Genesys ®

Genesys Interactive Insights 8.1

User's Guide

About Genesys

Genesys is the world's leading provider of customer service and contact center software—with more than 4,000 customers in 80 countries. Drawing on its more than 20 years of customer service innovation and experience, Genesys is uniquely positioned to help companies bring their people, insights and customer channels together to effectively drive today's customer conversation. Genesys software directs more than 100 million interactions every day, maximizing the value of customer engagement and differentiating the experience by driving personalization and multi-channel customer service—and extending customer service across the enterprise to optimize processes and the performance of customer-facing employees. Go to www.genesys.com for more information.

Each product has its own documentation for online viewing at the Genesys Documentation website or on the Documentation Library DVD, which is available from Genesys upon request. For more information, contact your sales representative.

Notice

Although reasonable effort is made to ensure that the information in this document is complete and accurate at the time of release, Genesys Telecommunications Laboratories, Inc., cannot assume responsibility for any existing errors. Changes and/or corrections to the information contained in this document may be incorporated in future versions.

Your Responsibility for Your System's Security

You are responsible for the security of your system. Product administration to prevent unauthorized use is your responsibility. Your system administrator should read all documents provided with this product to fully understand the features available that reduce your risk of incurring charges for unlicensed use of Genesys products.

Trademarks

Genesys and the Genesys logo are registered trademarks of Genesys Telecommunications Laboratories, Inc. All other company names and logos may be trademarks or registered trademarks of their respective holders.

The Crystal monospace font is used by permission of Software Renovation Corporation, www.SoftwareRenovation.com.

Technical Support from VARs

If you have purchased support from a value-added reseller (VAR), please contact the VAR for technical support.

Customer Care from Genesys

If you have purchased support directly from Genesys, please contact Genesys Customer Care. Before contacting Customer Care, please refer to the *Genesys Care Program Guide* for complete contact information and procedures.

Ordering and Licensing Information

Complete information on ordering and licensing Genesys products can be found in the *Genesys Licensing Guide.*

Released by

Genesys Telecommunications Laboratories, Inc. www.genesys.com

Document Version: 81ii_user_01-2014_v8.1.301.00

Table of Contents

Preface

Welcome to the *Genesys Interactive Insights 8.1 User's Guide.* This document introduces you to concepts and functionality of the Genesys Interactive Insights (GI2) product, which is powered by:

- BusinessObjects (BO) XI 3.1 software for GI2 releases 8.1.0 and 8.1.1.
- BusinessObjects Business Intelligence Platform(BI) 4.1 for GI2 release 8.1.3.

This document is valid only for the 8.1.*x* release(s) of GI2.

Notes: For versions of this document that have been created for other releases of this product, visit the Genesys Documentation website, or request the Documentation Library DVD, which you can order by e-mail from Genesys Order Management at `orderman@genesys.com`.

The tools offered in BO XI 3.1 and BI 4.1 suites are similar but named differently. The screen shots and BO software references in this document mostly use BI 3.1 terminology.

This preface contains the following sections:
- About Genesys Interactive Insights, page 7
- Intended Audience, page 8
- Chapter Summaries, page 8
- Making Comments on This Document, page 9
- Contacting Genesys Customer Care, page 9
- New in This Release, page 9

For information about related resources and about the conventions that are used in this document, see the supplementary material starting on page 111.

About Genesys Interactive Insights

GI2 provides reports that summarize contact center activity and an entire universe, named `GI2_Universe,` of elements that support them.

Intended Audience

Discussions in this document that revolve around the Interactive Insights reports are intended primarily for business users and report designers. Information about Interactive Insights universe elements requires extended experience with relational management database systems, and is intended primarily for database and BO system administrators. The material that is addressed to both audiences assumes that you have a basic understanding of:

- Computer-telephony integration (CTI) concepts, processes, terminology, and applications.
- Network design and operation.
- Your own network configurations.
- Contact center functions and operations.
- The Genesys telephony models.

Database and system administrators should be familiar with:

- The features that are provided with Genesys Info Mart 8.1.*x* and Interaction Concentrator (ICON) 8.1.*x* software.
- Genesys Info Mart 8.1 and ICON 8.1.*x* configuration.
- BO setup—including users, authentication, licensing, connection to the appropriate tenant schema in Info Mart, and so forth.

Finally, this manual assumes that users have had basic training in the use of BusinessObjects software and that they are familiar with general principles of report design and structured query language.

Chapter Summaries

In addition to this preface, this document contains the following chapters:

- Chapter 1, "Introducing Genesys Interactive Insights," beginning on page 13, which describes BusinessObjects licensing from the Genesys-provided image and the optimal time to run reports.
- Chapter 2, "Managing Your BO Environment," beginning on page 17, which describes a few of the administrative tasks that you can perform within the BusinessObjects Central Management Console to access the Info Mart and the Interactive Insights reports.
- Chapter 3, "Understanding GI2 Reports," beginning on page 23, which describes some nuances with BusinessObjects software when you are running the Interactive Insights reports, as well as other general information about report operation and performance.
- Chapter 4, "Understanding the GI2 Universe," beginning on page 45, which describes where supported alternate definitions are stored within the universe, what the reference metric ID is, and how measures have been organized in `GI2_Universe`.

- Chapter 5, "Customizing the GI2 Universe and Reports," beginning on page 59, which provides several examples of how to customize the universe and reports to accomplish specific results.

- Chapter 6, "Personalizing Report Instances," beginning on page 99, which describes how to use user profiles to personalize Web Intelligence publications in order to filter the data that a particular user sees when the user opens a report instance.

- Chapter 7, "Upgrading Interactive Insights Reports," beginning on page 105, which describes how to run the upgrade utility to upgrade 7.6.*x* reports to a current environment.

Making Comments on This Document

If you especially like or dislike anything about this document, feel free to e-mail your comments to `Techpubs.webadmin@genesys.com`.

You can comment on what you regard as specific errors or omissions, and on the accuracy, organization, subject matter, or completeness of this document. Please limit your comments to the scope of this document only and to the way in which the information is presented. Contact your Genesys Account Representative or Genesys Customer Care if you have suggestions about the product itself.

When you send us comments, you grant Genesys a nonexclusive right to use or distribute your comments in any way that it believes appropriate, without incurring any obligation to you.

Contacting Genesys Customer Care

If you have purchased support directly from Genesys, please contact Genesys Customer Care. Before contacting Customer Care, please refer to the *Genesys Care Program Guide* for complete contact information and procedures.

New in This Release

This section lists topics that are new or that have changed significantly since the 8.0.1 release of this document.

Changes Introduced in 8.1.300

- The Interactive Insights report basic user group is added in this release along with the added Interactive Insights report basic access level. In addition, the rights for the report viewer user group have been expanded. See page 22 for details.

- Information about troubleshooting Date prompts were added to the section describing Reports on page 30.

- Information about the new Automatic Refresh option for report data was added to the section describing data refresh on page 36.

- Date/time facts were added to the discussion of custom user data creation on page 71.

- Beginning with this release, all hidden universe elements are now described in GI2 documentation. References to hidden objects within this document have been updated accordingly.

Changes Introduced in 8.1.101

- The maximum memory pool size for Tomcat configuration was corrected on page 38.

Changes Introduced in 8.1.100

- A Date Range Query was added to all reports to facilitate the interpretation of reports that were generated based on a preset date. See page 26 and the Start Date and End Date dimensions in the *Genesys Interactive Insights 8.1 Universe Guide* for more information.

- Information has been added on page 33 about performing drill operations along the campaign group hierarchy.

- Changed the reporting interval to which Outbound Contact measures were attributed in this release. See page 50 for details.

- A new customization example, beginning on page 82, demonstrates how to configure your environment to provide social media reporting.

- A new customization example, beginning on page 94, demonstrates how to configure your environment to provide reporting in time zones other than GMT.

- The Genesys-provided definition of the Agent Name dimension changed in this release. The "Modifying the Agent Name Dimension" example on page 102 was slightly altered to reflect the new definition. (Refer to the *Genesys Interactive Insights 8.1 Universe Guide* for more information.)

Changes Introduced in 8.1.0

- Added a discussion about preset date prompts on page 31.

- Added a discussion on page 38 that demonstrates how to fine-tune configuration to prevent WebI Server failure when the retrieved dataset is larger than what memory can hold.

- Classified which GI2 measures contain measurements for consultations and which do not on page 50.

- Summarized the available media types for groups of GI2 measures on page 52.

- Beginning on page 84, added information about using the hidden user data dimensions and measures that were added to the universe in release 8.1.00.1.

- Added a customization example, beginning on page 87, that demonstrates how to alter the Interaction Volume Service Type Trend Report (new in this release) to reflect different dimensions and/or measures.

- Added a customization example, beginning on page 90, that demonstrates cascading prompt functionality.

Other Changes

Other changes, which describe the deployment and localization of GI2, are provided in the *Genesys Interactive Insights 8.1 Deployment Guide.* Also, refer to the *Genesys Interactive Insights 8.1 Universe Guide* for information about new reports and other new universe elements that were introduced or updated within the 8.1.*x* releases.

1

Introducing Genesys Interactive Insights

This guide picks up where the *Genesys Interactive Insights 8.1 Deployment Guide* leaves off. After you have configured Genesys Info Mart 8.1 and its supporting applications to measure and record contact center activity, after you have installed and set up your BusinessObjects (BO) environment, and after you have installed and imported the appropriate Interactive Insights reports and universe, this document assists you in managing the reports that are deployed with the Genesys Interactive Insights 8.1 release and in creating and/or modifying the reports and the supporting universe elements by using BusinessObjects software.

This document describes:

- how to use the features that Genesys has designed using BO XI 3.1 / BI 4.1 software,
- how universe elements are organized to paint a picture of contact center activity within your enterprise,
- fundamental principles and tips about how to tailor these the reports and universe elements to meet your business's needs.

This document does not describe how to operate BusinessObjects software, because that information is provided in documentation provided by SAP. For more information about the operation of Web Intelligence, InfoView, and/or Designer, refer to the BusinessObjects documentation, available from the following sources:

- from the SAP BusinessObjects Business Intelligence Platform Documentation CD,
- if you are a direct SAP customer, you can acquire the BusinessObjects documents from the SAP website at `http://help.sap.com/`
- if you obtained BO software through Genesys can use the following URL:

```
http://service.sap.com/sap/bc/bsp/spn/oem_portal/infouser_
request.htm?pid=0000279980&code=574DA18E763BA5920D1769FC17946653
&dstamp=20090604
```

This chapter contains the following sections:

Refer to the *Genesys Interactive Insights 8.1 Universe Guide* for more information about GI2 universe elements and reports.

Note: Because you can customize the appearance and functionality of BO's user interfaces, screenshots in this guide might appear differently in your environment.

Licensing Restrictions

GI2 and Info Mart licensing allow customers to add third-party data to enrich the reporting and analysis of your enterprise's operations. You may use GI2 (including the BusinessObjects Web Intelligence component) to report on any Genesys data sources. When reporting on non-Genesys data sources, Interactive Insights reports must contain data from at least one Genesys data source.

The restrictions regarding the number of concurrent users who can operate BusinessObjects software in your environment are bound by the number of GI2 seats that you have purchased. To obtain unrestricted licenses that enable you to freely access data sources other than Genesys Info Mart, contact SAP at `www.sap.com`.

GI2 8.1.3 is based on the Enterprise Edition of BusinessObjects Business Intelligence Platform 4.1

GI2 8.1.0 and GI2 8.1.1 are based on the "Professional Edition – Query, Reporting, and Analysis" of BO XI 3.1.

BO XI 3.1 is available in two other editions:

- • The Premium Edition
- • The Professional – Enterprise Reporting Edition

One key difference between the editions that is relevant to Interactive Insights is the number of content types that are available within InfoView. The Professional editions allow one content type while the Premium edition allows more than one. For details on the differences in features that are offered by each edition, please refer to the *BusinessObjects Enterprise XI Editions* document. Also, refer to the licensing agreement for further specific details.

Optimal Time to Run Reports

Note: As with other Genesys applications, it is assumed that your system's GMT (Greenwich Mean Time) setting is accurate and synchronized among the servers in your environment.

The Interactive Insights reports provide a snapshot of contact center and enterprise activity as of the last transformation and aggregation in Info Mart. For completed interactions in completed reporting intervals that fall prior to the last transformation and aggregation runs, the reports will consistently provide the same results every time the reports are run. However, the reports likely might reflect different results for interactions that are still active and/or for intervals that are incomplete—running a month-type report mid-month, for an obvious example, will yield results that differ from those that are obtained by running the same monthly report at the end of the month.

The headers of each report display the report date. This represents the timestamp when the report was run—which is entirely different from when the last transformation job was run. The date and time of the last runs of the data transformation and aggregation are reflected nowhere in the report, yet it is this very information that identifies the moment when the report's data accurately reflects contact center activity.

For the smaller aggregation levels, the variances in report results are more pronounced, given the configuration within the Genesys Info Mart application of the data chunk size that is to be transformed. It is important to emphasize here that Genesys Info Mart is an *historical*-reporting application. You must give care to the interpretation of report results when you use Interactive Insights as a near-real-time tool to obtain daily reports—for example, when the day has not yet completed or has only recently completed.

Many factors contribute to this latency in data availability (between the last transformation and aggregation runs and when the report is run), including the following:

• Scheduling of ETL jobs and job performance.

• Interaction volume and number of segments per interaction.

• Number of configured key-value pairs.

• Hardware and RDBMS that are used in your environment.

• Performance of ICON's merge procedure.

Read more about these factors in the Genesys Info Mart 8.1 documentation set and in the *Genesys Hardware Sizing Guide*.

![Genesys]

2 Managing Your BO Environment

Use the BusinessObjects (BO) Central Management Console (CMC) to manage your BusinessObjects environment. Figure 1 shows the CMC home page, which summarizes the tasks that administrators can perform by using this tool.
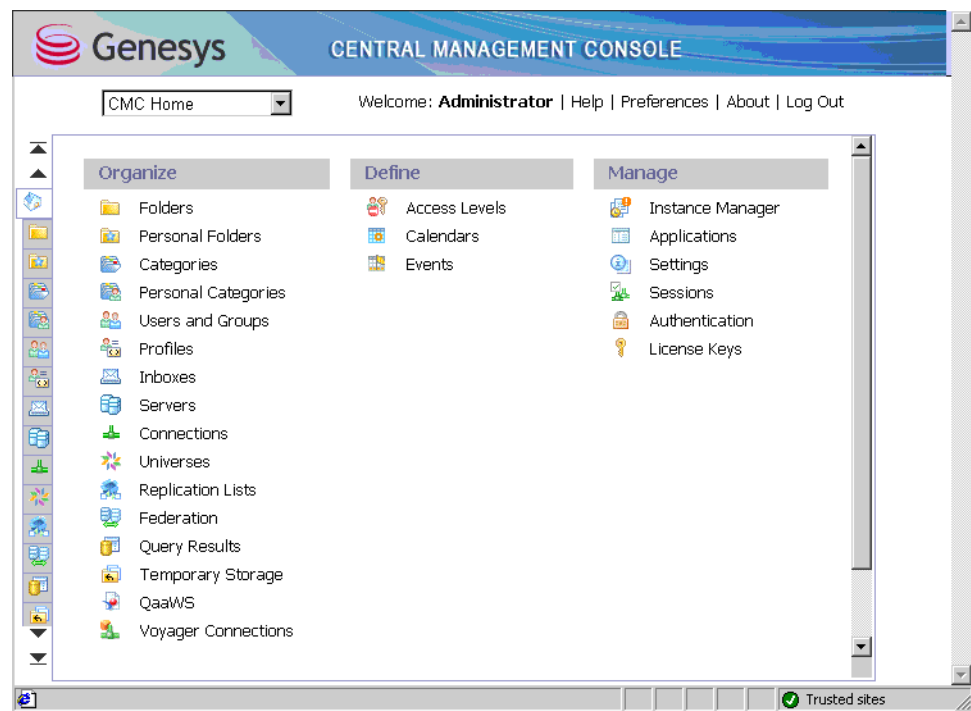
Figure 1: The CMC Home Page

CMC is a web-based application that enables users to control individual preferences. The BO Administrator must grant permission for the user to access the CMC.

This chapter discusses a few of the administrative tasks as they pertain to using the CMC to access Genesys Info Mart and the Interactive Insights reports. It contains the following sections:

For more information about using CMC, refer to the *BusinessObjects Enterprise Administrator's Guide*, particularly the chapter "Working with the Central Management Console".

Managing Folders

BO software uses folders to organize repository documents. Access to these folders and to specific items within them can be controlled by setting permissions. Figure 2, for example, shows user security permissions being invoked for a Genesys Interactive Insights (GI2) report for Genesys Info Mart.
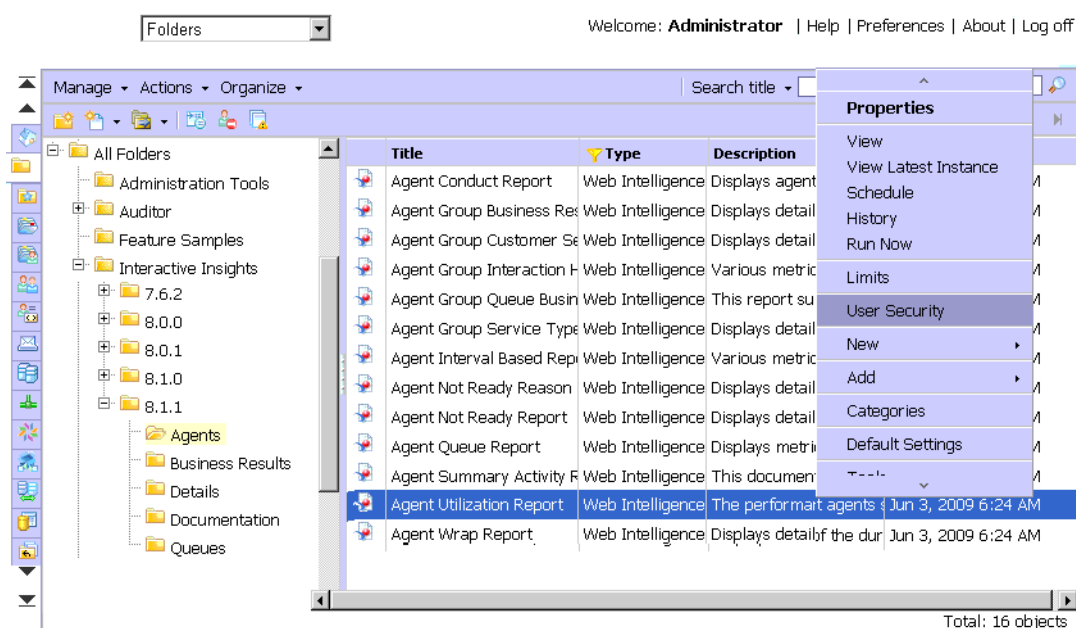
Figure 2:   Setting Folder Permissions Within CMC

Note: Beginning with the 7.6.2 release, release-specific subfolders of the Interactive Insights root folder houses report and documentation subfolders. This folder structure enables you to maintain customizations that you might have applied to previous universes. Text references and screen shots that appear throughout the GI2 documentation, however, might omit the release-specific subfolders.

A BusinessObjects (BO) installation deploys many default folders—such as `Administration Tools`, `Auditor`, and `Report Samples`—that are not used by GI2. As the BusinessObjects administrator, you can hide these folders to avoid confusion. To hide folders from select groups of users, apply no-access levels to those groups within the security profile of the folder's properties. Refer to the "Setting Folder Permissions" section of the *Genesys Interactive Insights 8.1 Deployment Guide* for further details.

The instructions in the *Genesys Interactive Insights 8.1 Deployment Guide* that describe redeploying Interactive Insights or reimporting the *same* Interactive Insights universe version, instruct you to first delete the root folder: `Interactive Insights`. If you do not delete the root folder, the GI2 installation routine creates a new folder, `Interactive Insights (1)`. Archive any custom reports that exist in this folder before you delete the folder.

To prevent the installation routine from overwriting a preexisting universe (`GI2_Universe`), export the universe to a BIAR (Business Intelligence Archive Resource) file for backup before you reimport the universe. When you customize reports, consider using a storage location that minimizes the need to relocate these custom reports when new releases of GI2 become available.

Managing Servers

You can view and modify server settings and stop and start BO servers by using the Central Management Console or Central Configuration Manager. Use either tool to troubleshoot your BO environment when you cannot access the GI2 universe or reports. A BOE XI 3.1 or BI 4.1 installation deploys more servers than are used by GI2; if you do not need them, you can safely stop any server that GI2 does not use, including the following:

- Predictive Analysis Server
- Adaptive Processing Server
- Dashboard Server
- Dashboard Analytics Server

Figure 3 shows one unused server being stopped within the Central Management Console.

If you use other BO functionality, such as scheduling reports, or setting up rules or events, you must have some of these servers running. Refer to the *BusinessObjects Enterprise Administrator's Guide* for a description of the servers and how to manage them.
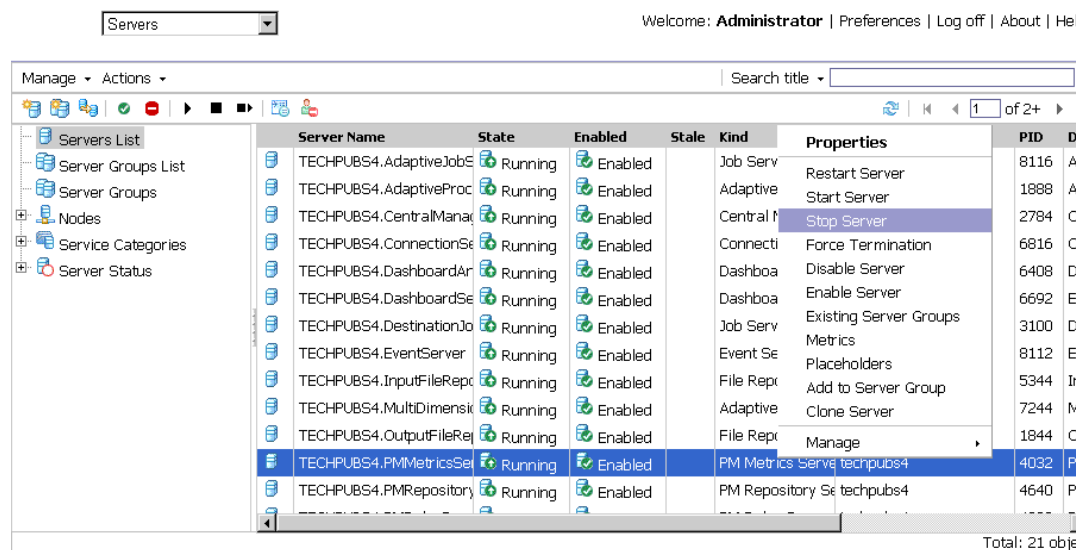
Figure 3:   Stopping the PM Metrics Server by Using CMC

Managing Connections

The GI2 installation routine copies a database connection object (`GI2_GIM_DB`) when the GI2 universe is imported into the BusinessObjects repository. This connection is reserved for Genesys use. You must define your own connection to link the GI2 universe with your data source (your Info Mart database). Refer to "Linking the Universe to Your Data Mart" in the *Genesys Interactive Insights 8.1 Deployment Guide* for step-by-step instructions on how to define a connection.

Managing the Universe

A BusinessObjects installation deploys several sample universes in the `Universes` root folder, including `eFashion, Island Resorts Marketing,` and `Activity.` These universes are not used by the Interactive Insights reports, and you can ignore them. The installation routine deploys a GI2-specific universe (`GI2_Universe`) which is stored in a release-specific subfolder of the Interactive Insights root folder.

Note: Some GI2 7.6.*x* releases stored `GI2_Universe` in the root folder, along with other BO universes.

The Administrator can *and should* control who has write access to `GI2_Universe` by setting user permissions appropriately in CMC. Unfettered access enables users to change definitions of universe elements at will. This, in turn, can potentially affect report results for all who receive and interpret them,

especially if the changes are imported back into the repository. The *Genesys Interactive Insights 8.1 Universe Guide* describes which measures of the GI2 universe are directly used in the Interactive Insights reports.

Note: BusinessObjects has no mechanism for tracking or reversing the changes made to a universe that has been imported into the BO repository.

Managing Users, Groups, and Access Levels

The `insights.biar` file, which is deployed during installation of GI2, includes the groups that are shown in Table 1 and the corresponding access levels. To complete the setup and make the various objects of the Interactive Insights repository available to other users in your contact center, you should set up BO accounts using the identification information of the users. You can assign these users to the predefined Interactive Insights user groups using the predefined access levels, or you can assign users to groups that you create with custom permissions. For instructions on how to assign users in a BO environment, refer to the relevant *SAP BusinessObjects Enterprise XI 3.1 Service Pack Installation Guide* or the *Business Intelligence Platform Installation Guide* for your specific operating system.

Table 1: Interactive Insights User Groups

Group	Summary
Interactive Insights report developers	Interactive Insights report developers can create reports in Web Intelligence from scratch, delete them, and edit and view their underlying SQL. Report developers can also schedule reports for later running and distribution and save them in other formats, such as PDF and Microsoft Office Excel.
Interactive Insights report editors	Interactive Insights report editors can modify existing reports and copy them in order to create new reports. However, they cannot create new reports within the Interactive Insights universe in any other manner. Report editors can also schedule reports and save results in other formats.

Table 1: Interactive Insights User Groups (Continued)

Group	Summary
Interactive Insights report viewers	Interactive Insights report viewers can specify values at the user prompts when they run the reports, view report results, and (in 8.1.3) even modify reports— they just can not save the modifications. Report viewers can also schedule reports and save results in different formats.
Interactive Insights report basic (8.1.3 only)	The Interactive Insights report basic users can see scheduled and existing report instances. A user within this group, however, cannot run reports or see the `Details` folder.

Note: The BusinessObjects installation routine creates other groups and users that might not be pertinent to Interactive Insights.

The Interactive Insights access levels consist of rights that enable or restrict users from managing elements in the BO repository. They correspond directly to the groups listed in Table 1; namely:

- The Interactive Insights report developer access level affords the rights that are necessary for users of the Interactive Insights report developers group.
- The Interactive Insights editor access level affords the rights that are necessary for users of the Interactive Insights report editors group.
- The Interactive Insights viewer access level affords the rights that are necessary for users of the Interactive Insights report viewers group.
- The Interactive Insights report basic access level affords the rights that are necessary for users of the Interactive Insights report basic group.

