspond to PowerPlay reports for viewing the cube. The default cube is generated in this directory.

- All Impromptu files associated with the cubes and the cubes themselves: **Program Files\Avaya\BI\reports\cognos\cubes**. This folder contains five folders, one for each cube:
  - **CallCenterQ**
  - **contact**
  - **tasks**
  - **cms**
  - **mma**

  Each of the five folders contain:
  - The Model file (**MDL**) that can be used to generate the corresponding cube using Transformer.
  - The Impromptu (**IMR**) reports and their corresponding query definition (**IQD**) files for defining the data sources for the corresponding cube.
- All Impromptu files associated with the cubes and the cubes themselves for Chinese, Japanese, or Korean language reports: **Program Files\Avaya\BI\reports\cognos\cubes_intl**. This folder contains the same folders and files as **Program Files\Avaya\BI\reports\cognos\cubes** except that the files are built using Impromptu 6.1. To make the files in this folder available to Cognos:
  - Rename **Program Files\Avaya\BI\reports\cognos\cubes** to **Program Files\Avaya\BI\reports\cognos\cubes_ver7**.
  - Rename **Program Files\Avaya\BI\reports\cognos\cubes_intl** to **Program Files\Avaya\BI\reports\cognos\cubes**.

Database client libraries

Database client libraries are required to run Advanced Reports. These libraries must be installed on the same machine where Impromptu and Transformer are run and on any machine where drill-through capability is required.

Database definition

After installing Advanced Reporting, you must define logical databases for Advanced Reports in Impromptu Administrator. The default logical database names for Advanced Reports provided with OA R6.1 are:

Application	Logical database name
CallCenterQ	ccq
HrQ	hrq
CustomerQ	customerq
Repository	repository
CMS	oadb
Contact Segment	oadb

Tip:

For more detailed instructions on defining your database, refer to *Cognos Impromptu Administrator's Guide.*

To define your database:

1. In Impromptu Administrator, select **Catalog > Databases**.
2. Select your database type from the list and select **New Database**.
3. Complete the fields in the **Database Definition** dialog box using the logical database names in the previous table to specify the exact connectivity information.
4. Select **OK**.

Note:

"oadb" accesses the Repository application through the database views/synonyms. You must refresh (that is, remove and re-create) the database views/synonyms if the Repository schema is changed. Then you must update the catalog file.

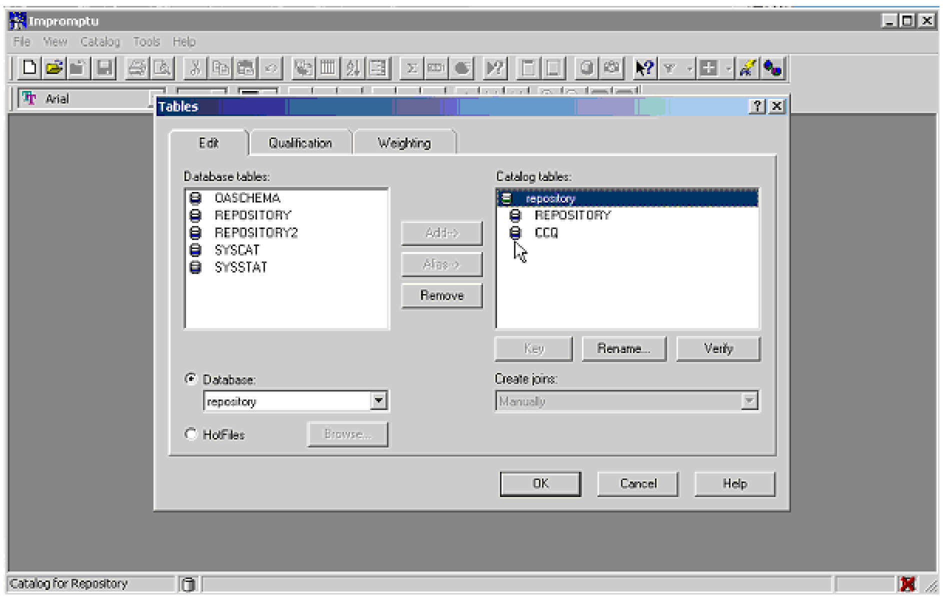
Changing the Advanced Reports catalog database names

If your database names differ from **`repository`**, **`ccq`**, **`customerq`**, **`hrq`**, or **`oadb`** then you must change Advanced Reports catalog database names in Impromptu Administrator.

The following example illustrates how to change the logical database name from "repository" to "icdb:"

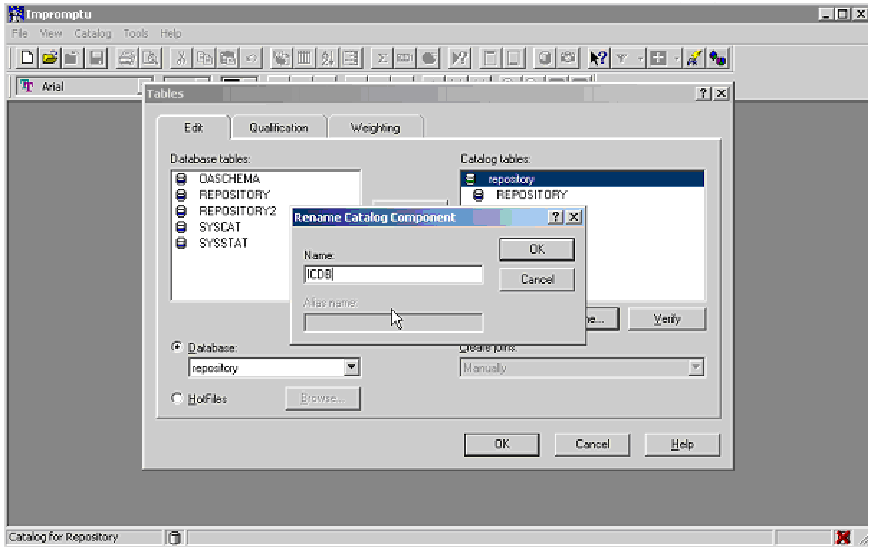
1. Open your Advanced Reports catalog in Impromptu Administrator using the default logical database name.
2. Select **Catalog > Tables.**

   The **Tables** dialog box appears.

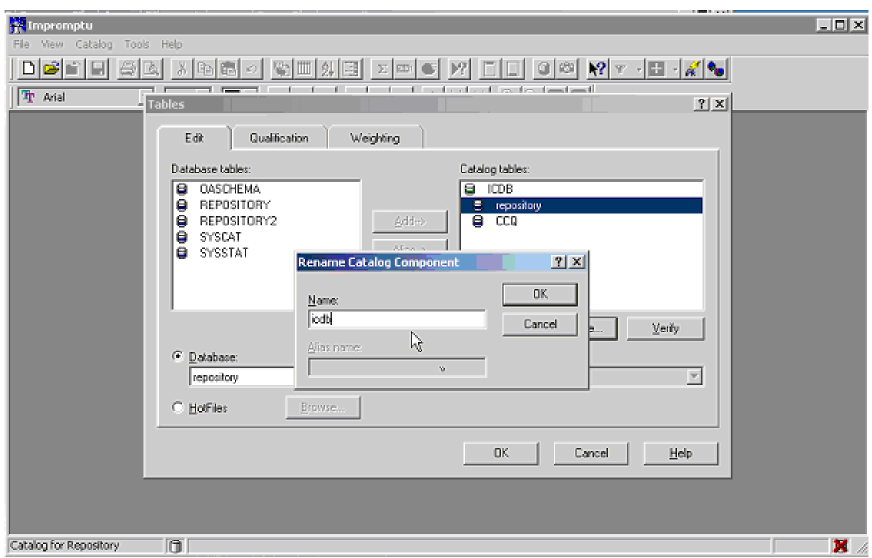


3. Select the database, **repository**, in the **Catalog Tables** field.

4. Select **Rename** to open the **Rename Catalog Component** dialog box.

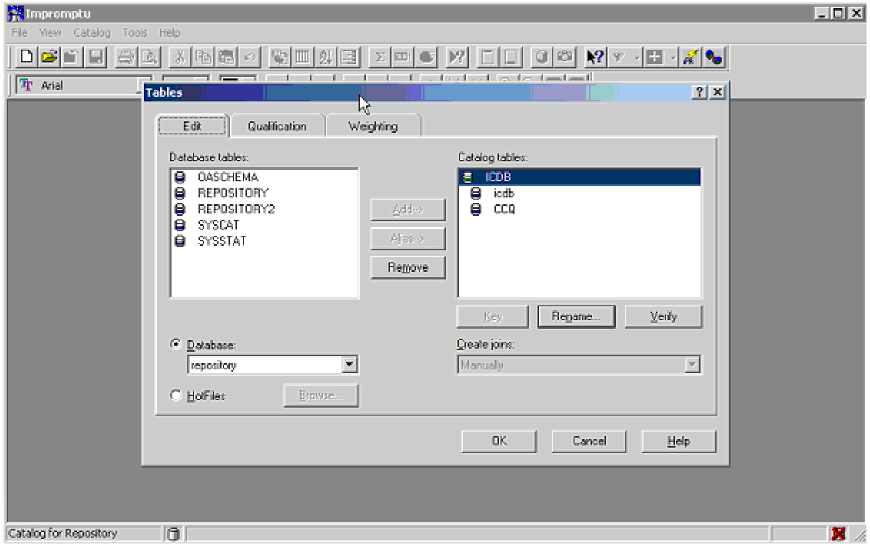


5. Enter the new logical database name, **icdb**, in the **Name** field of the **Rename Catalog Component** dialog box, and select **OK**.
6. Double click the new logical database name, **icdb**.
7. Select the **repository** entry under **icdb**.
8. Select **Rename** to open the **Rename Catalog Component** dialog box.



9. Enter the new name, **icdb**, in the **Name** field of the **Rename Catalog Component** dialog box, and select **OK**.

10. Select **OK** in the **Catalog Tables** dialog box to rename the database and catalog.



11. Create the new database connection. See Database definition on page 87 for details.
12. Delete the old **repository** database connection.
13. Regenerate the **`IQD`** files:
    a. Open the Predefined, Detailed, Drill-Through Reports in the **`cognos\cubes`** directory in Impromptu Administrator.
    b. Save the reports as file type **IQD**.

Database access

All Impromptu reports prompt you for the date ranges of the data you want to see. The report's performance depends on the date range specified in your query. The larger the date range specified, the longer it takes for Impromptu to generate the report data.

All Impromptu and PowerPlay reports read the data directly from the database. For this reason, times shown in the reports are GMT, not the local client time.

Cube descriptions

This section describes the predefined cubes included with Advanced Reports.

This section includes the following topics:

CallCenterQ Cube

The CallCenterQ cube provides data for analysis by call center managers regarding contact, request, order or fulfillment activity, and agents on their system.

Dimensions defined in the CallCenterQ cube:

Dimension	Description
Dates	Date when contact, request, order or fulfillment record was created.
Days of the Week	Based on creation time of contact, request, order or fulfillment records, lets you make comparisons for the same day across different weeks.
Time Range	Based on creation time of contact, request, order or fulfillment records, lets you make comparisons of measures during the day in half hour segments.
Agents	Lets you compare contacts, requests, orders or fulfillment orders created by agents.
Owners	Lets you compare contacts, requests, orders or fulfillment orders owned by agents.
Workgroups	Lets you compare contacts, requests, orders or fulfillment orders assigned to workgroups.
Contacts	Lets you compare 'contacts' in CallCenterQ by contact types: phone, mail, fax, email, web.

