# IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server Warehouse Enablement Pack Implementation Guide

## Version 1.1.0

# Edition notice

**First Edition**

**Copyright Notice**

© Copyright IBM Corporation 2002. All rights reserved. May only be used pursuant to a Tivoli Systems Software License Agreement, an IBM Software License Agreement, or Addendum for Tivoli Products to IBM Customer or License Agreement. No part of this publication may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into any computer language, in any form or by any means, electronic, mechanical, magnetic, optical, chemical, manual, or otherwise, without prior written permission of IBM Corporation. IBM Corporation grants you limited permission to make hardcopy or other reproductions of any machine-readable documentation for your own use, provided that each such reproduction shall carry the IBM Corporation copyright notice. No other rights under copyright are granted without prior written permission of IBM Corporation. The document is not intended for production and is furnished "as is" without warranty of any kind. **All warranties on this document are hereby disclaimed, including the warranties of merchantability and fitness for a particular purpose.**

U.S. Government Users Restricted Rights—Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corporation.

<div align="center">

**Trademarks**

</div>

DB2, IBM, the IBM logo, Tivoli, the Tivoli logo, AIX, Tivoli Enterprise, and WebSphere are trademarks or registered trademarks of International Business Machines Corporation in the United States, other countries, or both.

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

UNIX is a registered trademark of The Open Group in the United States and other countries.



Java and all Java-based trademarks and logos are trademarks or registered trademarks of Sun Microsystems, Inc. in the United States and other countries.

Other company, product, and service names may be trademarks or service marks of others.

<div align="center">

**Notices**

</div>

References in this publication to Tivoli Systems or IBM products, programs, or services do not imply that they will be available in all countries in which Tivoli Systems or IBM operates. Any reference to these products, programs, or services is not intended to imply that only Tivoli Systems or IBM products, programs, or services can be used. Subject to valid intellectual property or other legally protectable right of Tivoli Systems or IBM, any functionally equivalent product, program, or service can be used instead of the referenced product, program, or service. The evaluation and verification of operation in conjunction with other products, except those expressly designated by Tivoli Systems or IBM are the responsibility of the user. Tivoli Systems or IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to the IBM Director of Licensing, IBM Corporation, North Castle Drive, Armonk, New York 10504-1785, U.S.A.

# Contents

# 1   About this document

This document was revised on November 11, 2002, to correct technical and formatting consistency edits.

This document describes the warehouse enablement pack for IBM® Tivoli® Monitoring for Web Infrastructure, Version 5.1.0: WebSphere® Application Server. It covers the following topics:

- Installing and configuring the warehouse pack
- The data flow and data structures used by the warehouse pack

With this warehouse pack and the prerequisite IBM Tivoli Monitoring warehouse Version 5.1.1 enablement pack, you can extract data from the IBM Tivoli Monitoring middle layer database into the central data warehouse.  The data is then used to populate data marts created for reporting on IBM WebSphere administration servers and application servers and their components.

## 1.1   Related Documentation

You can access many Tivoli publications online using the Tivoli Information Center, which is available on the Tivoli Customer Support Web site:

http://www.tivoli.com/support/documents/

### 1.1.1   IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server

The following IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server documents are available on the IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server documentation CD:

- *IBM Tivoli Monitoring for Web Infrastructure Installation and Setup Guide*, GC23-4719

    Provides information about installing and setting up IBM Tivoli Monitoring for Web Infrastructure.

- *IBM Tivoli Monitoring for Web Infrastructure Release Notes*, GI10-5798

    Provides a product overview, system requirements, and additional installation information.

- *IBM Tivoli Monitoring for Web Infrastructure Reference Guide*, GC23-4720

    Provides detailed programming information about the IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server resource models, tasks, commands, and error messages.

- *IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server User's Guide*, SC23-4705

    Provides information about how to monitor WebSphere Application Server resources with IBM Tivoli Monitoring for Business Integration: WebSphere Application Server.

- *IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server Workaround and Limitations Supplement*, GI11-0928

    Provides information about problems that might occur, as well as customer issues that have been resolved.

### 1.1.2   Tivoli Enterprise Data Warehouse

The following Tivoli Enterprise™ Data Warehouse documents are available on the Tivoli Enterprise Data Warehouse Documentation CD:

- *Tivoli Enterprise Data Warehouse Release Notes*, GI11-0857

    Provides late-breaking information about Tivoli Enterprise Data Warehouse and lists hardware requirements and software prerequisites.