Refer to the *Genesys Interactive Insights 8.1 Deployment Guide* for a complete list of permissions that should be assigned to BO applications, groups, the GI2 universe, user connections to your Info Mart database, and the GI2 root folder and its subfolders.

3

Understanding GI2 Reports

The Interactive Insights reports for Genesys Info Mart compile contact center interaction activity and agent-summarized states for their telephony and multimedia DNs.

Data that summarizes virtual interactions, virtual agent activity, and Interactive Voice Response (IVR) port activity is excluded from agent-based reports. Data that pertains to IVR ports, however, is included in the business attribute and interaction detail reports if IVRs are configured as handling resources in your environment.

This chapter describes nuances that become apparent when you run the Interactive Insights BI reports. It contains the following sections:

About the Reports

The GI2 release for Genesys Info Mart 8.1 includes 16 agent activity reports, 7 queue activity reports, 6 detail reports, 3 outbound contact reports, and 9 business attribute reports. All of these reports were designed using Web Intelligence. The reports use the hierarchies, classes, dimensions, details, conditions (filters), measures, and prompts that are defined in the corresponding Interactive Insights universe: `GI2_Universe`. Figure 4 shows the organization of some of the reports in the `Agents` folder and some of the operations that you can perform within InfoView—the BO portal to Web Intelligence. To learn about performing basic report operations, such as

running and scheduling reports and printing, sharing, and exporting their results, refer to the BO XI 3.1 or BI 4.1 documentation.
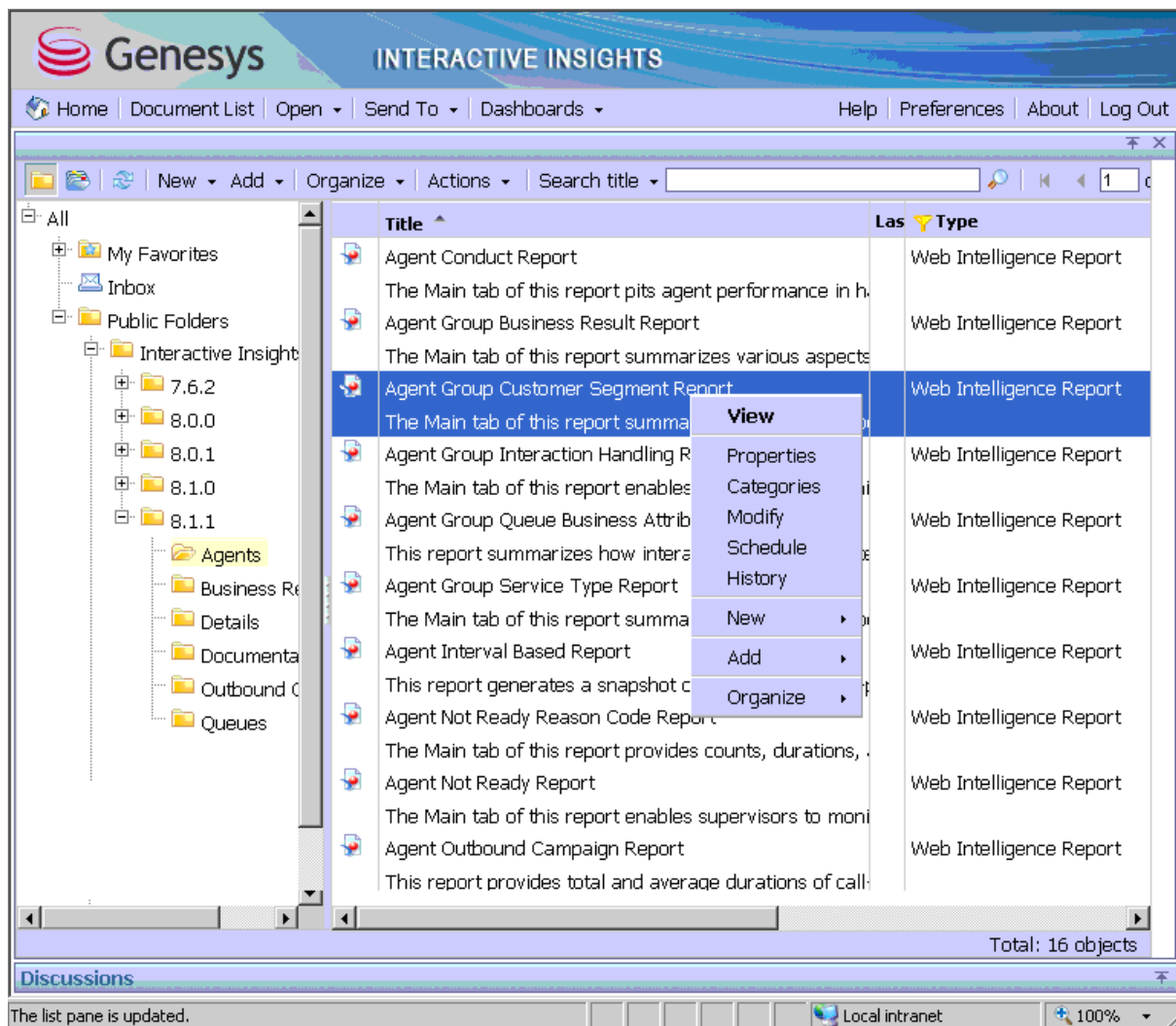
Figure 4:   Managing Interactive Insights Reports Using InfoView

Common Elements of Design Across All Reports

When you view, run on-demand, or modify a report, the report opens in the Web Intelligence interface, as shown in Figure 5.

The administrator configures permission that determine whether Web Intelligence is available for each user, and controls which operations the user can perform.

Edit Button

User Prompt Input Area   **Refresh Data Button**   **Drill Toggle**

Status Bar

Scroll down to see additional user prompts

Report Description Tab

User Prompt Info Toggle   **Report Main Tab**

Navigation Map Toggle

Report Summary Tab
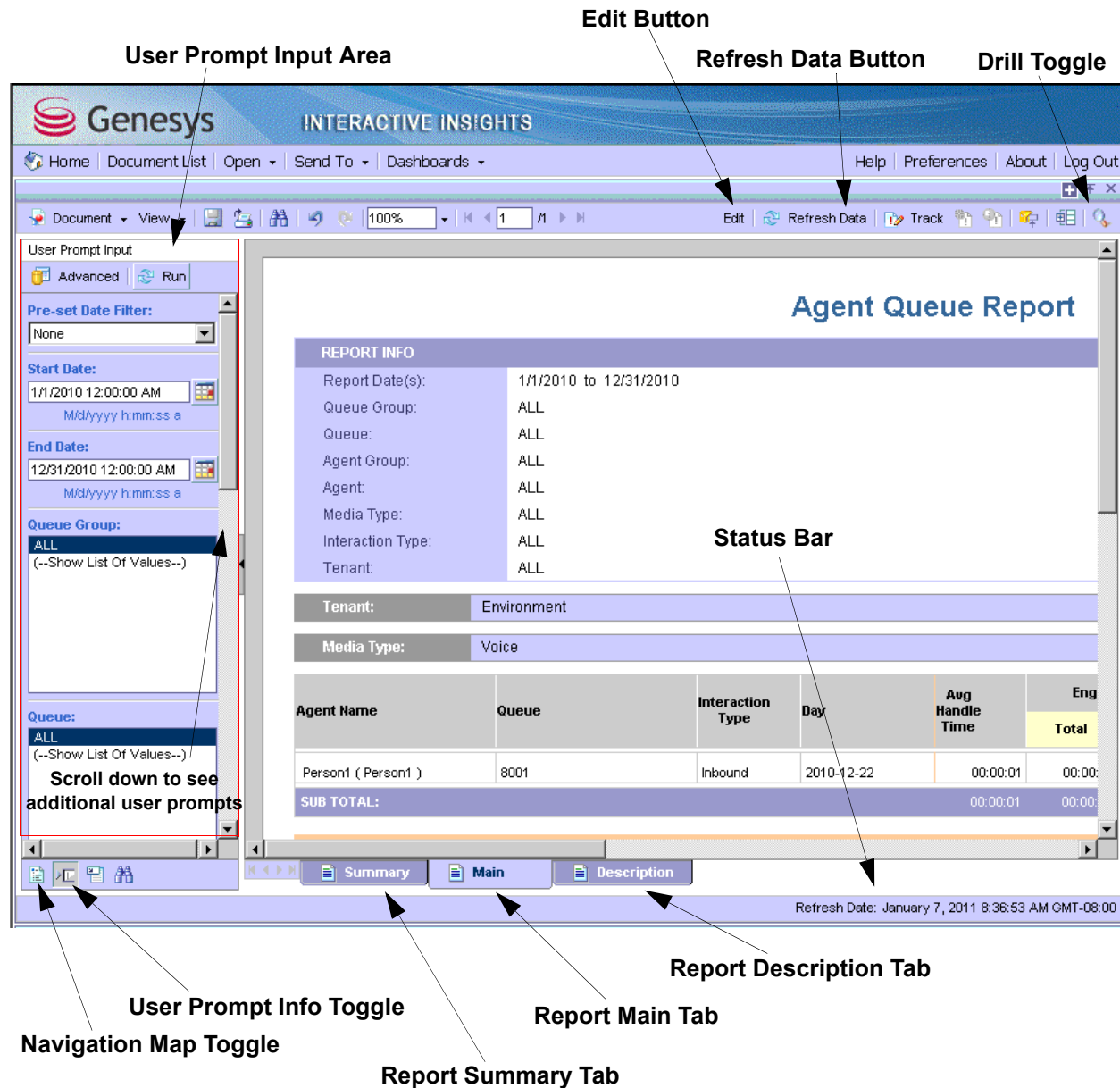
Figure 5:   Viewing Interactive Insights Reports Using Web Intelligence

Main and Description Tabs

The design of each report for all users includes a `User Prompt Input` area, a
`Main` tab[*] that contains one report, and a `Description` tab that describes the
report's measures.

_____

  * The Agent Summary Activity Report document contains 4 main tabs that house 4 reports. These tabs
    are titled `Active Time`, `% Active Time`, `Interaction Time`, and `% Interaction Time`. The Agent Uti-
    lization Report uses 2 main tabs: `Customer` and `Consult`. And, instead of a main tab, the Business Exec-
    utive Report provides 3 summary tabs: `Business Result`, `Customer Segment`, and `Service Type`.

The Main and Date Range Queries

If your user account has access permissions of an Interactive Insights Editor or Developer for the Web Intelligence application, the `Edit` button (shown in Figure 5) is available to you, and you can click it to view and edit a report's layout and underlying query.

Click the `Edit` button to open the `Report Panel`, and then click the `Edit Query` button (not shown in Figure 5 and available only to Developer users), to open the `Query Panel` (see Figure 6) and show the report's building blocks. Most of the Interactive Insights reports have been designed to display the results of two queries only, named `Main Query` and `Date Range Query`. However, in order to achieve a particular end result, the design of a few reports required the incorporation of a third (or fourth) query. Two reports—the Interaction Volume Service Type Trend and the Agent Details Activity reports—use a combined query, as shown in the image that appears to the left. If you have to customize reports, make sure that you are working with the correct query when there is more than one.
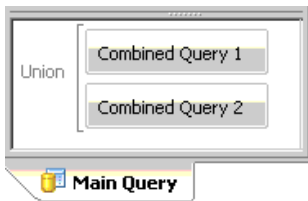
Figure 6 shows the `Main Query`, the `Date Range Query`, and the `Total Not Ready Query` of the Agent Not Ready Reason Code Report. Other Interactive Insights reports that make use of three or more queries include the following:

- Agent Conduct Report
- Agent Interval Based Report
- Agent Not Ready Reason Code Report
- Agent Summary Activity Report
- Agent Wrap Report
- Business Metrics Executive Report
- Interaction Volume Summary Report
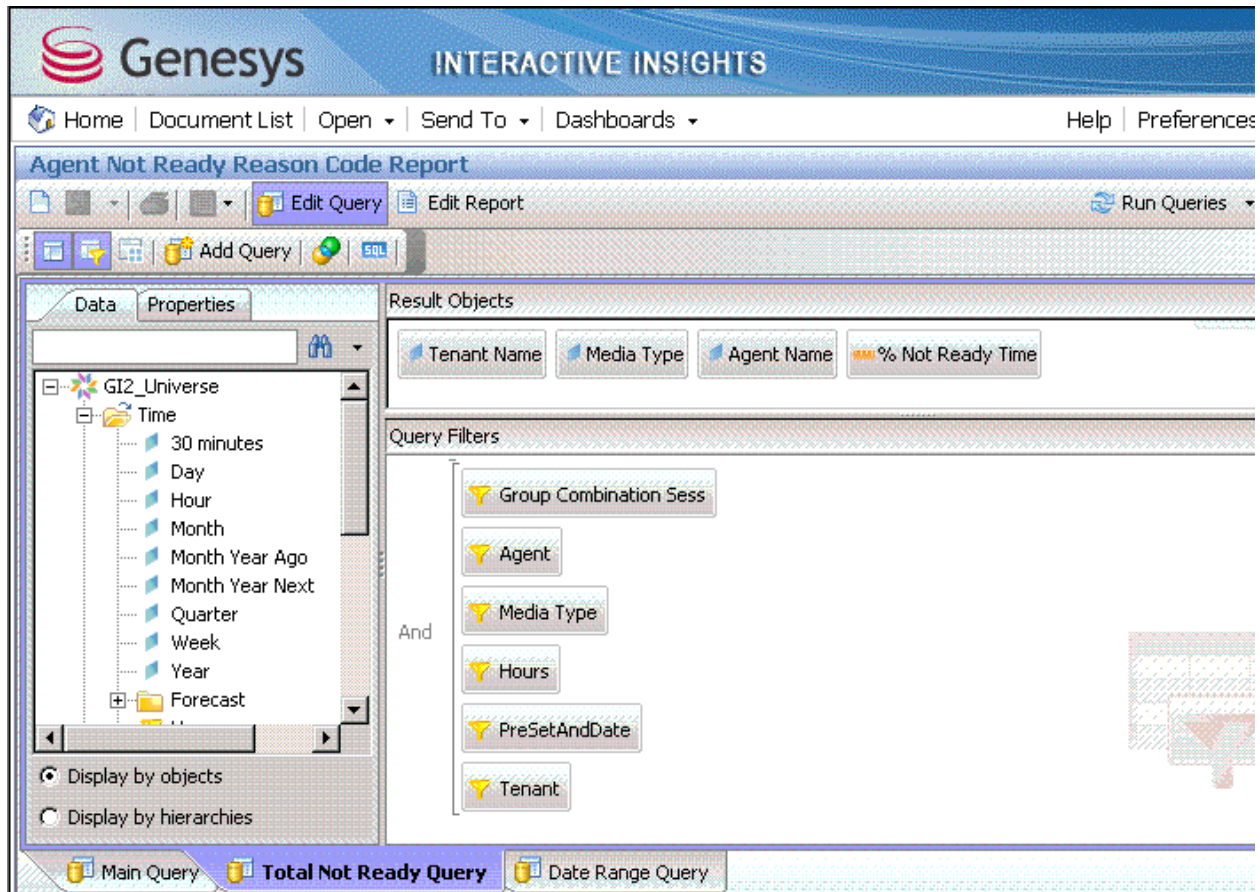
Figure 6:   Cutaway of the Query Panel for the Agent Not Ready Reason Code Report

Summary Tabs

Beginning with release 7.6.2, many of the reports also include one or more Summary tabs that highlight exceptional events that occur within your contact center or enterprise. Depending on the report, these exceptions might be highlighted in one or more colors to enable you to focus quickly on highly productive or problematic areas. Figure 7 shows sample data on the Summary tab of the Interaction Volume Service Type Report. With the exception of the Interaction Flow Report, none of the *detail reports* (that is, reports stored in the Details InfoView folder) include a Summary tab. Some other areas of the Web Intelligence interface are depicted in Figure 5.

Interaction Volume Service Type Report

REPORT INFO	
Report Date(s):	1/1/2010 to 12/31/2010
Service Type:	ALL
Service Subtype:	ALL
Media Type:	ALL
Interaction Type:	ALL
Tenant:	ALL

Tenant:	Environment

Media Type:	CHAT

% First Response Time Service Level over Time

Entered with Objective ■
% First Response Time Service Level ■

% First Response Time Service Level by Time and by Service Type

% First Response Time Service Level < 60	60 <= % First Response Time Service Level <= 80	% First Response Time Service Level > 80

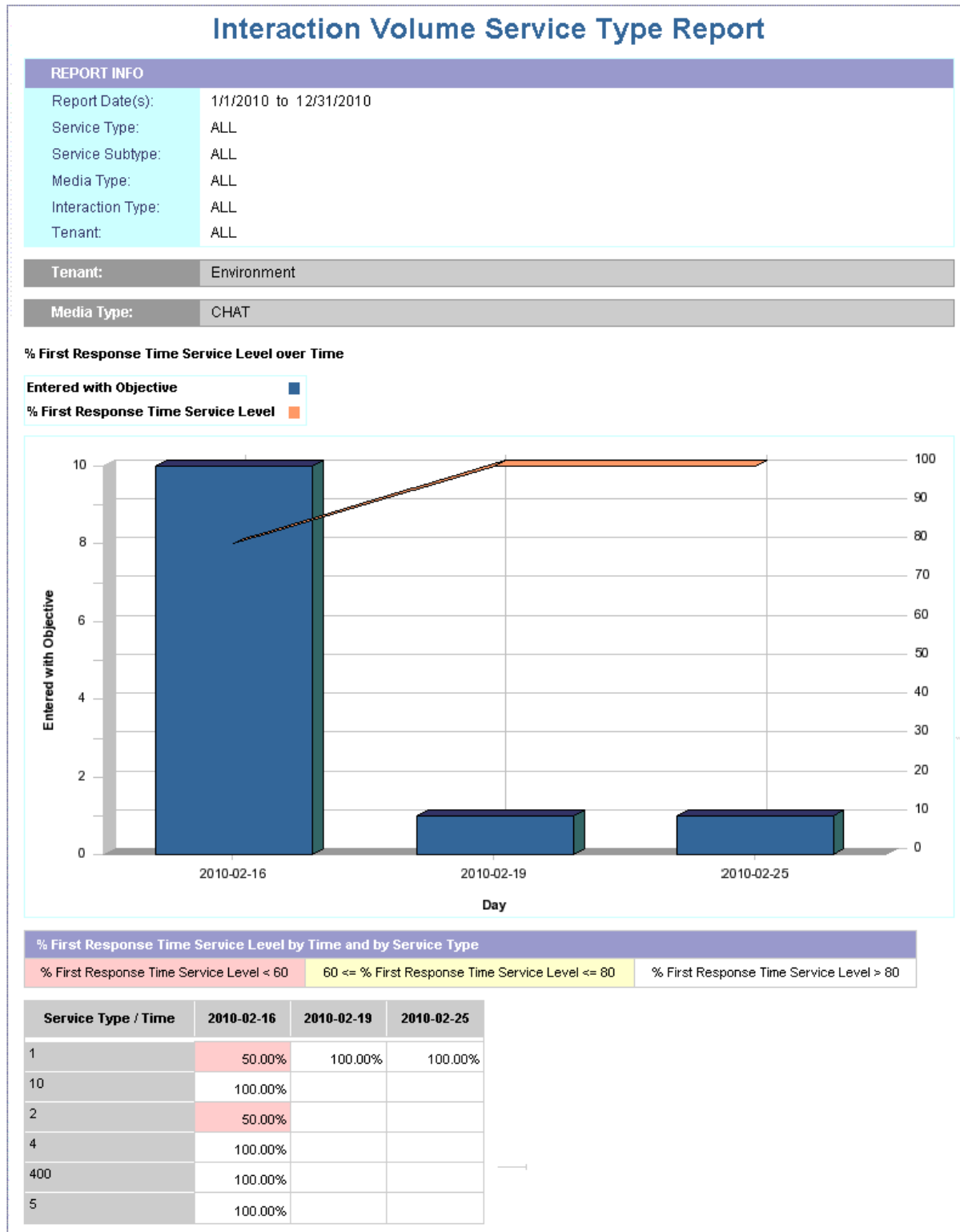| Service Type / Time	2010-02-16	2010-02-19	2010-02-25
1	50.00%	100.00%	100.00%
10	100.00%		
2	50.00%		
4	100.00%		
400	100.00%		
5	100.00%		

Figure 7:   Summary Tab of the Interaction Volume Service Type Report

Reports with Web Intelligence

This section describes nuances that apply when BO features work with Interactive Insights reports. For more information about Web Intelligence, refer to the BusinessObjects documentation.
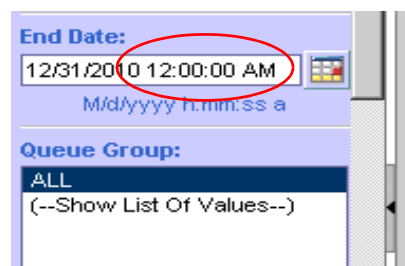
Using the Prompts

Each Interactive Insights report contains several user prompts that filter the data that the report will retrieve. (Refer to the `User Prompt Input` area of Figure 5 on page 25.) The values specified at these prompts apply to all tabs of the report. If the default specifications for these prompts are cleared and new values are not provided, you will not be able to run the report.

Hour Prompts

For the hourly reports, you must restrict your specification of hours to a range within one calendar day. You could not, for instance, request results for one Interactive Insights report where the shift operates from 9:00 PM of one day to 3:00 AM of the next day and expect results within the same report. Instead, you would run two reports—one from 9:00–11:59 PM of one day and the other report from 12:00–3:00 AM of the next day. Alternatively, you could customize the day-range prompts for the report to recognize hours.

Date Prompts

With the exception of the detail reports, InfoView and Web Intelligence ignore the time component of date prompts. This is common in the `Start Date, End Date,` and `Report Date` prompts of Interactive Insights reports. Thus, if you select a specific time in conjunction with a specific date, the Interactive Insights reports ignore the time and use only the specified date. Figure 8 highlights the time component that automatically appears with all date settings.

Figure 8:   BO Ignores the Time Component of Start and End Date Prompts

Regardless of the time that appears in the prompts, Interactive Insights uses the following times:

- `12:00:00 AM` as the start time for all dates that are specified under `Start Date`
- `11:59:59 PM` as the end time for all dates that are specified under `End Date`—even though `12:00:00 AM` appears in this field

So, to run a report for one day—for example, for July 30, 2012—you would designate the following:

- `07/30/2012 12:00:00 AM` (or any other time value) for the `Start Date` prompt
- `07/30/2012 12:00:00 AM` (or any other time value) for the `End Date` prompt.

where these user prompts appear in the reports. Even though start and end *appear* to be the same moment in time, the report actually spans 24 hours.

For the detail reports, the `Start Time` and `End Time` user prompts actually *do* recognize the time values that you designate, and you must indicate an appropriate time value along with a date.

Troubleshooting Date Prompts

When you select Date from a Calendar, BO can sometimes return the previous day's date. If this happens, you can correct the problem by setting the time zone to Coordinated Universal Time (UTC), using one of the following procedures:

For Microsoft Windows:

1. On the Microsoft Windows system where Tomcat is installed, open the Tomcat program group and select `Tomcat Configuration`.
2. In the Tomcat Configuration window, click the `Java` tab.
3. Under `Java Options`, append the parameter `-Duser.timezone=utc`.

For Linux:

1. Log in to the Linux account where BO is running, and open `.bash_profile` for editing.
2. Add the following rows to the `.bash_profile` file:
   ```
   TZ=utc
   export TZ
   ```
3. Save the file, and restart Linux.

Preset Date Prompts

Each Interactive Insights report also includes one preset date prompt that enables you to specify one date range—relative to the current date—in which to run reports. For example:

• Today	• Last Sunday	• Month to Date
• Yesterday	• Last Monday	• Quarter to Date
• Last Week	• Last Tuesday	• Year to Date
• Last Month	• Last Wednesday	• Last 30 days
	• Last Thursday	• Last 60 days
	• Last Friday	• Last 90 days
	• Last Saturday	

The preset dates that are available to you can vary from report to report. With the exception of the `Today` and the `...to Date` preset dates, all preset dates exclude information that has been gathered about the current day.

An Interactive Insights report uses the value that is specified in the preset date field over any other dates that are specified in the report's `Start Date`, `End Date`, and/or `Report Date` fields. For the report to recognize these other fields, you must set the preset date to `None`.

Free-Text Prompts

User prompts in some reports require that you type in values instead of selecting from a list. The Interaction Handling Attempt Report, for example, contains the following free-text prompts:

• Customer ID

• From

• To

• Interaction ID

The values that you supply in these fields must match exactly the values that are to be retrieved from your data source. Wild-card characters and operators, such as > and <, are not recognized. To specify more than one value in a field, separate each value with a semicolon [;]—for example:

    4155551234;5066746767;6504662829

To have Web Intelligence retrieve all values for these fields (satisfying the report's other conditions):

• Type `0` in number-based free-text fields, such as `Interaction ID`.

• Type `ALL`, character-based free-text fields, such as `Customer ID`.

Running a report with these fields cleared will cause Web Intelligence to display a dialog box that prompts you to specify the missing values.

Prompt Interrelationships

With the exception of the `Interaction Flow` report, there are no interrelationships between the user prompts in Interactive Insights reports as packaged. (You can add this functionality by customizing the reports to use cascading prompts [see pages 90–94].) From the perspective of InfoView or Web Intelligence, the selections that you make at one prompt are independent of the selections that you make at another. Although relationships between objects might be well defined within your data source, selecting a particular queue group from the `Queue Group` prompt, for instance, does not restrict the queues that are available at the `Queue` prompt to only those that belong to the selected queue group. Therefore, take care to make meaningful selections at all prompts.

For the `Interaction Flow` report, the selections that you make at the `Target Agent` and `Target Queue` prompts *are* interdependent. A selection of `ALL` targeted queues, for instance, returns all interactions (meeting the report's other qualifications) that pass through any queue that is associated with the indicated agent at the `Target Agent` prompt, and vice versa. In addition, although the values you select at other prompts in this report are independent—bearing no relationship to each another—the report will retrieve *all* legs of an interaction in which the criteria that you specify indicate to retrieve fewer than the entire life of the interaction.