Dimension	Description
Requests	Lets you compare 'requests' in CallCenterQ by request types: Problem, Information Request, Compliment, Response. Drills down to 'request status'.
Returns	Lets you compare 'returns' in CallCenterQ by return types: Repair, Exchange, Return, Upgrade.
Products	Lets you compare 'requests' and 'orders' by 'Products'.
Categories	Lets you compare 'requests' by 'Categories'.
Orders	Lets you compare 'orders' in CallCenterQ by order status.

The CallCenterQ cube contains the following measures:

Measure	Description
Number of Contacts	Number of 'Contacts' created in CallCenterQ.
Number of Requests	Number of 'Requests' created in CallCenterQ.
Number of Fulfillments	Number of 'Fulfillments' created in CallCenterQ.
Number of Orders	Number of 'Orders' created in CallCenterQ.
Number of Returns	Number of 'Returns' created in CallCenterQ.
Total Tasks Handled	Total number of (Requests + Fulfillments + Orders + Returns) created by an agent.
Fulfillment Order Total	Total dollar value of 'Fulfillment Orders'.
Order Total	Total dollar value of 'Orders'.
Quantity Ordered	Quantity of 'Products' sold (comes from 'Orders').
Total Owned Requests	Number of 'Requests' owned by an agent.
Total Owned Fulfillments	Number of 'Fulfillments' owned by an agent.
Total Owned Orders	Number of 'Orders' owned by an agent.
Total Owned Returns	Number of 'Returns' owned by an agent.
Total Tasks Owned	Total number of (Requests + Fulfillments + Orders + Returns) owned by an agent.
Total Assigned Requests	Number of 'Requests' assigned to a workgroup.

Measure	Description
Total Assigned Fulfillments	Number of 'Fulfillments' assigned to a workgroup.
Total Assigned Orders	Number of 'Orders' assigned to a workgroup.
Total Assigned Returns	Number of 'Returns' assigned to a workgroup.
Total Tasks Assigned	Total number of (Requests + Fulfillments + Orders + Returns) assigned to a workgroup.

Contacts Cube

The Contacts cube contains the following dimensions:

Dimension	Description
Dates	Dates of the contact based on EDU creation time.
Days of the Week	Based on EDU creation time, lets you make comparisons for the same day across different weeks.
Time Ranges	Based on EDU creation time, lets you compare measures during the day in half hourly segments.
Media Types	Lets you compare contact types: phone, email, web. Drills down to DNIS, mailbox, and tasktype.
#Agents/Contact	Lets you compare number of Agent interactions for each contact.
Agents	Lets you compare agent interactions between Agents.
Dispositions	Lets you compare disposition of agent interactions for the following values: Normal, Transfer, Abandon, and Closed.
Queues	Allows comparison of queues associated with different media types.

The Contacts cube contains the following measures:

Measure	Description
# Contacts Offered	Number of EDUs created.
# Contacts Handled	Number of contacts handled by an agent or VRU.
# Abandoned Contacts	Difference between the number of contacts offered and the number of contacts handled.
# Agent Interactions	Number of agent or VRUs handling contacts.
Avg. Contact Duration (min)	Lifetime of the EDU (usually the talk time plus the wrapup time).
Avg. Queue Time (sec)	Period of time that elapsed while the contact was in queue.
Avg. Answer Time (sec)	Period of time that it took to answer the contact.
Avg. Talk Time (sec)	The length of time spent talking or responding to the contact.
Avg. Wrap-up Time (sec)	Length of wrap-up time of one agent on the contact.
Avg. Defer Time	Length of time the message was in deferred or pend status

Tasks cube

The Tasks cube contains the following dimensions:

Dimension	Description
All Dates	Dates of the contact based on EDU creation time.
All Days of the Week	Based on EDU creation time, lets you make comparisons for the same day across different weeks.
All Time Ranges	Based on EDU creation time, lets you compare measures during the day in half hourly segments.
All Media Types	Lets you compare contact types: phone, email, web. Drills down to DNIS, mailbox, and tasktype.

Dimension	Description
All Agents	Lets you compare agent interactions between Agents
All Tasks	Lets you compare Agent performance across different Tasks.
# of Tasks per Agent	Number of Tasks handled by an Agent in a given Time Range.

The Tasks cube contains the following measures:

Measure	Description
# Tasks	Number of tasks for agents.
Avg. Queue Time (sec)	Period of time that elapsed while the contact was in queue.
Avg. Answer Time (sec)	Period of time that it took to answer the contact.
Avg. Talk Time (sec)	The length of time spent talking or responding to the contact.
Avg. Hold Time (sec)	The length of time the contact spent on hold.
Avg. Wrap-up Time (sec)	Length of wrap-up time of one agent on the contact.

CMS cube

The CMS cube contains the following dimensions:

Dimension	Description
Start Time	The time and date (in UTC) when the call segment started. Call segments start when CMS receives the first message for the call because each call segment represents a call. Another segment starts when an agent transfers or conferences a call.
Time of Day	This represents the 48 intervals, each interval is 30 minutes.
ACD/Skill	This represents all skills, organized by their associated ACD.

Dimension	Description
ACD/VDN	This represents all VDNs, organized by their associated ACD.
Day of Week	The day of the week.

The CMS cube contains the following measures

Measure	Description
Wait Time	Total time the contact spent waiting in queue.
ACW Time	The amount of after call work time.
Talk Time	Total time the Agent spent talking with the customer.
Number of Abandons	Total number of abandons from queue.
Number of Answers	Number of calls answered by an agent.
Number of Calls	Total number of calls (both answered and abandoned).
Percentage of Abandons	Percent of calls abandoned.
Average Wait Time	Average wait time for all answered calls.
Average ACW Time	Average ACW time for all answered calls.
Average Talk Time	Average time an agent spent on talking with the customer.

Note:
In this cube, all dimensions are associated with all measures.

Contact Segment cube

The Contact Segment cube contains the following dimensions:

Dimension	Description
All Dates	Dates of the contact based on EDU creation time.
All Days of Week	Based on EDU creation time, lets you make comparisons for the same day across different weeks.

Dimension	Description
Time of Day	This represents the 48 intervals, each interval is 30 minutes.
All Queues	This dimension applies to non-Advocate only.
All Agents	ID of the primary agent.
All Service Classes	This dimension applies to Advocate only.
All Media Types	Type and direction of a contact. For example "inbound voice" or "outbound voice."

The Contact Segment cube contains the following measures:

Measure	Description
Number of Contacts	The number of Routing Event table records. (Normally, this is equal to the number of contacts).
Number of Abandons from Queue	Number of abandons from a queue. This measure applies to non-Advocate only.
Percentage of Abandons from Queue	Percentage of contacts abandoned. This measure applies to non-Advocate only.
Number of Abandons from Service Class	This measure applies to Advocate only.
Percentage of Abandons from Service Class	This measure applies to Advocate only.
Average Wait Time (sec)	Average queue time and answer time for contact segments.
Average Work Time (sec)	Average amount of time the agent spent working directly with the contact for all contact segments.
Average Wrap-Up Time (sec)	Average wrap-up time for all contact segments.
Percentage of Contacts Redirected	Percentage of contact segments transferred.
Average Hold Time	Average hold time for all contact segments.
Number of Abandons from Hold/Defer	Number of abandons while an agent has the call on hold or the chat in deferred state.
Percentage of Abandons at Agent	Percentage of abandons after agent is assigned.

Note:

The term "Contact" is used in this cube and related reports even though contact segments are actually behind the calculations. Under normal circumstances (that is, processes that don't loop back on themselves), the two calculations are equivalent.

Report descriptions

This section organizes reports first by logical data: Contacts and tasks, CallCenterQ, HRQ, Email Management, CMS and Contact segment, and then by Advanced Reports report type: PowerPlay or Impromptu. The list gives the report‘s file name and full description.

This section includes the following topics:

Contacts and tasks

Predefined PowerPlay reports for Contacts Cube

File Name	Description
abandon.ppr	Abandoned calls by Time of Day.
abandon2.ppr	Contacts abandoned while ringing or on hold.
agentmedia.ppr	Agent Interactions by Agent Group and Media type.
autoagent.ppr	Contacts handled by Automatic Agent.
interactions.ppr	Agent interactions by Time of Day for Agent Groups and Phone media type.
media.ppr	Contacts Offered by Time of Day for all media types.
profile.ppr	Number of Contacts offered by Time of Day and Day of Week.
queuetime.ppr	Average Queue Time per interaction for contacts.

Predefined PowerPlay reports for Tasks Cube

File Name	Description
agentgroup.ppr	Number of tasks handled by Agent Group for all media types.
agenttalk.ppr	Average talk time for each Agent for single task contacts by Media type.
tasktime.ppr	Average Talk Time for each task type by media type.

Predefined Impromptu reports for Contacts Cube

File Name	Description
Drill_agent.imr	Contacts by date, type and agent with average times (queue time, talk time, answer time & wrap up time).
Drill_contact.imr	Contacts by date and type with average duration.

CallCenterQ

Predefined Impromptu reports

File Name	Description
Contacts By Agent.imr	Contacts By Agent – lists all contacts by agent for a user specified time range.
Anonymous Count Graph.imr	Anonymous Call Count by Category (Graph) – displays bar graph showing total anonymous calls per category for a user specified time range.
Anonymous Count.imr	Anonymous Call Count by Category – lists all anonymous calls by category for a user specified time range.
Lit Stock Levels.imr	Stock Status of Literature Stock Items – lists availability and stock status of all fulfillment items whose status is “current”.
Orders by Agent and Customer.imr	Orders By Agent and Customer – lists Orders by Agent and Customer, created during a user specified time range and include ID, total order amount and their current status.
Vouchers.imr	Vouchers By Agent – lists fulfillment orders by Agent and customer.

File Name	Description
Agent Requests by Category.imr	Requests by Agent and Category – lists Requests by Agent and Category, created during a user specified time range and includes request create date and summary.
Closed Requests.imr	Closed Requests by Priority – lists Requests with status “Closed” by “Request Priority”. Lists all requests created during a specified time range and includes request summary, create date, closed date and 'days to close' information.
Open Requests by Category.imr	Open Requests by Category – lists all “Open” Requests, sorted by Category, created during a specified time range and includes request summary and duration that the request has been open.
Request Count by Category and Status.imr	Request Count by Category and Request Status – lists Request count sorted by Category and Request Status for a specified time range.
Requests by Category Graph.imr	Total Requests per Category – displays bar graph showing total Request per Category for a specified time range.
Requests by Category.imr	Requests by Category – lists count of Requests sorted by Category created during a specified time range.
Requests by Customer and Category.imr	Requests by Customer and Category – lists Requests by Customer and Category, created during a specified time range. The report includes Agent and Request “Priority” details.
Requests by Product Graph.imr	Requests by Product Graph – displays bar graph showing total Requests per Product created during a specified time range.
Requests by Product.imr	Requests by Product – lists Requests by Product, created during a specified time range. The report includes request summary, priority and status information.

Predefined PowerPlay reports

File Name	Description
ContactsByTimeOfDay.ppr	Contact count by contact method and time of day.
FulfillmentAmountByAgent.ppr	Fulfillment amounts by Agent and day of week.
OrdersByDayOfWeek.ppr	Number of Orders and Order Amounts by day of week.
ProductQntyOrdered.ppr	Quantities of Products sold.

File Name	Description
RequestsByCategory.ppr	Requests by Category and day of week.
RequestsByProduct.ppr	Requests by Product and day of week.
RequestTypebyStatus.ppr	Requests created by day of week, organized by “Type” and “Status”.
ReturnsByDayofWeek.ppr	Returns by “Type” and day of week.
TasksAssignedToWorkgroups.ppr	Total number of “Requests”, “Fulfillments”, “Orders” and “Returns” that are currently assigned to workgroups.
TasksHandledByAgent.ppr	Total number of “Requests”, “Fulfillments”, “Orders” and “Returns” that have been created in the system by “Agent”.
TasksOwnedByAgent.ppr	Total number of “Requests”, “Fulfillments”, “Orders” and “Returns” that are currently owned by “Agent”.