- *Installing and Configuring Tivoli Enterprise Data Warehouse*, GC32-0744

Describes how Tivoli Enterprise Data Warehouse fits into your enterprise, explains how to plan for its deployment, and gives installation and configuration instructions. It provides an introduction to the built-in program for creating and running reports, and contains maintenance procedures and troubleshooting information.

- *Enabling an Application for Tivoli Enterprise Data Warehouse*, GC32-0745

Provides information about connecting an application to Tivoli Enterprise Data Warehouse. This book is for application programmers who use Tivoli Enterprise Data Warehouse to store and report on their application's data, data warehousing experts who import Tivoli Enterprise Data Warehouse data into business intelligence applications, and customers who use their local data in the warehouse.

### 1.1.3 DB2

The DB2® library contains important information about the database and data warehousing technology provided by IBM DB2, DB2 Data Warehouse Center, and DB2 Warehouse Manager. Refer to the DB2 library for help in installing, configuring, administering, and troubleshooting DB2. The DB2 library is available on the Tivoli Customer Support Web site. After you install DB2, its library is also available on your system.

The following DB2 documents are particularly relevant for people working with Tivoli Enterprise Data Warehouse:

- *IBM DB2 Universal Database for Windows Quick Beginnings*, GC09-2971

Guides you through the planning, installation, migration (if necessary), and setup of a partitioned database system using the IBM DB2 product on Microsoft Windows.

- *IBM DB2 Universal Database for UNIX Quick Beginnings*, GC09-2970

Guides you through the planning, installation, migration (if necessary), and setup of a partitioned database system using the IBM DB2 product on UNIX.

- *IBM DB2 Universal Database Administration Guide: Implementation*, SC09-2944

Covers the details of implementing your database design. Topics include creating and altering a database, database security, database recovery, and administration using the Control Center, a DB2 graphical user interface.

- *IBM DB2 Universal Database Data Warehouse Center Administration Guide*, SC26-9993

Provides information on how to build and maintain a data warehouse using the Data Warehouse Center.

- *IBM DB2 Warehouse Manager Installation Guide*, GC26-9998

Provides the information to install the following Warehouse Manager components: Information Catalog Manager, warehouse agents, and warehouse transformers.

- *IBM DB2 Universal Database and DB2 Connect Installation and Configuration Supplement*, GC09-2957

Provides advanced installation considerations and guides you through the planning, installation, migration (if necessary), and set up a platform-specific DB2 client. Once the DB2 client is installed, you then configure communications for both the client and server, using the DB2 GUI tools or the Command Line Processor. This supplement also contains information on binding, setting up communications on the server, the DB2 GUI tools, DRDA™ AS, distributed installation, the configuration of distributed requests, and accessing heterogeneous data sources.

- *IBM DB2 Universal Database Message Reference Volume 1*, GC09-2978 and *IBM DB2 Universal Database Message Reference Volume 2*, GC09-2979

Lists the messages and codes issued by DB2, the Information Catalog Manager, and the Data Warehouse Center, and describes the actions you should take.

# 2 Overview

The following sections provide an overview of Tivoli Enterprise Data Warehouse and the IBM Tivoli Monitoring for Web Infrastructure 5.1.0 - WebSphere Application Server warehouse pack.

## 2.1 Overview of Tivoli Enterprise Data Warehouse

Tivoli Enterprise Data Warehouse provides the infrastructure for the following:

- Extract, transform, and load (ETL) processes through the IBM DB2 Data Warehouse Center tool
- Schema generation of the central data warehouse
- Historical reporting