Many of the reports have more than one date prompt, including `Pre-set Date Filter`, `Pre-set Day Filter`, `Start Date`, and `End Date` prompts. Know that the selection that is specified in the `Pre-set Date Filter` or `Pre-set Day Filter` trumps any other date specification that you make. Also, if your preset date selection is set to a date for which there is no data in your data mart, your report will return no results, regardless of any range of dates that you might have specified in the `Start Date` and `End Date` user prompts. For the report to recognize the values that you specify for `Start Date` and `End Date`, you must explicitly set the `Pre-set Date Filter` (or `Pre-set Day Filter`) prompt to `None`. Web Intelligence does not validate for meaningless input at the user prompts, such as end dates that fall before start dates.

Drilling Up and Drilling Down

The ability to drill up and drill down within a report to view results from a wider or narrower perspective is available through Web Intelligence. This feature is controlled by the ordering of dimensions in the hierarchies that are defined using Designer for the universe.

Note: The hierarchies in Designer differ from those that are used for aggregation of Info Mart data, which are described in the *Reporting and Analytics Aggregates 8.1 User's Guide.*

Hierarchies Inherent within GI2_Universe

Time Interval hierarchy:	`Year > Quarter > Month > Day > Hour > 30 minutes`
Service Type hierarchy:	`Service Type > Service Subtype`
Agent hierarchy:	`Agent Group > Agent Name`
Campaign Group hierarchy:	`Campaign Group > Campaign`
Queue hierarchy:	`Queue Group > Queue`
Interaction hierarchy:	`Interaction Type > Interaction Subtype`

Special Note about Drilling along the Campaign Group Hierarchy

Drill operations along the Campaign Group hierarchy can result in the display of duplicate rows in a report when agents belong to more than one agent group. When agent-campaign results are displayed, drilling down from campaign to campaign group and then drilling up from agent to agent group results in duplicate rows. Figure 9 demonstrates this anomaly in three cutaway illustrations of the Agent Outbound Campaign Report.

Tenant:	Environment					
Agent Name	**Campaign**	**Business Result**	**Day**	**Avg Handle Time**	**E**	
					Tot	
(Agent1)	Campaign New	DEFAULT_BUSINESS_RESULT	2011-02-07	00:00:10	00:	
SUB TOTAL:				00:00:10	00:	

■ ■ ■

Tenant:	Environment					
Agent Name ⇧	**Campaign Group** ⇧	**Business Result**	**Day** ⇧	**Avg Handle Time**	**E**	
					Tot	
(Agent1)	Campaign New @ Agent Group 1	DEFAULT_BUSINESS_RESULT	2011-02-07	00:00:10	00	
SUB TOTAL:				00:00:10	00:	

■ ■ ■

Tenant:	Environment					
Agent Group	**Campaign Group** ⇧	**Business Result**	**Day** ⇧	**Avg Handle Time**	**E**	
					Tot	
Agent Group 1	Campaign New @ Agent Group 1	DEFAULT_BUSINESS_RESULT	2011-02-07	00:00:10	00	
Agent Group 2	Campaign New @ Agent Group 1	DEFAULT_BUSINESS_RESULT	2011-02-07	00:00:10	00	
SUB TOTAL:				#TOREFRESH	00:	

Figure 9:   Drilling Anomaly When Agents Belong to > 1 Group

Drill-Up Operations

Drill-up operations display results that are based on the original selection criteria that you specified. So, drilling up from a daily report instance that spans two days, for example, provides results for only the two days that originally were selected for the new report instance, which, according to the `Time Interval` hierarchy, is aggregated by month. Further drill-up from the one-month report instance provides partial quarter results—containing data just for those two days that originally were selected—and similarly for drill-up to a year report. Reverse drilling also respects the original selection criteria.

Drill-Down Operations

Drill down operations from aggregated results to the interaction- or interaction-segment level are not provided in this release; however, the data is available in the Info Mart database (if it has not been purged), and reports could be created to provide this level of detail. (The `Interaction Detail`

reports provide interaction- and interaction-segment levels of detail without drilling from aggregated information.) The previously referenced `Interaction` hierarchy is based on an interaction's type and subtype (for example, `Inbound/ InboundNew`), not on the legs of the interaction.

Refreshing Data

You should refresh report data whenever the aggregation process completes and prior to first opening the report. Indeed, for that report to display any results, you *must* refresh the data upon opening a report that has never been previously opened at all. The process of opening a report, in and of itself, does not refresh the report's data. Refreshing the report's data is important if the report was previously saved with its results; if the data is not refreshed, Web Intelligence uses instead the data that is saved within the *report's cube,* which might contain outdated data. (Refer to BusinessObjects documentation for information about the content of report cubes.) You must also refresh a report upon drill when the report contains *smart measures*— measures whose aggregation function is `Database delegated.` By design, instead of the cell's value, Web Intelligence, displays `#TOREFRESH` as a place-holder until the report is refreshed.

Click the `Refresh Data` button, shown at the top of Figure 5 on , to refresh a report's data. The Web Intelligence status bar, a portion of which is shown in Figure 10, reflects the last date and time when the report was refreshed.

Figure 10: The Web Intelligence Status Bar, Showing the Refresh Date

The `Status` bar displays the following message if the report has never been refreshed:

`Refresh Date: Data is not refreshed.`

The aggregation process runs continuously throughout the day within the time frame that is determined by configuration options in the `[schedule]` section of the Genesys Info Mart `Application` object. Refer to the *Genesys Info Mart*

Deployment Guide for information about these options, and to determine the schedule setting in your environment.

Note: When aggregation values are not available at the time that a query is run, delegated measures can return #TOREFRESH values in some reports. To prevent this, you can enable an automatic refresh option either on the server, or on a per-document basis:

- To enable automatic refresh on the server, open the `Property` page of the Web Intelligence Application, and enable `Automatic Refresh`.
- To enable automatic refresh on a per-document basis, open the `Document Summary` page and enable `Automatic Refresh`.

What 0 Signifies in the Interactive Insights Reports

Whenever the underlying query for an Interactive Insights report returns no rows, the report displays no data. For example, a query to retrieve activity for a particular agent for a shift that the agent did not work returns no data. On rare occasions, Web Intelligence returns `No data to retrieve in Main Query`.

For those Interactive Insights reports that do return rows, but in which a particular field is not applicable, the reports return a value of `0`. For example, suppose that all interactions for a particular day were accepted within the first four service time intervals that were defined for a tenant; none were accepted beyond the fourth interval. As a result, the `Speed of Accept (seconds) Report`, for example—a portion of which is shown in Figure 11— displays `0` values for the each of the fifth through tenth intervals.

Legend						
ST	**ST 1**	**ST 2**	**ST 3**	**ST 4**	**ST 5**	**ST 6**
Time Range (secs)	From 0 to 5	From 5 to 15	From 15 to 30	From 30 to 45	From 45 to 60	From 60 to 9

Queue	Interaction Type	Day	Accepted Agent ST							
			1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
8001	Inbound	2010-12-22	4	20	5	2	0	0	0	
SUB TOTAL:			4	20	5	2	0	0	0	
TOTAL FOR TENANT:			4	20	5	2	0	0	0	
GRAND TOTAL:			4	20	5	2	0	0	0	

Figure 11: Zero Values in the Speed of Accept Report

The reports also return `0` for measures when the underlying database columns on which measures are based hold `0` values. Additionally, when a report is based on a query that gathers data from more than one aggregation table, empty cells in reports are possible where other cells contain data.

For composite measures, such as percentages and averages, wherever a `0` count or `0` duration ensues, the reports display `0` for such measures. The average duration of calls placed on hold, for instance, is `0` in the circumstances where either no calls were placed on hold during the interval, or where the duration of held calls was `0` seconds (or a fraction of `1` second).

The custom reports that you create might behave differently depending on their design. Refer to BO XI 3.1 or BI 4.1 documentation for further information.

Maintaining High Performance

Some elements are repeated throughout the universe not only for convenience or to reduce the potential for incompatibilities (see), but also to improve report-query performance. Such is the case, for example, for all time-related conditions that exist in more than one class:

- `DateRange`—in the `Activity`, `Agent Contact`, `Business Attribute`, `Contact Attempt`, and `Time` classes
- `PreSetAndDate`—in the `Activity`, `Agent Contact`, `Business Attribute`, `Contact Attempt`, `Summarized State`, and `Time` classes
- `PreSetAndDateRange`—in the `Activity`, `Agent Contact`, `Business Attribute`, `Contact Attempt`, `Queue`, `Summarized State`, and `Time` classes
- `PreSetAndDayAndTimeRange`—in the `Handling Attempt` and `Transfer` classes

In previous releases, many of the reports referenced date-time keys that directly queried records in the `DATE_TIME` table; this required an additional join from the aggregate table to the `DATE_TIME` table—which is a sizeable table filled with thousands of rows of metadata. Beginning with the 8.0 release, some of these date-time references within the reports have been redirected to query the date and time fields within the reports' base aggregate tables themselves—constituting a simpler design that requires one fewer complex join. As a direct result, performance for those reports improved.

As you build new reports or customize the provided Interactive Insights reports, be sure to weigh the decision to employ date-time elements from the `Time` class with the decision to employ those elements—where they exist—from the universe class that supports your report's underlying aggregate tables and views.

Preventing Large Amounts of Data from Crashing the WebI Server

As the size of your Info Mart grows with contact center data, the likelihood that users will request an Interactive Insights report with seemingly boundless data rises. Running such a report without restriction can potentially crash the BO system when user selections are not refined. This occurs because BO stores the data that it retrieves in memory. If there is insufficient memory, overflow will result. Specifically, BO returns the following error message when it is unable to handle a report with voluminous amounts of data or if it is charged to handle requests from too many concurrent users running reports in parallel:

```
Unexpected behavior: Java heap space.
```

To prevent overflow due to insufficient memory, Genesys recommends that you adjust any or all of the following:

- The memory pool size of your web server.
- The virtual memory of the host on which BO runs.
- The document cache of the Web Intelligence server.

Managing the Memory Pool Size of Your Web Server

Microsoft Windows x86 applications are limited to 2 GB each for maximum memory pool size. The default memory pool size for the Tomcat web server application that is deployed with BusinessObjects Enterprise, however, is 1 GB. To increase this value, you can modify Tomcat configuration to set the maximum memory pool size to a value within the 1,200–1,500 MB range.

Having this maximum number of pre-allocated memory blocks available for Tomcat enables memory allocation with constant execution. To change this setting for the Tomcat application, perform the following steps:

1. From your Microsoft Windows platform, open the Tomcat program group and select `Tomcat Configuration`.

2. On the `Java` tab, set the initial and maximum memory pool size to `512` and a value within the 1,200–1,500 MB range as shown in Figure 12.
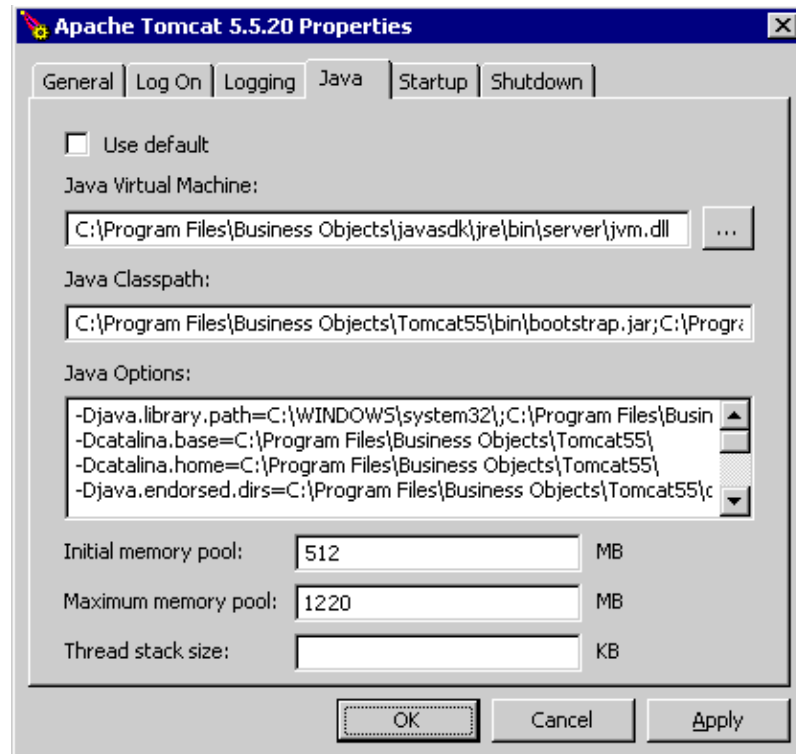
Figure 12: Setting Memory Pool Size Within Tomcat Configuration

3. Restart Tomcat.

Refer to the *SAP BusinessObjects Enterprise Administrator's Guide* for additional information.

Managing the Virtual Memory of Your Host

When your computer lacks adequate physical memory to perform an operation or run a program, Microsoft Windows uses virtual memory to compensate. For efficient GI2 operation, set the amount of virtual memory to a size at least 1.5 times that of your host's RAM.

To adjust your host's virtual memory, perform the following steps:

1. Open the properties associated with `My Computer`.

2. On the `General` tab, note the amount of RAM.

3. On the `Advanced` tab, in the `Performance` frame, click `Settings`. The `Performance Options` dialog box opens.

4. On the `Advanced` tab, in the `Virtual memory` frame, click the `Change` button. The `Virtual Memory` dialog box, shown in Figure 13, appears.
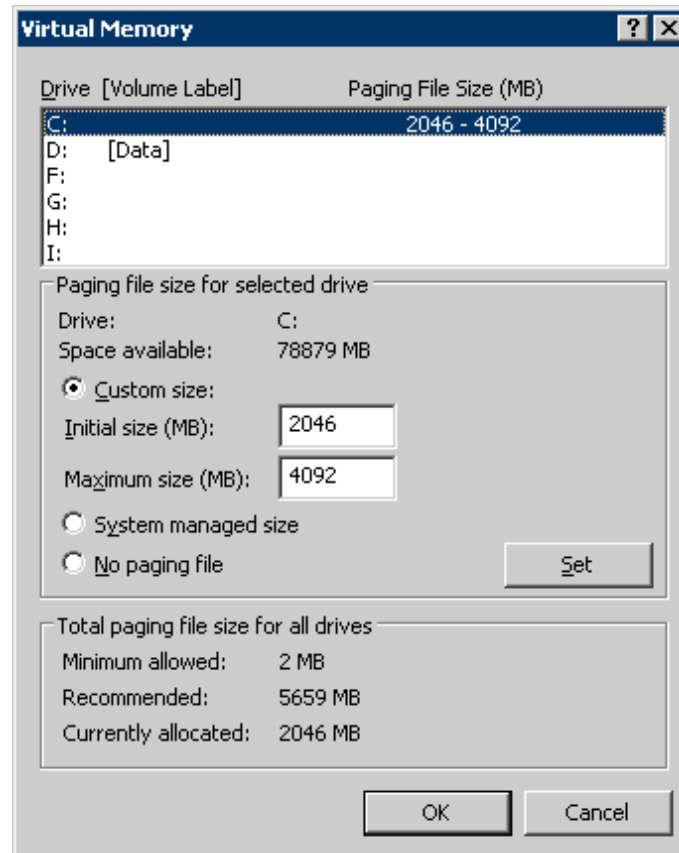
Figure 13: Setting Virtual Memory on the BO Host Computer

5. In the `Initial size` field, set the value for the initial page file size equal to the amount of RAM noted in Step 2.

6. In the `Maximum size` field, set the value at least 1.5 times the initial size.

7. Click `Set,` and then click `OK` to close the `Virtual Memory` dialog box.

8. Click `OK` to close the `Performance Options` dialog box.
   Click `OK` to close the `System Properties` dialog box.

The system may require a restart.

Managing the Web Intelligence Document Cache

Depending on the design of an Interactive Insights report and the types of actions being performed against it, memory requirements vary. Refreshing a report demands the greatest amount of memory for a Web Intelligence document because BO must query the Info Mart database and transfer the entire dataset to the Web Intelligence server.

File caching allows BO's web services to handle very large attachments without buffering them in memory. File caching compromises performance because BO's web services must process information by using files instead of memory. If file caching is not enabled, however, all JVM memory could be

utilized when handling very large attachments and replication can fail. You can configure BO web services to use file caching for large transfers to a file and to use memory for smaller files.

To manage the Web Intelligence document cache, perform the following steps:

1. Within the Central Management Console (CMC), click `Servers`.

2. Expand Service Categories, and open the properties of Web Intelligence Processing server. Figure 14 shows a portion of WebI properties in which the default values are set.

3. Set the value in the `Document Cache Cleanup Interval` field to `600` seconds.

4. Set the value in the `Cache Timeout` field to `20` minutes. This value indicates how often BO will clear the document cache.

5. If it is checked, clear the `Disable Cache Sharing` checkbox.

6. Set the value in the `Maximum Document Cache Size` field to `10240` KB.

7. Restart the Web Intelligence Processing server.

8. Locate and back up the `webi.properties` file. BO references this file from the following location:

    ```
    <Drive>:\Program Files\BusinessObjects\Tomcat55\webapps\
    AnalyticalReporting\WEB-INF\classes
    ```

9. Edit this file to uncomment the following lines:

    ```
    WID_FAILOVER_SIZE=60
    WID_STORAGE_TOKEN_STACK_SIZE=60
    MAX_HEAP_SIZE=1073741824
    ```

10. Restart the server computer.

Figure 14: Setting Web Intelligence Processing Parameters

Refer to the *SAP BusinessObjects Enterprise Administrator's Guide* (or the *Business Intelligence Platform Administrator Guide*) and the relevant SAP *Sizing Companion Guide* for further information.

Printing Reports

Although some effort was made to make Interactive Insights reports legible when they are printed, the primary focus of their design was to optimize them for onscreen viewing.

Some of the charts and tables that are presented on the Summary tabs of reports use background colors (for example, green, red, and yellow) to summarize the information that is provided in the main report tab; these colors might be difficult to differentiate when the report is printed to a black-and-white printer.

Printing most reports requires tabloid-size paper (11x17") and most reports are output with landscape orientation. Also, a few of the reports, such as the `Queue`

`Summary` and `Agent Utilization` reports, are packed with so much data that they encroach the minimum margin space that is required for some printers. If you find that your printed output is cropped at the margins, consider scaling down the report output to satisfy the minimum allowable margins for your printer. Typically, you can accomplish this either by adjusting the settings in the `Print` dialog box of your printer driver or through the `Print Setup` or `Page Setup` menu items of the software application of the report output. The ability to scale output is provided with some of the supported BO output formats. Consult the software documentation of your targeted output format to learn about its ability to scale, as well as the hardware documentation for your specific printer for information about the minimum margin widths.

![Genesys]

4 Understanding the GI2 Universe

This chapter contains the following sections:

About the GI2 Universe

The universe for Genesys Interactive Insights (GI2) consists of nearly 600 measures; 60 conditions (otherwise known as filters); several queue, agent, and time-related dimensions; hierarchies; lists of values; and hidden elements. These elements are organized and managed in the BusinessObjects (BO) Universe Designer application (see Figure 15). Within the BusinessObjects Business Intelligence Platform, Designer is known as either the *Universe Design Tool* or the *Information Design Tool*, depending on the universe format.

Most of the elements used by the Interactive Insights reports are defined in the universe. Other elements—such as the labels, the page footer, column headers, and a portion of report headers—are defined in the report's structure using Web Intelligence. However, there are many universe elements that are not used in any report. The *Genesys Interactive Insights 8.1 Universe Guide* describes each element and the reports that rely on them, if any.

Because universe elements serve as the semantic layer for all users, Genesys recommends that you do not allow your general user population to modify universe elements. Universe restructuring should be performed only by users who possess a profound understanding of Info Mart tables and columns and commensurate knowledge of BusinessObjects software. Genesys does not support modifications to universe elements beyond those customizations listed on page 60.

The Interactive Insights Universe in Designer

The elements that are provided within the Interactive Insights universe constitute the business-friendly semantic layer of the Info Mart. This universe contains:

• Predefined SQL-based objects that map to SQL structures (tables, columns, database functions) in the Info Mart.

• A schema of the tables and joins that are used in the Info Mart. (The right pane in Figure 15 shows only a portion of this schema.)
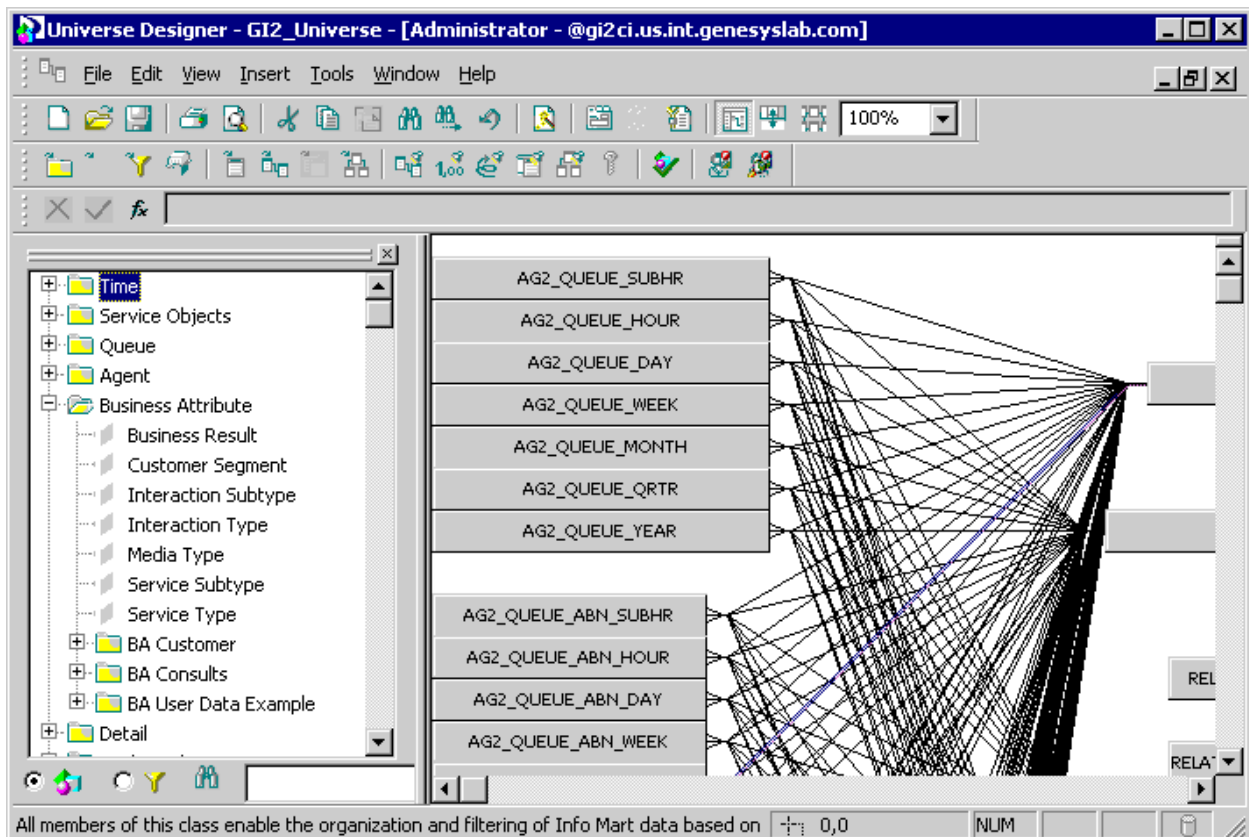
Figure 15: BusinessObjects Enterprise Universe Designer

Designer is the BusinessObjects tool that was used to define this layer and the tool that you can use (having been granted the appropriate rights) to:

• Modify the objects to affect which results are retrieved by the Interactive Insights reports.

• Create new universe objects (or universes) for use in Web Intelligence reports.

- See the *extended* definitions of objects that belong to the Interactive Insights universe. Basic descriptions of measures are visible to all users in the InfoView and Web Intelligence interfaces.

- Specify connection parameters to one or more database middleware.

Through Web Intelligence, report users connect seamlessly to the Interactive Insights universe and run queries against their data mart. Report users can perform data analysis and create new reports, choosing objects from the Interactive Insights universe, without ever seeing or having to understand the complex queries or data structures of their underlying data mart.

For instructions on how to use this component of the BO suite, refer to the relevant SAP *UniverseDesigner* (*Information Design Tool User Guide*).

Certain modifications to universe elements are supported; these are indicated in the description of a particular measure in the *Genesys Interactive Insights 8.1 Universe Guide.* In addition, if alternate definitions exist, they are provided in the measure's properties on the `Source Information` tab, which is shown in Figure 16. In Designer, supported alternate definitions begin with the phrase "`Developer use only`". (You might have to scroll to read all of the alternate definitions.) Refer to "Customizing Measure Definitions" on page 60 for the preferred procedure for changing these definitions.
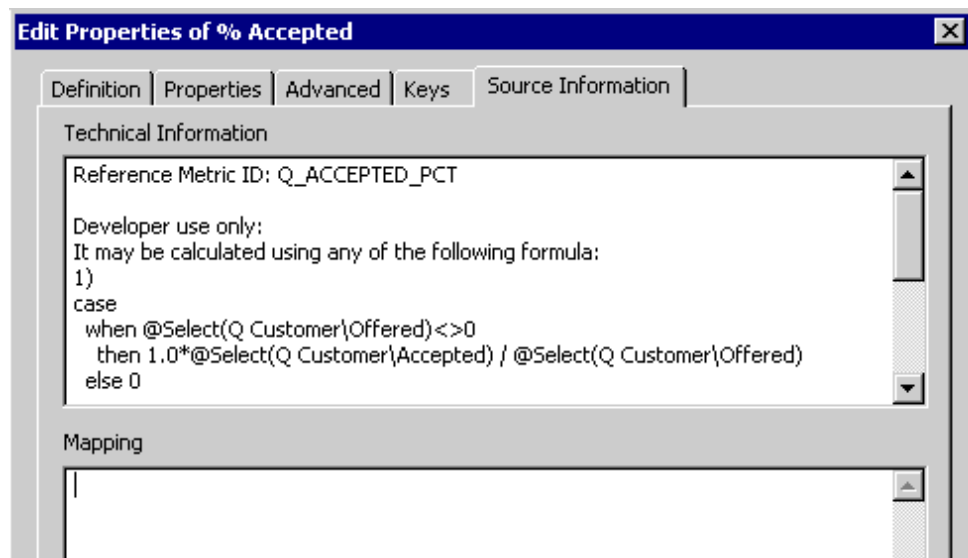
Figure 16: Supported Alternate Definitions of the % Accepted Measure

Reference Metric ID

Many measures are named identically across different classes. The full name of a measure includes the class in which the measure belongs, which thereby makes it unique. This full name, however, can be unwieldy and long. To assist further in the identification of a measure, most have been assigned a reference metric ID which appears on the `Source Information` tab of the measure's properties. This ID is informational only and is not referenced by any of the

reports. Should you need to contact Genesys Customer Care for assistance, this ID might be useful when you are describing a particular measure.