Predefined Impromptu reports for CallCenterQ Cube

File Name	Description
drill_fulfillment.imr	Drill-through Ad-hoc report for 'ccq' cube, showing a list of all “Fulfillments” by “Agent” and “Customer”. This drill-through report is available for measure “Total Fulfillments”. Further, the “Fulfillment ID” field in this Ad-hoc report has a drill-through link to another report – drill_fulfillmentdetail.imr that shows details of fulfillment order for that Fulfillment ID.
drill_fulfillmentdetail.imr	Shows details of Fulfillment Order with a prompt for the user to specify “Fulfillment Order Number”.
drill_order.imr	Drill-through Ad-hoc report for ccq cube, showing a list of all “Orders” by “Agent” and “Customer”. This drill-through report is available for measure “Total Orders”. Further, the “Order ID” field in this Ad-hoc report has a drill-through link to another report – drill_orderdetail.imr that shows details of that specific Order.
drill_orderdetail.imr	Shows details of an “Order” with a prompt for the user to specify “Order Number”.
drill_orderowner.imr	Drill-through Ad-hoc report for 'ccq' cube, showing a list of all “Orders” by “Owner”. This drill-through report is available for measure “Total Orders”. Further, the “Order ID” field in this Ad-hoc report has a drill-through link to the report – drill_orderdetail.imr that shows details of that specific Order.
drill_request.imr	Drill-through Ad-hoc report for `ccq` cube, showing a list of all “Requests” by “Agent” and “Customer”. This drill-through report is available for measure “Total Requests”.

File Name	Description
drill_requestbycategory.imr	Drill-through Ad-hoc report for `ccq` cube, showing a list of all “Requests” by “Request Category”. This drill-through report is available for measure “Total Requests”.
drill_requestbyproduct.imr	Drill-through Ad-hoc report for `ccq` cube, showing a list of all “Requests” by “Product”. This drill-through report is available for measure “Total Requests”.
drill_return.imr	Drill-through Ad-hoc report for `ccq` cube, showing a list of all “Returns” by “Agent”. This drill-through report is available for measure “Total Returns”. Further, the “Return ID” field in this Ad-hoc report has a drill-through link to the report – drill_returndetail.imr that shows details of that specific Return.
drill_returndetail.imr	Shows details of a “Return” with a prompt for the user to specify “Return Number”.

Email Management

Predefined Impromptu reports

File Name	Description
AgentResponseTimeRange.imr	Detailed Agent Response Time Range Report – lists message responses by selected agents, with columns for Response Time, in a format that lists all agents together, allowing direct comparison between agents.
CompleteAgentResponse.imr	Detailed Agent Response by Date Range Report – lists message responses by selected agents, with columns for Tracking Number, Date Taken, Date Responded, Response Time, Pool, From and Subject.
CustomerTrackingReport.imr	Detailed Customer Email Management Tracking Report – lists messages for selected customer email addresses, with columns for Tracking Number, Date Received, Date Responded, Pool, Agent Assigned and Subject.
QueueResponseTimerange.imr	Detailed Pool Response Time Range Report – lists the response times in intervals from Zero – Two Hours to Over 48 hours for each pool, with the number of messages responded for each reporting interval.

Predefined PowerPlay reports

File Name	Description
AgentResponseTime.ppr	Detailed Agent Response Time Range Report – lists message responses by selected agents, with columns for Response Time, in a format that lists all agents together, allowing direct comparison between agents.
AgentInteractionsByQueues.ppr	Detailed Agent by Pool Report – lists messages selected for each message pool, with columns for Messages Taken, Messages Responded, Messages Forwarded, Messages Outstanding, Messages Resolved and Average Response Time.
AgentInteractionsByContactEntrypoint.ppr	Detailed Agent Interactions by Contact Entry Point Report — lists number of contacts offered, number of contacts handled, number of abandoned contacts and number of agent interactions, as well as average contact duration, average queue time, average answer time, average talk time, average defertime, and average wrap -up, defertime.
ContactEntrypointTrafficTrends.ppr	Detailed Contact Entry Point Traffic Trends Report — lists number of contacts offered, number of contacts handled, number of abandoned contacts and number of agent interactions, as well as average contact duration, average queue time, average answer time, average talk time, average defer time and average wrapup time, defertime.
QueueTrafficTrends.ppr	Pool Monthly Traffic Trends Report – lists month by month activity of selected pools, with columns for Pool and Month.
QueueTrafficByHour.ppr	Pool Traffic By Hour Report – creates a graphical report showing percentage of the selected pools message traffic by hour.
ResponseTimesByContactEntrypoint.ppr	Mail Account Summary Report – lists Contacts Summary showing different average times such as queue time and response time.

HRQ

Predefined Impromptu reports

File Name	Description
average_tasks_percategory.imr	Average Tasks per Category - a report of issues created during a period of time defined by input parameters. Grouped by category name, includes the number of issues, number of tasks and average number of tasks for the category.
category_issue.imr	Issues per Category - for a period of time defined by input parameters, a summary of issues within a category. Totals are reported for each status (new, closed, assigned) and an overall issue total for the time period.
category_issue_graph.imr	Issues per Category Graph - for a period of time defined by input parameters, a bar graph of the total number of issues reported by category.
inside_outside_callers.imr	Inside Outside Callers - for a period of time defined by input parameters, a chart which shows what percent of calls are made by a caller who is the same as the participant compared to the percent of calls made by a caller who is not the participant.
issue_resolution_time.imr	Average Resolution Time per Category - for a period of time defined by input parameters, a report, grouped by category, listing specific issues for the time period and details about the time to resolve each issue. An average time to resolve all issues for each category is provided.
litstock_level.imr	Litstock Level Within 10% of Re-order - an analysis of the quantities of stock on hand and committed. Stock will appear on this report if the quantity on hand minus the quantity committed is equal to or greater than the reorder level plus 10%.

CustomerQ

Predefined Impromptu reports

File Name	Description
call_act.imr	Call Activity Summary Report - a daily summary, with the date provided as an input parameter, grouped by workgroup, of the amount of time spent to resolve calls. Time spent is classified by “workgroup support”, “owner support”, and “all support”. Another type of classification is provided by “phone time,” and “research time.” It also includes “must resolve by” date and indicator of whether the call was closed in time.
call_sum.imr	Call Summary for the Period - a summary over a period of time, parameters input by the user, grouped by workgroup, of the quantity of calls in various states during the period. States counted are “opened,” “closed,” “pending,” and “outstanding.” Totals are included for time spent on the phone, in research, and total support. Also summarized are the average days/hours to close and the number of calls closed in time.
ccal_sta.imr	Closed Call Performance Statistics - a report by region, and organization of the overall time spent and efficiency, grouped by workgroup, within a time window specified by input parameters. Measures include “number of calls,” “number of calls closed in time,” “average time to close.” Time is further classified by phone, research, and support time. Efficiency measures are “average times (call) touched,” and “average owners per call.” A summary is provided for the organization as well.
cust_inf.imr	Customer Information Sheet - a summary for a given customer. Includes contact information for the customer and organization data. A summary of the service contract and past calls is provided.
def_sum.imr	Defect Performance Summary - a list of defects for a given time period (parameters input by user) along with a summary for the period. Several attributes of the defects are reported including priority, state, severity, and business impact. Employees involved are listed as well as measures around time to fix and dates reported and fixed. The summary for the period includes number of defects reported, open, and closed as well as number resolved within estimates and on schedule.
soln_sum.imr	Solution Summary - a listing of all of the problems and their corresponding solutions. Includes other attributes such as “status,” “date created,” and when “last used.”

CMS

Predefined PowerPlay reports

Use the following reports to determine your busy times:

File Name	Report Title
callsByTimeOfDaySkill.ppr	Number of Calls by Time of Day (by ACD/Skill)
callsByTimeOfDayVDN.ppr	Number of Calls by Time of Day (by ACD/VDN)
pctCallsByTimeOfDaySkillAllAcd.ppr	Percentage of Calls by Time of Day for All ACDs (by ACD/Skill)
pctCallsByTimeOfDaySkillForAcd.ppr	Percentage of Calls by Time of Day for All ACDs (by ACD/VDN)
pctCallsByTimeOfDayVDNAllAcd.ppr	Percentage of Calls by Time of Day for an ACD (by ACD/Skill)
pctCallsByTimeOfDayVDNForAcd.ppr	Percentage of Calls by Time of Day for an ACD (by ACD/VDN)

Use the following reports to determine your queue abandon rates:

File Name	Report Title
abandonsByTimeOfDaySkill.ppr	Number of Abandons by Time of Day (by ACD/Skill)
abandonsByTImeOfDayVDN.ppr	Number of Abandons by Time of Day (by ACD/VDN)
pctAbandonsByTimeOfDaySkill.ppr	Percentage of Abandons by Time of Day (by ACD/Skill)
pctAbandonsByTImeOfDayVDN.ppr	Percentage of Abandons by Time of Day (by ACD/VDN).

Use the following reports to determine which skills require more agent coverage:

File Name	Report Title
abandonsBySkill.ppr	Number of Abandons by ACD/Skill
avgWaitTimeBySkill.ppr	Average Wait Time by ACD/Skill

Use the following reports to determine which skills have the longest work time:

File Name	Report Title
avgTalkTimeBySkill.ppr	Average Talk Time by ACD/Skill
avgACWTimeBySkill.ppr	Average ACW Time by ACD/Skill

Contact Segment

The tables in this section define the Advanced Reports for Contact Segment data.

Note:
All reports named **`ContactBy(*)AndSite`** reflect inbound non-Advocate data only.

Predefined Improptu reports

Use the following reports to determine your busy times:

Note:
These Impromptu reports are not available if you are using Chinese, Japanese or Korean language reports.

