Merced™ Performance Suite

Introduction to Merced Performance Suite

Software Version 2.7



Copyright ©2006 Merced Systems, Inc. All rights reserved.
Merced is a trademark of Merced Systems, Inc. All other trademarks are the property of their respective owners.
All information in this document is based on the latest product information available at the time of printing. Merced Systems has carefully reviewed the accuracy of this document, but shall not be held responsible for any omissions or errors that may appear.
Merced Systems reserves the right to revise this publication and to make changes from time to time in the content hereof without obligation to notify any person of such revision changes.

Document Revision 27-001-0

February 27, 2006

Contents

About this Document v

Chapter 1 **System Description** 1

Overview 2
Architecture 4
- Data Integration and Cleansing Engine (DICE) 4
- Data mart 5
- End-user modules 8
- Administrative tools 10

System implementation 12
- Discovery 12
- Data integration 13
- End-user configuration 13
- Production preparation 14
- Roll out 14

Maintenance 15

Chapter 2 **Org Chart** 17

Using the org chart 18
Modeling the org chart 20
- Modeling groups 20
- Modeling persons 22
- More modeling concepts 24
- Model benefits 26

Using the model for other dimensions 27
Importing data into org chart model 28

Chapter 3 **Extracting Source Data** 29
Capture and integration process 30
Connecting to source 30
Capturing data 30
Integrating data 31
Conversions and jobs 35

Chapter 4 **Data Mart** 37
OLTP and OLAP data marts 38
Metabeans 40
Dimension tables 41
Base metrics 43
Fact tables 45
Loading the OLAP data mart 46
CubePop 46
NextPop 47
Running CubePop and NextPop simultaneously 48

Chapter 5 **Calculated Metrics** 51
About calculated metrics 52
Level-restricted calculated metrics 55
Goal metrics 57
Metric example 58

Chapter 6 **End-User Modules** 61
Home page 62
Reports 65
Sample reports 68
Dashboards 72
Sample dashboards 74
Staff Manager 78
Forms 79
Alerts, messages, and tasks 82
Generating alerts, messages, and tasks 83
Enterprise work flow 85
Module customization 86
Content management 86
Personalization 86
Access privileges 87

Index 89

About this Document

Welcome to Merced Performance Suite. This document introduces you to the architecture and components in Merced Performance Suite. This document will help you understand:

- How the system works
- What you must implement
- What you must maintain

By reading this document, you will have enough information to understand core concepts, and understand what needs to be configured and how you might configure it. This document does not provide step-by-step details for every configuration process. Instead, this document provides you with enough information to seek and understand further information.

This document contains the following chapters:

- Chapter 1, "System Description" — Describes the system, the architecture, and implementation and maintenance issues
- Chapter 2, "Org Chart" — Describes how Merced Performance Suite uses and models a company's organizational chart
- Chapter 3, "Extracting Source Data" — Discusses how Merced Performance Suite captures data from your data sources and integrates it into a data mart

- Chapter 4, "Data Mart" — Discusses the design of the OLTP and OLAP data marts and the architecture that supports each data mart
- Chapter 5, "Calculated Metrics" — Discusses different types of calculated metrics, which are used to produce end-user reports
- Chapter 6, "End-User Modules" — Discusses the features and capabilities of each end-user module

NOTE: Though Merced Performance Suite effectively measures performance in any data-driven environment with a hierarchical organizational structure, including call centers, sales and service organizations, and claims and collection processing groups, this document uses call centers for most examples.

1 System Description

Merced Performance Suite is a collection of software components that enable organizations to measure and improve the performance of their people and overall operations.

This chapter describes Merced Performance Suite. This chapter discusses the system, the architecture, and implementation and maintenance issues. Sections include:

- Overview
- Architecture
- System implementation
- Maintenance

Overview

Merced Performance Suite enables organizations to use their existing data to effectively measure and improve performance. Merced Performance Suite is particularly helpful for data-driven organizations with a hierarchical employee structure. Organizations that have successfully deployed Merced Performance Suite include call centers, sales and service organizations, and claims and collection processing groups.

With Merced Performance Suite, your organization can:

- Create and automatically distribute Web-based, personalized dashboards and reports that contain key performance metrics
- Facilitate self improvement in agent behavior
- Provide management tools to analyze performance issues
- Automate activities through predefined work flows, using alerts, messages, and tasks

Merced Performance Suite uses data already collected by your organization. This can include data collected by your ACD (automatic call distributor), WFM (work force management system), CRM (customer relationship management system), and other systems, such as quality and sales. In addition, with custom forms, such as coaching forms, Merced Performance Suite can collect and use the data that your organization currently collects in spreadsheets or stores on paper.

Merced Performance Suite extracts, transforms, and loads this data into a data mart, a highly-focused relational database that supports decision analysis. The data mart is designed to meet your organization's needs, based on metrics or statistics that you decide are important to measure performance. The data mart supports dimensional reporting, showing metrics for a particular group during a particular time period or for a particular call category during a particular time period.

Merced Performance Suite includes a set of Web-based end-user modules that can serve as the standard performance management platform for an entire organization. This platform helps provide clear performance insights to all levels of the organization. These end-user modules include reports that present detailed information and dashboards that present information summarizing performance at a glance. End-user modules also allow you to receive automatic alerts, to enter data through forms, and to set up a work flow, or a set of tasks, to complete when certain conditions are met.

Merced Performance Suite also includes a set of administrative tools that allow you to manage and use all the components in the system. With these tools, you can set up and customize data extraction jobs, tables in the data mart, and the displays and functionality of the end-user modules.

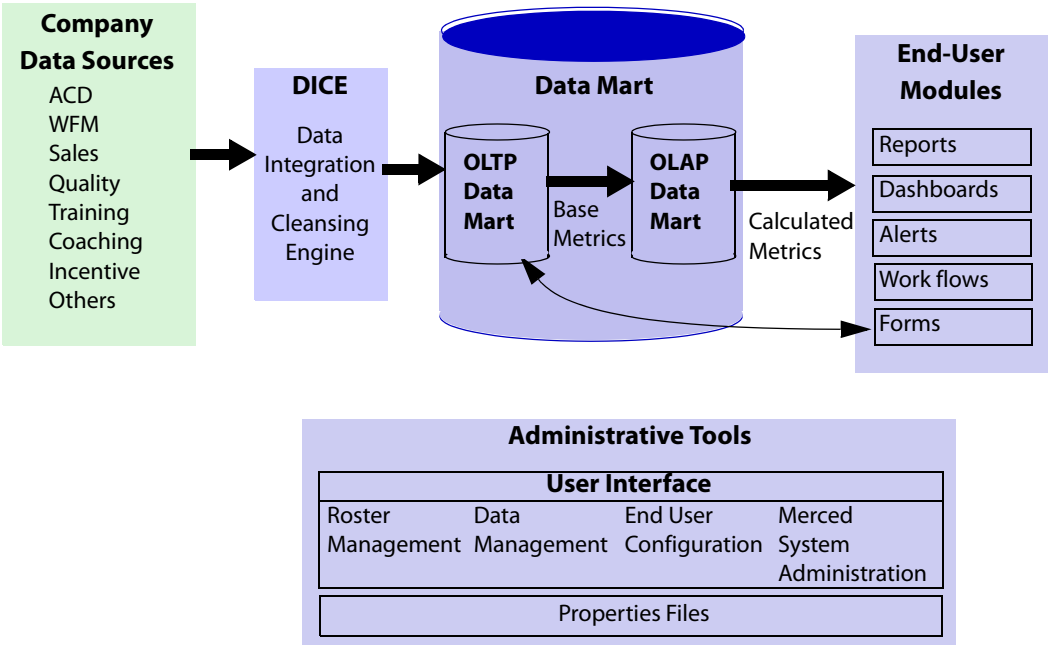
Built within Merced Performance Suite are key capabilities to enhance the product's value to your organization. These capabilities include:

- Temporality — You can store and track data that changes over time
- System availability — You can use the system's end-user modules for reporting, work flows, and other tasks, even when the system is updating data
- Customization — You can customize Merced Performance Suite on multiple levels, including setting the look and feel of the application, limiting data access based on user roles, and personalizing reports for individual users

Architecture

There are four primary parts of the Merced Performance Suite architecture:

- Data Integration and Cleansing Engine (DICE)
- Data mart
- End-user modules
- Administrative tools



Data Integration and Cleansing Engine (DICE)

Merced Performance Suite can access data from your ACD, WFM, and other operational systems. Merced Performance Suite can access data in an RDBMS (relational database management system) or a flat file.

Merced Performance Suite uses DICE (Data Integration and Cleansing Engine) to extract data from your data sources and load the data into the Merced Performance Suite data mart, a highly-focused relational database that supports the system's end-user modules. DICE is an ETL (extract transform load) engine. For each data source, you define a conversion that specifies the extraction, transformation, and loading process that DICE uses to import data. You then define a job—a set of conversions—and schedule the job to run at a particular time, usually daily or weekly. Job frequency varies by the type of data imported and customer preference.

You can also define a special DICE job, the org chart import, which automatically imports data from one or more source systems about your company's organizational chart, including the list of employees and the employee hierarchy. The org chart import is particularly useful when there are thousands of employees to load into the system initially or when there are many daily changes to the employee roster.

Data mart

Merced Performance Suite stores data in a data mart, a relational database that stores data about a particular subject or function. There are two distinct parts—sets of tables—in the Merced Performance Suite data mart: an OLTP (online transaction processing) data mart and an OLAP (online analytical processing) data mart.

DICE loads data into the OLTP data mart. The OLTP data mart is optimized for operational or transactional use, giving Merced Performance Suite fast and reliable access to the data. By loading data into an OLTP data mart, DICE can extract data from external systems with only minor transformation. The OLTP data mart also supports direct entry and retrieval of data through custom-designed Merced Performance Suite forms.

The tables holding information about the company's organizational chart, or org chart, are a key part of the OLTP data mart. These tables store information about the employees or persons in the organization, and how they are related to each other through a hierarchy. These tables store how this data varies over time. These tables also maintain a unique identity, called the Merced ID, for each person and can maintain that unique identity even if a source system re-uses the same identities for different people, such as when systems recycle training IDs.

From the OLTP data mart, Merced Performance Suite populates data into the OLAP data mart. The OLAP data mart is optimized for use of the Merced Performance Suite end-user modules, allowing end user modules to generate reports and dashboards quickly and reliably. The OLAP data mart organizes data into a high-performance relational OLAP structure that includes dimension and fact tables.

Dimensions are the axes or coordinates of reports. Typical dimensions in Merced Performance Suite are persons, time, and splits or queues. Other dimensions, like customer, products, or functions, are possible. For each dimension, you define grains, or levels of detail. For a person dimension, grains might include organization, site, group, team, and agent. For a time dimension, grains might include year, quarter, month, and day. The dimension table includes all the descriptions of the dimension. When you create a report, you use dimension tables to constrain the output. The dimension and the grain determine what sort of reports you can produce and how you can roll up or drill down through the data in the report.

Fact tables store the data for combinations of relevant dimensions. A fact table is also called a data cube.[1] For example, a fact table might store data about after-call processing time. A fact in this table has information about the after-call processing times for an agent on a particular date. In Merced Performance Suite, you configure base metrics that specify which facts the system stores in the OLAP data mart.

Merced Performance Suite uses a process, called CubePop, to populate the OLAP data mart with facts and dimensions from the OLTP data mart, based on the base metrics. When dimensions do not need updating, Merced Performance Suite uses a faster process, called NextPop, to load updated data into the fact tables. The system always remains available for reporting whenever CubePop or NextPop is running.

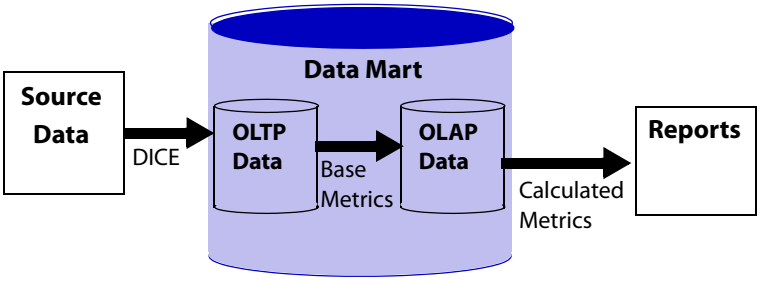
Merced Performance Suite computes calculated metrics from fact tables in the OLAP data mart. Calculated metrics combine facts and present meaningful measures, suitable for higher-level analysis. Merced Performance Suite uses calculated metrics to produce preconfigured dashboards and reports, presented through the Web-based user interface.

1. Merced uses the word "cube" to describe a relational fact table in the Merced Performance Suite OLAP data mart. Merced Performance Suite uses a relational-OLAP (ROLAP) architecture that stores data in relational database tables; Merced Performance Suite does not use a multi-dimensional "cube" design. Merced uses "cube" because it is an industry standard term, associated with analytics and multi-dimensional analysis, not because the term indicates an actual underlying technology.

Note that the system architecture offers flexibility and gives you three points for data calculation:

- When extracting source data, during DICE
- When populating OLAP data mart, with base metrics
- When presenting reports, with calculated metrics

For most organizations, the optimal configuration uses minimal calculations during DICE, core aggregation during population of the OLAP data mart, and complicated calculations during reporting. Delaying complicated calculations increases reporting options—business users can add a performance measure without adjusting the data schema—and improves overall system performance by only computing calculations needed for requested reports.



End-user modules

Merced Performance Suite includes end-user modules that you access through a single user interface directly from your Web browser. The user interface integrates reporting, alerts, and work tasks in a single, seamless system that enhances employee productivity.

End-user modules include:

- Dashboards
- Reports
- Forms
- Alerts
- Work flow

Dashboards provide highly customized at-a-glance summaries of an organization's performance. Dashboards show summaries of a set of reports that address a similar theme, such as KPIs (key performance indicators) for a certain time period. You can customize dashboards for appropriate roles in your organization, such as agent, manager or coach, functional VP, and so forth.

Reports present a detailed view of a set of performance metrics along specified dimensions. Users can customize reports and analyze data by rolling up and drilling down in various dimensions, moving dimensions to different axes, or applying filters. For example, a report might present managers with their team's NCH (number of calls handled), AHT (average handle time), and CPH (calls per hour) for the month-to-date period. Reporting tools allow managers to drill into the report details to see NCH, AHT, and CPH for any time period for each of the agents on their team.

Forms are customized Web pages that allow you to enter data directly from Merced Performance Suite into the OLTP data mart or to retrieve data from the OLTP data mart. Information entered through forms can appear in dashboards or reports.