Figure 17 shows the ID that is assigned to the `Entered` measure that belongs to the `Q Customer` class in `GI2_Universe`. By contrast, the reference ID of the like-named measure in the `BA Customer` class is `T_ENTERED`.
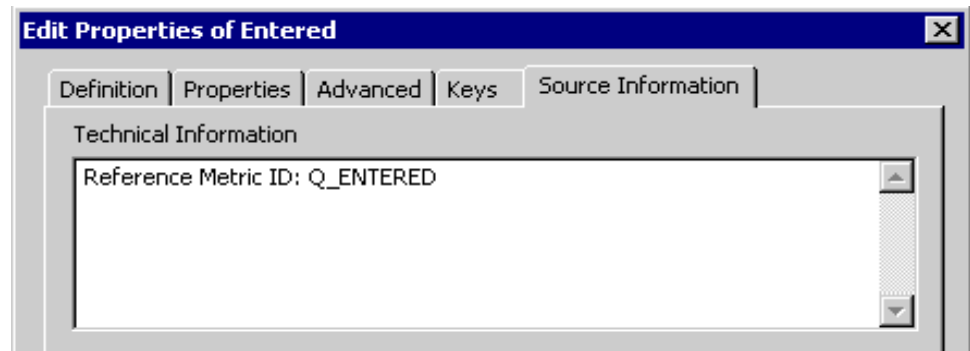

Figure 17: Reference Metric ID of the Queue\Entered Measure

Classification of Measures

In this release, all measures are classified as one of three types:

- Detail

- Interval

- Disposition

The *Interactive Insights Universe Guide* identifies each measure's classification.

Measures can also be described as measuring either *customer* or *consult interactions*, and for consult interactions, as either *warm* or *simple consultations*.

The following subsections describe each of these classifications.

Detail Measures

Detail measures provide the measure of one and only one activity, in contrast to interval and disposition measures, which aggregate information about a number of interactions that occur over a period of time. Some examples of detail measures include the following:

- `Flow\Duration`
- `Session\Active Time`
- `State\Reason Time`
- `Ixn State\Duration`

- `Handling Attempt\Queue Time`
- *`Flow User Data Example\Detail 8`*
- *`Handling User Data Example\Detail 16`*

(The last two are hidden universe measures that appear in italic font both in this document and in Designer.)

These detail measures should not be confused with BO's terminology for `Detail` objects—such as the `User Name` detail object of the `Agent Name` dimension. The two concepts are entirely different.

Interval Measures

Interval measures measure the activities occurring within the reporting interval as they occur (regardless of whether or not the interactions complete during the interval and whether or not the interval completes). Counts and durations of such measures are clipped where interactions cross over multiple intervals and are attributed to each of the intervals in which the activities occur. So, in the scenario in which an interaction is still waiting in queue when the hour changes, the time that the interaction actually waited in queue (3:58–4:03 PM, for example) during the first interval (two minutes, in our example) gets attributed to the first interval (3:30–3:59 PM). The remaining three minutes, in our example, get attributed to the second interval (4:00–4:29 PM). Furthermore, a count is attributed to each interval in which the interaction persists—that is, a count of 1 for the interaction that is waiting in queue during the first interval, and another count of 1 for the same interaction, waiting in queue, during the second interval.

Interval measures provide an interpretation of the activity that occurred during an interval. Some examples of interval measures include the following:

- `Interaction State\Consult Received Time`
- `Interaction State\Hold`
- `Summarized State\Active Time`
- `Summarized State\Busy`

The `Ixn State` class in the Interactive Insights universe houses additional interval measures.

Disposition Measures

Disposition measures provide a different interpretation of the count and duration of contact center activity, attributing their measure to the interval in which an interaction was received by the contact-center resource—whether the resource is a mediation DN or a handling resource, such as an agent. So, in the scenario in which an agent talks to a customer over day boundaries (11:45 PM –12:15 AM, for instance), all of the talk time (30 minutes, in this example) gets attributed to the first reporting interval (Day 1) and no time gets attributed to the latter interval(s) (Day 2). Likewise, the count (of 1 interaction) gets attributed to the first interval; no count at all gets attributed to the second. As such, disposition measures *are* additive; their counts from one interval can be added to the counts of other intervals to obtain a total count of activity across all intervals, without double counting.

Some examples of disposition measures include the following:

- `Activity\Avg Consult Received Time`

- `BA Customer\% Transfer Initiated Agent`

- `Q Customer\Hold`

- `Agent Contact\Preview`

Special Note about Campaign Disposition Measures

For measures that are associated with outbound campaigns, beginning with release 8.1.1, counts and durations are attributed to the interval in which contact attempts were made. This differs from prior releases, in which such measures were attributed to the interval in which the outbound campaign group session was started.

Customer versus Consult Interactions

The GI2 universe contains objects that measure only the customer-related legs of interactions or the consultation-related legs of interactions—described as *customer interaction* and *consult interaction,* respectively, within GI2 documentation. These terms are defined in the "Dictionary of Data Elements" appendix of the *Genesys Interactive Insights Universe Guide*. This distinction enables you create reports that summarize activities that better align with a contact center's core business.

Some universe measures mix together these different parts of an interaction's life cycle—most predominantly, those that are in the `Q Customer & Consults` class. Some measures commingle customer interactions with a subset of consult interactions, or *warm consultations* (a term that is also defined in the *Genesys Interactive Insights Universe Guide*.)

Table 2 summarizes whether measures in each universe class incorporate customer-related activity or consultation-related activity; and, if the latter, what type of consultation activity is measured therein. A few universe measures are related neither to customer nor consultation activity; this is indicated in the N/A column. (The `Bound` measures in the `Service Objects` class, for example, do not measure contact center activity; they are provided in an administrative capacity for the derivation of other measures.)

Table 2: Customer vs. Consult Interactions in the Universe

Class\Measure	Customer	Consult			N/A
		Simple	Warm	Both	
Abandoned Waiting STI class*	✓	✓			
Accepted Agent STI class*	✓				

Table 2: Customer vs. Consult Interactions in the Universe (Continued)

Class\Measure	Customer	Consult			N/A
		Simple	Warm	Both	
Activity class					
All Consult Warm measures			✓		
All other Consult measures		✓			
All Accepted, Offered, Responses measures	✓		✓		
Handle	✓			✓	
All other measures	✓				
Agent Contact class			✓		
All Consult Warm measures					
All other Consult measures		✓			
All other measures	✓				
BA Consults class					
All Consult Warm measures			✓		
All other Consult measures		✓			
BA Customer class*					
All Accepted measures	✓		✓		
All other measures	✓				
Queue\Q Consults class					
All Consult Warm measures			✓		
All other Consult measures		✓			
Contact Attempt class*	✓				
Queue\Q Customer class					
All Accepted measures (but not the Accept measures)	✓		✓		
All Entered, Distribute(d), and Offered measures	✓		✓		
All other measures	✓				
Queue\Q Customer & Consults class*	✓			✓	
Flow class\Duration	✓			✓	
Handling Attempt class					
All Customer measures	✓				
All Conference measures	✓				
Revenue, Satisfaction	✓			✓	
Queue Time, Response Time, Routing Point Time, and Total Duration measures	✓			✓	
Interaction State class	✓			✓	
Ixn State class*	✓			✓	
Service Objects class*					✓

Table 2: Customer vs. Consult Interactions in the Universe (Continued)

Class\Measure	Customer	Consult			N/A
		Simple	Warm	Both	
Session class*	✓			✓	
State class*	✓			✓	
State and Reason class*	✓			✓	
Summarized State class*	✓			✓	
Transfer class*	✓				

Naming Convention

Detail measures are sourced from the following Info Mart tables:

- `SM_RES_STATE_FACT`
- `SM_RES_STATE_REASON_FACT`
- `MEDIATION_SEGMENT_FACT`
- `INTERACTION_RESOURCE_FACT`

All interval measures are sourced from aggregation tables that contain `_I_` in the database object name—for example:

- `AG2_I_AGENT_SUBHR`
- `AG2_I_STATE_RSN_SUBHR`
- `AG2_I_SESS_STATE_SUBHR`

No special naming convention identifies a table as one that contains disposition measures, other than disposition measures are all sourced from `AG2_*` tables that do not to use `_I_` in the table name—for instance:

- `AG2_AGENT_CAMPAIGN_HOUR`
- `AG2_QUEUE_ACC_AGENT_HOUR`
- `AG2_AGENT_QUEUE_HOUR`
- `AG2_QUEUE_GRP_HOUR`
- `AG2_CAMPAIGN_HOUR`
- `AG2_ID_HOUR`
- `AG2_QUEUE_HOUR`
- `AG2_AGENT_HOUR`
- `AG2_QUEUE_ABN_HOUR`
- `AG2_AGENT_GRP_HOUR`

Each hierarchy contains seven tables and/or views, which have the following suffixes: `_SUBHR`, `_HOUR`, `_DAY`, `_WEEK`, `_MONTH`, `_QRTR`, and `_YEAR`.

Available Media Types

The *Genesys Interactive Insights Universe Guide* lists which media types can yield results different from zero for each measure in the universe. The available media types for the `Consult Standard Abandoned Waiting` measure in the `Q Consults` class, for example is voice and all open synchronous media types:

> **AVAILABLE MEDIA TYPES**
> Voice, Open (sync)

Table 3 attempts to summarize the applicable media types for groupings of measures across all of the classes in which they are found. "All Abandon measures", for instance, applies to all of those that measure the abandonment of interactions, whether they be consultations that were abandoned, abandoned inviting and waiting measures, short-abandoned measures, standard abandons, or abandoned-within-a-service-time-interval measures including durations, counts, maximums, averages, and percentages thereof.

Where the listed applicable media types for a particular measure within the group differs from the norm, the differences are footnoted at the bottom of the table. For those measures that can be classified as belonging to more than one grouping (that is, represented by two or more rows in the table), the most restrictive media-type rule applies.

For example, the `Consult Received Warm Wrap Time` measure can be classified in Table 3 under:

• "All Consult measures", which apply to all but Chat media.

• "All Warm measures", which apply only to Voice media.

• "All Wrap measures", which apply only to Voice media.

The last two media rules are the most restrictive of the three; therefore, they apply to the `Consult Received Warm Wrap Time` measure.

Table 3: Applicable Media Types Within the Universe

Type of Measure	Type of Media			
	Voice	Sync	All[*]	N/A
All Abandon measures		✓		
All Accepted/Not Accepted measures			✓	
All Active Time measures			✓	
All Bound measures and Is Current Data				✓
All Busy measures			✓	
All Clear measures			✓	
All Conference[†] measures			✓	
All Consult measures			✓	
All Dial measures	✓			
All Distributed measures			✓	
All Duration measures (not to be confused with all measures that measure duration)			✓	
All Engage measures			✓	
All Entered measures			✓	
All Finish measures			✓	
All Handle measures			✓	
All Hold measures	✓			
All Invite measures			✓	
All Offered measures			✓	
All Outbound measures	✓			
All Ready/Not Ready/Occupancy measures			✓	
All Redirected measures			✓	

Table 3: Applicable Media Types Within the Universe (Continued)

Type of Measure	Type of Media			
	Voice	Sync	All[*]	N/A
All Rejected measures			✓	
All Response, No Response, and Responded measures			✓	
All Revenue and Satisfaction measures			✓	
All Routed Other measures			✓	
All Skill measures			✓	
All Stuck measures			✓	
All Transfer measures			✓	
All Unknown measures			✓	
All Warm measures	✓			
All Wrap measures	✓			

*. The chat media is not applicable to Consult measures.
†. The e-mail media is not applicable to Conference measures.

Source of Aggregated Information

The tables that are created and populated by the aggregation engine are the immediate source of aggregated contact center data for Interactive Insights reports. This engine is deployed seamlessly with Interactive Insights installations and is described in the Reporting and Analytics Aggregates 8.1 documentation set. The reports, which are built on data from these tables, enable you to view the performance of contact center resources as interactions pass through the resources or are handled by them dimensioned by the following Info Mart dimension tables:

- CALLING_LIST
- CAMPAIGN
- DATE_TIME
- RESOURCE_
- RESOURCE_GROUP_COMBINATION
- GROUP_
- MEDIA_TYPE

- USER_DATA_CUST_DIM
- TENANT
- TIME_RANGE
- INTERACTION_TYPE
- INTERACTION_DESCRIPOR
- RESOURCE_STATE
- RESOURCE_STATE_REASON

The "Interactive Insights Reports" chapter of the *Genesys Interactive Insights 8.1 Universe Guide* lists the supporting tables for each report and some of the configuration options that control the Genesys Info Mart Server's population of them. Also, the *Reporting and Analytics Aggregates User's Guide* provides business views of each aggregate subject area. Furthermore, you should reference the *Genesys Info Mart 8.1 User's Guide* to learn how data is populated to Info Mart.

Measure Maps

Several measure maps illustrate the relationships among measures in the universe. These maps—along with the *Universe Guide,* this *User's Guide,* and a graphic illustrating the synchronicity of interactions—are accessible from the `Documentation` folder in InfoView. The measure maps that are available include the following:

- Agent Activity
- Agent Activity — Interaction State
- Agent Activity — Summarized State
- Business Attribute 1 of 2
- Business Attribute 2 of 2
- Agent Contact
- Contact Attempt
- Queue 1 of 2
- Queue 2 of 2

Figure 18, for example, shows one of the two `Business Attribute` measure maps, which corresponds to measures that were offered in the 8.1.1 release.
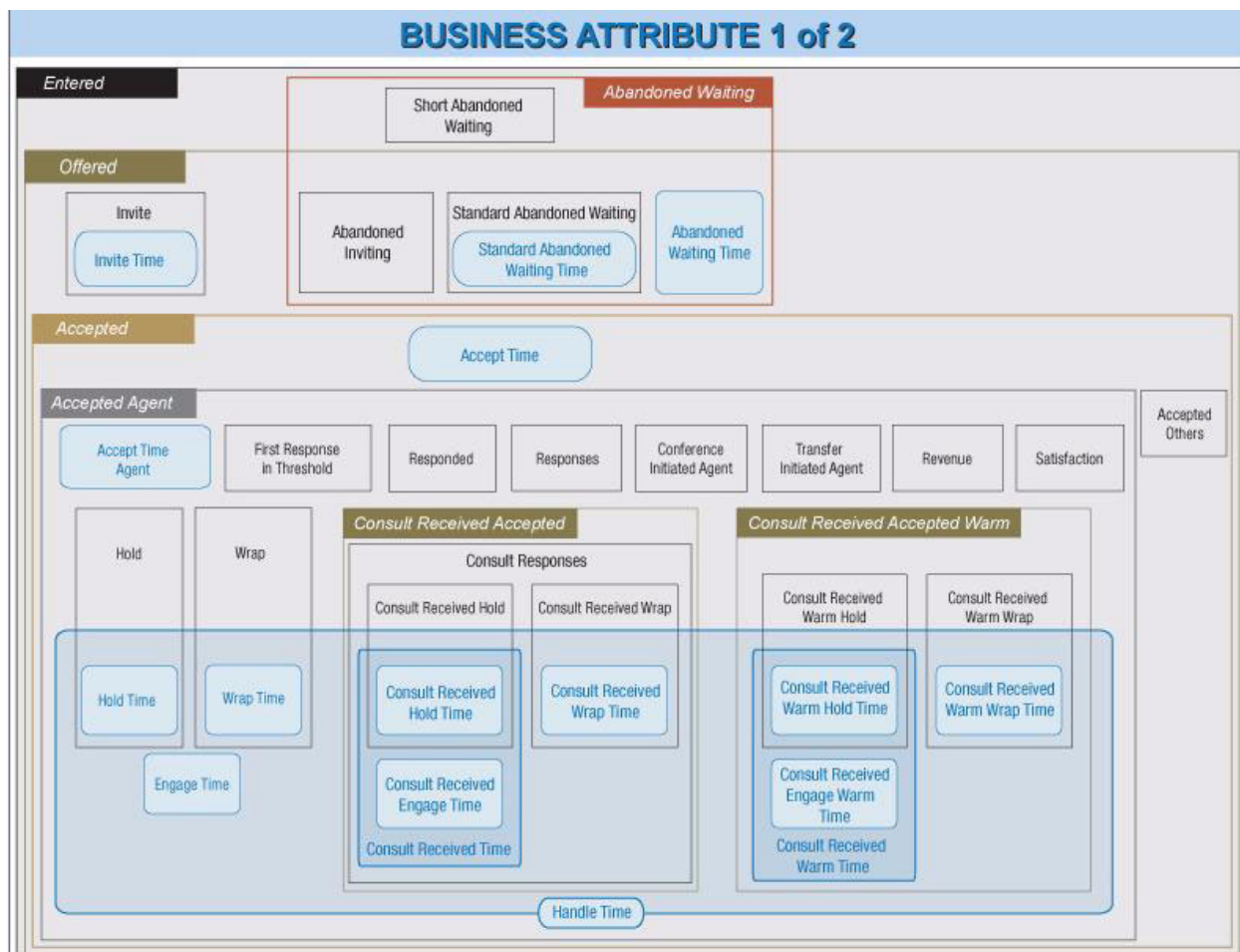
Figure 18: The Business Attribute (1 of 2) Measure Map (Release 8.1.1)

How Media-Neutral Measures Map to Call-Centric Terminology

A main feature, introduced in the Interactive Insights 8.0 release, is the reporting of internal and outbound interactions (in addition to inbound interactions) across chat and e-mail media channels (in addition to the voice channel). In order for the existing measures to be applicable to media other than voice media, the Interactive Insights language has adopted media-neutral object names instead of replicating like measures and assigning them media-identifying names.

You might be accustomed to viewing results that use voice-centric terminology, especially if your contact center monitors voice-only interactions. While `Avg Engage Time,` after consideration, *is* descriptive of the average length of an active telephone conversation, it does not resonate the same as the more widely known `Avg Talk Time.` To facilitate this transition to media-neutral terminology, Table 4 provides a mapping of industry-common terms to the names of Interactive Insights's media-neutral measures.

Table 4: Mapping Media-Neutral Measures to Voice Terminology

Voice-Centric Term	Media-Neutral Term in Interactive Insights
Abandoned while Ringing	Abandoned Inviting
ACW (after-call work)	Wrap
Answer	Accept (for Chat) Response (for E-mail)
Answered in Threshold	Accepted in Threshold
ASA (Average Speed of Answer)	Average Accept Time
Dialing	Inviting or Invite
Login Time	Active Time
Ringing	Alerting or Alert Inviting or Invite (Both Ringing and Dialing constitute Inviting measures.)
Talk	Engage

In addition, Genesys Info Mart prescribes some media-neutral states to interactions that differ slightly from how Interactive Insights reflects interaction (ixn) states in the names of some measures (see Table 5).

Table 5: Mapping of GIM Ixn States to GI2 Ixn States

GIM Classification	Interactive Insights Classification
Initiate	This is reflected in the Dialing component of Inviting measures.
Alert	Alerting. This is also reflected in the Alerting component of Inviting measures.
Connect	Engaged.
Hold	Hold.
Wrap	Wrap.
Unknown	Unknown.

This difference is most visible in data that is retrieved by the Agent Details Activity Report. For online media, for example, the report reports the state of an interaction as connected (`Connect`), whereas you might otherwise expect to see it classified as `Engaged`. Read more about Genesys Info Mart's classification of inter-action states in the *Genesys Info Mart Reference Guide*; they are described under the `INTERACTION_RESOURCE_STATE` table.

Genesys

5 Customizing the GI2 Universe and Reports

This chapter provides general guidelines for how to customize the GI2 universe and reports to achieve additional functionality. Emphasis is placed on customizing a *copy* of the reports and/or making a copy of the `GI2_Universe` universe. BusinessObjects does not maintain versioning of the changes that you make, and there are no rollback operations that can be performed after reports have been saved and universe elements have been exported to the repository.

This chapter contains the following sections:

- Customizing Measure Definitions, page 60
- Resetting Dimensions to Distinguish Same-Named Queues, page 63
- Creating Week-Level Reports, page 64
- Using 15-Minute Aggregation, page 67
- Removing Fields from Reports, page 69
- Using Attached Data, page 70
- Changing the Forecast, page 87
- Using Cascading Prompts, page 90
- Reporting Outside the GMT Time Zone, page 94
- Setting the Scope of Analysis, page 95
- Dealing with Incompatibility, page 96

After you have customized definitions in the universe, remember that you must export the universe back to the BusinessObjects repository so that your changes are made available to report users. This procedure is described in the *Genesys Interactive Insights 8.1 Deployment Guide*, under the "Exporting the Universe Back to the Repository" section.

Note: The procedures in this chapter describe customizations using BOE XI software and terminology.

> **Warning!** Genesys does not support the implementation of the procedures that are described in this chapter other than where it is explicitly noted. Universe customizations should be carefully designed, thoughtfully implemented, and fully tested in your own environment before they are placed into production. Genesys Quality Assurance has not tested these procedures, but believes that when they are used as guidelines, they will enhance your GI2 experience.

Customizing Measure Definitions

Genesys supports limited customization of the following measures in `GI2_Universe`:

Activity Class

`Avg Handle Time`
`Handle Time`

Queue Class

`% Accepted`
`% Accepted 80`
`Avg Handle Time`
`Handle Time`

BA Customer Class

`% First Response Time`
`  Service Level`

Summarized State Class

`% Occupancy`

The supported alternate definitions for each measure are provided only in the measure's `Source Information` properties in Designer, as shown in Figure 19. Alternate definitions are not provided within the documentation.
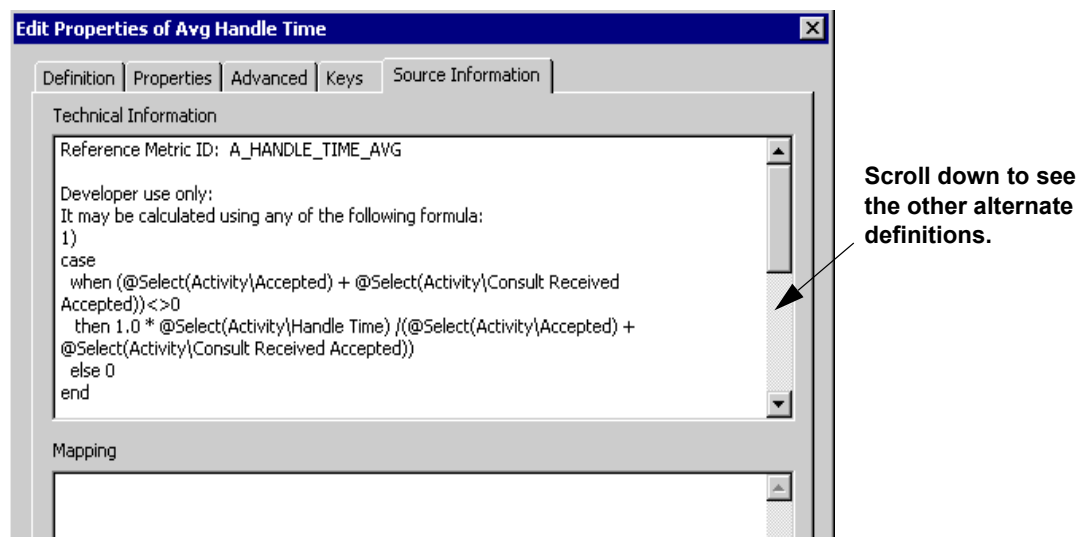
Figure 19: Alternate Definition of the Activity\Avg Handle Time Measure

Composite measures are based on the definitions of their supporting measures, which have definitions that might also be customizable. So, if you customize one definition, be sure to consider customizing the supported definitions for the entire family of

measures that is affected by your change. Also consider the full ramifications of your changes, as some of the measures are used by more than one Interactive Insights report. The `Activity\Avg Handle Time` measure, for instance, is used by the following seven reports:

• Agent Conduct Report

• Agent Group Business Result Report

• Agent Group Customer Segment Report

• Agent Group Interaction Handling Report

• Agent Group Service Type Report

• Agent Queue Report

• Agent Utilization Report

Changing a measure's definition in Designer affects all of the reports in which the measure is used. Refer to each measure's description in the *Genesys Interactive Insights 8.1 Universe Guide* for a listing of Interactive Insights reports that employ a measure. This guide also lists whether customization for a particular measure is supported under the `Alternate?` field of the measure's form—a portion of which is shown in Figure 20 for the `Activity\Avg Handle Time` measure.

Figure 20: Alternate Field, Showing Whether Customization Is Supported

To change a measure's definition:

1. Within Designer, open the measure's properties.

2. On the `Source Information` tab, copy the appropriate alternate definition from the `Technical Information` frame. There might be more than one alternate definition from which you may choose.

3. On the `Definition` tab, replace the definition that is listed in the `Select` frame with the alternate definition that you copied.

4. On the `Properties` tab, verify that the correct aggregation function is assigned. (Designer might reset this value to `Sum` when you make certain changes to measures.)

5. In the `Description` frame, edit the measure's description to match the definition that you chose.

6. Click `OK` to save and close the measure's properties.

7. Export the universe back to the repository so that the changes that you make are available to all users.

To ensure that report users see accurate descriptions, also update measure descriptions, as appropriate, in the reports in which these customized measures are used. The reports do not inherit descriptions from Designer; you must update them manually. These descriptions exist on the `Descriptions` tab of each report in Web Intelligence (see Figure 21).