File Name	Description
ContactsByTimeOfDayAndSite.imr	Number of Contacts by Time of Day (by Site)
ContactsByDayOfWeekAndSite.imr	Number of Contacts by Day of Week (by Site)
ContactsByDayOfYearAndSite.imr	Number of Contacts by Day of Year (by Site)
ContactsByWeekOfYearAndSite.imr	Number of Contacts by Week of Year (by Site)
ContactsByMonthAndSite.imr	Number of Contacts by Month (by Site)
ContactsByMonthOfYearAndSite.imr	Number of Contacts by Month of Year (by Site)
ContactsByQuarterAndSite.imr	Number of Contacts by Quarter (by Site)
ContactsByYearAndSite.imr	Number of Contacts by Year (by Site)
ContactsByTimeOfDayAndMedia.imr	Number of Contacts by Time of Day (by Media Type)
ContactsByDayOfWeekAndMedia.imr	Number of Contacts by Day of Week (by Media Type)
ContactsByDayOfYearAndMedia.imr	Number of Contacts by Day of Year (by Media Type)

File Name	Description
ContactsByWeekOfYearAndMedia.imr	Number of Contacts by Week of Year (by Media Type)
ContactsByMonthAndMedia.imr	Number of Contacts by Month (by Media Type)
ContactsByMonthOfYearAndMedia.imr	Number of Contacts by Month of Year (by Media Type)
ContactsByQuarterAndMedia.imr	Number of Contacts by Quarter (by Media Type)
ContactsByYearAndMedia.imr	Number of Contacts by Year (by Media)

Use the following report to determine what kind of work is handled at each site:

File Name	Report Title
ContactsBySiteAndMedia.imr	Number of Contacts by Site and Media Type

Predefined PowerPlay reports

Use the following reports to determine your busy times:

File Name	Report Title
ContactsByTimeOfDayQueue.ppr	Number of Contacts by Time of Day (by Queue)
ContactsByTimeOfDayServices.ppr	Number of Contacts by Time of Day (by Service Class)
ContactsByTimeOfDayMediaTypes.ppr	Number of Contacts by Time of Day (by Media Types)
PctContactsByTimeOfDayQueue.ppr	Percentage of Contacts by Time of Day (by Queue)
PctContactsByTimeOfDayServices.ppr	Percentage of Contacts by Time of Day for a Service Class
PctContactsByTimeOfDayAllServices.ppr	Percentage of Contacts by Time of Day for All Service Classes
PctContactsByTimeOfDayMediaTypes.ppr	Percentage of Contacts by Time of Day (by Media Type)

Use the following reports to determine your queue abandon rates:

File Name	Report Title
AbandonsByTimeOfDayQueue.ppr	Number of Abandons by Time of Day (by Queue)
AbandonsByTimeOfDayServices.ppr	Number of Abandons by Time of Day (by Service Class)

File Name	Report Title
PctAbandonsByTimeOfDayMediaTypes.ppr	Percentage of Abandons by Time of Day (by Media Types)
PctAbandonsByTimeOfDayQueue.ppr	Percentage of Abandons by Time of Day (by Queue)
PctAbandonsByTimeOfDayServices.ppr	Percentage of Abandons by Time of Day (by Service Class)

Use the following reports to determine which types of work have the longest work time:

File Name	Report Title
AvgWorkTimeByQueue.ppr	Average Work Time by Queue
AvgWorkTimeByServices.ppr	Average Work Time by Service Class
AvgWrap-UpTimeByQueue.ppr	Average Wrap-Up Time by Queue
AvgWrap-UpTimeByServices.ppr	Average Wrap-Up Time by Service Class

Multidimensional cubes

OA R6.1 Advanced Reports enable you to explore the data collected by Interaction Center or CMS in a multi-dimensional cube. You can view and compare calls per hour by agent, abandoned calls by type per day, and so on.

Each multidimensional cube contains a summary of cumulative information about call center activities and transactions performed by agents over specified periods of time. This information provides call center managers with a look at trends in the call center, such as the most frequently used media for contacts, or the number of contacts handled by agents in a specific time period.

Depending on your organization's needs, you can view the information in the cube in different combinations of measures and dimensions, and in various formats, such as a table, line graph, bar graph, pie chart, or multi-dimensional graph.

This section includes the following topics:

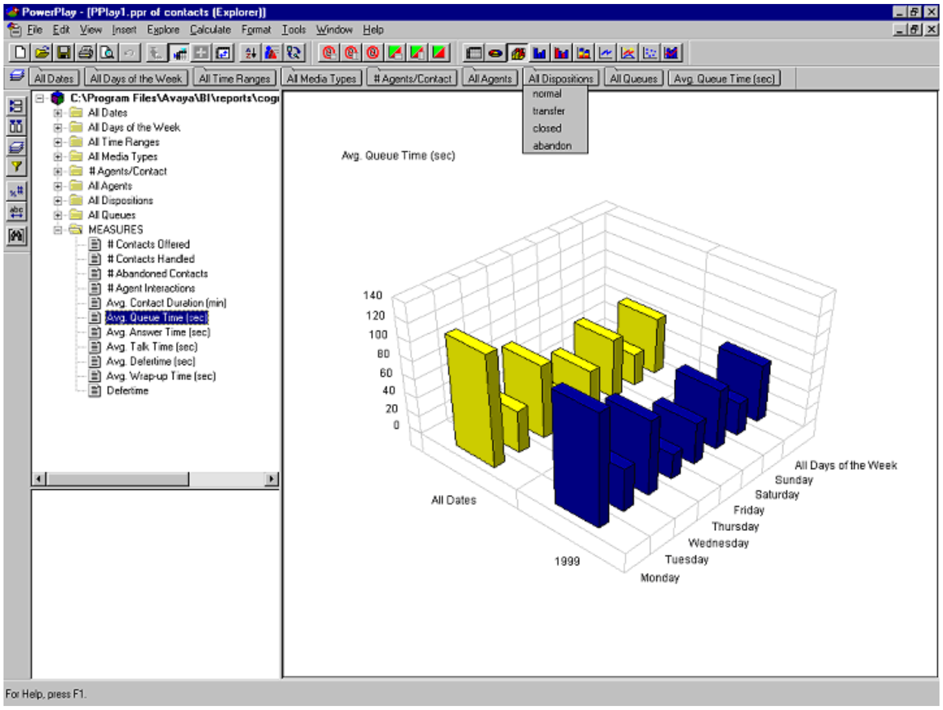
Selecting Measures and Dimensions

The dimensions and measures determine the information you see in a particular view of the cube. If one view does not work, you can select different measures or dimensions that better suit your information needs.

You change the dimensions and measures you see in a view of the cube from the Dimension Viewer or the Dimension Line. Multidimensional cubes retain all other measure and dimension settings.

The Dimension Viewer is an organized view of all dimensions, levels and categories in the cube. You may add categories, format measures, filter and defines sets of categories using the viewer.

Each folder on the Dimension line below the toolbar, except the last, corresponds to a dimension in the cube. Click on the folder to display the data elements within the dimension. The box on the far right of the Dimension line is the currently selected measure. Select another measure by clicking on this box.



Measures determine the type of information included in the cube. There are two types of measures. Direct fields pull data directly from columns in a database table. Calculated fields use a hotfile and data from database tables to calculate the information included in the cube. For example, all time measures are calculated fields that use the time ranges in the timeranges hotfile for the calculations.

Not all measures apply to all dimensions. For example, the # Contacts Handled measure doesn't apply to the Agents dimension because a contact can be handled by multiple agents. Instead, the # Agent Interactions measure applies to the Agents dimension.

Selecting the Graphical Display Format

You can choose different methods of displaying the cube data, depending on how the information will be used. You may need to try different graphical display formats until you find the most effective for each type of information. For example, you can use a multi-line graph to show trends, and a multi-dimensional graph to compare two or more dimensions or measures across two time periods.

You can change the format from the Display option of the Insert menu, or by clicking on any of the ten report display buttons on the upper right of the toolbar.

The following Multidimensional cube formats are used in the provided predefined Multidimensional Reports:

Format	Report Title	Report File Name
Crosstab	Agent Talk	agenttalk.ppr
3D bar graph	Profile	profile.ppr
Simple bar graph	Abandons	abandon2.ppr
MultiLine graph	Media	media.ppr

Drilling Through the Cube

If you would like more details about information in the cube, you can drill through the cube to a detail report and view information not available in the cube. When you choose the Drill Through option, Impromptu opens, queries the database, then displays the information in a table with summary lines at the bottom.

Advanced Reports' Contacts cube provide two report templates with the format of the Drill Through tables:

- drill_agent
- drill_contact

Note:

The Drill Through option is only available for views of the Contacts cube that are defined by the following four measures: # Contacts Offered, # Contacts Handled, # Abandoned Contacts, and # Agent Interactions.

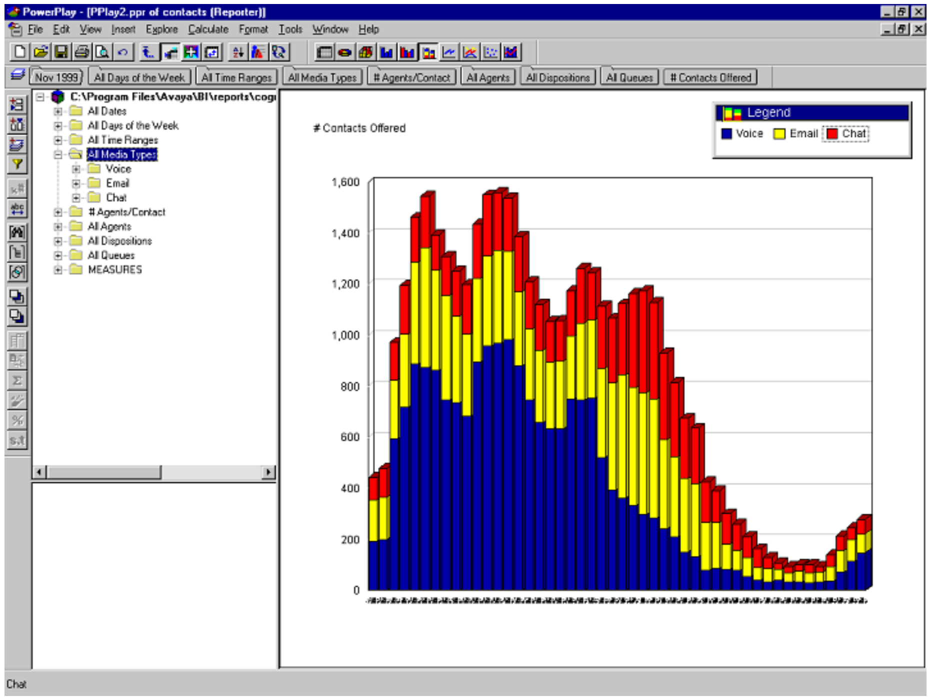
You determine the Drill Through filters by selecting sections of a cube view in a multidimensional cube. The more records in the section you select, the longer the drill through and formatting of the detail tables takes. You can see the number of records in the selected section at the bottom left of the multidimensional cube window.

The the following example shows the report generated after drilling through the Contacts cube to the database for more information about agent contacts across all media in a chosen time range on a specific date.

To drill through the cube to the database:

1. In a multidimensional cube, open the Contacts cube.
2. Select a view that is defined by one of the first four measures.

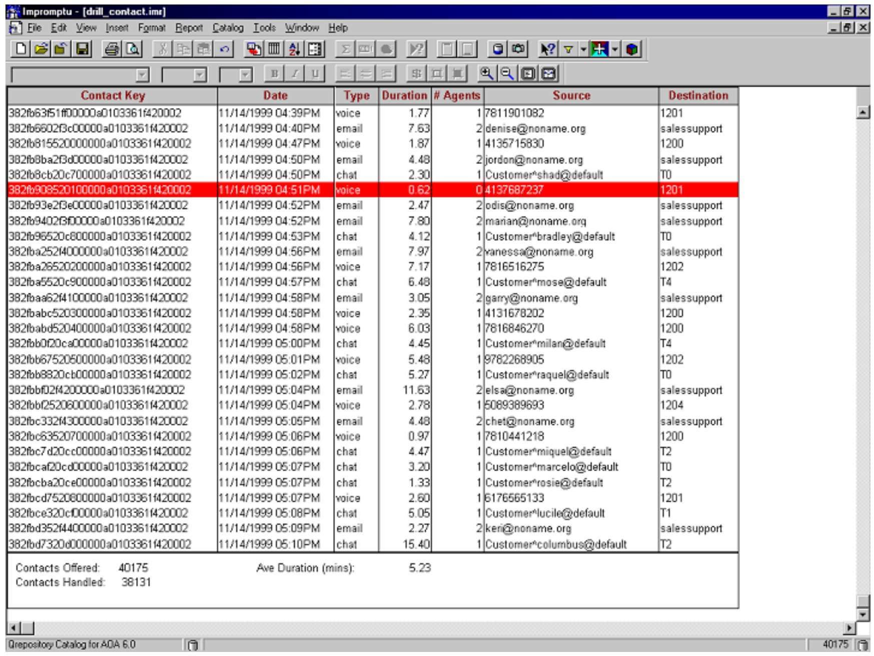
3. Select the section of the view for which you want more information.