Alerts are messages sent to selected recipients that warn them about specific metric thresholds, tell them about events, or remind them about tasks. You configure the recipients and the thresholds or events that trigger the alerts. For example, you might send agents an alert if their AHT during the month reaches more than six minutes, or you might send them an alert to notify them that their manager has completed a coaching assessment.

Work flows are sequences of alerts and the corresponding actions that certain conditions trigger. A work flow essentially defines a set of tasks to complete when a certain condition is met or a certain event occurs. A work flow might contain an alert that requests the recipient to complete a form.

You can customize the end-user modules using content management, personalization, and access privileges functions. Content Management System (CMS) allows you to control content—the material and format. The personalization function allows you to display material relevant to a particular user. The access privileges function allows you to protect data or limit data availability.

End users can archive Merced Performance Suite data by producing printouts, Portable Document Format (PDF) files, or Microsoft Excel files.

Administrative tools

You configure Merced Performance Suite with properties files that describe each component in the system. With properties files, you set up and customize DICE jobs, tables in the data mart, and displays and functionality in the end-user modules, including forms, alerts, reports, and dashboards.

Merced Performance Suite includes a set of administrative tools to help you build and maintain these properties files. You can access these tools from the user interface.

There are four categories of administrative tools:

- Roster management — Includes Employee Manager, which allows you to manage the employee hierarchy and all dimension information in Merced Performance Suite.
- End user configuration — Includes tools that allow you to create and edit metrics, reports, dashboards and other parts of Merced Performance Suite.
- Data management — Includes tools that allow you to view the status of data import jobs and a tool that allows you to edit cube configuration.
- Merced system administration — Includes tools that allow you to survey server status and the file system.

System implementation

To implement Merced Performance Suite, Merced's Client Services Group (CSG) works closely with your organization. The implementation process involves:

- Discovery — Understanding your business needs
- Data integration — Integrating data from the best sources to produce effective end-user modules
- End-user configuration — Configuring end-user modules that allow you to measure and increase company performance
- Production preparation — Preparing a production environment, including setting up required hardware and software
- Roll out — Developing a roll-out plan, including communication and training

After the discovery phase, the end-user configuration, data integration, and production preparation phases can go on simultaneously before system roll-out.

Discovery

During discovery, Merced's CSG works with your team to learn about your business operations. CSG wants to learn how you operate and how you can make the best use of Merced Performance Suite.

During the discovery process, CSG determines how your organization functions and how to model that in Merced Performance Suite. More specifically, CSG determines the org chart, the person hierarchy and attributes, the time dimension, and any other important dimensions, such as split or customer.

CSG also learns what performance metrics are key to your organization and what reports and dashboards will be most useful to different people in your organization.

Finally, CSG examines your data sources and identifies the best data sources for import into Merced Performance Suite.

Data integration

During data integration, CSG works with you to ensure that your system has accurate data. CSG creates DICE conversions to import data from your sources into the OLTP data mart. CSG also creates the conversion for importing the org chart. Finally, CSG defines the dimension and fact tables for the OLAP data mart by creating the base metrics needed to load the data mart.

End-user configuration

During end-user configuration, CSG configures the system to produce an effective end-user experience. CSG creates calculated metrics that efficiently query the OLAP data mart to produce the most up-to-date performance measures. CSG then works with you to define the dashboards and reports that allow you to quickly grasp and easily analyze performance issues.

Based on how you plan to use Merced Performance Suite, CSG defines forms to allow data entry and retrieval, and creates alerts to warn you of special conditions and required tasks.

Finally, CSG defines access control restrictions based on your requirements.

Production preparation

During production preparation, CSG prepares your system so that you can run Merced Performance Suite on an ongoing basis. This step involves installing and configuring the required hardware and software, and connecting the system with your network. This step also involves creating and scheduling the jobs that import data on an ongoing basis and the jobs that populate the data mart.

Roll out

To ensure effective roll-out of Merced Performance Suite, CSG works with you to develop a communication plan, a training plan, a technical support plan, and a plan to hand over administration of the application to your teams.

Maintenance

Merced Performance Suite is a flexible and extensible system that can grow with your business. After you install and begin to use the system, users will offer feedback, providing ideas about new metrics and reports that they would like to see, alerts they would like to receive, or forms they would like to have. You need to process this feedback and use it to enhance your installation. To do this, you need staff for ongoing maintenance and monitoring tasks.

Desired tasks might include:

- Roster management — You need to ensure that the org chart information is kept up-to-date. Depending on your system configuration, you might maintain the information in your source system or you might edit org chart information using Employee Manager directly.
- Report maintenance — You need to ensure that the dashboards, reports, and metrics are relevant and useful to your organization. When needed, you can easily edit existing reports or add new ones.
- Job management — You need to monitor the daily and weekly jobs that import source data into the OLTP data mart and that populate the OLAP data mart.
- System administration — You need to monitor the status and performance of the Web, application, and database servers, and back up the system databases periodically.
- User support — You need a system to offer technical support to users and a process to capture feedback regarding desired features.

2 Org Chart

A company's organizational chart—its org chart—provides Merced Performance Suite with vital information. An org chart contains information about all of an organization's employees and their relationships to each other; an org chart shows the employee hierarchy. Merced Performance Suite uses this information to create the person dimension, and uses the person dimension to calculate metrics and to personalize information that the user interface displays.

Merced Performance Suite contains a model that represents the org chart and stores the data it contains. The system offers jobs and tools to import and maintain data in this model. Merced Performance Suite uses the same model to represent other hierarchical dimensions, such as splits, customers, or products.

This chapter discusses:

- Using the org chart
- Modeling the org chart
- Using the model for other dimensions
- Importing data into org chart model

Using the org chart

Merced Performance Suite uses org chart data extensively. Before the system can use org chart data, however, the system must collect and store that data. Collecting org chart data involves:

- Importing data about all employees and their relationships to each other into the org chart model
- Assigning identifiers that Merced Performance Suite can use to link an employee in different source systems
- Defining and assigning roles that determine how employees can view data in Merced Performance Suite

The org chart data that Merced Performance Suite collects and stores allows you to:

- Aggregate data — Reports displaying data about a team, for example, aggregate the data about each individual that belongs to the team.
- Drill up or down — The drill path in a report is based on the hierarchy defined by the org chart.
- Limit functional access — Each user of Merced Performance Suite is assigned a role, based on the org chart. A user's role determines whether that user can access a report, dashboard, directory, or form. For example, users can only complete certain forms about employees on their team.
- Limit data access — Users can only view data about those related to them in the org chart. For example, supervisors can only view data about the agents that they supervise.
- Personalize reports — Many reports show data relevant to users and their role in the hierarchy. For example, supervisors viewing a report see data about their team, whereas directors viewing the same report might see data about their center.

- Create users — Each person in the org chart can have a user name and password. Therefore, everyone about whom the system collects data can potentially access the system and view data.
- Report historically — Because Merced Performance Suite stores org chart data over time, you can create historical reports that reliably show this data, such as reports that show which employees were on a team on different dates.
- Match people in different systems — An individual can have different identifiers in each source system. With the data that Merced Performance Suite stores, you can link these different identifiers to the proper person.
- Route alerts, messages, and tasks properly — Most work flows use the employee hierarchy, sending alerts, messages, and tasks to an employee's boss, and then to that boss's boss.

Modeling the org chart

Merced Performance Suite models org chart data in terms of groups and persons. This section discusses:

- Modeling groups
- Modeling persons
- More modeling concepts
- Model benefits

Modeling groups

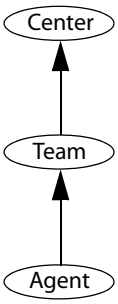
To capture the hierarchical structure of an org chart, Merced Performance Suite models groups and group types.

Group types

Group types define an organization's hierarchy. A group type typically represents a function and a level in the reporting hierarchy. Each group type has a name and a valid parent group type (except for the highest group type in the hierarchy). The parent group type usually has a supervisory function. For example, group types might be named Agent, Team, and Center. Agents must report to teams, and teams report to centers. Therefore, the valid parent group type for an agent is Team and the valid parent group type for a team is Center.

Group Type

Name	Parent
Agent	Team
Team	Center
Center	--



Groups

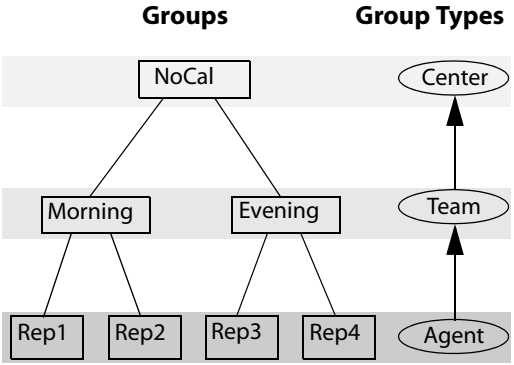
A group is an instance of a group type. A group defines a particular employee or collection of employees who work at a specific level and have a specific function in the hierarchy. A group usually has a single employee and possibly subordinate employees represented by subordinate groups.

Merced Performance Suite aggregates and reports on data for groups. Therefore, individuals on whom you wish to report must be in their own group, usually a group with no subordinates. For example, suppose you want to use Merced Performance Suite to report on sales representatives' performance. You will create a group for each representative, a group of type Agent.

Each group has a unique name, a group type, and a parent group. Valid parent groups depend on the group's type and the parent group's type. For example, if you create a group named Morning which is of type Team, then its parent group must have a type Center. When you define groups, you essentially define positions in an organization and how they report to each other. A group can have only a single parent, but many children.

Group

Name	Type	Parent
Rep1	Agent	Morning
Rep2	Agent	Morning
Rep3	Agent	Evening
Rep4	Agent	Evening
Morning	Team	NoCal
Evening	Team	NoCal
NoCal	Center	--



Modeling persons

To capture the employee aspect of an org chart, Merced Performance Suite models persons and roles. A person represents an employee; a role represents the employee type.

Roles

A role is often related to a function and a level in the organization. Together, these characteristics define an employee type. When specifying a role, you create a unique name and indicate the primary group type of employees in this role. For example, you might create roles named Director and Manager. The primary group type of a Director is Center; the primary group type of a Manager is Team.

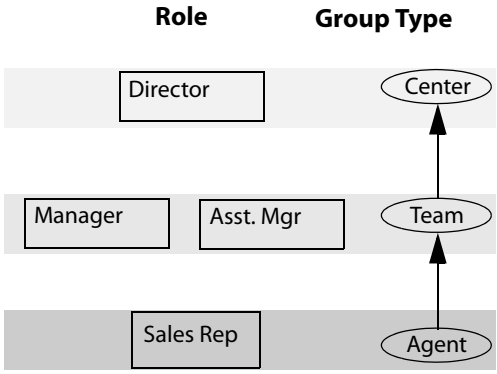
Defining a primary group type specifies the level in the hierarchy that those in this role work. Roles, therefore, imply subordinates, peers, and superiors. For example, the primary group type of a Manager is Team. For a Manager, subordinates belong to the group type Agent; peers belong to the group type Team; and superiors belong to the group type Center. Merced Performance Suite uses the hierarchical relationship specified by roles to support key functionality, such as to personalize reports and limit data access.

Remember that some types of groups have no subordinate groups. Employees in such groups have no supervisory function. For example, a role for sales representatives is Sales Rep. The primary group type of an employee with the role Sales Rep is Agent, a group type with no subordinates; hence, an employee with the role Sales Rep supervises no one.

Employees with different roles can have the same primary group type. Thus, employees with different roles can work at the same level in the hierarchy and supervise the same type of subordinate groups. For example, there might be two employee roles—Manager and Assistant Manager—that have a primary group type of Team. Employees in either role report to a Center and can supervise a subordinate Agent.

Role

Name	Primary Group Type
Sales Rep	Agent
Manager	Team
Asst. Mgr	Team
Director	Center



Persons

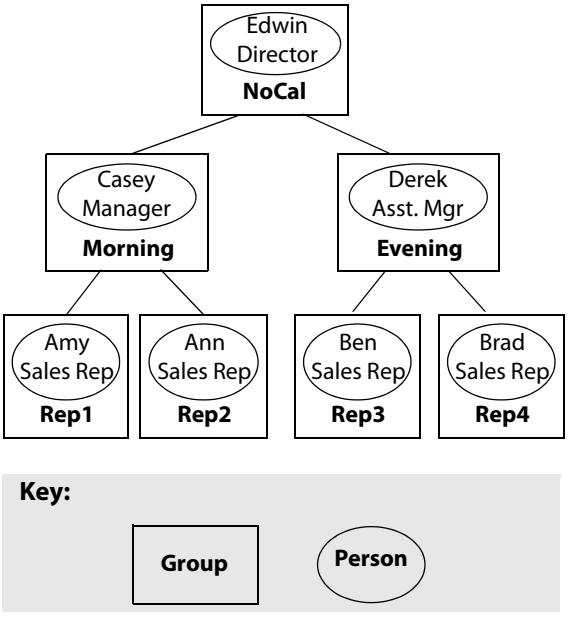
A person defines a particular employee. When you specify a person, you create a name to identify the employee, assign a role, and assign a parent group.

By assigning a role, you give an employee a level in the hierarchy. The person's role determines valid parent groups. For example, a person whose role is Manager must be assigned to a group of type Team, this role's primary group type. Valid parent groups, therefore, are Morning and Evening.

By assigning an employee to a group, you give the employee a specific position in the hierarchy, with a specific line of reporting. For example, by assigning a manager to the Morning group, you make that manager the supervisor of Rep 1 and Rep 2 and you make that manager report to NoCal.

Person

Name	Role	Parent Group
Amy	Sales Rep	Rep1
Ann	Sr. Agent	Rep2
Ben	Sr. Agent	Rep3
Brad	Jr. Agent	Rep4
Casey	Manager	Morning
Derek	Asst. Mgr	Evening
Edwin	Director	NoCal



More modeling concepts

You can expand upon the core concepts of groups and persons to add to the robustness of your org chart model.

Attributes. Groups and persons can also have additional associated information. Groups might have attributes, such as division, region, or department. Such properties provide additional ways to filter and drill in reports and dashboards. Persons might have related data, like start date and e-mail address.

Identities. Merced Performance Suite maintains a unique Merced ID for each person imported from the org chart. The system links individual persons or groups and their unique Merced IDs to specific identifiers in various source systems, such as WFM and ACD. The source system identifier is called the namespace identifier.