You can also create new measures that are based on the definitions of existing universe measures by using the `Formula Toolbar` within Web Intelligence. These new measures are available only within the Web Intelligence document in which you create them. In general, Genesys does not recommend this approach to define new measures. Allowing report users to use the custom formula capability can result in multiple versions of the truth. Customizing the universe should be a restricted feature in your environment.

Figure 21: The Report's Description Tab in Web Intelligence

Resetting Dimensions to Distinguish Same-Named Queues

The design of the GI2 universe assumes that the contact center objects in your enterprise are distinct and uniquely named. While this is usually true in single-switch environments, it might not be true in more complex environments that employ more than one switch. In such scenarios, the names of queue objects *could* be identical from one switch to the next.

Because the contact center objects in your enterprise might not have unique names, the queue-based Interactive Insights reports consider only a queue's name when retrieving data about queue objects. The reports do not filter data based on the switch from which the data originated. As such, you should carefully interpret the results of queue-based reports in multiswitch environments. The queue-based Interactive Insights reports display the results for *all* queue objects sharing the same name instead of only the results from the intended queue.

You can reset the definition of queue dimensions to recognize the queue's switch. To do so, within Designer:

1. In the definitions of all `Queue` dimensions, wherever they occur, replace the `SELECT` statement with the following:

   `RESOURCE_Q.RESOURCE_NAME,'@',RESOURCE_Q.SWITCH_NAME`

   > **Note:** There are other queue-type dimensions, such as `Last Queue`, `Source Last Queue`, and `Target Last Queue`, whose definitions would require comparable modifications.

2. Change the `WHERE` clause of all `Queue` conditions, wherever they occur, from:

   `...(@Select(Queue\Queue) IN @Prompt...`

   to

   `...(RESOURCE_Q.RESOURCE_NAME IN @Prompt...`

3. Save your work and test the results.

4. When you are finished, export the universe back to the repository.

With these changes in place, queue-based reports display the name of the queue's switch along with the name of the queue object instead of displaying only the queue's name. However, in some cases the *queue@switch* values might be too long to fit within the report headers, labels, and table cells where they might occur. The Interaction Flow Report, for instance, populates the names of queue objects in tables cells under the `Source` and `Target` columns of the report. You can adjust the layout of this and other reports for better presentation.

Creating Week-Level Reports

This release of GI2 includes no weekly reports, although the Genesys Info Mart server regularly aggregates and populates week-level data in the `AG2_*_WEEK` tables in Info Mart. You can use these tables as the source for week-level Interactive Insights reports that you can create, either:

- Drillable week-level reports or
- Week-level-only reports

If you want week-level-only reports without the ability to drill-up or drill-down functionality to the other aggregation levels, replace the time dimension that is used in the reports with the `Week` dimension. Follow the steps that are provided in "Week-Level-Only Reports".

For drillable week-level reports, you must do the following:

- Redefine the `Day` dimension to be a week-compatible day or create a new day-type dimension altogether (see "Creating a Week-Compatible Day Dimension" on).
- Modify the universe's `Time` hierarchy to define one drill path along the desired dimensions (which includes the `Week` dimension). Refer to BusinessObjects documentation for details about editing hierarchies.
- Replace the time dimension used in the applicable reports with the `Week` dimension (to create week-level reports). If, however, you want report users to be able to drill up for week-level results, this step is not necessary.

BusinessObjects Enterprise enables you to create hierarchies to facilitate multi-dimensional analysis in the reports. It is possible to create and maintain two or more time-related hierarchies within one universe:

- `30 minutes > Hour > Day > Week` and
- `30 minutes > Hour > Day > Month > Quarter > Year`

However, if you create such a sophisticated system, there can be complications with respect to performing drill operations in the reports. If hierarchies share the same dimensions, as previously demonstrated, drill operations become less convenient.

No further modification to the reports is required to enable users to drill up for week-level results. However, you must inform your users of a week's boundaries, as they are defined within your data mart. This is discussed in "Understanding Week Boundaries" on .

Week-Level-Only Reports

The `Week` dimension has been omitted from the `Time` hierarchy in Interactive Insights reports in this release, which disables drilling up or down for week-level results. You can, however, create new copies of some of the reports and

customize them to summarize contact center activity in week-only time buckets. Week-level-only reports cannot be drilled along the `Time` hierarchy.

You can enable week-level reporting in all reports except the following:

- Agent Interval Based Report
- Agent Not Ready Reason Code Report
- Agent Not Ready Report
- Agent Summary Activity Report
- Agent Wrap Report
- All reports in the `Details` folder

Procedure for Creating Week-Level-Only Reporting

Customize a copy of an Interactive Insights report as follows:

1. In InfoView, open a copy of a report.

2. Click `Edit` to start Web Intelligence.

3. Edit the report to add the `Week` dimension to both the report's query and the report's layout.

4. (Optional) Edit the prompts to display a selection of dates along week boundaries. This is a complex task. Alternatively, you can inform your report users of the week boundaries as defined within your data mart. Refer to "Understanding Week Boundaries" on for information on this topic.

5. Remove any other time dimension from both the report query and its layout.

Test your changes by running the report and verifying its results.

After making all changes, export your work to the BusinessObjects repository, following the procedure in the "Exporting the Universe Back to the Repository" section of the *Genesys Interactive Insights 8.1 Deployment Guide*.

Creating a Week-Compatible Day Dimension

You must create a week-compatible day dimension if you intend to enable your report users to drill up from or drill down to day-level results in the reports that you customize. In the default configuration, the `Day` dimension in the `Time` class is a month-compatible day, sourced from the `LABEL_YYYY_MM_DD` column of the `DATE_TIME` table. This field references the particular day with respect to the month and year in which the day falls; days are consequently numbered as `01` through `31`. To reference a particular day within a given week, source the `Day` dimension from the `CAL_DAY_NUM_IN_WEEK` field of this table, which stores the day number of a week—starting with `1` for the first day of the week and ending with `7` for the last day of the week.

To this end, within Designer, you can do either of the following:

- Redefine the existing Day dimension.

- Create and define a new dimension, such as Day in Week.

If you choose the first method, the new definition affects the results of all other reports that provide day- and month-level results. If you choose the second method, you must substitute the new dimension, in both the query panel and report layout, in all reports for which you want to generate week-level results.

When you have finished customizing the universe, you must export your work to the BusinessObjects repository so that this redefined or new dimension is made available to report users. This procedure is described in the "Exporting the Universe Back to the Repository" section of the *Genesys Interactive Insights 8.1 Deployment Guide*.

Understanding Week Boundaries

The boundaries of 15-minute, hour, day, month, quarter, and year aggregation levels are very well defined within any given Gregorian calendar year because each denomination represents an integral fraction of that year; there are four whole quarters in a year, 12 full months, 365 (or 366) complete days, and one year in a year. No single hour splits in such a way that part of the hour resides in one year and the other part in the next, as is precisely the case for the beginning and/or ending weeks of any given year.

Over and above this dual membership in each year, your system locale settings specify your preferred date-related conventions, which include the definition of a week and on which day the week begins. Different cultures observe different date conventions. As such, these variations in what constitutes a week merit special discussion.

Week Boundaries, as Defined in Genesys Info Mart

The beginning of whole weeks in the Info Mart is determined by the settings of the [date-time]/first-day-of-week Genesys Info Mart configuration option. By default, each week begins on Sunday and ends on Saturday. If report users specify any other week range in the User Prompt Input area of the week reports that you create in Web Intelligence, such as Monday to Sunday (when the default settings are used), the generated results display data for two partial weeks instead of one seven-day period. In the Monday–Sunday example, this breaks down to:

- Six days, Monday–Saturday, for the first partial week and

- One day, Sunday–Sunday, for the second partial week.

In addition, the first and last weeks of the year could be partial weeks, depending on how the simple-week-numbering Genesys Info Mart option is configured. A true value for this option mandates that Week 1 begin with

January 1 and that the last week end with December 31. Simple week numbering is not the default.

There are other configuration options that affect the content of a week, including the following:

- `min-days-in-first-week`

- `date-time-min-days-ahead`

- `date-time-max-days-ahead`

Refer to the *Genesys Info Mart 8.1 Deployment Guide* for a complete discussion of these and other week-related options. (The Genesys Info Mart 8.*x* release also supports ISO-8601–compliant weeks which this section does not address.) Refer also to the discussion of the `DATE_TIME` table in the *Genesys Info Mart 8.1 Reference Manual* for more information about the definition of a week that is used by Genesys Info Mart.

Using 15-Minute Aggregation

All of the out-of-box Interactive Insights reports (except for the reports in the `Details` InfoView folder) enable drill-down of results to a 30-minute level, by default, to enable you to review performance of your contact center for each half-hour of a day. The `sub-hour-interval` Genesys Info Mart configuration option controls this aspect of reporting to this subhour level. The Genesys Info Mart Server, however, accepts a value of `15min` for this option, which enables 15-minute aggregations, and therefore reporting at a 15-minute level.

To enable 15-minute reporting in the Interactive Insights reports, you change this option to `15`, rerun the aggregation job, and customize the universe and reports to use the `15 minutes` dimension. Note that the *Reporting and Analytics Aggregates 8.1 Deployment Guide* recommends that the aggregation level to use be set during the initial installation of Genesys Info Mart, and that it not be changed thereafter.

Note: Either 15 or 30 minutes is allowed—but not both simultaneously. Therefore, drill-up operations from the 15-minute level in the Interactive Insights reports that you customize take you directly to hour-level results, and not to 30-minute results.

Except where indicated, all of these activities can be performed only on Microsoft Windows platforms:

1. In the Genesys Configuration Manager, open the Genesys Info Mart `Application` object that controls Info Mart population.

2. Stop the aggregation process.

   a. In the Genesys Info Mart `Application` object, change the `run-aggregates` configuration option to `false`.

    b. Stop `Job_AggregateGIM` in the Genesys Info Mart console, if it is running.

    c. Wait until the current aggregation cycle completes. The following message appears in the Genesys Info Mart log when it is done:

        `Stopped processing pending aggregation`

3. As an optional but recommended step, disable the scheduler by setting the `run-scheduler` configuration option to `false`, and ensure that no jobs are running in the Genesys Info Mart Administration Console.

The steps that follow are database intensive; so, it is best to reduce the load and execute them when contact center activity is at a minimum.

4. Set the `sub-hour-interval` option to `15min` and save your changes.

Note: Set the value of this option before the Genesys Info Mart Server runs for the first time and avoid changing it thereafter.

---

5. Reaggregate data following the instructions provided in the *Reporting and Analytics Aggregates 8.1 User's Guide* ("Reaggregating Data over a Certain Time Range"). You can perform this step on any supported platform.

This step submits a request to delete and replace previously aggregated rows for the specified time period. When the next aggregation cycle starts and completes, the `AG2_*_SUBHR` tables contains data that is aggregated in 15-minute chunks.

6. If you disabled the scheduler at Step 4, re-enable it by setting `run-scheduler` to `true`.

7. Restart aggregation:

    a. Reset `run-aggregates` to `true`.

    b. Open the Genesys Info Mart Administration Console, and start `Job_AggregateGIM`.

        Perform this operation during the time of day when the reaggregation process does not interfere with ETL's processing of new data or with end-user querying of existing Genesys Info Mart data.

8. Close the Genesys Configuration Manager, and open the BusinessObjects Designer application.

9. Under the `Time` class, rename the `30 minutes` dimension appropriately—for example, to `15 minutes`.

Note: Genesys recommends that you rename the existing dimension instead of creating a new one.

---

10. In the dimension's properties, set the `SELECT` statement to either of the following and apply your changes:

    • `DATE_TIME.LABEL_YYYY_MM_DD_HH24_15INT`

    ◆   `LABEL_YYYY_MM_DD_HH_15INT`

Note: If you choose the latter, you will not be able to distinguish between 12 AM and 12 PM in your week reports.

11. Export the universe back to the repository.

Your Interactive Insights reports now display subhour results at the 15-minute level when you drill down from hour results.

Removing Fields from Reports

As you customize the Interactive Insights reports to meet your business's needs, there are some specific rules that you should observe with regard to removing undesired dimensions and/or measures from the reports. Otherwise, under some circumstances, you might encounter database and/or other errors when you are running reports.

Remove Objects from the Presentation Layer

If you remove a measure or dimension from the report's query, you must also remove it from the presentation layer. (The converse is not necessarily true, however. If you remove a measure from the presentation layer, you need not remove it from the report's query—though doing so can improve report performance.)

Remove Combination Objects

If the measure or dimension that you plan to remove from a report is the last one that belongs to a particular class, then in addition to removing that dimension or measure, you must also remove any corresponding `Combination` condition that pertains only to that dimension or measure.

The `Combination` conditions (such as `Group Combination Sess` and `Group Combination`) are distinguished from the non-`Combination` conditions in that they provide filtering only against a named series of aggregate tables. For example, whereas the `Queue Group` condition (a non-`Combination` condition) can be used to filter mediation DN groups from any Info Mart table that stores queue-related data, the `Group Combination ABN` condition can be used only to filter queue group–related data from the `AG2_QUEUE_ABN_*` series of Info Mart tables.

If the `Combination` condition remains among a report's query filters when no measures remain to gather data from the aggregate table, the query returns a database error when it is executed against Info Mart. You are likely to encounter this situation when you are removing measures from reports that query more than one series of aggregate tables.

Using Attached Data

This section provides information to help you customize the GI2 universe and reports to provide results that are dimensioned by your own business's user data:

- "Attached Data Example–Product Line and Product" on
- "Configuring Social Media User Data" on
- "Special Note about Numeric User Data" on

Attached Data Example–Product Line and Product

This customization example adds two dimensions to the Info Mart database that are derived from string-based attached data that might exist in your environment. These dimensions, `Product Line` and `Product,` form a Product hierarchy within the GI2 universe that you can drill. You can add these dimensions to the Interactive Insights reports to provide results by product, by product line, or by any other dimension that you choose to substitute in this example.

The general steps for customization are the following:

1. Create and populate one or more user data tables in the Info Mart database (described in the next subsection).

2. Configure user-data keys in the aggregation tables to point to your user data table(s) and populate the aggregation tables. This is described on .

3. Set Genesys Info Mart and Interaction Concentrator configuration options for collection of user data ().

4. Add the attached data tables to the universe structure ().

5. Add dimension and condition objects to the universe ().

6. Define a hierarchy within the universe for attached data that has parent-child relationships, such as `Product Line` and `Product` ().

7. Save the universe and export it to the repository.

8. Customize the Interactive Insights reports to include your attached data dimensions ().

A sample script on provides the SQL code that is used for this example.

Creating User Data Dimension Tables

Within the Info Mart database, create and populate a custom user data dimension table—for example, `USER_DATA_CUST_DIM_10`. The `USER_DATA_CUST_DIM_x` tables store information about changes in data that

accompany telephony events that are recorded by Interaction Concentrator (ICON) and further processed by Genesys Info Mart ETL runtime processes. Genesys Info Mart writes to these tables up to five descriptors of your business data. This example populates two fields: `PRODUCT_LINE` with product-line data and `PRODUCT_CODE` with product-code data.

Refer to the *Genesys Info Mart 8.1 Reference Manual* for the complete data model of the `USER_DATA_CUST_DIM_*` tables.

Mapping User Data Keys and Columns

The information in this section describes how to configure user data keys and columns in the Info Mart database Mapping and Aggregation tables.

User Data Mapping Tables in the Info Mart

Deployment-specific attributes, in the form of user-defined attached data, are represented in the Genesys Info Mart model both by low cardinality data (in string format) and high-cardinality data (in numeric, date/time, and string formats). Low-cardinality-string user data that is associated with an interaction resource—such as automobile models and product codes—is stored in the `IRF_USER_DATA_KEYS` and `USER_DATA_CUST_DIM_x` dimension tables. High-cardinality user data that is associated with an interaction resource—such as prices, number of widgets sold, and dates—is stored in the `IRF_USER_DATA_GEN_1` and `IRF_USER_DATA_CUST_x` fact extension tables.

In addition to these tables are the `CTL_UD_TO_UDE_MAPPING` and `CTL_UDE_KEYS_TO_DIM_MAPPING` tables that you must update:

- `CTL_UD_TO_UDE_MAPPING` ties in user data keys that are defined in the underlying ICON application with user data columns that are defined in the previous tables.

- `CTL_UDE_KEYS_TO_DIM_MAPPING` maps the user data dimension tables (`USER_DATA_CUST_DIM_x`) to `IRF_USER_DATA_KEYS`.

Execute the sample script that is provided on to set up user data mapping and recording in your environment. Also, refer to the:

- *Interaction Concentrator 8.1 Deployment Guide.*

- `make_gim_UDE_template.sql` script, provided with Genesys Info Mart 8.1 deployment.

> **Note:** Beginning with release 8.1.1, Reporting Analytics and Aggregates also deploys similar scripts—`make_gim_UDE_template_<rdbms>.sql`. These scripts, however, hold entirely different content and are designed, rather, to configure user data for social media measures.

- "Worksheet for Mapping User Data" in the *Genesys Info Mart 8.1 Deployment Guide.* This worksheet contains several columns that you can use to record information about the specific attached data key in use in

your environment. Consider adding each custom attached data table in use within your environment to this worksheet. Refer to "Special Note about Numeric User Data" on page 87 for information about configuring keys for Revenue and Satisfaction user data.

The instructions (beginning on page 74) for adding user data dimensions to the universe and customizing the Interactive Insights reports apply to all of the fields in this worksheet.

Predefined attached data also appears in other Info Mart database tables, including the following:

- `INTERACTION_DESCRIPTOR`
    (fields `CUSTOMER_SEGMENT`, `SERVICE_TYPE`, `SERVICE_SUBTYPE`, `BUSINESS_RESULT`)

- `STRATEGY`

- `REQUESTED_SKILL`

- `ROUTING_TARGET`

Using the attached data from these tables falls outside the scope of this section. Several Interactive Insights reports, however, are provided for all of the attached data-related fields in the `INTERACTION_DESCRIPTOR` table.

Configuring User Data Keys in the Aggregation Tables

The `AG2_AGENT`, `AG2_AGENT_CAMPAIGN`, `AG2_AGENT_QUEUE`, `AG2_CAMPAIGN`, and `AG2_ID` aggregate tables provide two key columns each that you can configure to join to two user data dimension tables of your choice. (Recall that the user data dimension tables store low cardinality, string data only.) The `AG2_AGENT_GRP` aggregate tables also provide two such columns, but their values are inherited from the `AG2_AGENT` tables. The `USER_DATA_KEY` fields are not available in the agent session, agent states, agent interval, and queue-only aggregate tables.

These columns are:

- `USER_DATA_KEY1`   A key that points to one dimension table, such as `USER_DATA_CUST_DIM_10`, storing five dimensions

- `USER_DATA_KEY2`   A key that points to another dimension table, storing another five dimensions

These two fields provide access to a total of 10 attached data dimensions—or two hierarchies—for each aggregate table and view, as shown in Figure 22. You must configure the aggregation job to aggregate and populate these fields.
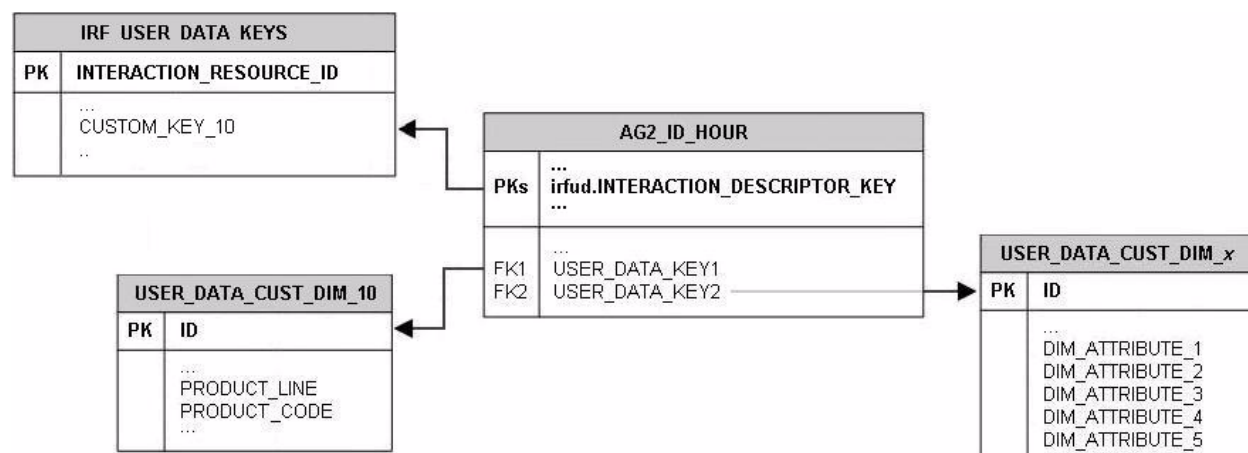
Figure 22: Mapping User Data Keys in the Aggregate Tables/Views to User Data Dimensions

Our product-line example uses the business attribute aggregate set, `AG2_ID_*`, which consists of four tables and three views. We must configure the `USER_DATA_KEY1` column in each to point to the custom user data dimension table, `USER_DATA_CUST_DIM_10`. This particular example does not define how `USER_DATA_KEY2` field should be mapped, but generic instructions are provided in the "Configuring User Data for Aggregation" chapter of the *Reporting and Analytics Aggregates 8.1 User's Guide*.

1. Create a file, named `user-data-map.ss`, having the following content on a single line:

```
(map-user-data-key (hierarchy: H_ID) (dimension: USER_DATA_KEY1)
    (expression: irfud.CUSTOM_KEY_10))
```

2. Save and place this file in Genesys Info Mart's root directory.

   After the Genesys Info Mart Server restarts and the aggregation process detects this file, aggregation begins.

Refer to the *Reporting and Analytics Aggregates 8.1 Reference Manual* for a data model of the aggregation tables in the Info Mart database, and the *Genesys Info Mart 8.1 Reference Manual* for the structure of the `USER_DATA_CUST_DIM_*` tables.

Setting Configuration Options

Several options are available to configure what data is written to the Info Mart database, and how long data is retained. In particular, storage of user data is highly configurable:

- On Interaction Concentrator, by means of the attached data specification file, `adata_spec.xml`, and ICON configuration options, such as `EventData`, for event-based user data.

- On Genesys Info Mart, by means of customizable SQL scripts to create mapping and storage tables in Info Mart.

Some of these options apply specifically to user data. Interim releases of Genesys Info Mart and Interaction Concentrator might also introduce new configuration options that affect results. Review the following documents for a listing and description of these options:

• *Genesys Info Mart 8.1 Deployment Guide*

• *Genesys Info Mart 8.1 Release Notes*

• *Interaction Concentrator 8.1 Deployment Guide*

• *Interaction Concentrator 8.1 Release Notes*

Adding Attached Data Tables to the Universe

After you have created and populated a user data table, you must add it to the universe and define joins between the user data table and those aggregate tables from which you plan to dimension data in the Interactive Insights reports. Note that you can use your RDBMS to define joins between tables or you can define these joins within Designer. This section illustrates defining joins within Designer.

Beginning with release 8.1.001.*x*, `GI2_universe` schema includes custom user data tables: `USER_DATA_CUST_DIM_1`, `USER_DATA_CUST_DIM_2`, `IRF_USER_DATA_CUST_1`, and `IRF_USER_DATA_CUST_2` with the appropriate joins and contexts already defined. If, however, you choose to include user data tables that are named or structured differently, you must add the tables to the universe schema yourself.

Our product-line example relies on data that is stored in the `USER_DATA_CUST_DIM_10` table, so we must perform the following steps:

1. Open `GI2_Universe` in Designer.

2. From the menu bar, select `Insert > Table` to open the `Table Browser` and locate your attached data table.

3. Select your table—`USER_DATA_CUST_DIM_10`, using this example—and click `Insert`. A symbol for the table appears in the `Structure` pane.

4. From the `Insert` menu, select `Join` to display the `Edit Join` dialog box that is shown in Figure 23. Here, we will add joins between the attached data table and each variation of an aggregate table:

   a. From the `Table1` drop-down list, select the `USER_DATA_CUST_DIM_10` table and field `ID` immediately below the list.

   b. From the comparison drop-down list, select the equal sign (`=`).

   c. From the `Table2` drop-down list, select the `AG2_ID_HOUR` table and field `USER_DATA_KEY1` immediately below the list.

   d. Set the cardinality for one (`1`) to many (`N`).

   e. Click `OK`.

Reopen the `Edit Join` dialog box and repeat these steps to establish joins between the attached data table and each of the remaining `AG2_ID_*` tables and views:

- `AG2_ID_DAY`
- `AG2_ID_SUBHR`
- `AG2_ID_QRTR`
- `AG2_ID_MONTH`
- `AG2_ID_WEEK`
- `AG2_ID_YEAR`
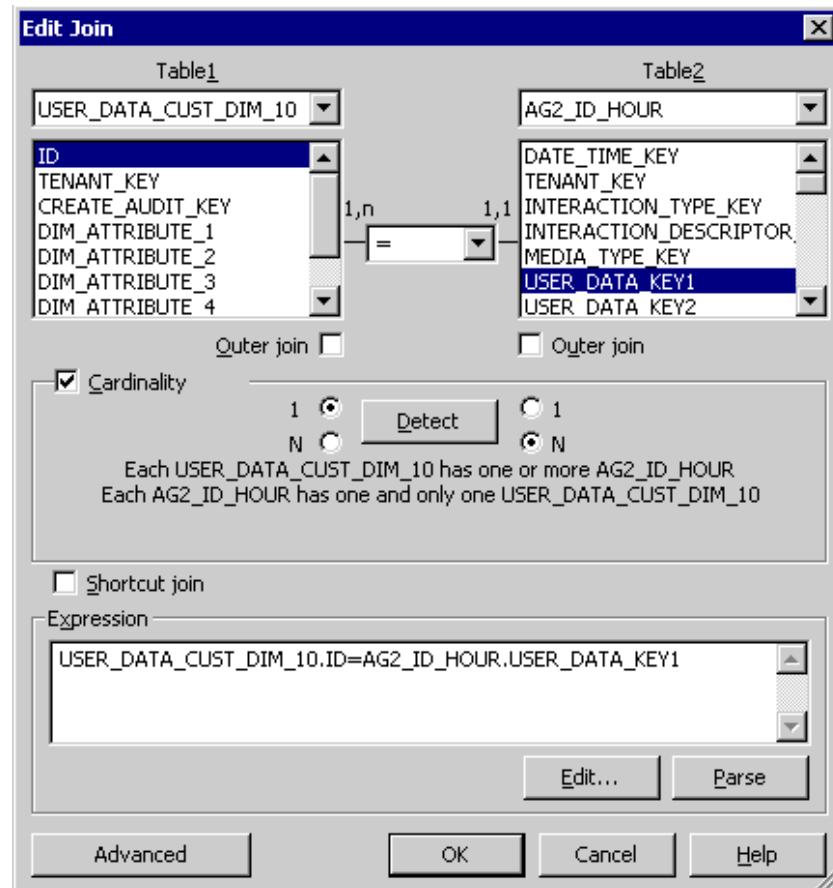
Figure 23: The Edit Join Dialog Box

Reopen the `Edit Join` dialog box and repeat these steps to establish joins between the attached data table and each of the remaining `AG2_ID_*` tables and views:

- `AG2_ID_DAY`
- `AG2_ID_SUBHR`
- `AG2_ID_QRTR`
- `AG2_ID_MONTH`
- `AG2_ID_WEEK`
- `AG2_ID_YEAR`

Next, we add these new joins to the contexts that already exist in the universe so that any join paths will automatically be resolved when report queries are run against the Info Mart database.