4. Double-click a bar in the view.

5. Log in to the database for Impromptu.

   Impromptu opens and displays the requested database information in a table.



Saving multidimensional cube views

You can save any particular view of a cube as a PowerPlay (**PPR**) file. Opening the PowerPlay file opens the cube showing that view. You do not need to update the **PPR** file when you update the cube.

Modifying Multidimensional Cubes

This section provides an example of why you might want to modify a multidimensional cube and how to carry out the modification.

The cubes provided by Advanced Reports do not contain a Customer dimension. The only reference to customers in **repository** is the key to the Customer table. However, this key is included in the query files used to build the cube.

Before adding a Customer dimension, you need to create customer groups, so that the dimension provides meaningful contact data. A dimension that just contains the key to the customer table will likely have too many categories to provide useful information.

This example uses a feature of the CallCenterQ data model. CallCenterQ has a link from the Customer table to “condemogroup”, an alias of the demographicgroup table. This is a generic table for organizing customers into groups. Using this link, you can add a Customer dimension to the Contacts cube that lets you view the contact data in the cube by demographic group.

Assuming that you have defined different logical databases for Repository, CustomerQ, HrQ, CallCenterQ and Contact Segment, you will be prompted to log in to each database when you re-build the Contacts cube. Although you are not creating a join across tables between the databases, Customer Key is treated as the same thing when applying measures, having the effect of a join.

Tip:

For more information about modifying Multidimensional Cubes, refer to documentation provided with the PowerPlay application.

How to make the modification

To add a dimension to the Contacts cube that shows demographic customer groups:

1. Verify that the catalog file that you plan to use exists and is setup to connect to the desired database.
2. Create an Ad-hoc Report (`IMR`) file via Cognos Impromptu, with the following fields:
   - customer.pkey
   - customer.fullname
   - condemogroup.name

   Note:

   You can omit the second field if you do not want to store customer names in the cube.
3. Change the column names for the fields:
   - customer.pkey to “Customer Key”
   - condemogroup.name to something your organization can easily identify, such as “Demographic Name”
4. Save the `IMR` file as an Ad-hoc Query Definition (`IQD`) file.
5. Open the `contact.mdl` Model File in Transformer.
6. Add the new `IQD` file to the set of Data Sources:
   a. Right-click in the Data Sources window and select Insert Data Source.
   b. In **New Data Source** field, enter `Customer` in the **Data Source Name** field and `IQD` in the **Source Type** field, then select **Next**.

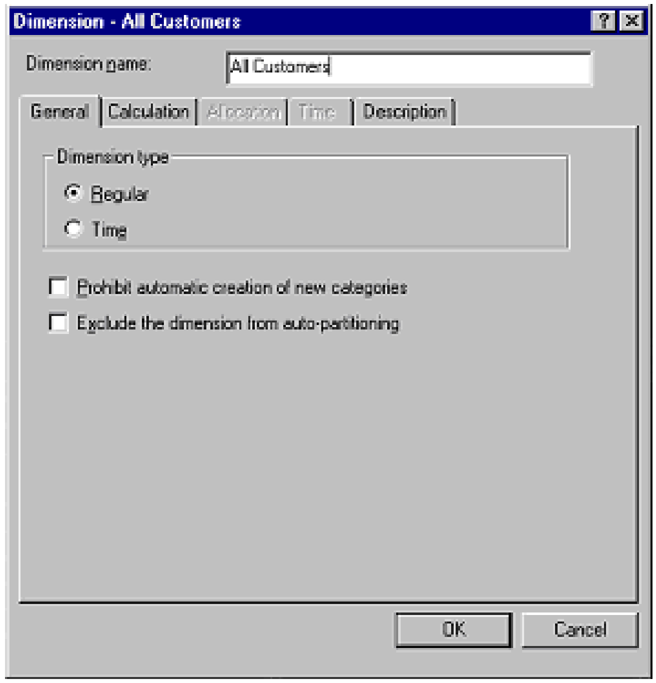
c. Browse for the `IQD` file, and select **Finish**.

d. Login to the database.

7. Add a new All Customers dimension:

a. Right-click in the **Dimension Map** window and select **Insert Item**.

b. In the **Dimension** dialog box, enter `All Customers` in the **Dimension Name** field, select **Regular** for **Dimension Type**, then select **OK.**



8. Add Demographic Name as a top level category:

a. Right-click in the **All Customers** column and select **Insert Level**.

b. Select "**...**" under **Source**.

c. Select **More**.

d. Select **Demographic Name** from the **Source** column list.

9. Add Customer Key as a second level category:

a. Right-click in the **All Customers** column and select **Insert Level**.

b. Select "**...**" under **Source**.

c. Select **More**.

d. Select **Customer Key** under the **Source Column** field.

e. Select **Fullname** from the **Label Column** field.

f. Check **Unique** in the check boxes on the right side of the dialog box.

10. To suppress the ability to drill down to individual customer names:
    a. Select **Diagram > Show Diagram** from the menu bar.
    b. Select **All Customers**.
    c. Right-click on **Customer Key**, then select **Suppress**.
11. Save the model file.
12. Create the cube file.

Appendix A: Optional support tasks for Advanced Reports

This appendix describes optional tasks you can perform to customize Advanced reports for your particular installation.

This section includes the following topics:

Creating multidimensional cubes

Multidimensional cubes contain selected data from your Customer Interaction Repository database. You can customize multidimensional cubes to provide exactly the statical data you desire.

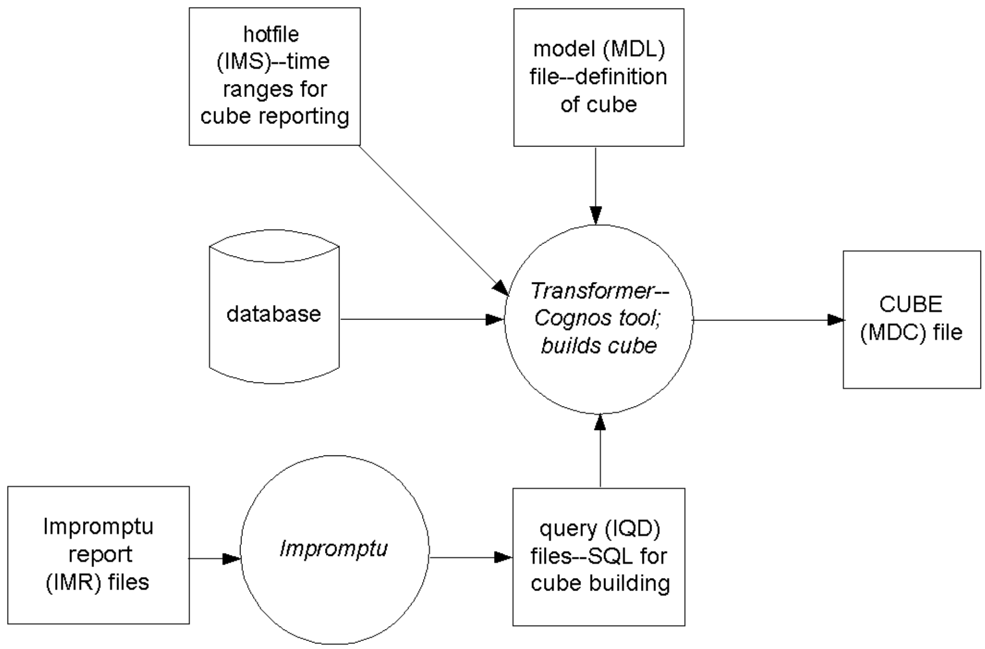
This section includes the following topics:

Required files

You create multidimensional cubes with the following files:

- **`MDL`** file— Multidimensional cube model file that defines the dimensions of the cube, the measures for the dimensions, and the queries that define how the cube is populated.
- **`IQD`** files— Impromptu Query Definition files, one created from each **`IMR`** file, that define a set of queries. These queries contain the connection information and SQL query which is executed in the database when the cube is built.
- **`Iims`** file— Hotfile that specifies time ranges for viewing data in cubes.

- Database— Database connections set in Impromptu Administrator that specify which database populates the cube.



Create a multidimensional cube

To create a multidimensional cube:

1. Define your logical database in Impromptu Administrator.
2. Make sure that the Cognos Catalog that you plan to use for providing data to the Transformer exists in the correct location.
3. Make sure that the Impromptu files and their corresponding `IQD` files are in place. They will be used as data sources by the Transformer.
4. Build the cube in PowerPlay Transformer.

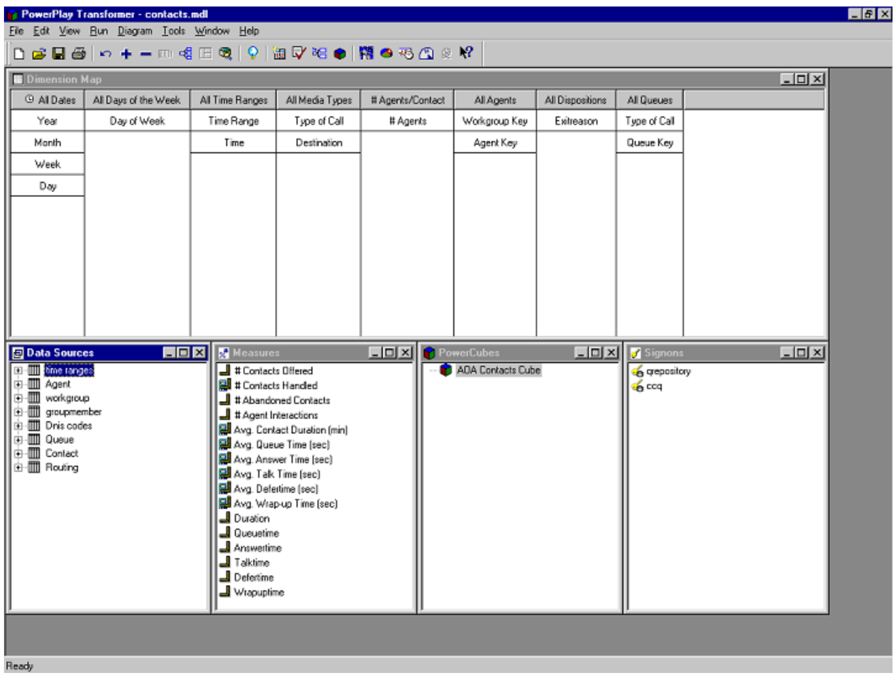
Create the cube file

To create the cube file:

1. In PowerPlay Transformer, open the model file for the cube.

2. Define the target cube’s destination (or else you might inadvertently delete an existing cube). Select **File > Preferences** and then select **Directories** to setup the default directories for the cube.
3. Select **Run > Create PowerCubes**.
4. In the **Database Access** dialog box, enter your database login and password and select **OK**.

   Transformer executes the `IQD` queries against the database and stores the results in the `MDC` cube file.



Updating multidimensional cubes

You may choose to incrementally update a multidimensional cube rather than creating a new cube each time you want to report on a different set of data. To incrementally update a cube:

- Modify the source files with an appropriate filter.
- Modify the model file to show **This cube is incrementally updated**.

Before incrementally updating a cube you should consider the following points:

- Remember that dates are saved in the database in GMT. Be careful that your incremental update strategy does not result in data overlaps because it may result in incorrect data in the cube.
- Cognos recommends that you periodically recreate the cube to take advantage of its auto-partitioning scheme.
- Whenever you make structural changes to your data model, you must recreate the cube before attempting incremental updates.

Note:

Refer to the Cognos documentation for more details about incremental cube updates.