Temporality. Merced Performance Suite stores org chart data over time; it stores both historical values and current values. For example, Merced Performance Suite stores the dates when an agent joined and left a team. Therefore, it stores the team composition at all points in time. There are limitations to changes that you can make and maintain historically, however. For example, you can change and maintain a historical record of a person's parent group—reflecting a promotion, perhaps—but you cannot change and maintain a historical record of a person's attributes, such as e-mail address.

You can load data about groups or persons at any level of the org chart. However, if a group has no persons assigned to it at any level, then that group does not appear in any reports.

Special cases. Unique needs of some organizations sometimes require special handling:

- Outsourcers — You can represent outsourcers as centers, inserting data only at center level and not at agent level.
- Ragged hierarchies (different levels of details in different divisions) — You can hide unnecessary levels for certain divisions using group attributes and tools in the end-user modules. For example, suppose an organization has an East Coast division and a West Coast division, and the East Coast division has centers, with teams reporting to centers, while the West Coast division only has teams. You can hide the center level for the West Coast division.

- Staff roles — You can add a special role to the model to represent employees who fall outside a normal level in the hierarchy and can report to any group type, such as employees in a staff role. For example, a special projects analyst who reports directly to a director has a staff role rather than a line role.

Model benefits

The Merced Performance Suite org chart model offers advantages for configuring the system and analyzing performance.

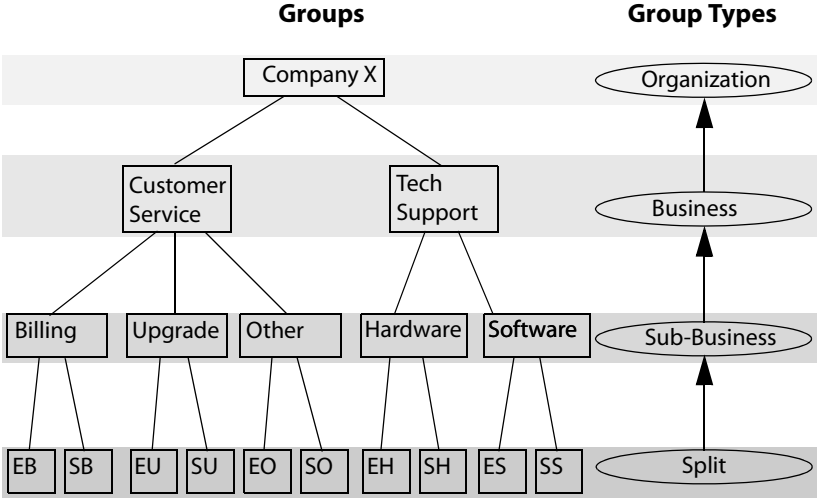
Modeling group types and roles allows you to configure specific relationships, attributes, and behaviors in fewer places. You can enter changes or apply characteristics for one or two group types or roles rather than making changes for many groups or people. For example, if you want to prevent sales representatives from viewing a report, then you set permissions for the role Sales Rep rather than for multiple individual representatives.

Modeling groups in addition to persons offers benefits when analyzing performance. Modeling groups is particularly useful in organizations with high rates of employee turnover. Group performance is a combination of many individuals' performance. Groups, therefore, offer organizations a consistent way to measure and view performance when individuals are inconstant.

Using the model for other dimensions

The org chart model is a hierarchy model. Groups and group types can represent any hierarchy. Merced Performance Suite uses the model—specifically, groups and group types—to store data about other hierarchical dimensions, such as split (for example, call category) hierarchies, customer hierarchies, or product hierarchies.

You can model categories and levels in these dimensions just as you model groups and group types in the person dimension, applying the same rules. For example, to model call splits, you might create four group types: Organization, Business, Sub-Business, and Split. You would create appropriate groups for each group type. For example, groups in the Business group type might include Customer Service and Tech Support, and you might have groups for English and Spanish splits for each Sub-Business type.



When adding other hierarchical dimensions to Merced Performance Suite, you collect the data and import the data using the same jobs and tools that you use to import org chart data—the jobs and tools for the org chart model.

Importing data into org chart model

You can use two methods to create and maintain data in the org chart model:

- Manual — Use Employee Manager, a Web-based administration tool, to create or edit any person or group (including groups that represent non-person hierarchy dimensions).
- Scheduled import — Use DICE to import org chart information from another system, such as a WFM or HR system.

Often, you will use both methods. Small organizations of under 500 people might use DICE to run a seed import job that pulls the organizational framework and defines roles and group types. After defining the framework, these organizations use Employee Manager to enter and maintain the data. Larger organizations might use DICE to input all updates from their source system but use Employee Manager to enter data about people not in the source system, especially those people at the top of the organizational hierarchy.

When using another system's source data, you must:

- Ensure that you input authentication information (user name and password).
- Make needed changes in the source system. Although you can override data with Employee Manager, the next data import job that captures this data will replace your changes with the source system data. The source system is the "system of record," and should be kept up to date.

  If not carefully monitored, the link between the automated data and the manually maintained data can become the source of problems and discrepancies in reports.

3 Extracting Source Data

DICE (Data Integration and Cleansing Engine) captures data from your data sources and integrates that data into the Merced Performance Suite OLTP data mart. DICE is the ETL (extract transform load) component of Merced Performance Suite. Essentially, DICE translates data into a format that other Merced Performance Suite components can use.

This chapter discusses:

- Capture and integration process
- Conversions and jobs

Capture and integration process

DICE extracts data from a source and loads the data into a target. There are three parts to the DICE process:

- Connecting to source
- Capturing data
- Integrating data

Connecting to source

DICE captures data from any company data source. A company data source might be a database or a flat file. A data source might contain a complex hierarchy or it might contain simple data. For each source, DICE requires a conduit, or connection. DICE might establish a connection to a database at a particular time to capture data, or you might place—by a particular time—a file in a designated directory that DICE monitors.

Capturing data

Once connected to a particular data source, DICE filters the data for records to import. Most records have a fact time, the time the data refers to, such as the date the agent handled a call or transaction. DICE uses the fact time to determine what data to import. Typically, DICE imports records for a particular time period. The time period might be defined by the time that DICE runs—all the records since DICE last ran, for example—or the time period might be defined by the data source, such as all the records in a flat file.

Some source systems require time to collect and compile data, before finalizing the data as accurate and reliable. For example, remote switches might not report data to a central repository for up to an hour after calls are completed. To avoid collecting data during a period when you know data might be inaccurate or

incomplete, you can specify a period, called an "invalid data duration," during which DICE does not capture data. For example, if you set this duration to 60 minutes, DICE will not attempt to capture data loaded into the source during the 60 minutes prior to running a data capture job.

Changes to source data also influence what data DICE needs to load, and therefore, what data DICE captures. Often, organizations update and change source data after DICE imports data. DICE must capture this changed data, in addition to new data. DICE requires a changed data capture (CDC) technique.

To ensure that it captures all changes, DICE can capture all source data. For large data sources, however, this is a lengthy process and not very efficient. Some sources store a timestamp that tracks when data is modified. For such sources, DICE might capture records that have a modified date since the last load. For sources without a modified timestamp, an approximation is often sufficient. Frequently, there is a time beyond which source data is unlikely to change—for example, the time call centers require to get updated information, or the time beyond which call centers do not bother updating information. This is called the "settle time." Thus, DICE might capture records for the period since it last ran plus the settle time.

Integrating data

After capturing data from the source, DICE integrates the captured data with existing data in the OLTP data mart. There are two parts to the integration process:

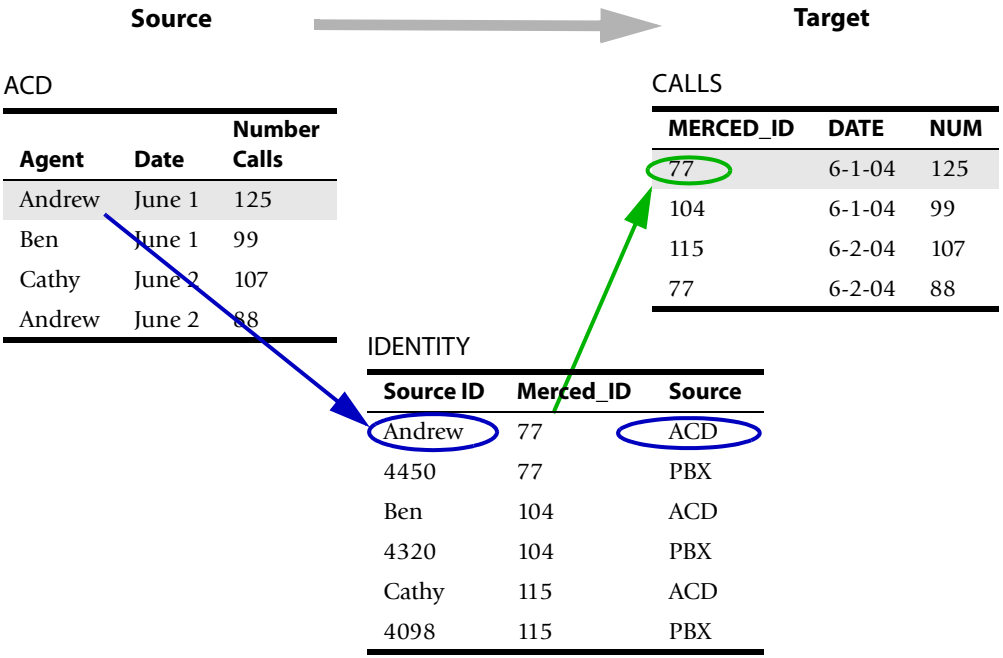
- Resolving references
- Merging changed data

Though the integration process can include data aggregation and calculations, Merced recommends importing data with as little change as possible. Importing data without change creates a verifiable copy of the source, minimizes DICE debugging, produces an OLTP data mart optimized for transactions, and

offers greater flexibility in reporting and analysis. You can aggregate and calculate data when loading the OLAP data mart and producing reports, through base metrics and calculated metrics.

Resolving references

When integrating data, DICE creates proper references to the existing data. For example, DICE ensures that the employee in the captured data refers to the correct employee in the OLTP data mart. For each source system, DICE uses an identity file that links the identifier that the source system uses to the unique Merced ID that the OLTP data mart uses. By accurately resolving references, DICE avoids difficulties created by discrepancies in how different systems refer to the same object.



Occasionally, DICE will import records from a source before a corresponding record exists in the target. For example, DICE might import a record about the calls a new agent handled before information about that agent has been entered into the employee hierarchy. In this case, DICE creates a phantom person. Later, when the employee is added to the system, DICE merges the "phantom" person with the actual person.

Merging changed data

When integrating data, DICE must also ensure that it merges changed records into existing records properly. DICE uses one of three changed-data-capture (CDC) methods:

- Clear target — DICE drops any rows in the target table that overlap with the captured data and loads all the rows in the captured data.

  For example, if DICE captured all records since it last ran plus the settle time, then DICE will drop all the existing rows in the target table that occurred during the settle time and load the rows from the captured data.

  Use this method when you are certain that the captured data contains a complete set of the required data.

  NOTE: A captured data set might not be complete when data in the source system expires and is not maintained beyond a certain date. In this case, the target might have records that are no longer in the source system.

- Insert and update — For each row in the captured data, DICE searches the target table for a matching row, typically using a natural key. If it finds a matching row, DICE updates the row with new information; if it does not find a matching row, DICE inserts the row.

For example, suppose the target table contains a unique row for each agent and date. When importing a row from a source, DICE searches the target for a row with the same agent and date. If DICE finds a matching row, DICE updates the data in that row with the captured data. If DICE does not find a row with the same agent and date in the target, DICE inserts the captured row into the target as a new row.

Use this method when the captured data does not contain a complete set of the required data, such as when the captured data only contains data modified since the last import.

NOTE: Use caution when data in natural keys might change. In this case, DICE cannot properly match captured data with existing rows and will insert the data as a new row rather than updating an existing row; the old row will remain in the target.

- Insert only — Insert each record in the captured data as a new row in the target.

  Use this method only when the captured data includes only new data and contains no changed data.

  This method is the default method when you do not select an alternate method. However, this method requires that the data set contains entirely new data. If the data set contains any overlapping records, this method results in duplicate rows in the target.

Conversions and jobs

A conversion is the set of tasks that DICE completes to import data. Typically, you will define a conversion for each data source, though in some instances, such as when a single source contains significantly different types of data, you might define more than one conversion for a single data source.

There are two types of conversions:

- Data chunk — Data chunk conversions define the tasks to import numerical data about company activity. Data chunk conversions typically follow a prescribed set of tasks with predefined choices.
- Org chart — Org chart conversions define the tasks to import employee data about the organization's hierarchy. Org chart conversions are more flexible and, hence, more complicated than data chunk conversions.

A job is a set of conversions to run together. In a job, DICE can run conversions in parallel (a "fork" job) or in serial (a "pipeline" job). Only run data chunk conversions in parallel; never run org chart conversions in parallel. There are some additional limitations to running conversions in parallel, depending on how you configure your system.

You create a conversion properties file that defines the information DICE requires to capture and integrate data. The conversion properties file defines:

- Source — Describes where DICE retrieves data
- Target — Describes where DICE stores data
- Mapping — Describes the logic DICE uses to translate data from the source to the target
- Changed data capture technique — Describes the logic to ensure that DICE captures any changed data in addition to new data

- Data set — Describes the data set to extract in terms of earliest and latest times and the settle time
- Reference data — Describes how to link data from the source to existing data in the target

You also create a job properties file that defines a set of conversions to run together.

4 Data Mart

Merced Performance Suite stores data in a data mart, a relational database that stores data about a particular subject or function. There are two distinct parts—sets of tables—in the Merced Performance Suite data mart: tables designed for OLTP (online transaction processing) and tables designed for OLAP (online analytical processing). Essentially, there are two separate data marts.

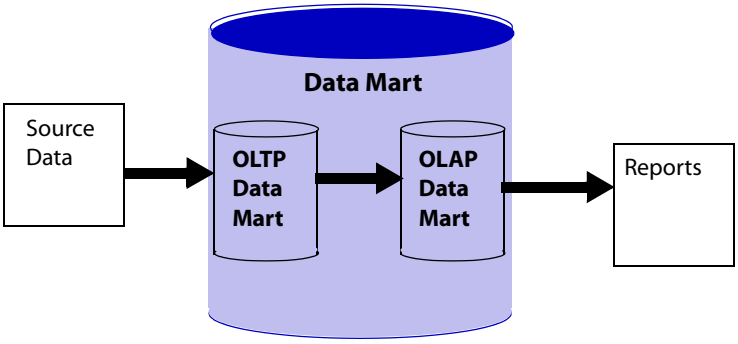
This chapter discusses the two-data mart design and the architecture that supports each data mart. Sections in this chapter include:

- OLTP and OLAP data marts
- Metabeans
- Dimension tables
- Base metrics
- Fact tables
- Loading the OLAP data mart

OLTP and OLAP data marts

Merced Performance Suite essentially contains two data marts: an OLTP data mart and an OLAP data mart. The OLTP data mart contains data that DICE extracts from company sources and data that you enter through forms, including org chart model data. The OLTP data mart stores mostly unaggregated data, providing a stable record of all source data and offering maximum reporting flexibility.