1. With `GI2_Universe` open in Designer, from the `View` menu, select `List Mode` to display the listing of tables, joins, and contexts above the `Structure` pane, which is shown in Figure 24.
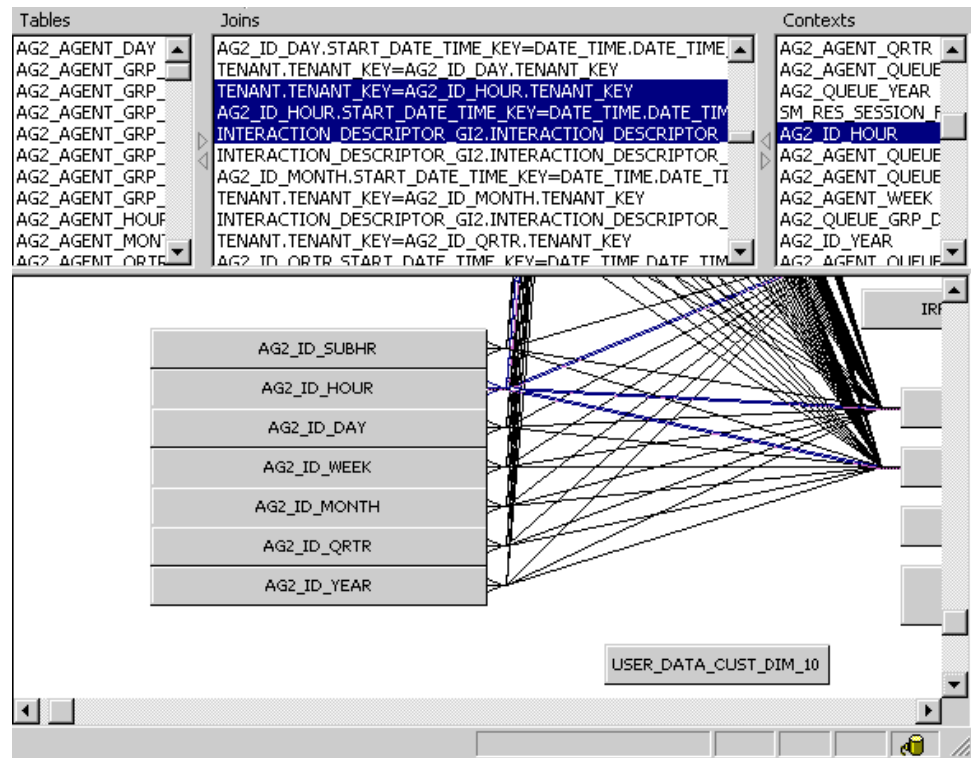
Figure 24: The Context Pane in Designer

2. In the `Context` pane, scroll to locate the `AG2_ID_HOUR` context; then, right-click it. The `Edit Context` dialog box, which is shown in Figure 25, is displayed.

3. From the `Current context join list`, scroll to locate the following join:

    `USER_DATA_CUST_DIM_10.ID=AG2_ID_HOUR.USER_DATA_KEY1`

Click this join to highlight it and click `OK`. (Do not unselect any previously highlighted joins.)

4. Repeat Steps 2 and 3 for the following contexts, selecting the appropriate joins that you created (in Step 4, page 74):

- `AG2_ID_DAY`
- `AG2_ID_SUBHR`
- `AG2_ID_QRTR`
- `AG2_ID_MONTH`
- `AG2_ID_WEEK`
- `AG2_ID_YEAR`

5. Save the universe.
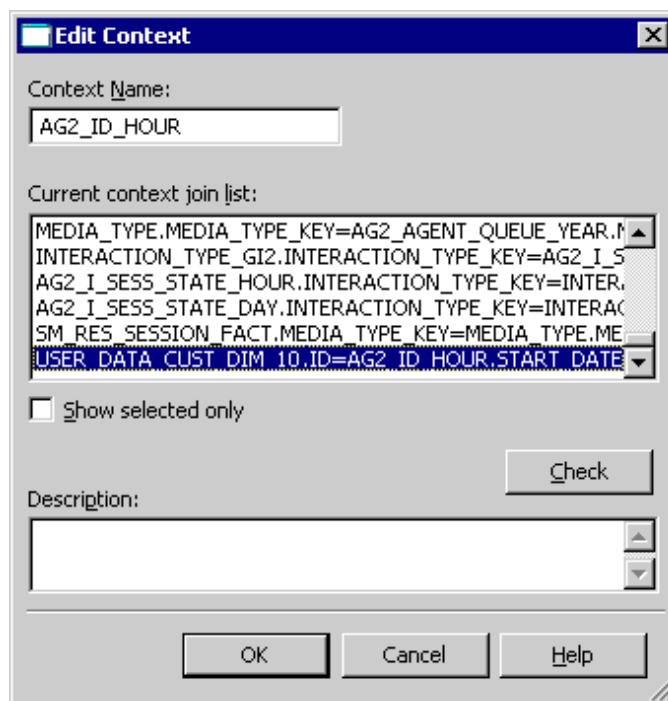
Figure 25: Edit Context Dialog Box

Adding Dimensions and Conditions to the Universe

With the user data tables added to the universe, joins established between them, and the aggregate tables and contexts defined, we can now add two new dimensions and conditions to the universe. These objects are used in the report that we create on .

Creating Dimensions Based on User Data

The following steps show how to add and define the `Product` and `Product Line` dimensions to `Business Attribute` class.

1. Within Designer, in the `Classes and Objects` pane, click the `Business Attribute` class.

2. On the menu bar, click the `Insert Object` button. The `Edit Properties of Object1` dialog box opens.

3. Rename the `Object1` to `Product Line`, and set other properties of this object as follows:

    a. On the `Definition` tab, set the data type to `Character` and the `Select` statement to `USER_DATA_CUST_DIM_10.PRODUCT_LINE`.

    b. On the `Properties` tab, click `Dimension`, and select the following checkboxes:

        ◆ `Associate a List of Values`

        ◆ `Export with universe`

      c. In the `List Name` text box, type an appropriate name for the product line list of values, such as `lov_product_line`.

4. Click `OK` to save your changes and close the `Edit Properties` dialog box.

5. Repeat these steps to create the `Product Code` dimension, setting the `Select` statement to `USER_DATA_CUST_DIM_10.PRODUCT_CODE` and the list of values to `lov_product`.

6. Save the universe.

Creating Conditions Based on User Data

The sample report that we create offers report users the opportunity to select one or more products or product lines in which to generate results. One way to utilize this capability is to prepare two condition universe objects that populate two product-oriented user prompts in our report:

1. Within Designer, in the `Classes and Objects` pane, click the `Conditions` radio button and open the `Business Attribute` class.

2. On the menu bar, click the `Insert Condition` button. The `Edit Properties of Condition1` dialog box opens.

3. Rename `Condition1` to `Product Line`, and set its `Where` clause to the following:

```
@Select(Business Attribute\Product Line) IN @Prompt('Product Line:',
'A','Business Attribute\Product Line',MULTI,CONSTRAINED,Persistent,
{'ALL'},user:13) or 'ALL' in @Prompt('Product Line:','A','Business
Attribute\Product Line',MULTI,CONSTRAINED,Persistent,{'ALL'},
user:13)
```

Refer to BusinessObjects documentation for more information about how to define conditions.

4. Click `OK` to save your changes and close the `Edit Properties` dialog box.

5. Repeat these steps to create a `Product Code` condition, setting its `Where` clause to the following:

```
@Select(Business Attribute\Product Code) IN @Prompt('Product Code:',
'A','Business Attribute\Product Code',MULTI,CONSTRAINED,Persistent,
{'ALL'},user:14) or 'ALL' in @Prompt('Product Code:','A','Business
Attribute\Product Code',MULTI,CONSTRAINED,Persistent,{'ALL'},
user:14)
```

6. Save the universe.

Defining a Hierarchy to the Universe

This example created two dimensions that share a parent-child relationship: a product belongs to a specific product line, and a product line consists of one or more products. The custom dimensions that you create might not share this

type of relationship. If they do not, they cannot form a hierarchy—you can skip this section.

We continue this example by defining a `Product` hierarchy, which makes drill-up and drill-down functionality available along product lines in the reports that you customize.

1. From the `Tools` menu in Designer, select `Hierarchies` to open the `Hierarchies Editor,` which is shown in Figure 26.

2. Click `New` to add a custom hierarchy and name it appropriately—for example, `Business Attribute – Product.` Keep this hierarchy highlighted.
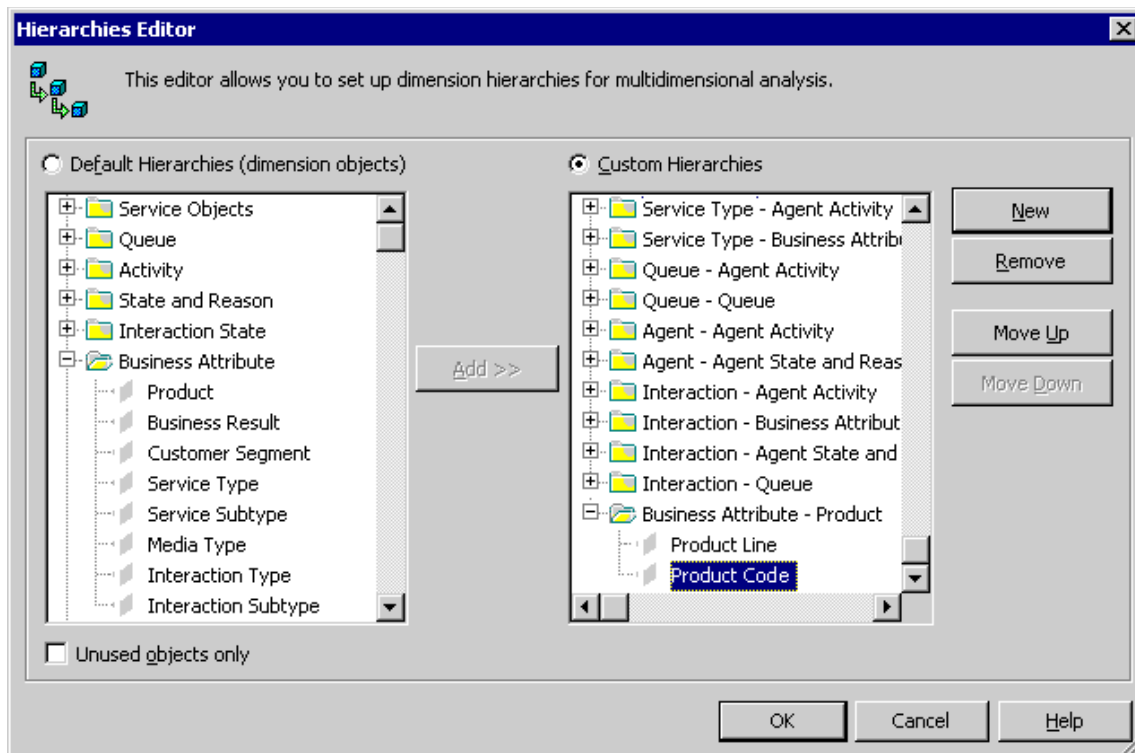
Figure 26: Defining the Product Hierarchy

3. From the `Default Hierarchies` frame, in the `Business Attribute` class, select the `Product Line` dimension and click `Add.`

4. Select the `Product Code` dimension and click `Add.`

5. Click `OK` to save this new hierarchy and close the editor.

6. Save the universe and export it to the repository.

Creating a Product-Line Business Attribute Report

Using the dimensions that you added to the universe (on page 77), you can now build one or more business-attribute reports that provide the results of your contact center activity by product line and product. The easiest way to create one such report is to make a copy of the Interaction Volume Service

Type Report, and tailor it to use the `Product Line` and `Product` dimensions instead of `Service Type` and `Service Subtype` dimensions, using the following steps:

1. Within InfoView, copy Interaction Volume Service Type Report to a working folder.

2. Open the report's properties, and rename the report appropriately—for example, Interaction Volume Product Line Report. Change its description, as desired, and save your changes.

3. Edit the text on the `Description` tab, as appropriate.

4. Open and edit the report's query within Web Intelligence.

   a. From the `Data Manager`, drag the `Product Line` dimension to the `Result Objects` window. (Do not yet remove the `Service Type` dimension.)

   b. Edit the report structure (on both the `Summary` and `Main` tabs) to replace the `Service Type` dimension, labels, and text with `Product Line`, wherever it occurs. Do the same for `Service Subtype`, replacing it with `Product Code`.

   c. Remove the `Service Type` section, and replace it with a `Product Line` section.

   d. In the `Query Filters` window, replace the `Service Type` and `Service Subtype` dimensions with `Product Line` and `Product Code`, respectively.

   e. Save and test your changes.

5. When you are satisfied with the report's results, edit the report query to remove the `Service Type` dimension from the `Result Objects` window, and retest the report.

Sample SQL Script for Creating and Mapping User Data

Note: This is a sample script only. You should validate it for use within your environment.

```
IF EXISTS ( SELECT 1
    FROM sysobjects
    WHERE id = object_id('USER_DATA_CUST_DIM_10') AND type = 'U' )
    DROP TABLE USER_DATA_CUST_DIM_10
GO

CREATE TABLE USER_DATA_CUST_DIM_10 (
    ID              INT identity    ,
    TENANT_KEY      INT NOT NULL     ,
    CREATE_AUDIT_KEY INT NOT NULL     ,
    PRODUCT_LINE    VARCHAR(170) NOT NULL DEFAULT 'none',
    PRODUCT_CODE    VARCHAR(170) NOT NULL DEFAULT 'none',
    DIM_ATTRIBUTE_3  VARCHAR(170) NOT NULL DEFAULT 'none',
```

```
        DIM_ATTRIBUTE_4  VARCHAR(170) NOT NULL DEFAULT 'none',
        DIM_ATTRIBUTE_5  VARCHAR(170) NOT NULL DEFAULT 'none',
        CONSTRAINT PK_USER_DATA_CUST_DIM_10 PRIMARY KEY(ID) )
GO

SET IDENTITY_INSERT USER_DATA_CUST_DIM_10 ON;

-- This row is for the predefined key 'UNKNOWN'. It is
-- mandatory. Do not remove it!
INSERT INTO USER_DATA_CUST_DIM_10 (
    ID,
    TENANT_KEY,
    CREATE_AUDIT_KEY )
VALUES ( -1, -1, -1 ) ;
GO

-- This row is for the predefined key 'NO_VALUE'. It is
-- mandatory. Do not remove it!
INSERT INTO USER_DATA_CUST_DIM_10 (
    ID,
    TENANT_KEY,
    CREATE_AUDIT_KEY )
VALUES ( -2, -2, -1 ) ;
GO

SET IDENTITY_INSERT USER_DATA_CUST_DIM_10 OFF;

-- Add a foreign key reference column from IRF_USER_DATA_KEYS
-- to the user data dimension table.
--
-- Note: Adding columns to a sizeable IRF_USER_DATA_KEYS table
-- could consume significant DBMS resources and time. Consider the
-- tradeoff between:
-- (1) adding redundant columns initially and adding/activating
--     mapping later and
-- (2) adding columns later.

ALTER TABLE IRF_USER_DATA_KEYS
   ADD CUSTOM_KEY_10 INT NOT NULL DEFAULT -2
GO

-- Add mapping between user data dimension table and
-- IRF_USER_DATA_KEYS to CTL_UDE_KEYS_TO_DIM_MAPPING

INSERT INTO CTL_UDE_KEYS_TO_DIM_MAPPING (
    DIM_TABLE_NAME,
    DIM_TABLE_PK_NAME,
    UDE_KEY_NAME )
VALUES (
    'USER_DATA_CUST_DIM_10',
    'ID',
```

```
                        'CUSTOM_KEY_10' )
            GO


            -- Add mapping between user data keys and user data tables to
            -- CTL_UD_TO_UDE_MAPPING.
            --
            -- Note: ICON should be configured to record these user data keys.

            INSERT INTO CTL_UD_TO_UDE_MAPPING (
                ID              ,
                UD_KEY_NAME     ,
                UDE_TABLE_NAME  ,
                UDE_COLUMN_NAME ,
                PROPAGATION_RULE,
                DEFAULT_VALUE   ,
                ACTIVE_FLAG )
            VALUES (
                103                     ,
                'CustomProductLine'     ,
                'USER_DATA_CUST_DIM_10',
                'PRODUCT_LINE'          ,
                'CALL'                  ,
                ''                      ,
                1 )
            GO

            INSERT INTO CTL_UD_TO_UDE_MAPPING (
                ID              ,
                UD_KEY_NAME     ,
                UDE_TABLE_NAME  ,
                UDE_COLUMN_NAME ,
                PROPAGATION_RULE,
                DEFAULT_VALUE   ,
                ACTIVE_FLAG  )
            VALUES (
                104                     ,
                'CustomProductCode'     ,
                'USER_DATA_CUST_DIM_10',
                'PRODUCT_CODE'          ,
                'CALL'                  ,
                ''                      ,
                1  )
            GO
```

Configuring Social Media User Data

The Social Engagement Report is available beginning in GI2 release 8.1.1.
This business attribute report relies heavily on the configuration of user data in
your environment as well as the strategies used to route interactions. This
section describes how to set up your environment to report on social media

user data. This report, and the universe objects that directly support it, are described in the *Genesys Interactive Insights Universe Guide.* Table 6 on lists additional hidden universe objects, some of which indirectly support social media user-data reporting.

1. Review the routing strategies in your environment with respect to user data and update them as appropriate.

   Note that the default Genesys-provided routing strategies do not set the `Sent` reason when responses are sent. You must design your strategy to change the `StopProcessing` reason from `Normal` to `Sent` when this event occurs. If you do not do so, the GI2 third-party media reports generate results for transfers only— not for responses.

2. In the `ccon_adata_spec_GIM_example.xml` file that is provided within the Genesys Info Mart installation package, uncomment the appropriate rows to enable Interaction Concentrator (ICON) to record data for the following user data keys:

   ◆ `Classify_Actionability_CtgRelevancy`
   ◆ `Classify_Sentiment_CtgRelevancy`
   ◆ `KloutScore`
   ◆ `CtgName`
   ◆ `Screen_Sentiment_CtgName`
   ◆ `Screen_Actionability_CtgName`
   ◆ `Classify_Actionability_CtgName`
   ◆ `Classify_Sentiment_CtgName`
   ◆ `desktop_influence`

   Place this file in ICON's root directory Refer to Objectives 1 and 2 of "Enabling the Storage of User Data" in the *Genesys Info Mart Deployment Guide* for detailed instructions.

3. Run `make_gim_UDE_template_<rdbms>.sql` against the Info Mart database to create the database objects for social-media detail reporting. This SQL script is deployed in the `\script` subfolder as part of a GI2 installation. Refer to the "Application Files" chapter of the *Reporting and Analytics Aggregates Deployment Guide* for more information.

4. Run aggregation in autonomous mode and specify the `setFeature` runtime parameter as follows:

   `-setFeature=eServicesSM`

   This parameter enables RAA to aggregate social-media data, including mapping `GEN_ES_KEY` (in the `IRF_USER_DATA_KEYS` table) to `USER_DATA_KEY1` in the `H_ID`, `H_AGENT`, and `H_AGENT_QUEUE` hierarchies.

   Note that `USER_DATA_KEY1` can be mapped only once per hierarchy. If you previously mapped this field to `CUSTOM_KEY_10`, as instructed on , for the Product Line example, then consider mapping `USER_DATA_KEY2` to `CUSTOM_KEY_10` instead.

   Refer to the *Reporting and Analytics Aggregates User's Guide* to learn how to run aggregation in this autonomous mode.

With the completion of this configuration, your environment is ready to process social media userdata for each interaction, and RAA is equipped to aggregate this data. You can now use the Agent Social Engagement and Social Engagement reports to retrieve meaningful data.

Hidden User Data Objects in GI2_Universe

The GI2 8.1.1 release introduces several measures and dimensions that were designed to report on user data. Those universe objects that are visible to report designers and viewers are described in the *Genesys Interactive Insights Universe Guide.* Some objects, however, are hidden in the universe. Table 6 lists those hidden objects that are related to user data. You must properly set up your environment and unhide these objects before they can be used to create reports.

Table 6: Predefined, Hidden User Data Objects

Class and Member		User Data Table and Field	Char or Numeric
Agent\Activity			
M	Actionability	AG2_AGENT_*.ACTIONABILITY AG2_AGENT_GRP_*.ACTIONABILITY AG2_AGENT_QUEUE_*.ACTIONABILITY	Numeric
M	Influence Score	AG2_AGENT_*.INFLUENCE AG2_AGENT_GRP_*.INFLUENCE AG2_AGENT_QUEUE_*.INFLUENCE	Numeric

M	Offered with Actionability	AG2_AGENT_*.ACTIONABILITY_OFFERED
		AG2_AGENT_GRP_*.
		        ACTIONABILITY_OFFERED
		AG2_AGENT_QUEUE_*.
		        ACTIONABILITY_OFFERED
			Numeric

M	Offered with Influence	AG2_AGENT_*.INFLUENCE_OFFERED AG2_AGENT_GRP_*.INFLUENCE_OFFERED AG2_AGENT_QUEUE_*.INFLUENCE_OFFERED	Numeric
M	Offered with Sentiment	AG2_AGENT_*.SENTIMENT_OFFERED AG2_AGENT_GRP_*.SENTIMENT_OFFERED AG2_AGENT_QUEUE_*.SENTIMENT_OFFERED	Numeric
M	Sentiment Score	AG2_AGENT_*.SENTIMENT AG2_AGENT_GRP_*.SENTIMENT AG2_AGENT_QUEUE_*.SENTIMENT	Numeric

Table 6: Predefined, Hidden User Data Objects (Continued)

	Class and Member	User Data Table and Field	Char or Numeric
	Agent\Activity\Activity User Data Example		
D	Dimension 1	USER_DATA_CUST_DIM_1.DIM_ATTRIBUTE_1	Char
	Dimension 2	USER_DATA_CUST_DIM_1.DIM_ATTRIBUTE_2	Char
	... Dimension 5	USER_DATA_CUST_DIM_1.DIM_ATTRIBUTE_5	Char
D	Dimension 6	USER_DATA_CUST_DIM_2.DIM_ATTRIBUTE_1	Char
	... Dimension 10	USER_DATA_CUST_DIM_2.DIM_ATTRIBUTE_5	Char
D	Screen Action-ability Category	USER_DATA_GEN_ES.SCREEN_ ACTIONABILITY_CTGNAME	Char
D	Screen Senti-ment Category	USER_DATA_GEN_ES.SCREEN_ SENTIMENT_CTGNAME	Char
	Business Attribute\BA Customer		
M	Actionability Score	AG2_ID_*.ACTIONABILITY	Numeric
M	Entered with Actionability	AG2_ID_*.ACTIONABILITY_ENTERED	Numeric
M	Entered with Influence	AG2_ID_*.INFLUENCE_ENTERED	Numeric
M	Entered with Sentiment	AG2_ID_*.SENTIMENT_ENTERED	Numeric
M	Influence Score	AG2_ID_*.INFLUENCE	Numeric
M	Sentiment Factor	a factor of BA User Data Example\Classify Sentiment Category	Numeric
M	Sentiment Score	AG2_ID_*.SENTIMENT	Numeric
	Business Attribute\BA User Data Example		
D	Dimension 1	USER_DATA_CUST_DIM_1.DIM_ATTRIBUTE_1	Char
	Dimension 2	USER_DATA_CUST_DIM_1.DIM_ATTRIBUTE_2	Char
	... Dimension 5	USER_DATA_CUST_DIM_1.DIM_ATTRIBUTE_5	Char
	Dimension 6	USER_DATA_CUST_DIM_2.DIM_ATTRIBUTE_1	Char
	... Dimension 10	USER_DATA_CUST_DIM_2.DIM_ATTRIBUTE_5	Char
D	Screen Action-ability Category	USER_DATA_GEN_ES.SCREEN_ ACTIONABILITY_CTGNAME	Char
D	Screen Senti-ment Category	USER_DATA_GEN_ES.SCREEN_ SENTIMENT_CTGNAME	Char

Table 6: Predefined, Hidden User Data Objects (Continued)

Class and Member		User Data Table and Field	Char or Numeric
Flow\Flow User Data Example			
M	Detail 1	IRF_USER_DATA_CUST_1.CUSTOM_DATA_1	Char
	Detail 2	IRF_USER_DATA_CUST_1.CUSTOM_DATA_2	Char
	...	...	
	Detail 14	IRF_USER_DATA_CUST_1.CUSTOM_DATA_14	Char
	Detail 15	IRF_USER_DATA_CUST_1.CUSTOM_DATA_15	Numeric
	Detail 16	IRF_USER_DATA_CUST_1.CUSTOM_DATA_16	Numeric
Handling Attempt\Handling User Data Example			
M	Detail 1	IRF_USER_DATA_CUST_1.CUSTOM_DATA_1	Char
	Detail 2	IRF_USER_DATA_CUST_1.CUSTOM_DATA_2	Char
	...		
	Detail 14	IRF_USER_DATA_CUST_1.CUSTOM_DATA_14	Char
	Detail 15	IRF_USER_DATA_CUST_1.CUSTOM_DATA_15	Numeric
	Detail 16	IRF_USER_DATA_CUST_1.CUSTOM_DATA_16	Numeric

Using the Predefined User Data Objects

If the user data that you configured within your environment exactly matches the sample tables that have been imported into GI2_universe—as well as their structure, all you have to do to use the predefined user data objects in custom reports is make visible the corresponding universe elements and save and export the universe to the BO repository. The objects will be revealed to report designers and can be used in reports just like any other universe object.