As shown in Figure 1, Tivoli Enterprise Data Warehouse consists of a centralized data store where historical data from many management applications can be stored, aggregated, and correlated.
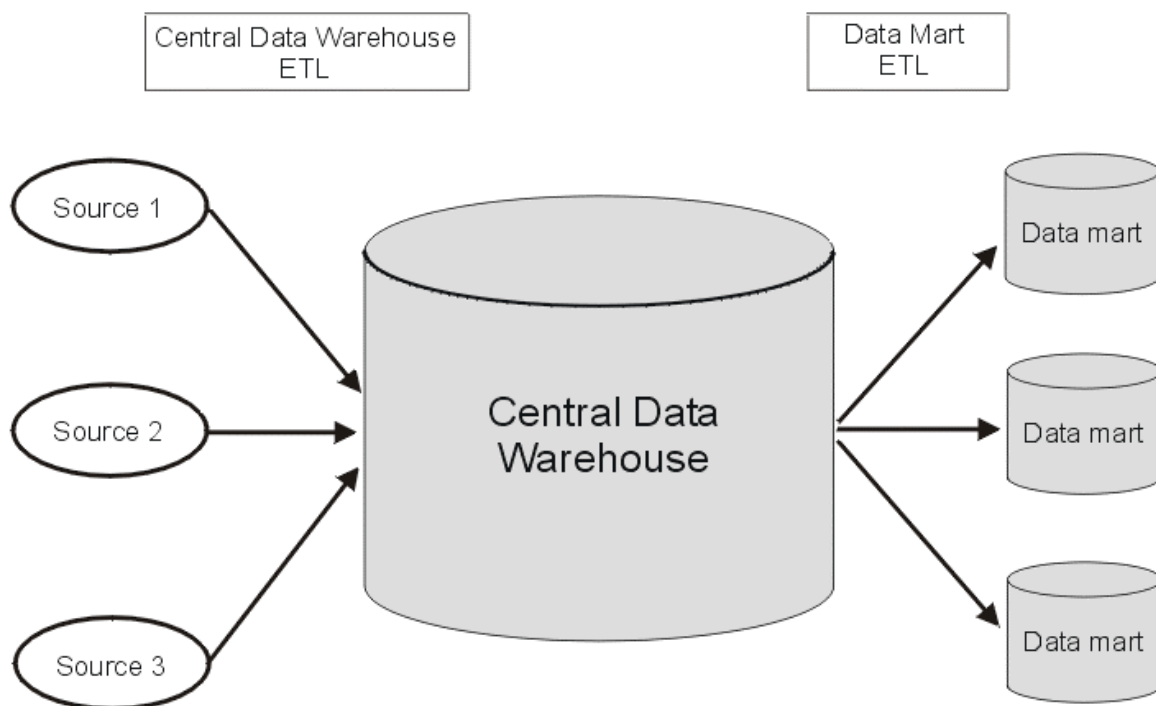


Figure 1. Tivoli Enterprise Data Warehouse overview

The *central data warehouse* uses a generic schema. As new components or new applications are added, more data is added to the database; however, no new tables or columns are added in the schema.

A *data mart* is a subset of a data warehouse that contains data tailored and optimized for the specific reporting needs of a department or team.

The *central data warehouse ETL* reads the data from the operational data stores of the application that collects it, verifies the data, makes the data conform to the schema, and places the data into the central data warehouse.

The *data mart ETL* extracts a subset of data from the central data warehouse, transforms it, and loads it into one or more star schemas, which can be included in data marts to answer specific business questions.

A program that provides these ETLs is called a *warehouse enablement pack*, or *warehouse pack*.

## 2.2   Overview of WebSphere Application Server Warehouse Enablement Pack

The warehouse pack for IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server provides metadata to enable the IBM Tivoli Monitoring, Version 5.1.1, warehouse enablement pack central data warehouse ETL to load data into the Tivoli central data warehouse for WebSphere Application Server administration servers, application servers and their components.

For more information, see section 7.1, "Metadata tables for applications that use the resource model ETL." The IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server resource models running on Tivoli endpoints collect and log this operational data. The Tivoli Enterprise Data Warehouse Support component then uploads and inserts the operational data into a middle layer database.

This warehouse pack also provides a data mart ETL, which is comprised of two warehouse processes that extract WebSphere Application Server performance and status data from the central data warehouse and inserts the data into the related IBM Tivoli Monitoring for Web Infrastructure, WebSphere Application Server star schemas.  See section 5, "ETL processes," and section 8.1, "Star schemas," for more information.  The star schemas are included in the data mart from which prepackaged reports are provided for IBM WebSphere Application Server performance analysis.

You can also use the data mart to create customized reports to meet your specific analytical needs.

# 3   Installing and Configuring

## 3.1   Prerequisites

This warehouse pack has the following prerequisites:

- Tivoli Enterprise Data Warehouse, Version 1.1, Fix Pack 1 (1.1-TDW-FP01A), efix 1.1-TDW-005E, and its prerequisite products
  **NOTE:** Tivoli Enterprise Data Warehouse 1.1 Fix Pack 2 (1.1-TDW-FP02) supersedes e-fix 1.1-TDW-0005E. When 1.1-TDW-FP02 becomes available, install 1.1-TDW-FP02, instead of 1.1-TDW-0005E.