Incremental cube update example

This example shows a simple approach to incrementally updating a cube. The example assumptions are:

- The update strategy is to perform an incremental update of the MMA cube daily at 1:00 AM, Denver time.
- The database server is located in the Denver timezone (GMT -07:00 during daylight savings time).

The following procedure is used to create the incremental update:

1. Save the original **`.imr`**, **`.iqd`**, and **`.mdl`** files:
    - Copy **`.../cubes/MMA/routing.imr`** to **`.../cubes/MMA/routing_create.imr`**.
    - Copy **`.../cubes/MMA/routing.iqd`** to **`.../cubes/MMA/routing_create.iqd`**.
    - Copy **`.../cubes/MMA/contactsegment.mdl`** to **`.../cubes/MMA/contactsegment_create.mdl`**.

2. Create the first cube at 1:00 AM Denver time.
3. Open **`.../cubes/MMA/routing.imr`** and add this filter condition:

   ```
   createtime > (now()+000 06:00:00.000) and createtime
     <=(now()-000 18:00:00.000)
   ```

   This filter assures that the cube is updated with the last 24 hours of data. The filter must be changed when daylight saving time ends to account for the difference from GMT.

   Note:

   `createtime` is defined in the Contact folder.
4. Save the modified file as **`.../cubes/MMA/routing.imr`** and **`.../cubes/MMA/routing.iqd`**.
5. Modify the cube property to **This cube is incrementally updated** in the **`.../cubes/MMA/contactsegment.mdl`** file.

   Note:

   Ignore the warning message (TR0719) that appears when you modify the cube property.
6. Schedule the cube update to occur every day at 1:00 AM Denver time.

The following table shows the column name for the time dimension for each cube.

Cube time dimension	Column name
For **CallCenterQ**	
contacts.imr	contact.datecreated
fulfillment.imr	litorder.dateentered
order.imr	orderentry.dateentered
request.imr	request.datecreated
return.imr	returns.dateentered
For **CMS**	
cms.imr	cmscallhistory.segstart
For **Contacts**	
contact.imr	contact.createtime
routing.imr	contact.createtime
For **MMA**	
routing.imr	contact.createtime

Cube time dimension	Column name
For **tasks**	
task.imr	contact.createtime

Database connectivity tasks

This section discusses connectivity tasks. You may need to perform specific procedures to make sure your Advanced reports and cubes function properly.

Note:

For more detailed procedures and information about the special considerations in this section, refer to documentation provided with the Cognos applications.

This section includes the following topics:

Changing the logical database name

If you want to use an Advanced reports logical database name other than **repository**, **ccq**, **customerq** or **hrq**, you must:

1. Regenerate the catalog (see Generating Cognos catalogs on page 126).
2. Regenerate the **IQD** files by opening the Predefined, Detailed, Drill-Through Reports under the **cognos\cubes** directory (using Impromptu Administrator) and then saving them as file type **IQD**.
3. Open Transformer and, in the **Signon** window, select and delete the **repository**, **ccq**, **customerq** or **hrq** signon, respectively.

The new logical database signon is added automatically when you build the cube.

Generating Cognos catalogs

In OA R6.1, if a new Catalog for **repository**, **ccq**, **hrq**, or **custq** is generated using Database Designer, the pre-existing reports that use the catalog will not work - either the data shown on the report will be incorrect or you will see this error message: **This report will result in a 'cross product' query. This User Profile prevents the use of 'cross product' reports**. Therefore, it is advised that unless necessary, do not recreate the catalog files using Database Designer.

Note:

The **oadb** catalog file cannot be generated from Database Designer.

If you simply need to add a few more tables and joins to the catalog, you can update it using Impromptu Administrator. If it is absolutely necessary to generate a new catalog using Database Designer, you can do so using the following procedure. You must rerun the data queries in the existing reports in order to make them work with the newly generated catalog. You should be able to create new reports without any problems using the new catalog.

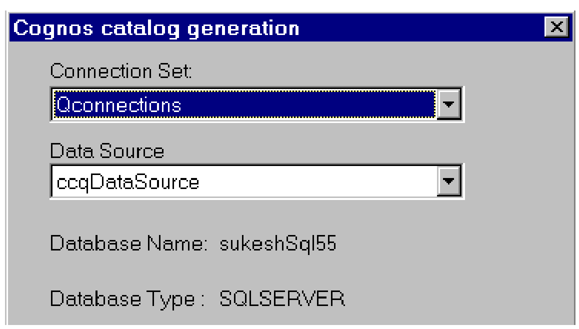
Important:

You should update the Cognos catalog after you modify the data model.

To generate a Cognos Catalog for Customer Interaction Repository:

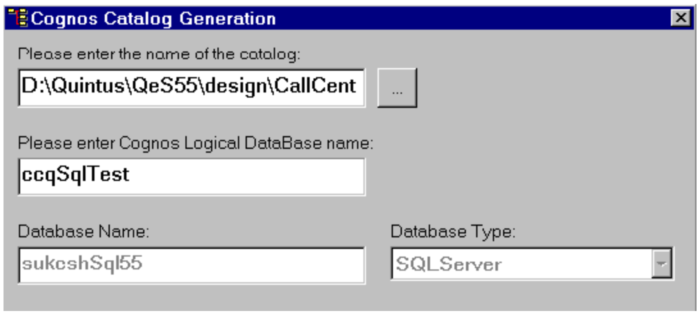
1. Verify that you have defined a logical connection for CallCenterQ **database** in Impromptu Administrator to your database. Name the **Logical Database Name ccq**.
2. Verify that you have defined a logical connection for **repository database** in Impromptu Administrator to your database. Name the **Logical Database Name repository**.
3. In Database Designer, open the **repository.adl** file.
4. Select **Tools > Export for Cognos Catalog**.
5. In the **Cognos Catalog Generation** dialog box, select **qrepositoryDataSource** from the **Data Source** field, then select **Next**.

   The **Database Name** and **Database Type** fields are automatically filled.

6. Enter the Catalog name **repository.cat** and the Cognos logical database name in the appropriate fields, then select **Generate Catalog**.

   Typically, the **Database Name** and **Database Type** fields are for your information only, and you cannot change the information in these fields. However, if you select a data source that refers to a database type that Advanced reports does not support, such as ODBC, you must change the **Database Type** field.



Note:

The primary connection/secondary connection does not automatically do a join between primary and secondary connection.

To add the table `customer` to the `repository` catalog:

1. Select **Catalog > Tables** menu item in Impromptu Administrator.
2. Select `ccq` database under **Database Tables**.
3. Double-click on the database name to see all tables in the database.
4. Select `customer` table and select **Add** to add this table to the catalog.
5. Name this catalog folder `Customer`.
6. You must define the join between contact and customer.

Table A	Table A Join Key	Table B	Table B Join Key
contact	customer_key	customer	pkey

See Adding the TimeRanges hotfile to `repository` catalog on page 129 for instructions on adding a join in Impromptu Administrator.

Note:

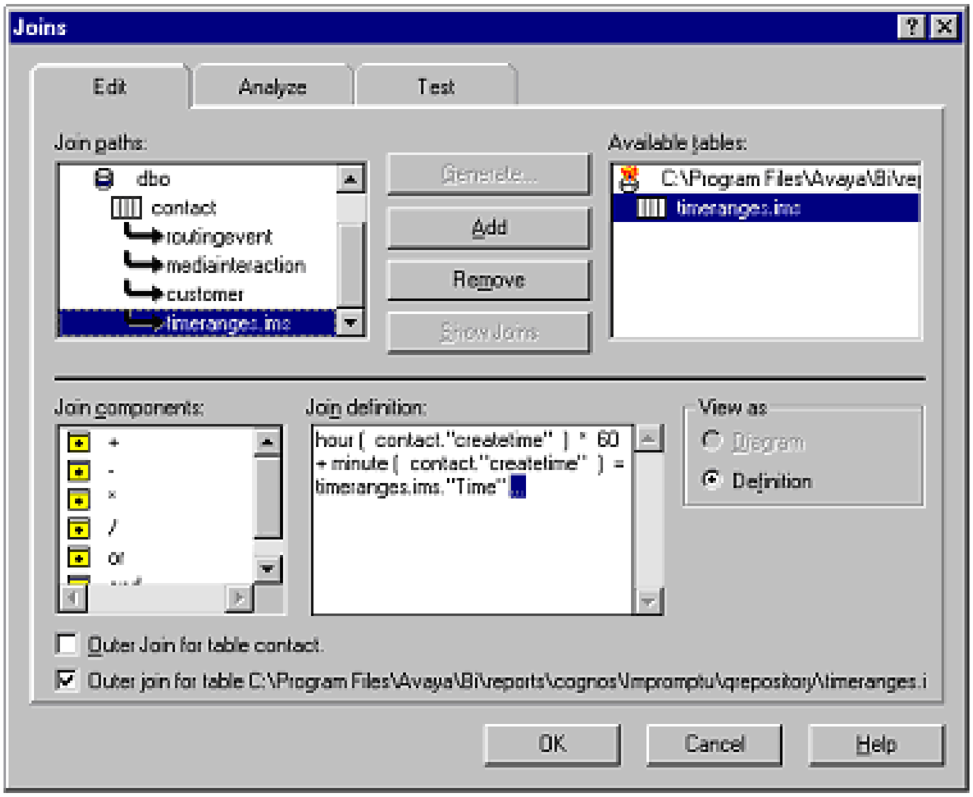
If you get an error during the catalog generation, such as **Database value is not defined** or **Error in Catalog Generation**, the Cognos catalog is not properly generated even if it appears in the directory. Verify that you have created the database definition in Impromptu Administrator, then regenerate the catalog.

Adding the TimeRanges hotfile to `repository` catalog

An Advanced reports hotfile is a file serving as a table to define certain fixed data. The TimeRanges hotfile defines appropriate time ranges for reporting within the Multidimensional cubes. You must add the **`TimeRanges`** hotfile to the **`repository`** catalog by:

1. In Impromptu Administrator, open the **`repository.cat`** catalog.
2. Add the folder **`TimeRanges`** to the catalog.
3. From the **Catalog** menu, select **Tables**.
4. Select **HotFiles**.
5. Select the just created **`TimeRanges`** folder and select **OK**. The folder's path appears above the **Database Tables** field.
6. In the **Database Tables** field, browse for the **`TimeRanges.ims`** hotfile to add to your catalog, and then select **Add**.
7. Select **OK**.
8. For drill through to Predefined, Detailed, Drill-Through Reports to work, you must add a join between the **`contact`** table and the **`timeranges`** table as follows:
   a. Select **Catalog > Joins** to open the **Joins** dialog box.
   b. Select the **`contact`** table in the **Join Paths** field.
   c. Select the **`timeranges`** table in the **Available Tables** field.
   d. Select **Add**.

e. Create the join from the options in the **Join Components** field as shown in the example below, that is, **`hour(contact."createdate") * 60 + minute (contact."createdate") = timeranges.ims."Time"`**



f. Select **OK** to save the join.

Generating a Cognos Catalog for CallCenterQ

1. Verify that you have defined a logical connection for CallCenterQ **`database`** in Impromptu Administrator to your database. Name the **Logical Database Name** **`ccq`**.
2. Verify that you have defined a logical connection for **`repository database`** in Impromptu Administrator to your database. Name the **Logical Database Name** **`repository`**.
3. In Database Designer, open the **`ccq.adl`** file (**`ADL`** file for CallCenterQ).
4. Select **Tools > Export for Cognos Catalog**.
5. In the **Cognos Catalog Generation** dialog box, select **ccqDataSource** from the **Data Source** field, then select **Next**.