If, however, your user data configuration employs different tables or table structure, perform the following steps within Web Intelligence to avail their use to report designers:

1. If necessary, add the appropriate user data table(s) to GI2 universe schema. (See "Adding Attached Data Tables to the Universe" on page 74.)

2. To use the predefined user data objects, show only those objects that you intend to use.

   User data classes, dimensions, and measures are marked as hidden within the universe so that they are not available to report designers before their time.

3. Alter user data object definitions, as needed.
   - For instance, fields in the IRF_USER_DATA_CUST_* tables could be numeric or character.
   - Perhaps your user data table is named differently from that which is used in Table 6.
   - Perhaps you want the dimension or detail to reference a field different from that which is already defined for the object.
   - Perhaps you want to reference a list of values and have the dimension available as a user prompt on a custom report. (See "Creating Conditions Based on User Data" on page 78.)

- Perhaps you want to rename the predefined classes, dimensions, or measures.

4. Save the universe and export it to the BO repository.

Special Note about Numeric User Data

The Customer Perspective Report includes four measures that are based on numeric user data—`Revenue`, `Satisfaction`, `Avg Revenue`, and `Avg Satisfaction`. Running aggregation (to populate the data for this report) will yield error if users are permitted to attach nonnumeric data for these business attributes to interactions. You must ensure that the resources that set the values of `Revenue` and `Satisfaction` userdata keys are configured or trained, as applicable, to record numerical values only. Refer to "Check for Incorrect Data Type" in the *Reporting and Analytics Aggregates 8.1 User's Guide* to learn how to recover from this situation.

Changing the Forecast

The Interaction Volume Service Type Trend Report (Trend report, for short) provides a forecast of one service-level measure based on the historical values that are retrieved within the time range that is bound by the start and end dates that you specify. The report provides forecasted data beginning from the end date and extending through the forecast-thru date that you specify.
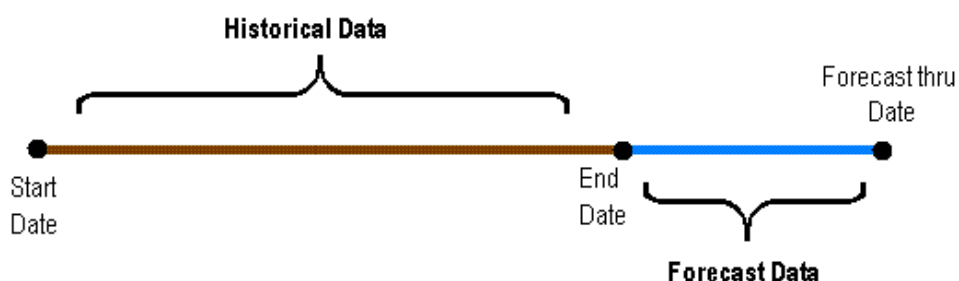
This report uses several variable-based measures (see) to load the terms for a least-squared forecast calculation. These variables are reserved for internal use and should be altered only as instructed on the pages that follow.

Swapping the Forecast Measure

The report's `Measure` variable identifies the universe measure that is used to compute the trend. Resetting this variable to another measure will not break the formula. As packaged, the `% First Response Service Level` measure in the `BA Customer` class is assigned to this variable. You can customize a copy of the report to provide a forecast of a different measure. To do so, perform the following steps:

1. Choose the measure that you want to substitute—for example, `Entered,` in the `Business Attributes` class.

2. Within InfoView, make a copy of the Interaction Volume Service Type Trend Report and retitle it accordingly—for example, Interaction Volume Entered Trend Report.

3. From the toolbar, click `Edit.` Then, click `Edit Query.`

4. In the Query Panel, add the desired measure to both combined queries (`Combined Query 1` [for current data] and `Combined Query 2` [for forecasted data]). Do not yet remove the `% First Response Service Level` measure.

5. From the toolbar, click `Edit Report.`

6. On the `Data` tab, double-click `Measure` to open the `Variable Editor.`

7. In the `Formula` box of the `Editor,` replace `[% First Response Time Service Level]` with the measure that you chose in Step 1 and click `OK.`

8. If your selected measure yields values that are greater than 1—as is the case with the `Entered` measure that was chosen in Step 1—perform the following steps on the `Main` tab of the report:

   a. Set `Forecast Alerter` (the alerter that is associated with the forecast column, shown to the bottom left) appropriately, or remove it altogether.

   b. Update also the legend.

Figure 27: Components of the Interaction Volume Service Type Trend Report
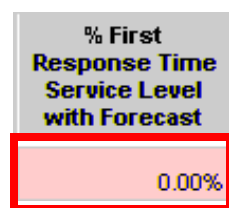
An alerter has been applied to this report cell to change its background color when alarming conditions are risen

c. On the `Data` tab, double-click the `Trend Line` variable and change its formula to the following:

```
If [A] * [Dimension With Forecast] + [B] < 0 Then 0
Else [A] * [Dimension With Forecast] + [B]
```

9. Appropriately rename any strings that indicate the name of the measure that is to be replaced. On the report's `Summary` tab, for instance, change the name of the axis, the chart name, and the "`% First Response Time Service Level over Time`" hardcoded string to `Entered over Time` in the report's structure.

10. On the report's `Description` tab, add the `Entered` measure and its description to the table. Change the report's description appropriately.

11. (Optional) On the Query Panel, remove any measures that you no longer want to appear in the query.

12. Save and test your report.

Note: In the GI2 universe, the `First Response in Threshold` and `Entered with Objective` measures (the first two columns of the Trend report) are used to derive `% First Response Time Service Level` (the third column in this report). If you swap the service-level measure for another, as instructed in the preceding section, you might also want to swap out the first two measures. Be sure to add any new measures to both halves of the report's underlying combined query and set the columns of the main table appropriately.

Managing the Report's Dimensions

Among the internal variables of the Interaction Volume Service Type Trend Report are some that parameterize dimensions. This section demonstrates how to modify such variables and the report's structure to reflect different dimensions.

Changing Other than Time Dimensions

The following abbreviated steps demonstrate how to define additional or fewer dimensions within the report:

1. In the Query Panel, add the desired dimension to ((or remove it from) both combined queries.

2. On the `Data` tab, double-click `Dimension With Forecast` to open the variable editor. Change this variable's definition to include or remove the desired dimension.

For instance, the following definition adds the `Service Type` dimension:

`=RunningCount([Time Dimension];([Tenant Name];[Media Type];`
`[Service Type]))`

3. Click `View Structure` and modify the report's section as desired.

4. Save and test your report.

Changing Time Dimensions

To change the report's time dimension, perform the following abbreviated steps:

1. In the Query Panel, add the desired time dimension to both combined queries. For example, add `Month`. Do not yet remove the `Day` dimension.

2. From the `Data` tab, double-click `Time Dimension` to open the variable editor. Change this variable's definition to match the added dimension—for example, to =[Month].

3. Click `Edit Report,` and show the Formula Toolbar [fx] .

Between the first two visible columns in the main table of the report are two hidden columns: `[Day]` and `[Is Current Data]`. The bottom of

Figure 28 shows the hidden [Day] column, selected within the red rectangle.

4. Select the hidden [Day] column and change its formula to your desired dimension—for example, to [Month].

5. (Optional) On the Query Panel, remove any time dimensions that you no longer want to appear in the query.

6. Save and test your report.
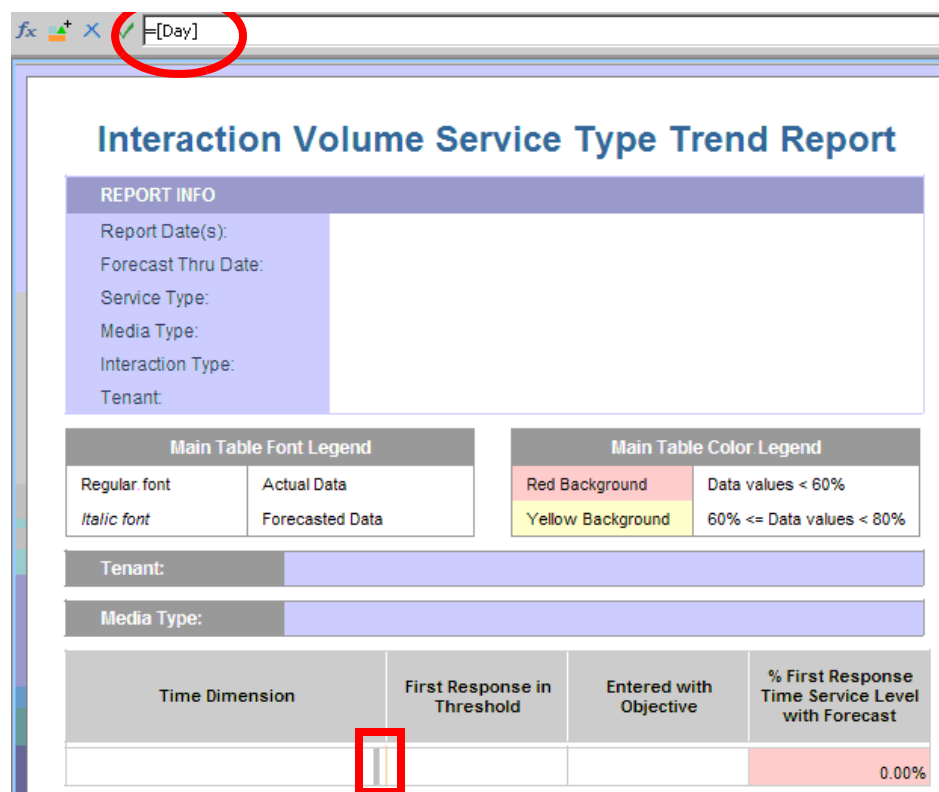
Figure 28: Hidden Columns in the Trend Report

Using Cascading Prompts

As packaged, the user prompts in the Interactive Insights reports do not observe interrelationships between the objects that users select for report generation even though direct relationships might exist within the contact center. (The one exception to this rule is described in section "Prompt Interrelationships" on page 32.) Users can, for example, select any combination of agents against which to run a report regardless of the groups to which the agents belong and regardless of the agent groups which the report user selects.

The GI2 8.1.1[+] universe features agent and queue *cascading prompts* whose purpose is to limit user selections during report generation to only those

members that belong to the selected agent group(s) or queue group(s). This functionality is delivered via either of the following methods:

- Customizing the agent and queue lists of values in the universe
- Customizing the reports to replace agent and queue user prompts with those cascading objects described in Table 7. (Some of these objects are hidden.)

This section demonstrates how to implement cascading-prompt functionality within your reports using both methods and discusses the limitations associated with their use.

Table 7: Universe Objects Used for Cascading Prompts

Universe Object		Description
Class	**Object**	
Service Objects	Agent Cascade dimension	Same as the `Agent Name` dimension except this object employs `agentcascade_lov` to populate values instead of `agentname_lov`.
	Agent Cascade condition	Same as the `Agent` condition except this object references the `Agent Cascade` dimension instead of the `Agent Name` dimension.
	Queue Cascade dimension	Same as the `Queue` dimension except this object employs `queuecascade_lov` to populate values instead of `queue_lov`.
	Queue Cascade condition	Same as the `Queue` condition except this object references the `Queue Cascade` dimension instead of the `Queue` dimension.

Modify the Universe LOVs

The benefit in the approach of modifying the agent and queue lists of values (lovs) in the universe to provide cascade functionality is that all reports (that employ agent and queue lovs) will reflect this change automatically. Any report that references the altered lovs will reflect cascading-prompt behavior. However, this approach also has the drawback in the scenario in which you want only a subset of reports to use cascade functionality.

To add cascading prompts to a report using the modify-the-lov approach, perform the following steps:

1. Within Designer, open the GI2 universe.

2. In the `Activity` class, open the properties of the `Agent Name` dimension.

3. On the `Properties` tab, in the `Associate a List of Values` frame, click `Edit` to open the `Query Panel`.

4. On the menubar, click `SQL` to modify the code for the `agentname_lov` list of value.

5. Change the code to the following, and click OK:

```
SELECT VALUE
FROM ( SELECT VALUE, 0 SEQ_NUM FROM GI2_CONSTANTS
WHERE TYPE='CONSTANT' AND VALUE ='ALL'
      AND 'ALL' IN @Variable('Agent Group:')

UNION ALL

SELECT DISTINCT RESOURCE_NAME VALUE, 1 SEQ_NUM FROM RESOURCE_
INNER JOIN RESOURCE_GROUP_FACT_
ON (RESOURCE_GROUP_FACT_.RESOURCE_KEY= RESOURCE_.RESOURCE_KEY)
INNER JOIN GROUP_
ON (GROUP_.GROUP_KEY=RESOURCE_GROUP_FACT_.GROUP_KEY)
WHERE RESOURCE_.RESOURCE_TYPE_CODE='AGENT'
AND
    ( ('ALL' IN @Prompt('Agent Group:','A','Activity\Agent
        Group',Multi,Constrained,Persistent,{'ALL'},USER:9) )
OR
    ( GROUP_.GROUP_TYPE_CODE IN ('AGENT','UNKNOWN','NO_VALUE' )
AND GROUP_.GROUP_NAME IN @Variable('Agent Group:') )
    )
)    s
ORDER BY SEQ_NUM, 1
```

> **Notes:** You can copy this code from `agentcascade_lov`—the lov associated
> with the `Agent Cascade` dimension in the `Service Objects` class.
>
> Make sure that the `Do not generate SQL before running` checkbox
> remains checked.

6. On the `Query Panel`, click OK to save the modified lov definition.

7. Click OK on the `Properties` dialog box of the `Agent Name` dimension.

8. Repeat Steps 2–7 to modify the `queue_lov` definition in the `Queue` class.
Copy the SQL code from the `queuecascade_lov`—the lov associated with
the `Queue Cascade` dimension.

These two lov modifications affect the `Agent Name` and `Queue` dimensions in
all classes in which the dimensions exist throughout the universe and in
which they are paired with the `agentname_lov` and `queue_lov` lovs.

9. Save the universe and export your changes to the repository to make them
available to the reporting community.

10. Within Web Intelligence, edit each affected report's query to remove a
group condition—where it exists—and save the report. This includes the
following conditions:

- `Group Combination`
- `Group Combination ABN`
- `Group Combination ANS`

- ◆ `Group Combination Detail Session`
- ◆ `Group Combination Detail State`
- ◆ `Group Combination Rsn`
- ◆ `Group Combination Sess`

Note: Unless other significant modifications are made, do not remove the `Agent Group` condition from the Agent Group reports; these reports do not reference the `Agent Name` dimension.

Modifying the Report Query

To add cascading prompts to one or more reports only by using the `modify-the-report-query` approach:

1. Choose a report to customize and make a copy of it.

   Reports that include either or both the `Agent Name` and `Queue` conditions are conducive for incorporating agent- and queue-cascade functionality.

Note: The Agent Group reports reference the `Agent Group` condition instead of `Agent Name`; these reports are not conducive for cascade-prompt customization without making other significant modifications as well.

---

2. Within Web Intelligence, edit the report's query to perform the following modifications.

   Where it exists:

   a. Replace the `Agent` condition with the `Agent Cascade` condition.
   b. Replace the `Queue` condition with the `Queue Cascade` condition.

   Note: It does not suffice merely to add cascading objects to a report; you must remove also the regular conditions.

   ---

   c. Remove any group condition from the report. (See above for more information.)
   d. Save the report.

With these modifications, users will be prompted to select agents or queues from a particular group instead of from a listing of all agents (or queues) who belong to the tenant (or contact center).

Limitations

Cascading prompts can be designed for other contact-center relationships for any universe object that uses an lov and that can be used in conditions. The GI2 universe provides only the two mentioned in this section to retrieve:

- A listing of agents from a group of agents.
- A listing of queues from a group of queues.

Furthermore, when you modify a report as previously described, the `Report Info` section in the report's header no will longer provide information about the selected agent and/or queue group.

Reporting Outside the GMT Time Zone

A standard Genesys Info Mart deployment using the default `DATE_TIME` calendar yields reporting in the Genesys Info Mart default time zone only. There are, however, other supported deployments allowing:

- One tenant reporting across multiple time zones
- Multiple tenant reporting within one common time zone
- Multiple tenant reporting using a different time zone for each tenant

This section describes how to configure Genesys Info Mart to accomplish this type of reporting within GI2 using one universe and multiple connections.

1. Configure additional calendars in Genesys Info Mart; for example, `DATE_TIME_CNT` and `DATE_TIME_AET`. Refer to the "date_time Section" in the *Genesys Info Mart Deployment Guide* for further instructions.

2. Identify the created calendars to RAA:

   a. Create an ASCII file, named `time-zones.ss,` that contains the following code. [Substitute the AET and CNT time zones and their offsets with your desired time zone(s) and their corresponding offsets]:

```
;This code identifies time zones to RAA
(~time-zone CNT "DATE_TIME_CNT" -12600  -9000)
(~time-zone AET "DATE_TIME_AET" +36000 +39600)

;This code instructs RAA to use the AET time zone when
;populating data for only those aggregation hierarchies that
;are listed
(add-other-tz AET
     (hierarchies: H_AGENT H_AGENT_GRP H_QUEUE H_QUEUE_GRP
              H_AGENT_QUEUE H_QUEUE_ACC_AGENT H_QUEUE_ABN H_ID
              H_I_AGENT H_I_SESS_STATE H_I_STATE_RSN
              H_AGENT_CAMPAIGN H_CAMPAIGN))

;This code make all hierarchies CNT-time zone aware
(add-standard-hierarchies-in-tz CNT)
```

    b. Save this file and place it in the Genesys Info Mart root folder.

      The aggregation process must be able to locate this file from the location that aggregation is run.

    c. Invoke aggregation.

      RAA creates a separate set of database objects for each calendar and names the objects with the time zone's abbreviation as such: `AG2_AET_AGENT_SUBHR`. RAA manages these objects within the main schema.

3. Create different schemas in Info Mart for each tenant.

    Users should not directly reference objects in the main schema. So, we will next create aliases to control the access that users have to Info Mart data.

4. Create an alias file, (`tenant-tz-alias.ss,` for example), following the information provided in "Format of the Tenant Alias File" in the *Reporting and Analytics Aggregates User's Guide.*

```
(aliases-for-account name: <tenant1_schema_name> login: "<tenant1_user>" password: "<tenant1_pwd>"
    (tenants: <tenant1_key>) (time-zone: PST))
(aliases-for-account name: <tenant2_schema_name> login: "<tenant2_user>" password: "<tenant2_pwd>"
    (tenants: all) (time-zone: EST))
```

5. To update tenant aliases, invoke aggregation in standalone mode by issuing the following command:

```
java -jar agg/GIMAgg.jar -conf runagg -updateAliases tenant-tz-
alias.ss
```

    RAA creates views in the specified schema(s) that employ standard names. Therefore, no change to the definitions of measures, dimensions, or conditions is required in the GI2 universe. Each tenant account now sees data in their own time zone.

6. Open Designer, and create connection parameters for each tenant account. At the `Login Parameters` screen of the Wizard Connection, specify the parameters to connect to the desired tenant schema.

    Refer to "Linking the Universe to Your Data Mart" in the *Genesys Interactive Insights Deployment Guide* for more information.

Through the connection parameters that you establish and the setup of calendars, your users will have the access to their own data and the GI2 reports will display this data in their own time zone.

Setting the Scope of Analysis

When you run and save a report, BusinessObjects stores analytical information about the report in the report's cube. This information includes referenced universe elements, the database query, the returned results, and the report's *scope of analysis*, which defines the degree of data that will be retrieved from

the data mart a result of a query. This degree of data corresponds directly to the additional hierarchical levels, lower than those initially designed to be included in the query.

Figure 29 shows the unaltered `Scope of Analysis` pane for the Interaction Volume Service Type Report. This pane becomes visible when you edit a report's query within Web Intelligence and click the `Show/Hide Scope of Analysis Pane` icon ( ) on the menu bar.
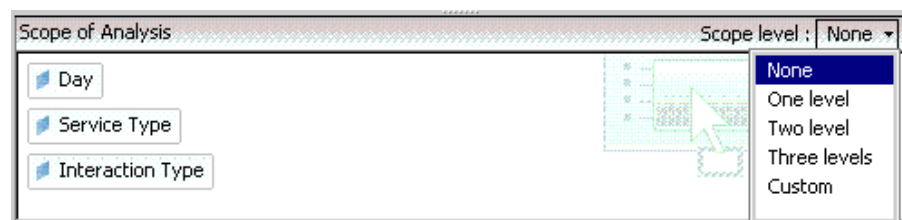
Figure 29: Scope of Analysis for the Interaction Volume Service Type Report

The Interactive Insights reports have all been saved with the `None` setting for the scope of analysis; this means that no extra data is stored within the report's cube other than the dimensions that are directly used by the query to organize and retrieve results. This was done intentionally in order to minimize the size of a report's cube and, in turn, to maximize the report's performance —specifically, to reduce the time that is required to run a report (retrieving data from the data Mart) and have its results displayed on screen. However, you can customize each report to broaden its scope of analysis if extra data should be available to your users at some later point. In addition to the `None` setting, BusinessObjects provides the capability to set the following scopes:

- `One level`
- `Two levels`
- `Three levels`
- `Custom,` where you can selectively designate the additional objects that should be included in the query

Refer to the *BusinessObjects Enterprise XI 3.1 Performing on-report analysis with Web Intelligence* document for further information about this feature.

Dealing with Incompatibility

It is possible for your custom reports to generate results that are difficult to interpret, to generate errors, or to require excessively long query-processing times when certain combinations of GI2 measures and dimensions are included in the report. These conditions can occur under several circumstances, including:

- Improperly combining incompatible dimensions—such as the `Queue` and `State Name` dimensions—in the same report.

- Improperly combining disposition and interval measures in the same report.

For this reason, Genesys recommends that when you create or customize new reports, you try to employ measures and dimensions that belong to the same class. Additionally, you should select one or more dimensions from the `Time` class in every report. Observing this simple rule will minimize errors and confusion among your report users.

Incompatible Objects

Incompatibilities can result if you add to your custom reports measures and dimensions from different classes—even if you mix objects from a parent and its subclasses. Web Intelligence displays an error, shown in Figure 30, when it encounters an incompatibility.
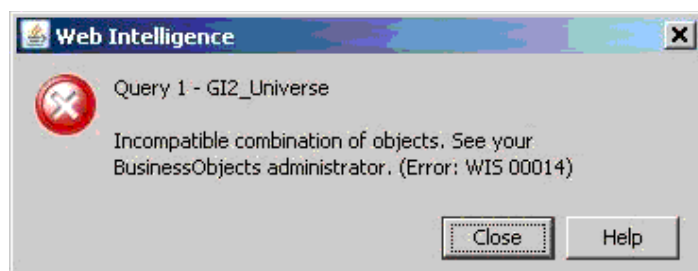
Figure 30: Incompatible Objects Error Message

To resolve this problem, you can modify the existing contexts to add joins between tables—where they can be joined—or you can create new contexts defining these relationships altogether. In the scenario where two tables cannot be joined, you should avoid mixing measures and dimensions within the same report.

Ambiguous Queries

Another dialog box that you might encounter when you build custom reports—even when you select objects from the same class—is the `Query Contexts` dialog box, which is shown in Figure 31.

Web Intelligence displays this dialog box when the resulting query of your custom report is ambiguous—that is, when the query does not uniquely identify the table from which data should be retrieved. On the contrary, an ambiguous query can be executed against more than one table in the database. For example, if you fail to include in your report a time-related dimension, then Web Intelligence will display this dialog box before the query is executed—because like results are stored in all of the `_SUBHR`, `_HOUR`, `_DAY`, `_WEEK`, `_MONTH`, `_QRTR`, and `_YEAR` Info Mart aggregation tables and views. Only after you have specified the appropriate context (the appropriate time dimension in this case) will Web Intelligence display the report's results.
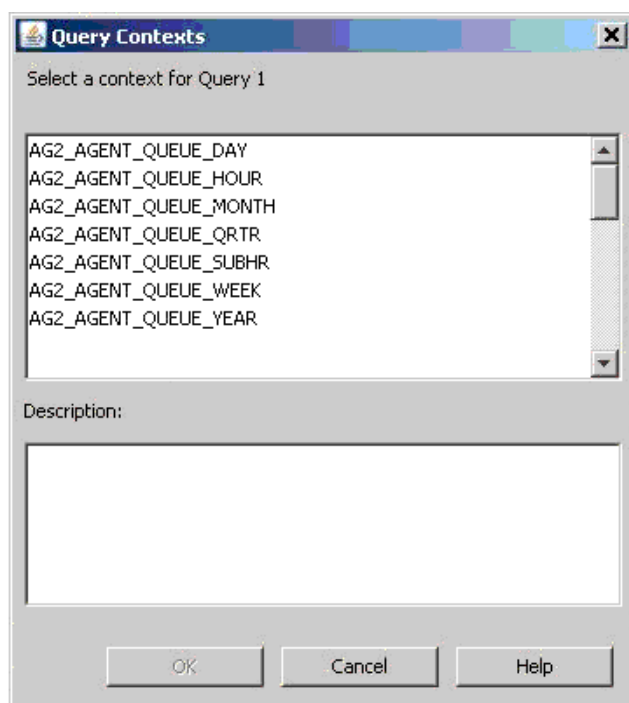
**Figure 31: The Query Contexts Dialog Box Appears—
When the Report Query is Ambiguous**

As another example, if you attempt to run a custom report in which you had added only the Queue and Queue Group dimensions from the Queue class (from GI2_Universe) to the query definition and nothing else, you would see a similar dialog box. Queue-related data from this class can be retrieved from any of the following aggregate tables:

- AG2_AGENT_QUEUE_*

- AG2_QUEUE_*

- AG2_QUEUE_ABN_*

- AG2_QUEUE_ACC_AGENT_*

- AG2_QUEUE_GRP_*

Such a query, without any measures or a time-related dimension, provides insufficient information for Web Intelligence to determine the table (or view) from which it should retrieve the desired data.