Merced Performance Suite derives the OLAP data mart from the OLTP data mart. The OLAP data mart organizes data into fact tables and dimension tables. Fact tables are also called cubes. Most end-user modules use the fact and dimension tables in the OLAP data mart to create reports and dashboards. The structure of the OLAP data mart easily accommodates data reporting and analysis, allowing you to roll up or drill down and change reporting axes.



The two-data mart design enables Merced Performance Suite to offer you maximum choices in reporting and performance. With the OLTP data mart, the system can efficiently track and maintain a record of all the data about your organization, offering you the most choices in reporting: all stored data is available. With the OLAP data mart, the system aggregates and stores only the data required for reporting and in a format that is optimized for fast reporting.

Final configuration of your data mart depends on your organization and your needs. In a typical configuration, the OLTP data mart structures tables to minimize redundant data. Each entry, therefore, affects one row, allowing you to quickly insert, update, or delete data. DICE jobs capture source data and load that data into the OLTP data mart with minimal transformation. Forms also store data in the OLTP data mart.

The OLAP data mart structures tables using redundant data, in order to reduce the number of joins required to obtain query results. You can quickly select data with this structure. The OLAP data mart contains the aggregated data required for reports. Thus, the OLAP data mart balances the conflicting goals of minimizing storage, including time-to-populate, and minimizing report display time. The OLAP data mart minimizes storage and time-to-populate by only storing aggregates of required data, delaying complicated calculations until they are required. The OLAP data mart minimizes report display time by organizing data to allow fast response times.

Metabeans

A metabean is the programming object that Merced Performance Suite uses to load database tables in the OLTP data mart. A metabean has constituent properties. Those properties are specified by another object, a metabean type. In other words, a metabean type specifies unique properties that describe a particular metabean. Essentially, a metabean type corresponds to a table, and a metabean corresponds to a row in the table. Merced Performance Suite uses metabean types to create tables and uses metabeans to load tables.

Merced Performance Suite's metabean-based architecture is a powerful and flexible architecture that allows you to build and configure database tables—to develop the schema—without having to go into the RDBMS itself. For each table in the OLTP data mart, you create a metabean type with properties that define the columns or fields in the table. You register all the metabean types that compose the data mart in a properties file that defines the repository.

Merced Performance Suite runs a process, called Schemaload, to create the tables in the actual database—to create the database meta-data. Schemaload takes each registered metabean type and creates a database table in the format required by the RDBMS. For example, Schemaload might add columns that an RDBMS requires to track system parameters, like created date or modified date.

Dimension tables

Dimensions specify the spaces an organization uses to measure performance, such as the time space. Dimensions correspond to axes. Values on those axes—values in the dimension—are called labels. Labels describe a point or area in the dimension. Labels imply units, such as the units in a graph or on a report.

Merced Performance Suite typically is concerned with three dimensions:

- Time
- Person
- Split (call categories)

Other dimensions are possible, too, such as customers or products. Merced Performance Suite uses the org chart model to define hierarchical dimensions. You can input these dimensions using an org chart conversion (a DICE job) or using Employee Manager. For example, you define a group containing splits by using a special group type.

Each dimension has one or more grains. A grain is a level of detail. A finer grain represents more detail; a coarser grain represents less detail. A finer grain is contained completely within a coarser grain. You can use grains to roll up or drill down in reports. For example, grains in the person dimension are defined by the employee hierarchy. Agent, team, and center are different grains. Agent is a finer grain than team, and team is a finer grain than center. Center is the coarsest grain.

When defining grains, determining finer and coarser grains is not always obvious. For example, in the time dimension, a week might seem like a finer grain than a month. However, depending on the calendar, a week might belong to two months. Therefore, a week is not always a finer grain than a month.

The OLAP data mart contains a table for each dimension. Each dimension table lists all the grains for that dimension and all the possible values that can co-exist for those grains.

For example, you might define the time dimension with grains of year, month, and day. The time dimension table contains a row for each combination of grains that can co-exist—in this case, a row for each date.

Time Dimension

Year	Month	Day
...		
2004	December	30
2004	December	31
2005	January	1
2005	January	2
...		

Labels for the dimension vary with the grain that you are describing. Valid labels for this time dimension include "2004," "December 2004," and "December 31, 2004."

Base metrics

A base metric is a numerical measurement—a statistic—for a specific set of dimension labels. For example, a base metric is a statistic about a particular person at a particular time. A base metric has a rule that describes how to extract and calculate that statistic. The rule is essentially a formula. Merced Performance Suite calculates base metrics by aggregating rows from a table in the OLTP data mart. Aggregations include adding or counting or determining maximum or minimum values. Merced Performance Suite stores base metrics in fact tables, or cubes.

When determining base metrics for your implementation, you must know what statistics your final reports require. However, base metrics do not necessarily calculate the precise statistics. Instead, base metrics provide the data from which the reporting module can derive the final statistics. The reporting module calculates final statistics using calculated metrics. For more about differences between base and calculated metrics, see "About calculated metrics" on page 52.

Base metrics essentially identify appropriate data and aggregate that data to a native grain, the finest level that a final report might require. Base metrics provide numerical data—such as data about the number of calls or the number of minutes calls lasted. For example, DICE might capture and store data in the OLTP data mart about calls by minute, and a base metric will aggregate that data for storage by day.

For each base metric rule, you must create a properties file. The base metric properties file specifies:

- The metabean type, or OLTP table, from which the metric draws data
- The formula for extracting the metric
- The native grain to which the metric aggregates data

After you install Merced Performance Suite, you can create and edit these properties files using the administrative tools available from the user interface.

Fact tables

In Merced Performance Suite, a fact table is also called a cube. A fact table stores data—the facts—about sets of dimension labels. A fact is a numerical measurement about a set of dimension labels. For example, the fact table stores that a call lasted 400 seconds (fact) on January 21 (time dimension label) and was handled by agent 48709 (person dimension label) from the spanish language queue (split dimension label). In Merced Performance Suite, a fact is called a base metric.

A fact table in the OLAP data mart has several characteristics. Each fact table:

- Contains data originating from exactly one table in the OLTP data mart.
- Has exactly one native grain per dimension, the smallest grain that a report derived from this fact table will use.

  Use larger grain sizes whenever possible to reduce the number of records and to speed query performance.

  NOTE: In cases where you have two frequently used final reports that draw on the same source data but report at different grain levels, you can create a special "aggregate" cube that stores the information at multiple dimension grain levels.

- Has any number of facts, subject to the limitation of the database system.

Merced Performance Suite offers automatic cube management. With automatic cube management, you need not create properties files that define cubes (the fact tables). Instead, when you define new base metrics, CubePop automatically inserts the metrics into appropriate existing cubes or creates new cubes. You can use an administrative tool, Cube Editor, to examine cubes and change base metric assignments.

Loading the OLAP data mart

Merced Performance Suite offers two ways to load data in the OLAP data mart:

- CubePop — An executable that creates or updates data in every existing dimension and fact table. Fact tables that CubePop loads reference data in newly-created or updated dimension tables.
- NextPop — A process that updates an individual fact table with fresh data. Fact tables that NextPop loads continue to reference current dimension tables.

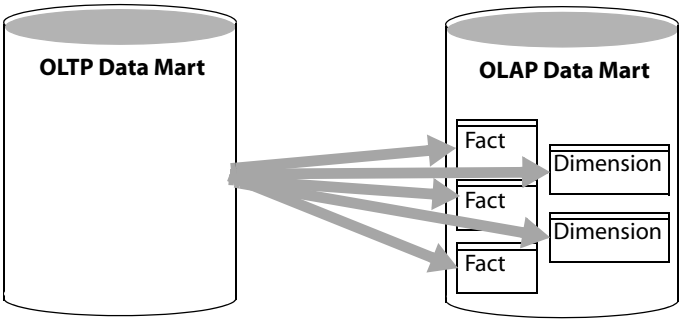
After initial deployment and data loading, Merced Performance Suite is continuously available for reporting, even while loading the OLAP data mart with data updates.

This section discusses:

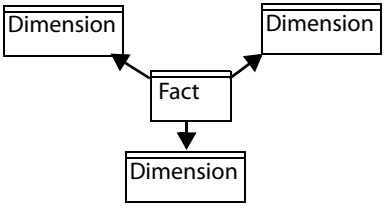
- CubePop
- NextPop
- Running CubePop and NextPop simultaneously

CubePop

CubePop loads fresh data into all the dimension tables and fact tables in the OLAP data mart. Whenever you update dimension tables, you must update fact tables also. A dimension table update creates new person identifiers, and fact tables must always properly reference the person identifiers.



CubePop populates all fact and dimension tables



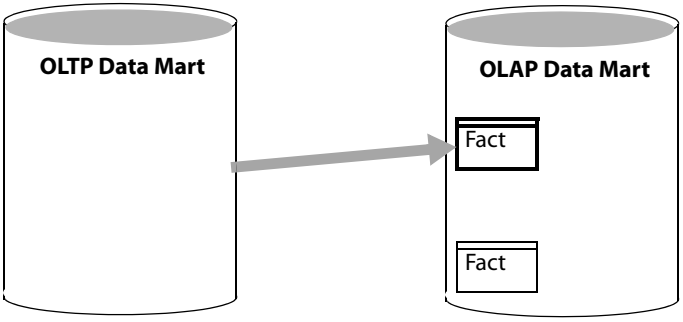
Fact tables reference dimension tables

CubePop loads dimension tables and then fact tables. CubePop loads fresh data into copies of tables. After loading all tables, it deploys the fresh copies, making them the active tables that the system uses for reporting. All fact tables must contain fresh data that reference the same fresh dimensions before the system uses any fresh table for reporting. Using fresh data and references across all tables ensures that reports are accurate and consistent and make logical sense, particularly for reports that contain metrics that combine data from different fact tables.

NextPop

NextPop loads fresh data into specified fact tables. NextPop allows organizations to update specific fact data or add new fact data without updating all dimension tables and all fact tables in the OLAP data mart. For example, an organization may want to update the fact data from its sales data source hourly without having to run an entire CubePop process every hour.

The data that NextPop loads references current dimension tables. If relevant dimension data is unavailable—data about a new employee is not yet in the person dimension, for example—NextPop does not load the corresponding facts; instead, the data remains in the OLTP data mart until new dimensions are created.



NextPop populates select fact tables

NextPop also loads data into a copy of the table. After NextPop completes the data load successfully, NextPop deploys the copy, making it the active table that the system uses for reporting.

Running CubePop and NextPop simultaneously

Often, you might want to run CubePop and NextPop at the same time. Depending on the size of your system, CubePop can be a lengthy process—a process that you need to schedule at a specific time. You might, therefore, start the CubePop process before a source system updates its data, or you might want to make updated data available for reporting before the CubePop process finishes. In these cases, you can run NextPop while CubePop is running. NextPop can make data updates available immediately, before CubePop finishes, and NextPop can refresh any data that CubePop loaded before a source system update.

NextPop is able to handle various possibilities about the loading status of CubePop, including that CubePop has not updated the dimension tables, has updated the dimension tables but not the relevant fact table, or is updating the relevant fact table. Even when CubePop is running, NextPop loads fresh data that references current dimensions, making this data available for reporting immediately.

5 Calculated Metrics

Merced Performance Suite uses calculated metrics to retrieve data from the OLAP data mart and compute the information required for end-user reports and dashboards.

This chapter discusses:

- About calculated metrics
- Level-restricted calculated metrics
- Goal metrics
- Metric example

About calculated metrics

Like a base metric, a calculated metric is a statistic about a combination of dimension labels, such as a person and a time. A calculated metric has a rule that describes how to compute the statistic. The rule specifies the data inputs, called arguments, and the computation method.

Unlike rules for base metrics, rules for calculated metrics can use more complicated mathematical expressions. Whereas a base metric rule simply aggregates data, a calculated metric rule might add and divide data, perhaps determining an average. By delaying complex calculations until calculated metrics, you delay the calculations until you need the results. This delay improves system performance. The system does not calculate these statistics, which might not be used, each time it loads the table in the OLAP data mart.

Merced Performance Suite derives a calculated metric from base metrics and other calculated metrics. Merced Performance Suite stores calculated metrics in memory; it does not store calculated metrics in any database table.

Base Metric	Calculated Metric
Data source: OLTP table	**Data source**: Other metric (base or calculated)
Computation: Aggregation (sum, count, max, or min)	**Computation**: Any (average, division, multiplication, etc.)
Stored in: OLAP table	**Stored in**: Memory

Base metrics versus calculated metrics

Valid grains of a calculated metric depend on the grains of its arguments—its source metrics. Calculated metrics can provide values at the same grains as its arguments or at coarser grains. For example, if the arguments provide information about teams and months, then the calculated metric can provide values for teams

and months. If the arguments provide information about agents and hours, then the calculated metric can provide values about agents and hours. When a calculated metric has multiple arguments at different grains, the metric can only provide values at the coarsest grains.

Merced Performance Suite computes calculated metrics for the labels specified by the report—for a particular agent and time period, for example. Therefore, only use a calculated metric in reports designed to show the metric's valid grains. In other words, use a calculated metric in a report that shows data at the same grain or a coarser grain. For example, if a calculated metric can provide values for teams and months, do not use the metric in a report about agent and month. You can, however, use the metric in a report about center and year.

When evaluating a calculated metric, Merced Performance Suite does a point-wise calculation, aggregating to the level that the report requests. For example, if a report requests average talk time at a site per year and a base metric gives information about calls by team and month, Merced Performance Suite sums the talk time for each team at the site over the year and divides by the total number of calls. Calculated metrics do not take an average of averages.