   The **Database Name** and **Database Type** fields are automatically filled.
6. Select "**...**" and browse to a selected location for the new Cognos catalog. A good location is the reports folder for CallCenterQ:
   `Program Files\avaya\BI\Rreports\Cognos\Impromptu\CallCenterQ`

7. Enter the Catalog name **`ccq.cat`** and the Cognos logical database name in the appropriate fields, then select **Generate Catalog**.

Typically, the **Database Name** and **Database Type** fields are for your information only, and you cannot change the information in these fields. However, if you select a data source that refers to a database type that Cognos does not support, such as ODBC, you must change the **Database Type** field.

In IC R6.1, employee and workgroup tables, which formerly resided in **`ccq`** database, have moved to **`repository`** database. However, the old employee and workgroup tables have not been dropped. In the **`ccq.adl`** file, they are named respectively, **`employee_old`** and **`workgroup_old`**. At the **`ccq`** database level they remain **`employee`** and **`workgroup`**.

When you generate **`ccq.cat`**, the Cognos catalog for the CallCenterQ, the catalog references the "old" employee and workgroup tables in **`ccq`** database. You must:

- rename the catalog folders for **`Employee`** and **`Workgroup`**
- modify the catalog to reference these tables as they appear in the **`repository`** database

To rename the catalog folders for **`Employee`** and **`Workgroup`**:

1. In Impromptu Administrator, open the **`ccq.cat`** catalog.
2. Select **Catalog > Folders** menu item in Impromptu Administrator.
3. Highlight **Employee** in the **Catalog Folders** field.
4. Select **Edit...** and rename **Employee** to **`EmployeeOld`**.
5. Highlight **Workgroup** in the **Catalog Folders** field.
6. Select **Edit...** and rename **Workgroup** to **`WorkgroupOld`**.
7. Close the **Folders** dialog.

To add the tables **`Employee`** and **`Workgroup`** from **`repository`** to the **`ccq`** catalog:

1. In Impromptu Administrator, open the **`ccq.cat`** catalog.
2. Select **Catalog > Tables** menu item in Impromptu Administrator.
3. Select **`repository`** database under **Database Tables**.
4. Double-click on the database name to see all tables in the database.
5. Select **Employee** table and select **Add** to add this table to the catalog.
6. Select **Workgroup** table and select **Add** to add this table to the catalog.

You must define the following inner joins between tables. To define a join refer to the steps from Adding the TimeRanges hotfile to ccq catalog on page 133.

Table A	Table A Join Key	Table B	Table B Join Key
w_task_detail	agent_id	employee	pkey
w_agent_summary	agent_id	employee	pkey
w_agent_summary	team_id	workgroup	pkey
w_task_detail	customer_id	customer	pkey

You must also define the following additional aliases for the table **employee**, and joins to those aliases. To define these table aliases:

1. Select **Catalog > Tables**.
2. Select **repository** database under **Database Tables**.
3. Double-click on the database name to see all tables in the database.
4. Select **Employee** table and select **Alias** to designate the alias name.
5. Enter an alias name from the list below. Select OK.
6. Select **OK** in the **Tables** dialog.
7. **Joins** dialog is displayed. Enter the appropriate join keys from the table. Select **OK**.
8. Repeat from step 4, and enter all joins from table.

Catalog Folder Name or Table Alias	Table Join Key	Employee Table Alias	Alias Join Key
contact	contactagent_key	Contactagent	pkey
orderentry	agent_key	Orderagent	pkey
orderentry	owner_key	Orderowner	pkey
fulfillment	agent_key	Fulfillmentagent	pkey
request	agent_key	Requestagent	pkey
returns	agent_key	Returnagent	pkey
returns	owner_key	Returnowner	pkey

Adding the TimeRanges hotfile to `ccq` catalog

The TimeRanges hotfile defines appropriate time ranges for reporting within the Multidimensional cube. You must add the **`TimeRanges`** hotfile to the **`ccq`** catalog by:

1. In Impromptu Administrator, open the **`ccq.cat`** catalog.
2. Add the folder **`TimeRanges`** to the catalog.
3. From the **Catalog** menu, select **Tables**.
4. Select **HotFiles**.
5. Select the just created **`TimeRanges`** folder and select **OK**. The folder's path appears above the **Database Tables** field.
6. In the **Database Tables** field, browse for the **`TimeRanges.ims`** hotfile to add to your catalog, and then select **Add**.
7. Select **OK**.
8. For drill through to Predefined, Detailed, Drill-Through Reports to work, you must add a join between the **`contact`** table and the **`timeranges`** table as follows:
   a. Select **Catalog > Joins** to open the **Joins** dialog box.
   b. Select the **contact** table in the **Join Paths** field.
   c. Select the **timeranges** table in the **Available Tables** field.
   d. Select **Add**.
   e. Create the join from the options in the **Join Components** field as shown in the example from Adding the TimeRanges hotfile to `repository` catalog on page 129.

   Note:
   The join relationship in this case would be:
   `hour(contact."datecreated") * 60 + minute (contact."datecreated") = timeranges.ims."Time"`.

   f. Select **OK** to save the join.

Confirming catalog contents

You may confirm the contents of your Cognos catalog, including table joins, by generating a **Content Overview** report via Impromptu.

1. In Impromptu Administrator, open the catalog.
2. From the **Catalog** menu, select **Content Overview**.

3. In the **File name** field, specify a name for the report. The `icr` extension is appended automatically.
4. Select the drive and directory where you wish to save the report.
5. Select **Options**, and select **Table Join Expressions** to include information about the table joins. You may select any other options for the catalog contents as desired.
6. Select **OK**, and **Save**.
7. Open the `.icr` file with a text editor. The file lists table join expressions separately from other information regarding the catalog.
8. Compare the join expressions to those you entered in Generating a Cognos Catalog for CallCenterQ on page 130.

Customizing the data model

Customizing the Customer Interaction Repository data model and setting up the mapping process is very important. The contents of EDUs can vary greatly from site to site and only some of the EDU names are standard across all switches. Each VRU is likely to insert different names into the EDU based on the information that is captured in the VRU.

You can extend the provided data model with additional fields to record more customer specific names in the EDU by:

1. Using Database Designer to add the fields to the tables and reconfigure the database.
2. Using the Mapping Administration focus in the Avaya IC Report Wizard to add rules in the mapping tables to specify how the EDU names map to the new database fields.
3. Restarting the report server.

Full details about performing these tasks are available in *IC 6.1 Administration Volume 1: Servers & Domains*.

Glossary

Administration screen Screen on the right side of the Operational Analyst Client interface that contains information about configuration settings which are selected in the navigation tree.

ADU Agent data unit

Agent A customer service representative (CSR). An agent is a person qualified to handle customer requests. He or she may deal with customers directly or just process customer requests.

Aggregated data Data that Operational Analyst has aggregated or summarized. Aggregated data has the minimum value (least), maximum value (greatest), sum, or a combination of those values, for each data period. Each column in the schema can be set to a different aggregation behavior, as long as it contains numeric data.

Aggregation occurs at an offset after the end of each base interval. The default offset is 10 minutes, but the offset can be set from 10 to 25 minutes by modifying the system scheduled aggregation job.

Aggregation Operational Analyst aggregates or summarizes data by selecting the minimum value (least), maximum value (greatest), or sum of a numerical measure for a particular data period. A data period involves one base interval.

Aggregation job Job that aggregates data. An aggregation job summarizes data by selecting the minimum value (least), maximum value (greatest), sum of each data period, or a combination of those options.

A system scheduled aggregation job runs at an offset after the end of a base interval. The default offset is 10 minutes, but the offset can be set from 10 to 25 minutes by modifying the system scheduled aggregation job. This job aggregates data for that interval only.

An on-demand aggregation job can aggregate data for multiple intervals, up to 24 hours of data.

Aggregation recovery job Job that re-aggregates and archives container data that was not successfully aggregated in the past 30 hours. If enabled, the aggregation recovery job runs every six hours and aggregate data that was not successfully aggregated in previous attempts.

Analytical license key The Avaya OA license key that is used for Avaya OA, Avaya IC, and Advanced Reporting installations.

API Application Program Interface. An API is a set of routines that allows an application program to gain access to the operating system or application program. A developer who wants to build a program that makes requests to the operating system or application must use the prescribed method.

Archive The act of compressing and summarizing aggregated data into the historical database. While aggregation occurs every base interval, archiving occurs on a daily, weekly or monthly basis, with the frequency determined by your configuration in the **Container Archives** administration screen.

Archive time zone Time zone relative to which all archival jobs are performed. This value is specified during OA installation. It can be changed via the OA Administration Client.

Archived data Aggregated data that has been stored in the historical database. The data is categorized into daily, weekly and monthly archives.

back-end database A database that is located on a different server than the database software.

Base interval Operational Analyst lumps IC real-time data into 30-minute intervals in the historical subsystem.

Also called intervals.

See also base interval data.

Base interval data Real-time data that Operational Analyst has lumped into 30-minute intervals. The real-time subsystem summarizes IC data into 30-minute intervals and transfers it to the historical subsystem, which proceeds to aggregate the base interval data into containers.

CMS Standalone license key The Avaya OA license key that is used for Avaya OA and CMS installations.

Container Metadata that defines how data should be sifted and stored in the historical database. The term "container" encompasses both the table definition as well as the data contained in the table.

Container aggregation job
Scheduled job that aggregates selected containers. You specify the aggregation period and select the containers in the **Scheduled Jobs** administration screen.

Container data purge job
Scheduled job that purge aggregated and archived data. You specify which data in the containers and archives to delete in the **Scheduled Jobs** administration screen.

Container filter
Container definitions that you customize. A filter determines which fields of the base interval data are aggregated into a container. It specifies the name, data fields and default values for each container.

Container limit
Limit or constraint that you set on your containers. This enhances data calculation performance and disk usage. You can configure the maximum number of containers and rules in the **Container Limits** administration screen.

Container profile
Includes the definition and the name of a container. Container profiles contain rules that detail what fields a container should have and what sort of data it should collect. Each container has a profile which has a filter that may contain from one to 100 rules.

Container rule
Defines which rows of data in the historical store should be collected. Each container has a profile and a profile may have from one to 100 rules.

Also called filter rules or rules.

Coordinated Universal TIme
Coordinated Universal Time (UTC). Formerly called Greenwich Mean Time (GMT). UTC reflects the time in the prime meridian and uses a 24-hour format. For example, it uses 14:00 to represent 2:00 p.m.

Operational Analyst stores data in UTC but converts the time to the local time of the client.

CORBA
Common Object Request Broker Architecture. CORBA is a way to create and manage distributed program objects in a network. It lets programs developed by different vendors or programs scattered throughout different servers communicate. A program in a client can request services from a program in a server without having to understand where the server is in a distributed network or what the interface to the server program is.

Current schema
The existing schema that is being used. The current schema is the pre-migration schema.

Daemon A program that runs continuously in the background and handles periodic service requests. The daemon forwards the requests to other programs or processes them as appropriate.

Daily interval A 24-hour shift that Operational Analyst uses for real-time statistical reporting.

Data dictionary A database about data and databases. The data dictionary holds the name, type, range of values, source, and authorization for access for each data element in the contact center's files and databases.

Data manager An interface service that resides on a server where a real-time subsystem is installed. The data manager receives events, maintains real-time status information, summarizes data into fixed thirty-minute intervals, and forwards the data to the forwarders, a set of real-time subsystem services.

Data type Category of data. Each type is a set of data with values that have predefined characteristics and has a specified range of values and a specific way of being processed by the computer and stored by the database.

Database check job A job that inspects the overall state of the historical database. A database check job fine-tunes the database by scanning the database and its error logs, as well as updating the statistics on tables. It also reports inconsistent metadata and rolls over the error log file to prevent it from growing unbounded. It runs daily if enabled.