To repress this dialog box from your report viewers, add the appropriate universe elements that satisfy Web Intelligence's request for additional information. Even if you choose not to display these elements in the report, they should be part of the underlying query. Optionally, you could preselect the appropriate context, so that the dialog box will not be displayed to users. Refer to BusinessObjects documentation for information on how to create contexts.

Finally, as is the case with any report design, study the results of your generated custom report to ensure that they make sense.

Genesys

6 Personalizing Report Instances

Using the built-in features of BusinessObjects, you can publish reports in a manner that limits the dataset that is exposed to report viewers when they open a report instance. This dataset can be personalized to a dynamic profile that is defined in the Central Management Console (CMC).

In the following sections, this chapter describes how to personalize report instances:

Notes: All steps in this chapter should be performed by a user who has administrative privileges.

The procedures in this chapter describe customizations using BOE XI software, documents, and terminology.

Creating a Dynamic Profile Within CMS

The task of personalizing report instances begins with the creation of *one* user profile within the Central Management Server (CMS). Profiles work in conjunction with publications to personalize the content that users see. This sample profile will be dynamic—classifying users and groups, based on the user name that is issued to log in to InfoView. However, you can create other

types of profiles that are based on other variables or on one or more fixed values.

To create a dynamic profile, perform the following steps:

1. Open CMC, and select `Profiles`.

2. Create and name a new profile. Figure 32 shows the creation of the `BOE User Account` profile.

3. Open the profile and add a new profile value.

   a. Select `Profile Values` from the list on the left-hand side.

   b. Click `Add` in the upper right-hand section of the frame.

   c. Click `Choose` to the right of `User/Group`.

   d. Select the targets of your publication from the frame on the left-hand side, move them to the right, and then click `OK`. This particular example targets one of the Genesys-provided default groups: `Interactive Insights report viewers`.

   e. With the `Value` option selected, select the `Title` placeholder profile value from the list box. CMC autofills the `New value` field with a variable: `%USER.SI_NAME%`. Click `Add` to move this value to the `Existing values` frame. Figure 32 illustrates this action.

   f. Click `OK`, and then click `Close` to close the profile.
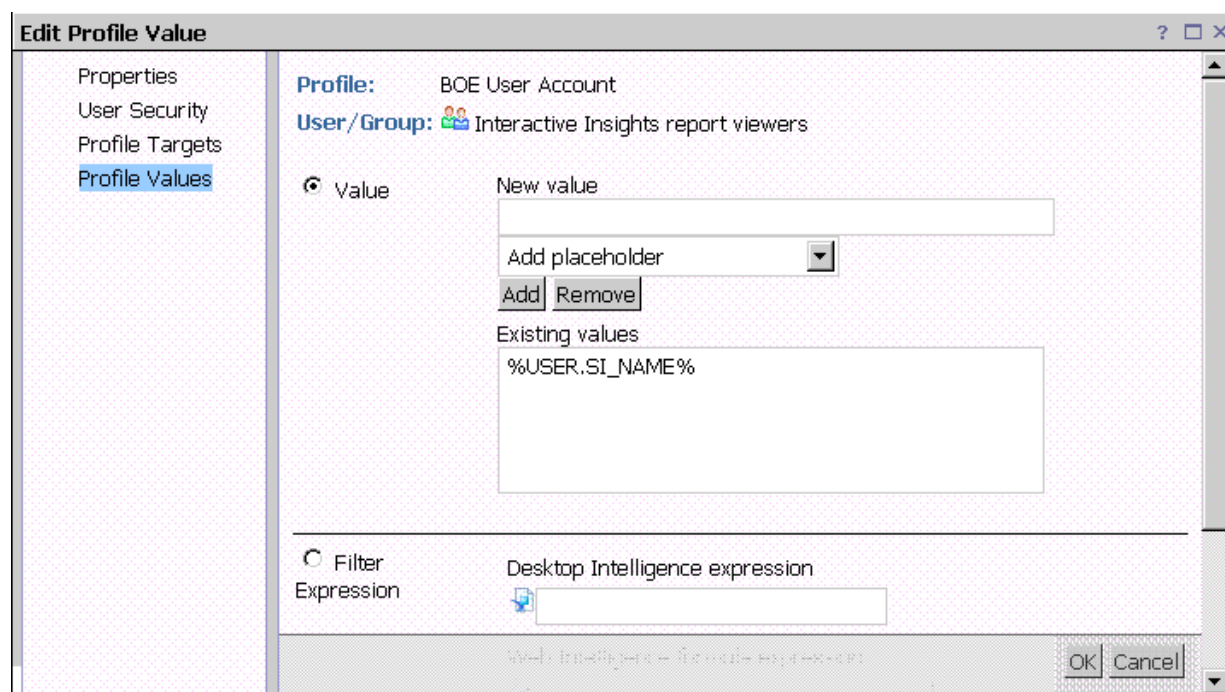
Figure 32: Setting a Dynamic Profile Value

Creating this dynamic profile enables you to concentrate configuration refinements to one BO object; you do not have to configure data-restriction rules individually for each recipient. Next, you must apply the profile to a publication that is distributed to report-viewer recipients.

Refer to "Managing Profiles" in the relevant SAP *Administrator's Guide* for more information about creating profiles.

Applying the Profile to a Publication

The next step in the example is to create the `Agent Conduct Publication` within InfoView. The `Agent Conduct Publication` uses the Agent Conduct Report as the source document. To this publication, you add the `BOE User Account` profile that was created earlier. Finally, you schedule the publication for distribution to all Interactive Insights report viewers.

1. Within InfoView, create a publication that points to a WebI report as the source document. This example names this publication `Agent Conduct Publication,` and specifies the Agent Conduct Report as the source document.

2. Open and modify the publication's properties, as follows, to associate with it the previously created profile:

   a. From the list of properties, select `Personalization`.

   b. In the `Local Profiles` section, from the `Report Field` list box, select a value that will serve as the filter.

      Figure 33 shows the `Agent Name` field from the report's `Agent` query selected for this option.

      Note that, unlike most other Interactive Insights reports, the `Agent Conduct Report` is built from the unified results of two queries. Most other reports are built from one query.

   c. From the `Enterprise Recipient Mapping` list box, select the profile you created in the previous procedure.

      Note: This list box appears only after you have selected a report field.
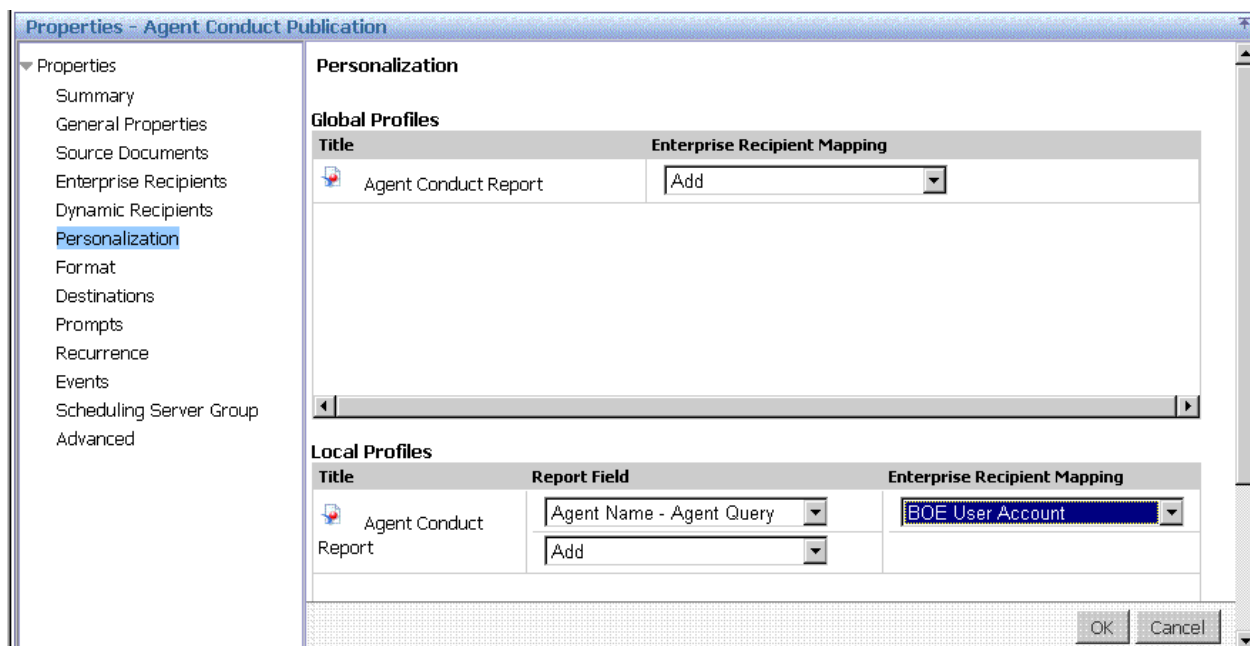
Figure 33: Assigning a Local Profile to a Publication

> **d.** Set other properties (`Destinations` and `Recurrence`), as appropriate for this publication; then, click `OK` to save and close the publication.

> **3.** Schedule the publication for distribution, as desired.

> Refer to the relevant SAP *Publisher's Guide* for more information about creating and scheduling publications.

Modifying the Agent Name Dimension

The filter that you defined when you created a dynamic profile on page 99 was associated with BO account names; the profile's value changes according to the manner in which the user logs into InfoView. This filter is used to limit the data that is exposed to users. As packaged, however, no Interactive Insights report contains any object that directly correlates to BO account names. To complete this example, therefore, you must tailor one universe object to synchronize it with BO user account names. Doing so will cause the data that users see to be limited to their own dataset.

The `User Name` detail dimension is the closest universe object that can be associated with a BO account name. This presumes, of course, that you configure BO user names in the same manner in which users are configured within Configuration Server. In the 8.1 release, however, no Interactive Insights reports employ the `User Name` detail dimension in their design; the `Agent Name` dimension is used instead. `Agent Name` is a composite entity comprised of three components when their values are not null:

- `Last Name`

- `First Name`
- `Resource Name`

There are three solutions from which you can choose:

- Modify all of the reports to substitute `User Name` for `Agent Name,` modify the report layouts that section and filter on this dimension, and conduct testing.
- Add the `User Name` detail to the query and layout of those reports wherever the `Agent Name` dimension appears.
- Alter the definition of the `Agent Name` dimension in the few classes where it exists.

This example uses the third option.

To modify the `Agent Name` definition:

1. Open Designer and navigate to the `Agent\Activity` class.

2. Open the properties of the `Agent Name` dimension, clear the `WHERE` clause, and change the `Select` statement to the following:

   `@Select(Activity\User Name)`

   Or, mimic the `User Name` detail definition:

   `RESOURCE_GI2.RESOURCE_NAME`

3. Save the definition by clicking `OK`.

4. Repeat this modification for all other `Agent Name` dimensions that exist throughout the universe.

5. Save the universe and export the changes back to the repository.

6. Test by running agent-related reports and comparing results to expectations.

Subsequently, when a BO user opens a report instance that was distributed by the publication, the results that the user sees are limited to only those records in which `Agent Name` is equivalent to the name of the user's own BO user account.

Limitations

Profiles filter the view of a document's content; they do not restrict the data that is being queried from the data source nor do they control users' access to data. If users have the appropriate rights to access documents in their original format, they can see the document's entire dataset.

Altering the definition of the `Agent Name` dimension—or replacing this dimension altogether within the reports—is neither supported nor tested by Genesys Quality Assurance. Subsequent redesign and testing can be extensive, depending on the option that you choose to associate contact center objects with BO objects. Genesys has not assessed the full impact of such changes, such as the continued functionality of drill-down/drill-up operations.

7

Upgrading Interactive Insights Reports

The initial Genesys Interactive Insights (GI2) 8.0 release introduced a utility that renames report measures from the 7.6.*x* releases to the current release—in essence, migrating 7.6.*x reports* to an 8.*x* environment. This chapter describes the utility and how to operate it. It contains the following sections:

- Prerequisites, page 105
- Overview of the Upgrade Utility, page 106
- Preparing the Environment, page 107
- Running the Upgrade Utility, page 109

The GI2 8.1 release introduces a utility that migrates *the aggregated data* that is stored in a 7.6 Info Mart to your 8.1 Info Mart. If you choose to perform this data migration, you do not have to also migrate the reports. Refer to the *Genesys Migration Guide* for details about data migration.

Note: This chapter does not pertain to the GI2 8.1.3 release.

Prerequisites

- BO XI 3.1 software must be installed, and you must have administrative access to it. The upgrade utility does not have to reside on the same host.
- The BO servers that are required to import a universe and edit Web Intelligence (WebI) documents must be running.
- GI2 8.*x* must be installed; the prerequisites for GI2 8.*x* (described in the *Genesys Interactive Insights Deployment Guide*) apply.
- The reports that are to be upgraded must reside within a public InfoView folder.

- Java Runtime 1.5 (or higher) must be installed on the host from which you will run this utility.

- The GI2_UNIVERSE_VERSION parameter must be set to a GI2 universe. This parameter is defined within Designer, as shown in Figure 34.
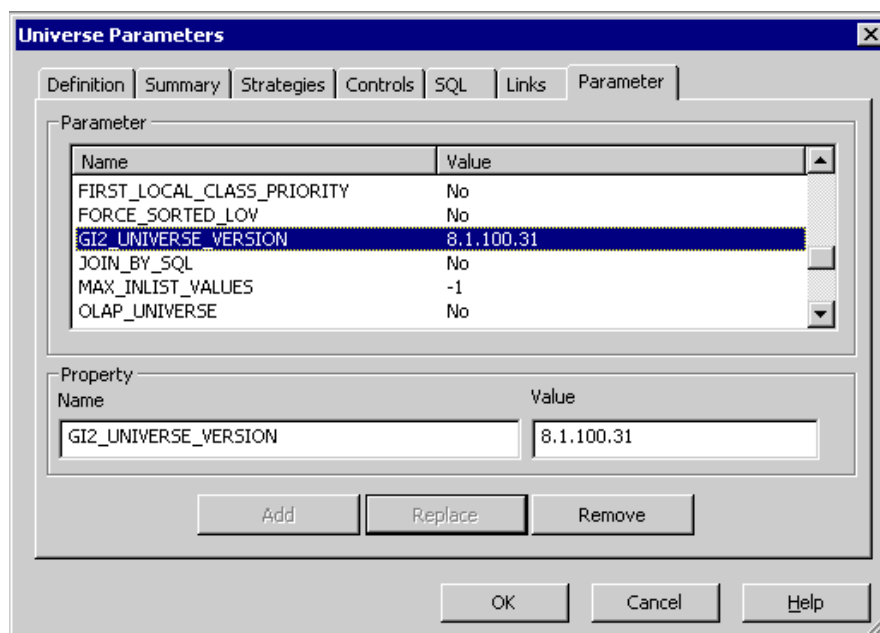
Figure 34: The GI2_UNIVERSE_VERSION Parameter

- On Oracle platforms, Genesys recommends that you set the ANSI92 universe parameter to No. The optimization improvements introduced in release 8.1.1 require this setting.

- You must appropriately set the required environment variables (see "Preparing the Environment" on) if you run the utility from one of the provided scripts.

Overview of the Upgrade Utility

The upgrade utility gathers the classes, measures, dimensions, details, and conditions that are found in any prior version of the Interactive Insights reports and renames them to the corresponding object names that are used by the targeted universe (designated by the NEW_UNV parameter) enabling you to use the upgraded reports in a current environment. The utility performs this conversion for only report elements and those reports that are located in the designated folder (indicated by BO_FOLDER environment variable or the -bo_folder runtime parameter). This utility affects only the name of the contents of the Interactive Insights reports—Info Mart schema remains untouched, the underlying universe remains unaltered, and measure definitions and descriptions remain the same. After you have upgraded the reports, you

may not be able to run them in your old environment without encountering errors, because the reports will reference objects that do not exist there.

> **Tip:** You can also use the upgrade utility to *downgrade* your reports.

With regard to the Interactive Insights reports, only that portion of the reports that directly call universe elements are updated. Section headers, labels, measure descriptions, report titles, report headers, page headers and footers, and statically named column headers, for example, that are not derived from the universe are not affected. (The names of most columns in the Interactive Insights reports are dynamic.) The utility bypasses any document that is not a WebI document, such as any of the objects that are located in the `Documentation` folder.

Before you run the utility, Genesys recommends that you:

* Make a copy of the folder that you want to upgrade, and upgrade that copy.
* Specify a subfolder of reports for the utility to upgrade as opposed to specifying the entire release-level folder; the utility can take minutes to run.

Genesys further recommends that you study the output results before you place the upgraded reports into production.

If required by definition, the utility substitutes one BusinessObjects object qualification for another. For example, the `Interaction Subtype` *detail* that belong to the `Flow` class in the GI2 7.6.2 release is mapped to the `Interaction Subtype` *dimension* in the GI2 8.*x* releases.

Preparing the Environment

Before you run the Genesys-provided scripts that invoke the upgrade utility, you must number of environment variables. The requisite variables exist in the `gi2_setenv` and `upgrade.universe` batch files or shell scripts that are deployed to the root directory upon successful installation of GI2 8.1. These scripts are described in the following subsections.

> **Note:** You can also run the utility from the command line, specifying runtime parameters instead of setting environment variables. Refer to "Running the Upgrade Utility" on .

gi2_setenv

The `gi2_setenv` script sets environment variables that identify the location of BO and GI2 installation paths and connection information to the BO Central Management Server. This script is called by the `gi2_upgrade_ universe` script, described in the next subsection, before it upgrades your reports. Table 8

describes the variables that are defined within the `gi2_setenv` script. Incidentally, all of these variables are predefined for you as part of a successful installation of GI2.

Table 8: Environment Variables of the gi2_setenv Script

Environment Variable	Description
BO_INSTALL_PATH	The root path of the BO XI 3.1 installation. This path must contain the `javasdk` subfolder. By default, this location is `C:\Program Files\Business Objects` on Windows platforms. UNIX platforms have no default.
GI2_INSTALL_PATH	The root path of the GI2 installation. By default, this location is: `C:\Program Files\GCTI\Genesys Interactive Insights` on Windows platforms. UNIX platforms have no default.
BOXI3_HOST	The host on which BOXI is installed.
BOXI3_PORT	The port of the host on which BOXI is installed.
BOXI3_AUTH	secEnterprise
BOXI3_LOGIN	The name of the account for the administrative user.
BOXI3_PASSWD	The unencrypted password of the administrative user.

The `gi2.upgrade.universe` batch file/shell script, described below, calls `gi2_setenv`; ensure that these variables are set appropriately before you execute the upgrade script.

gi2_upgrade_universe

Table 9 shows the environment variables that you must set within the `gi2_upgrade_universe` script before you run it. Several of these variables are preset for you as part of GI2 installation.

Table 9: Environment Variables of the gi2_upgrade_universe Script

Environment Variable	Set during GI2 Installation?	Description
JAVA_HOME	Yes	The full path to the `javasdk` subdirectory in the BO installation path.
GRT_WRAPPER	Yes	The full path and file name to `gi2.upgrade.universe.jar`. By default, this file is located in the root folder: `set GRT_WRAPPER=.\gi2.upgrade.universe.jar`

Table 9: Environment Variables of the gi2_upgrade_universe Script (Continued)

Environment Variable	Set during GI2 Installation?	Description
GRT_WRAPPER_ CLASS	Yes	The name of the class in `gi2.upgrade.universe.jar` that upgrades the universe. This value must be set to `com.genesyslab.gi2.uu.UnvUpgrader`.
DIFF_FILE	Yes	The file name and path to `conf\diff.json` containing the object renaming rules that the utility observes.
BO_FOLDER	No	The full path to the public InfoView folder whose WebI documents the utility should upgrade. To process all WebI documents in all public InfoView folders, set this variable to "/".
NEW_UNV	No	The location of the current (8.1.*x*) GI2 universe.
GI2_INSTALL_PATH	Yes	The root path of the GI2 installation. By default, this location is: `C:\Program Files\GCTI\Genesys Interactive Insights` on Windows platforms. UNIX platforms have no default.
BOXI3_HOST	Yes	The host on which BOXI is installed.
BOXI3_LOGIN	Yes	The name of the account for the administrative user.
BOXI3_PASSWD	Yes	The unencrypted password of the administrative user.

Running the Upgrade Utility

You can run the upgrade utility by executing the `gi2_upgrade_universe` batch file or shell script or by issuing the following from the command line:

```
java –jar gi2.upgrade.universe.jar --login=AdminUser
   --password=pass --server=host --new_unv="pathNEW
   --diff=conf\diff.json --bo_folder=pathReports
   --log_cfg=logpath
```

where:

    AdminUser is the account name of the BO administrative user.
    pass is the password of the BO administrative user.
    host is the name of the computer that hosts the BO software.
    pathNEW is the full path to the current universe.
    pathReports is the full BO path to the public InfoView folder whose WebI documents the utility should process.
    --log_cfg is the path and file name of `LOG4J` properties file from which this utility will inherit logging settings. If this is not specified, the utility logs output to the console.

The upgrade utility typically takes several minutes to complete execution and provides a log, in which you can observe the upgrades that have been made.

Related Documentation Resources

BusinessObjects XI 3.1

* *SAP BusinessObjects Enterprise XI 3.1 InfoView User's Guide.*
* *Universe Designer.*
* *Building reports with the SAP BusinessObjects Web Intelligence HTML Report Panel*

BusinessObjects Business Intelligence Platform 4.1

* *Business Intelligence Platform User Guide—SAP BusinessObjects Business Intelligence Platform 4.1Support Package 2.*
* *Business Intelligence Launch Pad User Guide—SAP BusinessObjects Business Intelligence Platform 4.1 Support Package 2*
* *Information Design Tool User Guide—SAP BusinessObjects Business Intelligence platform 4.1 Support Package 2*

Genesys

* *Genesys Technical Publications Glossary,* which ships on the Genesys Documentation Library DVD, provides a comprehensive list of the Genesys and computer-telephony integration (CTI) terminology and acronyms used in this document.
* *Genesys Migration Guide*, which ships on the Genesys Documentation Library DVD, provides documented migration strategies for Genesys product releases. Contact Genesys Customer Care for more information.
* Release Notes and Product Advisories for this product, which are available on the Genesys Customer Care website at `http://genesys.com/support`.

Information about supported hardware and third-party software is available on the Genesys Customer Care website in the following documents:

- *Genesys Supported Operating Environment Reference Guide*
- *Genesys Supported Media Interfaces Reference Manual*
- *Genesys Hardware Sizing Guide,* which provides information about Genesys hardware sizing guidelines for the Genesys 8.*x* releases.

For additional system-wide planning tools and information, see the release-specific listings of System-Level Documents on the Genesys Documentation website (docs.genesys.com).

Genesys product documentation is available on the:

- Genesys Customer Care website at `http://genesys.com/support`.
- Genesys Documentation site at `http://docs.genesys.com/`.
- Genesys Documentation Library DVD, which you can order by e-mail from Genesys Order Management at `orderman@genesys.com`.

Document Conventions

This document uses certain stylistic and typographical conventions—introduced here—that serve as shorthands for particular kinds of information.

Document Version Number

A version number appears at the bottom of the inside front cover of this document. Version numbers change as new information is added to this document. The following is a sample version number:

81ii_user_02-2013_v8.1.104.00

You will need this number when you are talking with Genesys Customer Care about this product.

Screen Captures Used in This Document

Screen captures from the product graphical user interface (GUI), as used in this document, may sometimes contain minor spelling, capitalization, or grammatical errors. The text that accompanies and explains the screen captures corrects such errors *except* when such a correction would prevent you from installing, configuring, or using the product successfully. For example, if the name of an option contains a usage error, the name would be presented exactly as it appears in the product GUI; the error would not be corrected in any accompanying text.

Type Styles

Table 10 describes and illustrates the type conventions that are used in this document.

Table 10: Type Styles

Type Style	Used For	Examples
Italic	- Document titles - Emphasis - Definitions of (or first references to) unfamiliar terms - Mathematical variables Used also to indicate placeholder text within code samples or commands, in the special case in which angle brackets are a required part of the syntax (see the note about angle brackets on page 114).	Please consult the *Genesys Migration Guide* for more information. Do *not* use this value for this option. A *customary and usual* practice is one that is widely accepted and used within a particular industry or profession. The formula $x + 1 = 7$ where x stands for . . .

Table 10: Type Styles (Continued)

Type Style	Used For	Examples
Monospace font (Looks like `teletype` or `typewriter text`)	All programming identifiers and GUI elements. This convention includes: • The *names* of directories, files, folders, configuration objects, paths, scripts, dialog boxes, options, fields, text and list boxes, operational modes, all buttons (including radio buttons), check boxes, commands, tabs, CTI events, and error messages. • The values of options. • Logical arguments and command syntax. • Code samples. Used also for any text that users must enter manually during a configuration or installation procedure, or on a command line.	Select the `Show variables on screen` check box. In the `Operand` text box, enter your formula. Click `OK` to exit the `Properties` dialog box. T-Server distributes the error messages in `EventError` events. If you select `true` for the `inbound-bsns-calls` option, all established inbound calls on a local agent are considered business calls. Enter `exit` on the command line.
Square brackets ([ ])	A particular parameter or value that is optional within a logical argument, a command, or some programming syntax. That is, the presence of the parameter or value is not required to resolve the argument, command, or block of code. The user decides whether to include this optional information.	`smcp_server -host [/flags]`
Angle brackets (<>)	A placeholder for a value that the user must specify. This might be a DN or a port number that is specific to your enterprise. **Note:** In some cases, angle brackets are required characters in code syntax (for example, in XML schemas). In these cases, italic text is used for placeholder values.	`smcp_server -host <confighost>`

Index

Symbols

Numerics

A

B