You define a calculated metric with a properties file. After you install Merced Performance Suite, you can create and edit these properties files using the administrative tools available from the user interface. A calculated metric properties file specifies:

- Name
- Report information — Information about how to sort this metric and display this metric in any reports
- Calculation — Arguments and method for calculating the metric

Common mathematical functions used in calculated metrics:

+	<=	random	kurtosis
-	>	round	confidence intervals
*	>=	avg	correlation coefficient
/	log	count	quartiles
=	max	std dev	
<	min	variance	

Examples of typical metrics/KPIs:

Operational metrics

- Average handle time
- Calls/hour
- Number of call
- Average talk time
- Average after work time

Scheduling metrics

- Adherence
- Compliance

Quality

- Surveyed customer satisfaction rating
- Manager appraisal ratings
- Call monitors completed/rep/month

Sales

- Revenue/hour
- Revenue/call

Incentive

- Balanced score
- MTD variable compensation

There are two types of specialized calculated metrics:

- Level-restricted calculated metrics
- Goal metrics

Level-restricted calculated metrics

Level-restricted calculated metrics (LRCMs) give you more flexibility and control over dimension grains when calculating a metric. With LRCMs, you can:

- Specify the dimension grain at which you aggregate data before using the data in a calculation
- Copy values from coarser dimension grains to finer dimension grains, such as copying team goals to individual agents

LRCMs allow you to ensure the mathematical integrity of calculations and to present information at multiple levels in the same report.

Merced Performance Suite computes calculated metrics for the grains that the report specifies. For example, an agent's report calculates data about the particular agent, whereas the manager's report calculates data about the team, combining data for all agents on the manager's team.

In contrast, Merced Performance Suite computes LRCMs for specific grains. You might restrict a calculation to the agent grain, for example. Using LRCMs, therefore, a manager's report can calculate values for each agent on the team and show the percent of agents meeting a goal. A director's report presents the same information—percent of agents meeting a goal—by calculating values for each agent in the center.

With LRCMs you can calculate a metric at one grain and copy the data to finer grains. For example, you might calculate a goal at a center level and copy that goal to all teams and agents that belong to that center.

Using LRCMs, you can present metrics at different grains in the same report. Presenting metrics at different grains in a single report is a useful way to track changes and trends. For example, suppose you are creating metrics for a report that will show agents their average handle time (AHT). In addition to showing

each agent his or her AHT for a particular day (a calculated metric), you can show the agent the average handle time at the site for that day (an LRCM computed at the site grain) and the agent's average handle time for the week (an LRCM computed at the week grain). By presenting these metrics together, you show agents how their performance is improving during the week and how their performance compares to their peers.

Goal metrics

Goal metrics enable you to measure compliance with goals for specific metrics in Merced Performance Suite, such as key performance indicators (KPIs). Goals might be set statically or dynamically, for an entire organization or for specific groups of employees.

A goal metric is a type of calculated metric. A goal metric is a discrete descriptor. Essentially, a goal metric provides a simple indicator or interpretation about a combination of dimension labels. A goal metric might translate a base or calculated metric into a color—red, green, or yellow—or into a hand signal—thumbs up or thumbs down—that a dashboard presents to an end user. In reports, goal metrics show conformance with specific goals.

The goal metric rule converts an expression into a discrete value, such as 1, 2, or 3, and translates that value into a symbol.

A goal metric has two additional properties:

- Symbol table — Links the expression values to specific states shown in a report (for example, 0 = red)
- Default symbol — Indicates the state assigned to expressions that evaluate to null

Metric example

Call centers that install Merced Performance Suite are often concerned with the average handle time for calls. An agent's average call handle time is a key measure of performance. Agents with lower call handle times—those who handle calls quicker—have higher performance than those with higher call handle times.

Reports on call handle time might involve several metrics.

Metric	Metric Type	Description
Number calls	Base	The number of calls that an agent handled.
Talk time	Base	The amount of time that an agent was on the telephone with a customer.
After call work time	Base	The amount of time that an agent required to process after-call tasks.
Total handle time	Calculated	Talk time + after call work time.
Average handle time	Calculated	Total handle time / number of calls. Calculated for the level specified in the report, such as agent per day.
Monthly average	LRCM	Total handle time/number of calls for current month. Calculated for person specified in the report (such as an agent or team), but showing the average for the current month.
Handle time goal	LRCM	The call handle time goal. Calculated for a center and used for all agents and teams that belong to the center.
AHT goal	Goal	Indicates compliance with the handle time goal.

Base metrics store the core data needed to compute average handle time—the number of calls, the talk time, and the after-call work time. The system extracts this data directly from the source, but might aggregate the data. The source system might record call time in milliseconds, for example, but the base metric might aggregate that data to seconds. Reports present base metrics at specified grain levels. When a report presents base metrics, therefore, the report might aggregate the data further. For example, if a report shows data at agent and day grain levels, then the report would aggregate talk time from the second level to the day level.

Calculated metrics, such as total handle time and average handle time, store values computed from base metrics and other metrics. For example, the system computes total handle time by adding the base metrics, talk time and after-call work time; and the system computes the average handle time by dividing the calculated metric, total handle time, by the base metric, number of calls. Reports compute calculated metrics at the grain specified in the report. If a report specifies agent and day, the report computes the calculated metrics for the agent and day; if the report specifies agent and month, the report computes the calculated metrics for the agent and month.

An LRCM can present information at a specific grain, regardless of the grain specified in the report. Such LRCMs are useful for comparative purposes. For example, the LRCM, "monthly average," computes the average handle time over the current month regardless of the grain of the report. If a report specifies agent and day, the LRCM shows the monthly average for the agent, while the calculated metric, average handle time, shows the average for the agent for the day. Agents can compare the two metrics and see how their performance is changing. Note that if the report specified agent and month, then the LRCM and the calculated metric would compute the same value—the agent's average for the month.

An LRCM can also compute a value at higher levels, or coarser grains, and copy that value to lower levels, or finer grains. Goals, for example, are often set at the center level or at the team level. The goals are relevant to all the agents who belong to the center or to the team. For example, an LRCM can compute the call handle time goal for a center and copy that goal to all agents in the center. Presenting the call handle time goal in a report provides agents with an objective measure for evaluating their their average handle time on a particular day or month.

A goal metric indicates compliance with a goal. The metric compares the agent's average handle time to the handle time goal. When an agent meets or exceeds the goal, the metric returns a specified value, such as 1; when an agent fails to meet the goal, the metric returns another value, such as 0. The metric translates these values into visual representations, such as a thumbs-up or thumbs-down graphic.

6 End-User Modules

Merced Performance Suite includes a Web-based user interface that provides employees in your organization access to the system's data, capabilities, and tools. The user interface is organized into end-user modules that have particular functions. Different end-user modules allow employees to view and analyze the collected performance data, to act on that data, and to add new data.

This chapter describes the features and capabilities of each end-user module, and describes the functionality that supports customization of the end-user modules. This chapter discusses:

- Home page
- Reports
- Dashboards
- Staff Manager
- Forms
- Alerts, messages, and tasks
- Enterprise work flow
- Module customization

Home page

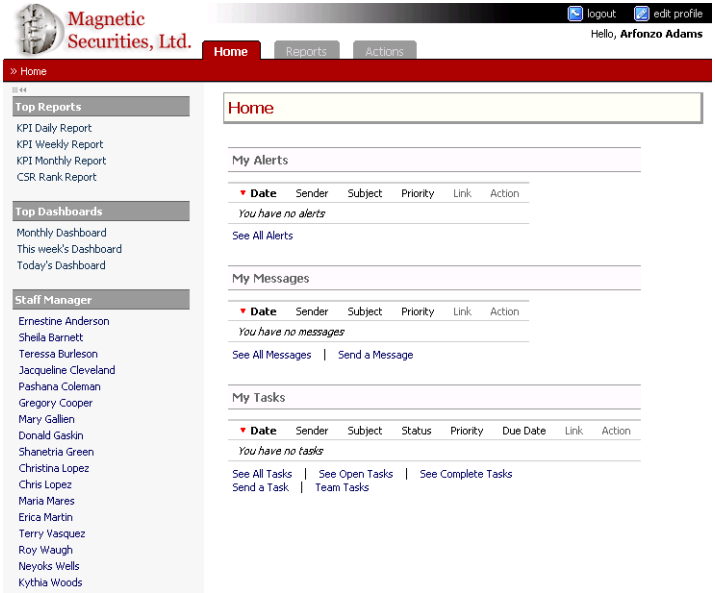
The Home page is a user's gateway into Merced Performance Suite. Customized for each employee's role in the organization, the Home page provides access to all the features and modules that you want the employee to view and use.

Employees must be logged in before they can use Merced Performance Suite. If employees are not logged in, the system directs them to a log in page, where they enter their user name and password. You can configure the system to use a single sign-on, one integrated with the operating system. When the system is configured using single sign-on, employees need not view the log in page.



Once logged in, employees view the Home page, which orients them in the system. Typically, the Home page shows three tabs—**Home**, **Reports**, and **Actions**—that provide access to different pages, and a left navigation pane that lets employees select the most frequently used reports and dashboards.

You customize what tabs and reports employees see based on employee role. Employees with special privileges—those who administer the system, for example—can access the Admin page and can view the **Admin** tab on the Home page.



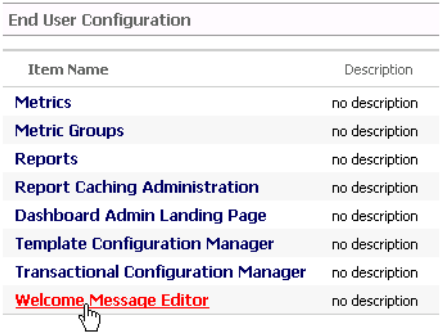
You can customize the content on the Home page with a welcome message. The welcome message can present important information that you want to disseminate to your employees. For example, you might include messages about scheduled system maintenance, improvements recently made, or other information pertinent to your installation.

Authoring Home page message

Administrators can use Welcome Message Editor to create or edit the welcome message that appears on the Home page. The welcome message appears at the top of the Home page, below the page label.

➢ To create or edit Home page welcome message

1. On the **Admin** tab under **End User Configuration**, select **Welcome Message Editor**.



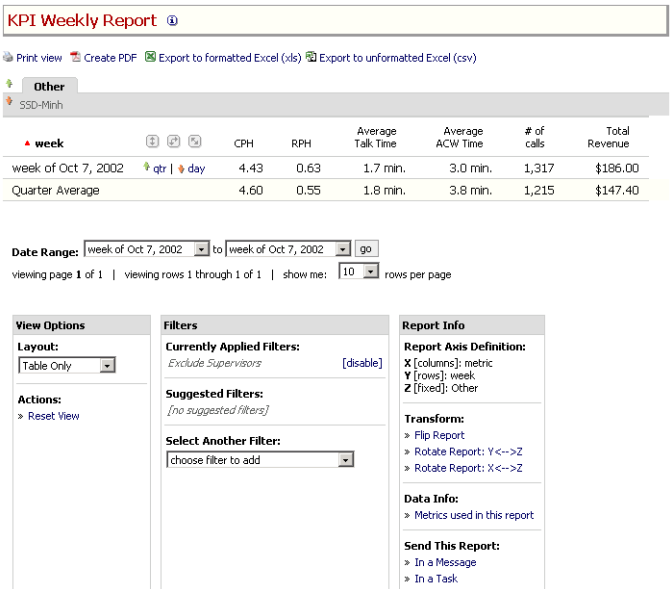
2. In the **Message** box, enter HTML code that specifies the desired welcome message.

   Enter any valid HTML code, using tags and styles that the application supports. Be sure to use a closing tag for each open tag that you introduce. Avoid using the <html>, <head>, <title>, and <body> tags.

3. Click **Submit** to update the application database.

Reports

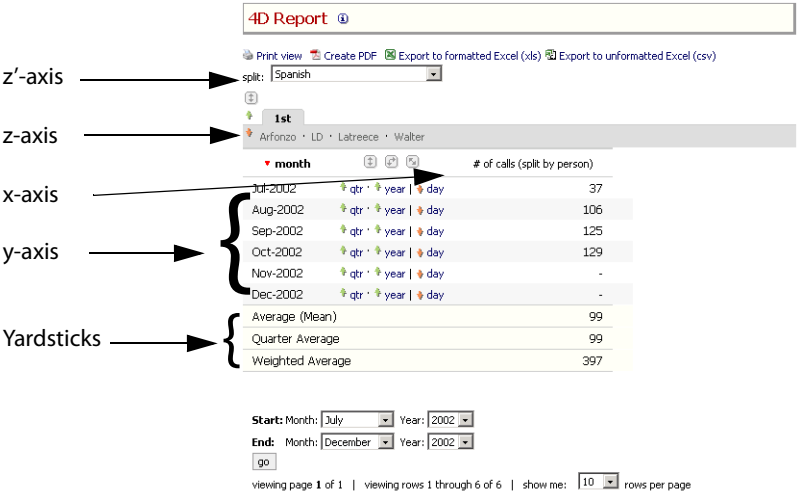
Reports enable users to view the data in Merced Performance Suite. Reports present metrics according to a specified configuration file. Users can then manipulate the report to view data in different ways, perhaps in a different format or using a different aggregation, and gain insight into the information presented. An installation is preconfigured with specific reports. Administrators can also add new reports with the end user configuration tools available from the Admin page.



Users access key reports from the Home page, and can access all reports from the Reports page. Reports contain many features that enhance the user experience and functions that enable users to easily view and manipulate all the facets in a data set.

Features in reports include:

- **Axes** — A report has an axis for metrics and for each dimension. Reports typically have three or four axes. For example, most reports have axes for person, time, and metric, and some reports have an axis for queue. Reports can present data on the x-, y-, z-, or z′-axis. Reports show the z-axis on tabs and show the z′-axis through a drop down list. You can only view data about one item in the z- or z′-axis at a time. Reports show different values in these axes as different tabs or as different items on the drop down list.
- **Yardsticks** — A report can have a yardstick that provides context for the reported data. Yardsticks reveal comparative information about the reported data. For example, yardsticks can show can show minimum values, maximum values, standard deviations, averages, or ranks relevant to metrics on the report.
- **Charts/tables** — A report can depict data graphically, through charts, or numerically, through tables. The same report can depict both table and chart formats. Available chart formats include bar, line, pie, and variance.



Functions that enable you to manipulate reports include:

- **Drill down/roll up** — You can drill down or roll up in a dimension. This allows you to look at finer or coarser levels of detail. For example, if you are looking at a team, you can drill down to agents or roll up to the center.
- **Pivot** — You can switch the information presented on each axis in a report. For example, if time is presented in the columns (the x-axis) and metrics are presented in the rows (the y-axis), you can switch them, showing time in the rows and metrics in the columns. Some axes, such as the z- and z′-axes, have limited capability. Pivoting can allow you to view more detail or allow you to drill down or roll up.
- **Sort** — You can change the order in which data appears, such as ascending order or descending order.
- **Dates** — You can change the dates about which the report shows data.
- **Filter** — You can limit the data that appears in the report, such as excluding employees in certain roles or excluding calls during certain periods. For example, you might want to exclude supervisors or exclude weekends.
- **Pages** — You can control how many rows of data appear on a single page in the report.
- **i-button** — You can view more detailed information about select elements in a report by clicking the i-button.