Default schema Schema that is pre-configured in Operational Analyst. You can revert back to the pre-configured default schema if you decide to discard your changes. You need to migrate your data, however.

Detail data Historical data that cannot be aggregated.

Detail data contains information about the work item, such as the customer ID, work item ID and the origination.

Detail data purge job Scheduled job that purges selected detail data. You select which detail data to purge in the **Scheduled Jobs** administration screen.

Disabled container Container that is not collecting or aggregating data.

Disabled interface service Data collection service that is not running.

Disabled job A job that has been configured but is not activated to run.

Display name	A meaningful name associated with a value in the database. For example, instead of displaying the agent ID, Operational Analyst Administration Client displays the agent name; so it will display "**John Smith**" instead of "**1021454540554**."
EDU	Electronic Data Unit
Enabled container	Container that is collecting or aggregating data.
Enabled interface service	Data collection service that is running.
Enabled job	A job that will execute at scheduled times. See also disabled job.
Event	An activity or change of state that occurs in a contact center. Examples include: a change in port state, an agent logging in, or a call transfer.
Execution frequency	See recurrence.
External job	Custom-designed instruction set that specifies when certain processes should be executed. You can add an external job, whose scripts reside in the historical server, into Operational Analyst Administration Client and schedule its execution.
Failed	Data collection status that indicates database errors.
Filter	See container filter.
Filter rule	See container rule.
Flat file	An independent data file that is not related to another file. Flat files can be related to other data files, but only if you program them to do so.
Forwarder	An interface service that resides on CMS or real-time subsystems. The forwarder transfers the data it receives to its corresponding recorder. When the recorder is not available, the forwarder buffers the detailed data until the recorder is on-line again.
FQDN	Fully-qualified domain name

GMT
Greenwich Mean Time. Also known as UTC (Coordinated Universal Time). GMT reflects the time in the prime meridian and uses a 24-hour format. For example, it uses 14:00 to represent 2:00 p.m.

Operational Analyst stores data in UTC but converts the time to the local time of the client.

Historical database
Where all historical data about your contact center is stored.

Historical store
Storage location where historical or long-term contact center performance information is stored in a database. Each historical store consists of a database table or a group of database tables. Operational Analyst has 11 stores that accumulate a variety of report-related data from IC or ACD systems.

The IC historical stores are:

- Agent service class
- Agent state
- Service class summary
- Service class state
- Display names

The ACD historical stores are:

- CMS agent summary
- CMS call work codes
- CMS skill summary
- CMS VDN summary
- CMS call history
- CMS display names

Historical subsystem
Along with the source subsystem, real-time subsystem, reporting subsystem, and CMS subsystem, the historical subsystem constitutes the Operational Analyst data collection system. The historical subsystem pertains to all Operational Analyst components and services that involve historical data.

IC
Avaya ™ Interaction Center.

IDL
See *Interface Definition language*.

Incomplete
Data collection status that indicates there is missing data and the container or archive is missing at least one base interval data.

Info store
Historical store with a group of database tables that keeps track of the display names for the data fields.

Installation directory
Directory where the software is installed. In this document, the installation directory is represented by the following variables:

$PABASE (for Solaris, the default installation directory is **/export/home/biadmin/BI**)

%PABASE% (for Windows, the default installation directory is **c:\Program Files\Avaya\BI**)

Interface definition language
A language used to communicate with various software components in a CORBA network.

Interface service
Process that automatically collects data in the background while the system is up. An interface service handles periodic service requests and forwards the requests to other programs or processes as appropriate. The Operational Analyst interface services include:

- Data manager
- Report data server
- Report Framework
- The respective forwarders and recorders for each historical store.

Interface service name
The internal name that Operational Analyst Administration Client uses to identify, enable and disable the services. You cannot change the names of the services.

Interval data
See base interval data.

IVR
Interactive Voice Response. A technology that allows callers to issue commands to a computer without agent intervention. For example, a bank customer can obtain account balance information by entering an account number on a touch tone phone.

IVR port
Part of an IVR system. An IVR port provides interactive voice response services for incoming calls, acting as a virtual agent. Each port uses one phone extension on the PBX and can handle one phone call at a time.

IVR system (IVRS)
A server that processes calls using interactive voice response (IVR) technology. An IVRS contains a large number of IVR ports. The IVRS is connected to the PBX, which routes incoming calls to the IVR ports

Java database connectivity Java Database Connectivity. An application program interface (API) specification for connecting Java programs to a database. The API lets you request statements in Structured Query Language (SQL) which are then sent to the program that manages the database.

JDBC See Java database connectivity.

Job Instruction set that specifies when certain processes should be executed. The **Scheduled Jobs** administration screen enables you to automate certain tasks such as data purges and aggregation.

Migration The process by which Operational Analyst alters the database tables to conform to a new schema.

MSMQ Microsoft Message Queue. MSMQ is a software program that allows programs to send messages to other programs.

Navigation tree Tree that appears on the left side of your Operational Analyst Administration Client interface, and contains various configuration tools for customizing and managing data collection.

No data Data collection status that indicates no data exists. Operational Analyst did not find matching records.

Not null Clause in a column or field that specifies that the column or field cannot contain a null value. You must define a default value.

Null Special value in the database which represents an unknown value. A null value is not the same as blank (which is a valid character), zero (which is a valid number), or a zero length string.

On-demand job A job you define to execute tasks on specific data at a particular time or recurrence. An on-demand job is different from a system scheduled job in that it is limited in scope and applies to selected data. On-demand job types include:

- Aggregation
- Container purge
- Detail purge
- Data collection
- External

Operational license key The Avaya OA license key that is used for Avaya OA and Avaya IC installations.

ORB Object Request Broker. ORB is the programming code in CORBA that mediates between a client and a distributed object. It enables clients to request services without having to know the location of the server in a network.

Parameter A piece of information, such as a file name, a coordinate, or a range of values, that is passed to a program by a user or another program.

Pending schema A custom-defined schema that is not implemented until migration.

PID See *Process ID*.

Precision Specifies the maximum total number of decimal digits that can be stored, both to the left and to the right of the decimal point. The precision must be a value from 1 to 15.

Process ID Identification number for a container delete job. You can determine the PID of a deleted container by looking at the **Container Status** screen.

Purge The deletion of selected container data or detail data.

Purge job A job that deletes selected containers and detail data from the historical database. A purge job is different from a system-scheduled purge job in that it is more focused and deletes only particular pieces of data you specify in the **Scheduled Jobs** administration screen.

Queue A virtual queue where Work Items are placed by the routing engine while they wait for service. Queues generally hold Work Items of the same type.

RAID Redundant Array of Inexpensive Disks

Real-time subsystem Along with the source subsystem, historical subsystem, reporting subsystem, and CMS subsystem, the real-time subsystem constitutes the Operational Analyst data collection system. The real-time subsystem pertains to all Operational Analyst components and services that involve real-time data.

Recorder An interface service that resides in the historical subsystem. The recorder time stamps the data it receives from the forwarder and inserts the data into the historical database.

There are up to 11 recorders, one for each historical store.

Recurrence The start date and end date of a job, or the number of times a job should be executed. For example, you can schedule a job to execute on April 3, 2002 or once a week. Recurrence is part of the job definition.

Report Framework The self-contained Operational Analyst reporting framework application programming interface (API) that provides an environment to create reports based on the Operational Analyst real-time data. It is a framework that lets you develop servlet-based applications for Web-based reporting and monitoring for your contact center.

Retention period The length of time Operational Analyst retains data.

Rule See container rule.

Scale Specifies the maximum number of decimal digits that can be stored to the right of the decimal point. Scale must be a value from 0 through precision. Maximum storage sizes vary, based on the precision.

Schema Defines aspects of the database, such as attributes (fields) and domains and parameters of the attributes.

Select To select an item, click the item's name or icon. Selected items appear highlighted on the screen.

Service See *interface service*.

Service class A logical category used to measure service levels and define goals for that work. A particular service class can consist of any combination of interaction source (such as call, fax, or email), customer class (such as Platinum, Gold, or Silver), or activity (such as new loan or account inquiry).

Shortcut menu

To	Press
Cancel multiple selection of items in the status window	**Shift** + up (or down) arrow key
Copy	**Ctrl** + **C**
Cut	**Ctrl** + **X**
Move to the next item on the screen	**Tab**
Move to the previous item on the screen	**Shift** + **Tab**
Paste	**Ctrl** + **V**

Skill An attribute that is assigned to an ACD Agent. Agent Skills can be thought of as the ability for an Agent with a particular set of skills to handle a call which requires one of those skills.

Source subsystem Operational Analyst subsystem that collects all ACD and IC event data.

SQL See *Structured Query Language*.

Status window Window on the results screen that lets you view the status of elements such as your schemas or interface services that you have set up.

Store See historical store.

String A data type contained in the column of the table which is composed of a sequence of characters usually representing human-readable text. The column must be a contiguous set of alphanumeric characters that does not contain numbers used for calculations. Names, addresses and error messages are examples of strings.

Structured Query Language Structured Query Language. The standard programming language for getting information from and updating a database. Queries let you select, insert, update, find out the location of data, etc.

Subsystem A major component that constitutes the Operational Analyst data collection system. The available subsystems are:

- Historical
- Real-time
- Reporting Framework
- CMS
- Source (ACD and IC)

Successful Data collection status that indicates data was successfully archived or aggregated.

Summary data Data that pertains to the performance of the contact center. While detail data tracks work items, summary data tracks agents and IVR systems. Summary data is also aggregated and, if configured, stored in containers and archives.

These historical stores contain summary data:

- Agent service class
- Agent state
- Service class summary
- Service class state
- CMS agent summary
- CMS call work codes
- CMS skill summary
- CMS VDN summary

Summary historical store A historical store that contains aggregated data. Available summary historical stores are:

- Agent service class
- Agent state
- Service class summary
- Service class state
- CMS agent summary
- CMS call work codes
- CMS skill summary
- CMS VDN summary

Sun ONE Web Server The new product name for the Solaris Web server, formerly iPlanet.

System scheduled aggregation job A job that aggregates base interval data. This job executes on every base interval, that is, in 30-minute increments, if enabled.

System scheduled job A job that is executed on a system-wide level. This job applies to all the containers and data in the system. The following types of jobs are system scheduled jobs: aggregation, aggregation recovery, ACD display name collection, database check and database purge.

See also on-demand jobs.

System scheduled purge job A job that deletes container and detail data from the historical database according to the data retention limits defined in the **Retention Periods** administration screen. A system-scheduled purge job is different from on-demand purge jobs in that it executes on the entire system and not just on a particular set of data, and it runs regularly, not periodically. This executes daily, if enabled.

Tree A way of structuring information, where sublevels are shown as branches of a higher level. The navigation tree in Operational Analyst Administration Client contains a tree of configuration tools. Items on a tree are also referred to as nodes.

Unicode A character set that can accommodate the alphabet of most of the world's languages. Unicode can handle 65,536 character combinations rather than just 256, and uses two bytes for each character rather than one.

UTC	Coordinated Universal Time. Formerly called Greenwich Mean Time (GMT). UTC reflects the time in the prime meridian and uses a 24-hour format. For example, it uses 14:00 to represent 2:00 p.m. Operational Analyst stores data in UTC but converts the time to the local time of the client.
Widget	A graphical user interface element that lets you interact with the application. Examples of widgets include drop-down lists, buttons, text boxes, and radio buttons.
Work item	Data that describes the flow of work through a business process. This data may include details about the agents involved with the work, the amount of time the item spent in various queues, and any follow up calls.
Workflow	The flow of work in a business process; work travels from one point to another so that necessary tasks can be completed on that piece of work.

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