Options that enable you to archive a report include:

- **Print view** — You can print a report by opening a special window that shows a view formatted for printing and that allows you to insert custom formatting.
- **Create PDF** — You can specify custom formatting and create a PDF file of the presented report. You can view, print, and save the PDF file.

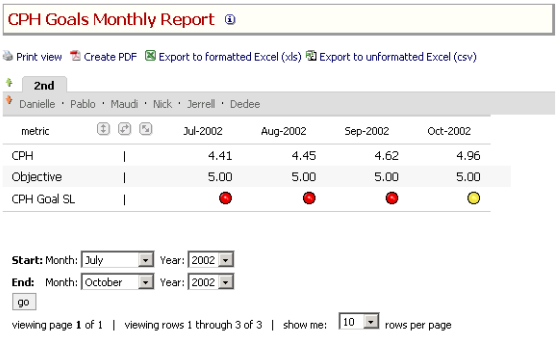
- **Export to Excel**— You can export the data in a report to a Microsoft Excel spreadsheet, either a formatted file useful for viewing, or an unformatted file useful for importing into other applications.

Sample reports

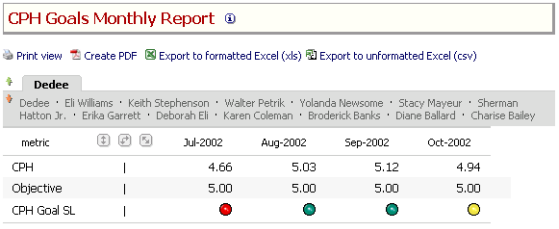
This section contains a set of sample reports that demonstrate the variety of reports you can create with Merced Performance Suite.

CPH goals monthly report

The "CPH goals monthly report" shows calls per hour, measured for the month. The report compares the measured statistic to the objective (a yardstick) and presents a goal metric to give a visual indication to help interpret the data.

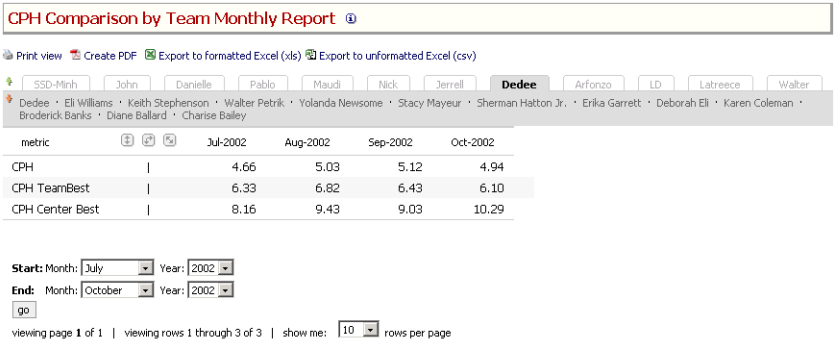


You can drill down to the team level to see the performance of individual teams.

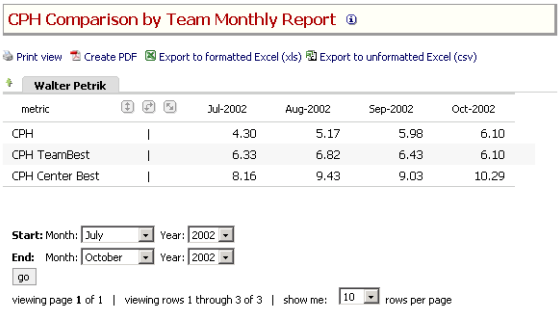


CPH comparison by team monthly report

The "CPH comparison by team monthly report" shows the same data—calls per hour—calculated monthly per team. This report, however, includes two LRCMs for comparative purposes: one shows the best calls per hour statistic for a team and the other shows the best calls per hour statistic for the center.

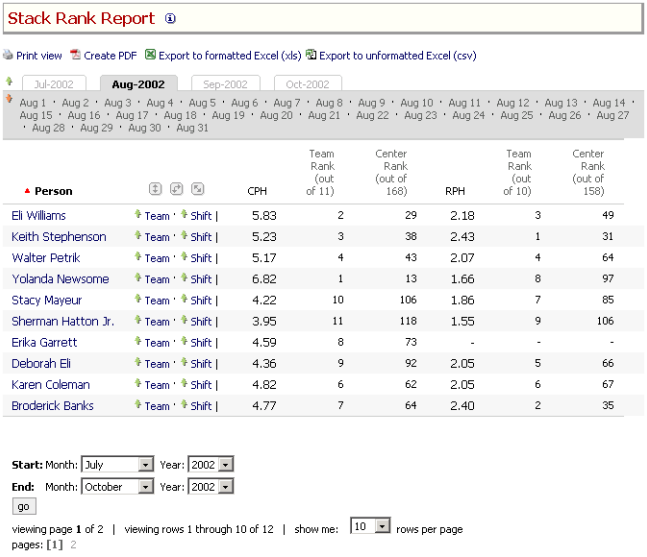


You can drill down to the person level to see the performance of individual agents.



Stack rank report

The "stack rank report" also shows calls per hour data. This report includes two different yardsticks for comparative purposes—team rank, which shows agents how they rank on their team, and center rank, which shows agents how they rank in the center.



Stack Rank Report

Print view | Create PDF | Export to formatted Excel (xls) | Export to unformatted Excel (csv)

Jul-2002 | **Aug-2002** | Sep-2002 | Oct-2002

Aug 1 · Aug 2 · Aug 3 · Aug 4 · Aug 5 · Aug 6 · Aug 7 · Aug 8 · Aug 9 · Aug 10 · Aug 11 · Aug 12 · Aug 13 · Aug 14 · Aug 15 · Aug 16 · Aug 17 · Aug 18 · Aug 19 · Aug 20 · Aug 21 · Aug 22 · Aug 23 · Aug 24 · Aug 25 · Aug 26 · Aug 27 · Aug 28 · Aug 29 · Aug 30 · Aug 31

Person	CPH	Team Rank (out of 11)	Center Rank (out of 168)	RPH	Team Rank (out of 10)	Center Rank (out of 158)
Eli Williams	5.83	2	29	2.18	3	49
Keith Stephenson	5.23	3	38	2.43	1	31
Walter Petrik	5.17	4	43	2.07	4	64
Yolanda Newsome	6.82	1	13	1.66	8	97
Stacy Mayeur	4.22	10	106	1.86	7	85
Sherman Hatton Jr.	3.95	11	118	1.55	9	106
Erika Garrett	4.59	8	73	-	-	-
Deborah Eli	4.36	9	92	2.05	5	66
Karen Coleman	4.82	6	62	2.05	6	67
Broderick Banks	4.77	7	64	2.40	2	35

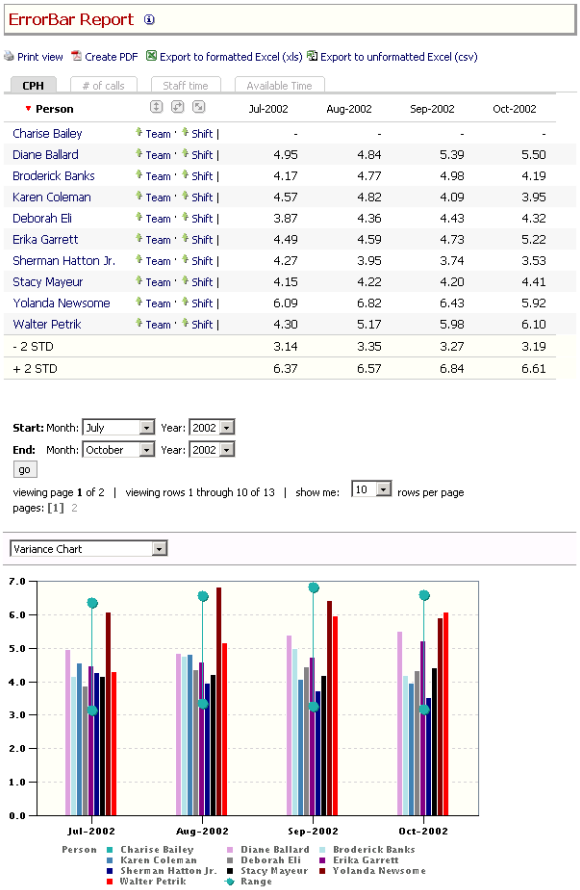
Team · Shift |

Start: Month: July Year: 2002
End: Month: October Year: 2002
go

viewing page **1** of 2 | viewing rows 1 through 10 of 12 | show me: 10 rows per page
pages: [1] 2

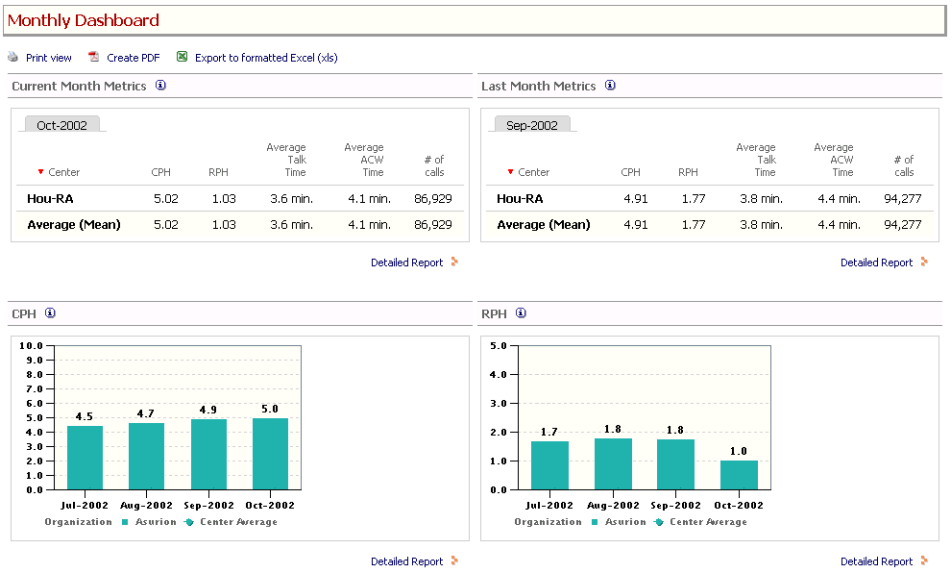
Error bar report

The "error bar report" also shows calls per hour data. This report includes statistical yardsticks—two standard deviations above and below the mean—to help with analysis and comparison. You can use this information for statistical analysis of agent performance. You can use the chart output for a quick indication of the ranges and outlying performers.



Dashboards

One of the most important features in Merced Performance Suite, dashboards show at-a-glance summaries of a set of reports that address a similar theme, such as the monthly dashboard that shows key metrics over the past month. Dashboards contain several panels. Each panel shows a summary view of a particular report and contains a link to drill into report details. Dashboards provide a convenient way to group several important reports together on a single page that managers and employees can easily access and view.



Users can access key dashboards from the Home page, and can access other dashboards from the Reports page. An installation is preconfigured with specific dashboards. Administrators can add new dashboards with the end user configuration tools available from the Admin page.

When creating a dashboard, application developers customize the dashboard for their organization. They determine:

- Panels to include — How many report summaries and for which reports
- Panel layout — The location of each panel on the page
- Panel format — Whether to present the report summary as a chart or a table or in both formats
- Dashboard access — What are the roles of the employees who can access this dashboard

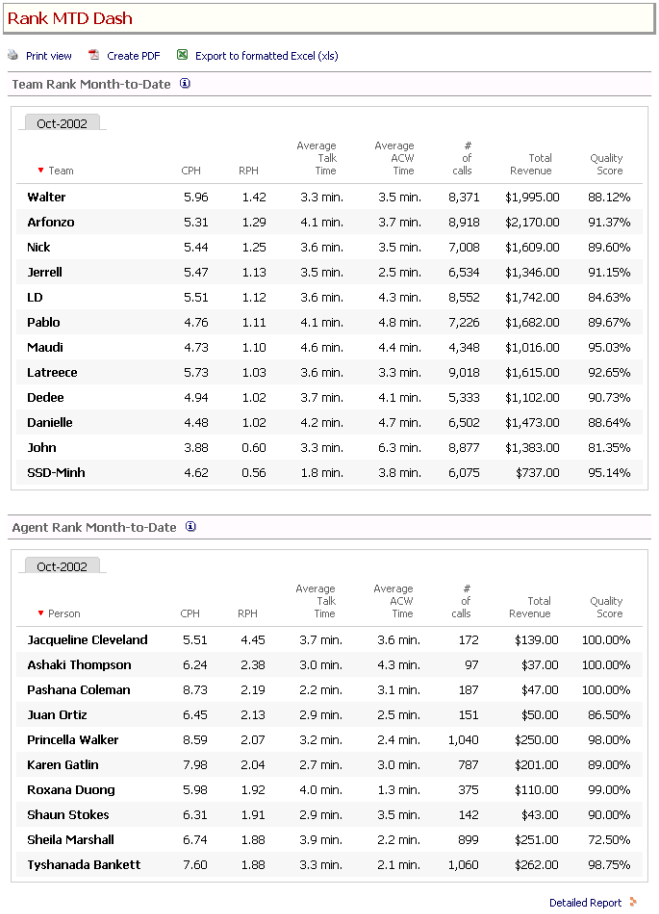
By customizing dashboards effectively, you can influence the impact the system has on employees. Some panel positions are more noticeable than others; some formats and graphics may draw attention more than others. Custom dashboards provide employees with subtle cues about information that is important; custom dashboards can, therefore, influence changes in performance.

Possible dashboards include:

- KPI (key performance indicator) daily
- KPI weekly
- KPI monthly
- Executive summary
- Bonus and incentive summary
- Stack rank performance reports
- Goal performance dashboard
- Site performance dashboard

Sample dashboards

For example, a month-to-date ranking dashboard might list teams and agents in order by their comparative ranks and show the key statistics that contribute to those ranks.



Rank MTD Dash

Print view Create PDF Export to formatted Excel (xls)

Team Rank Month-to-Date

Oct-2002

Team	CPH	RPH	Average Talk Time	Average ACW Time	# of calls	Total Revenue	Quality Score
Walter	5.96	1.42	3.3 min.	3.5 min.	8,371	$1,995.00	88.12%
Arfonzo	5.31	1.29	4.1 min.	3.7 min.	8,918	$2,170.00	91.37%
Nick	5.44	1.25	3.6 min.	3.5 min.	7,008	$1,609.00	89.60%
Jerrell	5.47	1.13	3.5 min.	2.5 min.	6,534	$1,346.00	91.15%
LD	5.51	1.12	3.6 min.	4.3 min.	8,552	$1,742.00	84.63%
Pablo	4.76	1.11	4.1 min.	4.8 min.	7,226	$1,682.00	89.67%
Maudi	4.73	1.10	4.6 min.	4.4 min.	4,348	$1,016.00	95.03%
Latreece	5.73	1.03	3.6 min.	3.3 min.	9,018	$1,615.00	92.65%
Dedee	4.94	1.02	3.7 min.	4.1 min.	5,333	$1,102.00	90.73%
Danielle	4.48	1.02	4.2 min.	4.7 min.	6,502	$1,473.00	88.64%
John	3.88	0.60	3.3 min.	6.3 min.	8,877	$1,383.00	81.35%
SSD-Minh	4.62	0.56	1.8 min.	3.8 min.	6,075	$737.00	95.14%

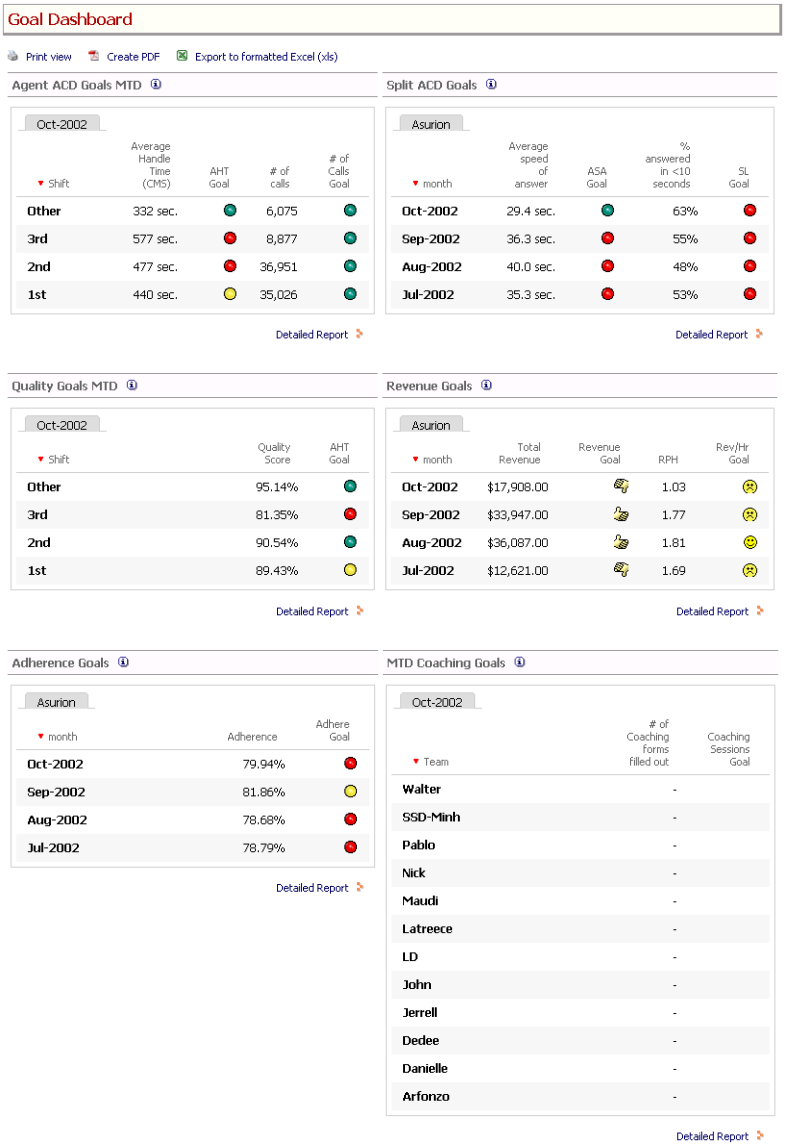
Agent Rank Month-to-Date

Oct-2002

Person	CPH	RPH	Average Talk Time	Average ACW Time	# of calls	Total Revenue	Quality Score
Jacqueline Cleveland	5.51	4.45	3.7 min.	3.6 min.	172	$139.00	100.00%
Ashaki Thompson	6.24	2.38	3.0 min.	4.3 min.	97	$37.00	100.00%
Pashana Coleman	8.73	2.19	2.2 min.	3.1 min.	187	$47.00	100.00%
Juan Ortiz	6.45	2.13	2.9 min.	2.5 min.	151	$50.00	86.50%
Princella Walker	8.59	2.07	3.2 min.	2.4 min.	1,040	$250.00	98.00%
Karen Gatlin	7.98	2.04	2.7 min.	3.0 min.	787	$201.00	89.00%
Roxana Duong	5.98	1.92	4.0 min.	1.3 min.	375	$110.00	99.00%
Shaun Stokes	6.31	1.91	2.9 min.	3.5 min.	142	$43.00	90.00%
Sheila Marshall	6.74	1.88	3.9 min.	2.2 min.	899	$251.00	72.50%
Tyshanada Bankett	7.60	1.88	3.3 min.	2.1 min.	1,060	$262.00	98.75%

Detailed Report

Similarly, a goal dashboard might show goals set within your organization, such as goals regarding quality or revenue, and show how your organization is complying with these goals. You can easily scan the goal metrics to find areas that need attention or warrant commendation.



Goal Dashboard

Print view | Create PDF | Export to formatted Excel (xls)

Agent ACD Goals MTD

Oct-2002

Shift	Average Handle Time (CMS)	AHT Goal	# of calls	# of Calls Goal
Other	332 sec.		6,075	
3rd	577 sec.		8,877	
2nd	477 sec.		36,951	
1st	440 sec.		35,026	

Detailed Report

Split ACD Goals

Asurion

month	Average speed of answer	ASA Goal	% answered in <10 seconds	SL Goal
Oct-2002	29.4 sec.		63%	
Sep-2002	36.3 sec.		55%	
Aug-2002	40.0 sec.		48%	
Jul-2002	35.3 sec.		53%	

Detailed Report

Quality Goals MTD

Oct-2002

Shift	Quality Score	AHT Goal
Other	95.14%	
3rd	81.35%	
2nd	90.54%	
1st	89.43%	

Detailed Report

Revenue Goals

Asurion

month	Total Revenue	Revenue Goal	RPH	Rev/Hr Goal
Oct-2002	$17,908.00		1.03	
Sep-2002	$33,947.00		1.77	
Aug-2002	$36,087.00		1.81	
Jul-2002	$12,621.00		1.69	

Detailed Report

Adherence Goals

Asurion

month	Adherence	Adhere Goal
Oct-2002	79.94%	
Sep-2002	81.86%	
Aug-2002	78.68%	
Jul-2002	78.79%	

Detailed Report

MTD Coaching Goals

Oct-2002

Team	# of Coaching forms filled out	Coaching Sessions Goal
Walter	-	
SSD-Minh	-	
Pablo	-	
Nick	-	
Maudi	-	
Latreece	-	
LD	-	
John	-	
Jerrell	-	
Dedee	-	
Danielle	-	
Arfonzo	-	

Detailed Report

Finally, an executive dashboard might show key measures your organization uses to gage success. Executives can use this dashboard to analyze business performance. When desired, executives can link directly to the base report that contains more detailed information.

Executive Dashboard

Print view | Create PDF | Export to formatted Excel (xls)

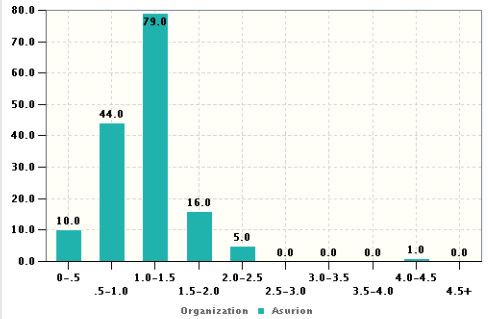
Center Goals

Oct-2002

Shift	RPH	RPH Goal	Adherence	Adhere Goal	Quality Score	Quality Goal
Other	0.56		85.63%		95.14%	
3rd	0.60		73.21%		81.35%	
2nd	1.10		81.49%		90.54%	
1st	1.21		80.49%		89.43%	

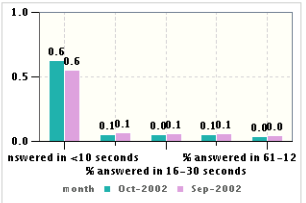
Detailed Report

Agent RPH Distribution MTD



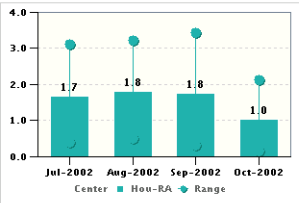
Detailed Report

Service Level Distribution



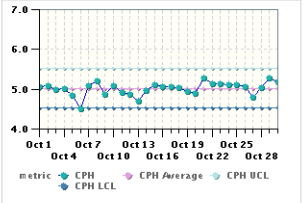
Detailed Report

RPH Variation



Detailed Report

CPH Control Chart



Detailed Report

KPI Monthly Report

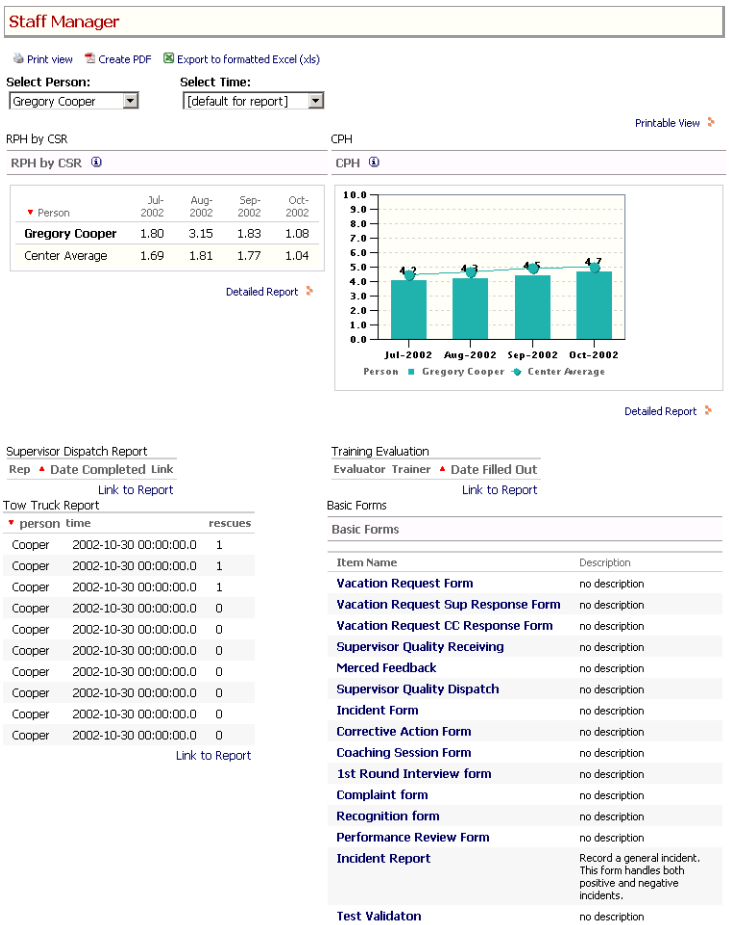
Asurion

metric	Jul-2002	Aug-2002	Sep-2002	Oct-2002	Average (Mean)
CPH	4.49	4.67	4.91	5.03	4.77
RPH	1.69	1.81	1.77	1.04	1.58
Average Talk Time	3.5 min.	3.6 min.	3.8 min.	3.6 min.	3.6 min.
Average ACW Time	4.4 min.	4.5 min.	4.4 min.	4.1 min.	4.4 min.
# of calls	33,444	92,569	94,115	86,762	76,722
Total Revenue	$12,591.00	$35,971.00	$33,924.00	$17,870.00	$25,089.00
Quality Score	87.54%	87.42%	90.96%	88.83%	88.69%

Detailed Report

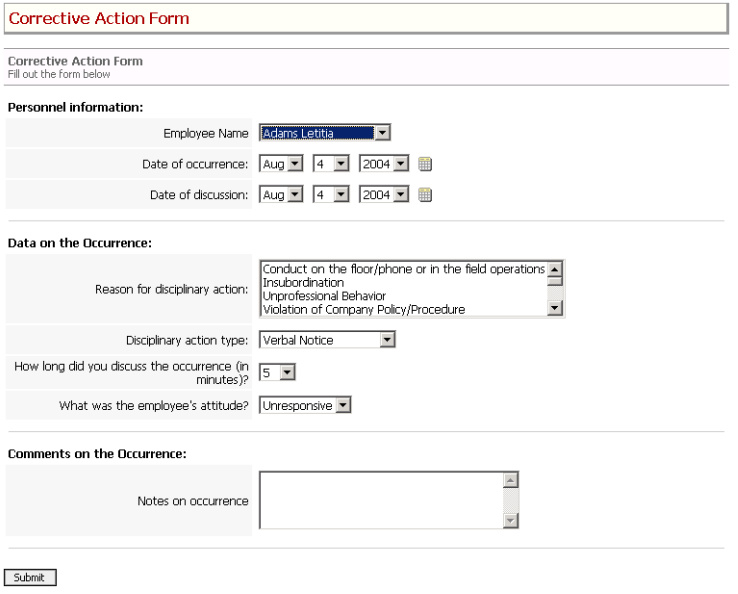
Staff Manager

Staff Manager shows team managers a variety of performance indicators about employees they supervise. Staff Manager shows data from reports and recently filled out forms, and Staff Manager offers links to common forms that managers complete about their employees. Essentially, Staff Manager provides managers a single location from which they can manage an employee's performance, reducing the time managers need to gather and present information about their employees.



Forms

Forms enable users to enter data directly into or retrieve data from Merced Performance Suite. Merced Performance Suite integrates data from forms with the rest of the system. This data can appear in dashboards or reports; it can raise an alert; and it can generate a work flow task.

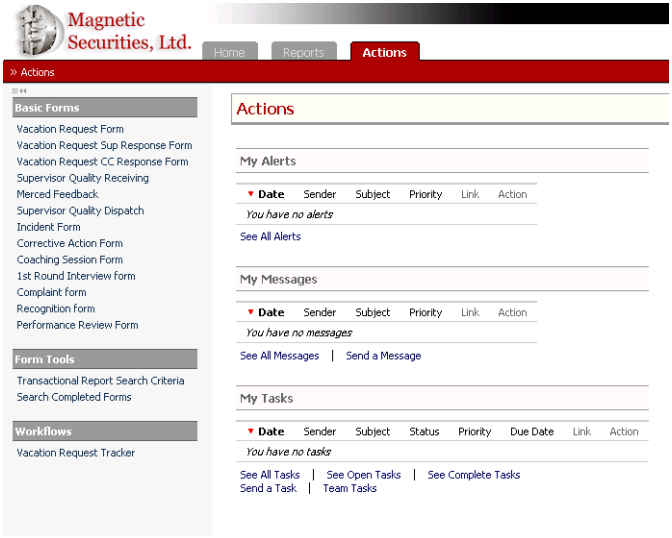


Forms are powerful tools. Properly configured, forms can replace some uses of other enterprise software. Forms offer a mechanism to capture data that organizations collect in spreadsheets or store on paper. For example, you might use forms to complete a performance review, to record a disciplinary action, or to record a coaching session. You can also use forms to create and track goals. You might, for example, set a goal and create a goal metric based on a coaching session. You can use Merced Performance Suite to track the results, linking a particular type of coaching to improvements in performance.

Forms are powerful in their simplicity. Characteristics of forms help you maintain this simplicity:

- Forms present information on a single page rather than a series of pages using complex, conditional logic that is hard to follow.
- Forms edit a single row of data. Forms do not affect multiple records or multiple tables in the data mart.
- Forms are best for support functions rather than for real-time mission-critical uses.

Employees access forms from the Actions page.



Possible forms include:

- Interaction coaching monitor forms
- Staff review/appraisal forms
- Vacation request form
- Merced Performance Suite feedback form
- Employee call in form

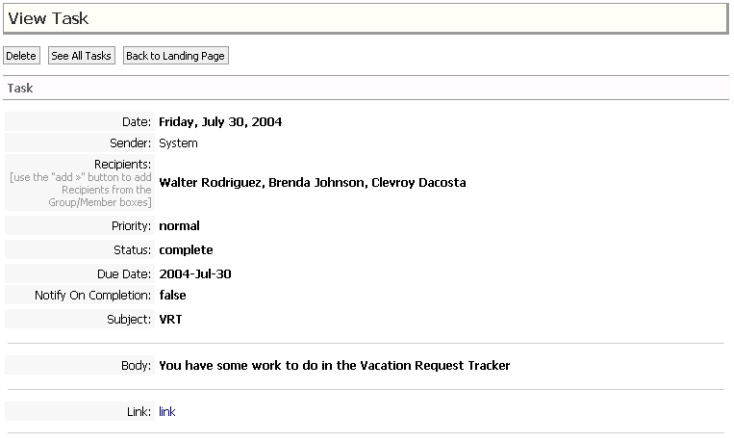
- Incident form
- Corrective action form
- Employee interview form
- VOC (voice of customer) forms
- Employee recognition forms
- Various data input forms

Alerts, messages, and tasks

Merced Performance Suite can proactively inform employees about their performance and pending job-related duties. Merced Performance Suite informs employees using alerts, messages, and tasks:

- Alerts are system-generated notifications that indicate a condition that needs attention. An alert might warn employees about a specific metric threshold.
- Messages are user-generated notifications. Managers might send an agent a message to commend a reached goal.
- Tasks request employees to complete a set of actions, such as completing a form. Tasks contain a due date and a status that indicates whether they are complete or not.

For example, you might configure the system to send agents an alert if their average handle time during the month reaches more than six minutes, or to send supervisors a task that requests that they approve a subordinate's vacation request.



Employees can access alerts, messages, and tasks from the Alerts page.

Generating alerts, messages, and tasks

To proactively inform employees, Merced Performance Suite has an alert-message-task (AMT) system that finds events that warrant alerts or tasks. Typically, events that warrant alerts or tasks indicate a change in the state of the system. Such events include:

- Changes in the data mart — The system can inform employees when values, such as performance metrics, change.
- Form submissions — The system can inform an employee when another employee has completed a form, such as when a subordinate completes a vacation request form.

Changes in the data mart

The AMT system requires a monitor to find events and an adapter to process events. A monitor is the component that watches for a change of state. When a monitor observes a change that exceeds a threshold, it generates an AMT event. Merced Performance Suite has two monitors:

- OLTP monitor — Monitors specific tables in the OLTP data mart for changes, using the table's modification dates. At a scheduled time, the monitor finds any new modifications, compares those modifications to threshold criteria, and generates events for changes meeting the criteria.
- OLAP monitor — Monitors changes in the OLAP data mart, using specific report coordinates that define a set of metrics and dimensions. At a scheduled time, the monitor compares values in the report coordinates to threshold criteria, and generates events for values meeting the criteria.

For each monitor, you configure a properties files that defines the tables or report coordinates to monitor and the conditions to monitor for.

An adapter takes events that the monitors generate and processes those events. Typically, you create different adapters for different types of events. An adapter selects an action for each event and a format for that action.

Actions that adapters take include:

- Do nothing (if an event is insignificant or suited for another adapter)
- Send an e-mail message
- Create an alert or task, which is displayed in the user interface
- Send an e-mail message *and* create an alert or task

When formatting actions, adapters take appropriate information included with the event, such as the person and the threshold value, and create an appropriate message. For example, an adapter might include the person in the "To" field of an e-mail message and the threshold in the subject line.

For each adapter, you configure a properties file. In the properties file, you specify the types of events that the adapter processes, the actions that the adapter takes, and the formatting information for each action.

Enterprise work flow

You can use Merced Performance Suite to manage business processes throughout an enterprise. You can manage business processes using forms, alerts, messages, and tasks. You create a work flow to define an ordered set of alerts, messages, tasks, and forms that supports a particular business process that you want to manage. Merced Performance Suite includes a work flow engine to monitor the overall flow of business processes.

With work flows, you can manage processes related to customers, administration, or performance. For example, work flows might help maintain customer satisfaction by initiating and tracking follow-up calls, maintain staff vacation requests, or warn automatically of performance issues.

Work flows are associated with states, events, and actions. States describe the work flow. For example, states in a customer satisfaction work flow are "waiting for follow-up time" and "two hours overdue"; states in the vacation request work flow are "waiting for supervisor approval" and "waiting for center approval."

Events change the state of the work flow. Events are triggered by time, metrics, and forms. In the customer satisfaction work flow, for example, the state changes to "two hours overdue" two hours after the scheduled call time. Similarly, a large call handle time might initiate a performance issue work flow, and an agent completing a vacation request form initiates the vacation request work flow, setting its status to "waiting for supervisor approval."

Actions are activities that trigger events and activities that events trigger. For example, completing a form, such as the vacation request form, is an action that triggers an event, changing the status of the work flow. However, that event also triggers another action—the system sends a task to the supervisor requesting the supervisor to approve the vacation request.

Module customization

Merced Performance Suite allows you to easily personalize and control access to the end-user modules. You can use:

- Content management
- Personalization
- Access privileges

Content management

Through content management, Merced Performance Suite allows you to maintain and customize the user interface. Content Management System (CMS) is a set of properties files that controls what information appears in the user interface.

The user interface has a core structure—four tabs and a left navigation pane on each tab. With CMS, you organize content within that core structure. Using CMS, you control what information appears on each tab and how it is organized. You define categories for each navigation pane and assign particular modules, such as particular reports or dashboards, or sets of modules, such as a list of quality reports, to the categories.

Combining content management with personalization and access privileges gives you complete control over what information appears for which users through the user interface.

Personalization

With personalization, Merced Performance Suite enables you to customize the content for individual employees, based on their roles. Personalization ensures that employees see information relevant to them—information about their performance or subordinate employees' performance, for example.

To employ personalization, you define dynamic phrases, such as "me" or "below me," and apply these phrases to reports or dashboards. Merced Performance Suite uses the phrase to set the proper focus for the report. For example, you can configure a report to show information about "me." When a representative is logged in, the report shows data that pertains to that representative. When a manager is logged in, the report shows data that pertains to that manager and his or her team of subordinate representatives.

Access privileges

With access privileges, Merced Performance Suite enables you to protect data or limit access of the data that is available through the user interface. Your organization might regard performance data as highly personal and want to limit access to appropriate individuals.

Merced Performance Suite offers two mechanisms to limit access: access control and data restriction. Access control limits access *to* certain people; data restriction limits access *about* certain people.

This section discusses:

- Access control
- Data restriction

Access control

Access control limits access by subject—by the person trying to access the data. With access control, you grant people access to particular objects in CMS, such as pages in an end-user module. You limit access by a person's role—by their function in the organization. Only grant access to the Admin page, for example, to employees who have an administrative role.

To use access control, you must create an access control list, a set of roles to which you want to grant access. You can associate an access control list with a particular object, such as a page in an end-user module, in the object's properties file. The access control list defines which employees can access that object—employees whose role is on the list.

If a user who is not allowed access requests a page, the module will return an error page. Other objects, such as links or fields, simply do not appear for users who are not allowed access.

Data restriction

Data restriction limits access by subject and object—by the person trying to access the data and their relationship to the data. With data restriction, you limit access about certain people. You can use data restriction to limit access to metrics or metabeans. For example, you can use data restriction to allow only an agent and his or her supervisor to view a particular metric, to allow only agents to complete management review forms about their managers, or to allow directors to view metrics only about employees in their division.

To use data restriction, you must create a data restriction policy. A data restriction policy lists possible roles and a restriction relationship for each role. The restriction relationship indicates about whom persons in that role can access data. For example, a data restriction policy might give directors access to information about everyone, managers access to information about their team members, and agents no access at all.

To restrict access to a metric or a metabean, you assign the data restriction policy to the metric or metabean through the appropriate properties file.

Index

A

access control 87
access control list 88
access privileges 87
adapters 84
administrative tools 10
alerts 10, 82
AMT system 83
attributes 24
automatic cube management 45
average handle time 58
axes
  displayed in report 66
  switching in report 67

B

base metrics
  compared to calculated metrics 52
  description 43
  examples 58
  using in reports 59
business processes, managing 85

C

calculated metrics
  commonly used 54
  compared to base metrics 52
  description 52
  examples 58
  limitations 53
  mathematical functions in 54
  overview 7
  properties file 53
  using in reports 59
calculating data 8
changed data capture 31, 33
charts in report 66
clear target CDC method 33
Client Services Group. *See* CSG
CMS, description 86
Content Management System. *See* CMS
conversions
  description 35
  purpose of 5
CPH comparison by team monthly report 69
CPH goals monthly report 68
CSG (Client Services Group) 12
CubePop
  description 46
  overview 7
  running with NextPop 48
cubes 7

D

dashboards
  description 72
  design process 73
  examples of 74–76
  executive 76
  goal 74
  overview 9
  ranking 74
data
  calculation points 8
  collecting for org chart 18
  importing for org chart 28
  integrating newly captured data 31
data chunk conversion 35

Data Integration and Cleansing Engine. *See* DICE
data mart
  See also OLAP data mart, OLTP data mart
  description 38
data restriction 88
data restriction policies
  description 88
data sources for DICE 30
database
  data marts in 5
  developing schema for 40
designing dashboards 73
DICE
  capturing data 31
  changed-data-capture methods 33
  conversions 35
  description 5
  filtering source data 30
  jobs 35
  org chart data, importing 28
  overview 29
  resolving references 32
dimensions
  description 41
  overview 6
drilling in reports 67

E
Employee Manager 28
employee type 22
error bar report 71
ETL engine 5
Excel, exporting to 68

F
fact tables
  base metrics in 43
  description 7, 45
filtering reports 67
fork jobs 35
forms
  accessing 80
  characteristics 80
  description 79
  examples of 80
  overview 9
  uses of 79

G
goal metrics
  description 57
  example 58
  in reports 68
  using in reports 60
grains
  calculated metrics 52
  copying values between 55
  description 6, 41
  different in single report 55
  specifying for calculation 55
group types, description 20
groups
  defining 21
  missing from reports 25
  model advantages 26

H
hierarchies 27
Home page
  customizing 63
  editing welcome message 64
  overview 62

I
identities
  description 25
  org chart tables 6
  resolving during DICE 32
implementing new systems 12
insert and update CDC method 33
insert only CDC method 34

J
job components, DICE 35

L
labels 41
left navigation pane
  content organization 86
  uses of 62
level-restricted calculated metrics. *See* LRCMs
logging in 62
LRCMs
  description 55
  examples 58
  report containing 69
  using in reports 59

M
maintaining system 15
managing business processes 85
Merced ID 25
messages 82
metabean type 40
metabeans 40

N
NextPop
  description 47
  running with CubePop 48

O
OLAP data mart
  availability 46
  data loading 46
  description 6, 38
  dimensions in 42
  fact table characteristics 45
  monitoring for changes 83
  populating 7
OLTP data mart
  description 5, 38
  monitoring for changes 83
  org chart tables 6
org chart
  conversions 35
  data collecting 18
  groups 20
  importing data 5, 28
  model 20
  model, benefits of 26
  overview 17
  persons 22
  tables, description of 6
  temporality 25
  uses of 18
  using for other hierarchies 27
outsourcers 25

P
parent group type 20
personalization 86
persons
  limiting access about 88
  modeling in org chart 23
phantom person 33
pipeline jobs 35
pivot an axis 67
point-wise calculation 53
properties files
  base metrics 43
  calculated metrics 53
  DICE conversion 35
  goal metric 57

R
ragged hierarchies 25
reports
  base metrics and 43
  description 65
  different grains in 55
  displaying in dashboard 72
  examples of 68–71
  examples of metrics in 58
  features in 66
  functions 67
  overview 9
Reports page 65
restriction relationship 88
roles
  description 22
  limiting access by 87
  special 26

S
single sign-on 62
sorting reports 67
stack rank report 70
Staff Manager 78
system implementation 12

T
tables in reports 66
tabs 62
tasks 82
temporality 25

U
user interface
  administrative tools 10
  controlling information displayed 86
  modules in 61
  overview 8

W
welcome message 63
Welcome Message Editor 63
work flows 10, 85

Y

yardsticks
  description 66
  in reports 70, 71

Merced Systems, Inc.
333 Twin Dolphin Drive, Suite 500
Redwood Shores, CA 94065 USA

650-486-4000
fax 650-486-4001
info@mercedsystems.com
www.mercedsystems.com