  You can obtain the Tivoli Enterprise Data Warehouse e-fixes and fix pack from the Tivoli Enterprise Data Warehouse Web site (http://www.ibm.com/software/sysmgmt/products/support/TivoliEnterpriseDataWarehouse.html). Click the Downloads link in the Self-help section.

- DB2 UDB Version 7.2, FixPack 6 and efix 1.1-TDW-0002 for the central data warehouse
  You can obtain the Tivoli Enterprise Data Warehouse e-fixes and fix pack from the Tivoli Enterprise Data Warehouse Web site (http://www.ibm.com/software/sysmgmt/products/support/TivoliEnterpriseDataWarehouse.html). Click the Downloads link in the Self-help section.

- IBM Tivoli Monitoring, Version 5.1.1, Fix Pack 5.1.1-ITM-FP01 warehouse enablement pack and its prerequisite products
  You can obtain this Fix Pack from the following Web site: ftp://ftp.tivoli.com/support/patches/patches_5.1.1/5.1.1-ITM-FP01

- IBM Tivoli Monitoring for Web Infrastructure, Version 5.1.0: WebSphere Application Server
  This product is not an installation prerequisite to the WebSphere Application Server Warehouse Enablement Pack, but it is required for the resource models to log data for this warehouse enablement pack.

## 3.2   Supported hardware and software

IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server warehouse enablement pack supports IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server. It supports all versions of DB2, Informix, Microsoft SQL Server, Oracle, and Sybase database products as documented in the *IBM Tivoli Monitoring 5.1.1 Release Notes*, GI10-5797-01.

## 3.3   Limitations

This warehouse pack has no known limitations.

## 3.4   Database sizing considerations

You need to consider the volume of data you expect to collect for the execution of the IBM Tivoli Monitoring 5.1.1 central data warehouse ETL and define an appropriate amount of space for the Tivoli central data warehouse database. In addition, you should estimate additional space for this database because some of the staging tables utilized by the IBM Tivoli Monitoring 5.1.1 central data warehouse ETL are purged only when the AMX_c10_RIM_Prune warehouse process is executed.

## 3.5   Data sources and targets

The warehouse pack for IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server leverages the IBM Tivoli Monitoring, Version 5.1.1, warehouse enablement pack central data warehouse ETL; no additional data sources nor target sources are required for operational data. However, see the Post-installation section below for information about configuring the AMX_TWH_CDW_Source and AMX_ITM_RIM_Source warehouse sources and the AMX_TWH_CDW_Target warehouse target.

Warehouse sources and targets specific to the IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server warehouse enablement pack are IZY_TWH_CDW_Source for the central data warehouse database, IZY_TWH_MART_Target for the data mart database, and IZY_TWH_MD_Target for the metadata database.

## 3.6   Pre-installation procedures

Before installing the warehouse pack for IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server, you must install the IBM Tivoli Monitoring, Version 5.1.1, warehouse enablement pack. See the *IBM Tivoli Monitoring Version 5.1.1 Warehouse Enablement Pack Implementation Guide* for more information.

If you install the warehouse pack with one user ID, and the IBM Tivoli Monitoring 5.1.1, Warehouse Enablement or this warehouse enablement pack with another user ID, you must create a temporary tablespace for the warehouse enablement pack install user.

To create a temporary tablespace:  On the system that's identified as the Tivoli Enterprise Data Warehouse control server, open a DB2 command window  and issue the following commands, where <*userid*> is the warehouse enablement pack install user and <*password*> is the password of that user.

```
db2 connect to TWH_CDW user <userid> using <password>

db2 create user temporary tablespace usertmp2 managed by system using ('usertmp2')

db2 connect to TWH_MART user <userid> using <password>

db2 create user temporary tablespace usertmp3 managed by system using ('usertmp3')
```

## 3.7   Installation procedure

To install the IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server warehouse enablement pack, perform the following steps:

1.   Ensure that Tivoli Enterprise Data Warehouse and the required DB2 database software are installed as defined in the Prerequisites section. For instructions about installing Tivoli Enterprise Data Warehouse, refer to *Installing and Configuring Tivoli Enterprise Data Warehouse, Version 1, Release 1.*
2.   Install the IBM Tivoli Monitoring, warehouse enablement pack.  See the *IBM Tivoli Monitoring for Web Infrastructure Installation and Setup Guide*  for more installation information.
3.   Perform any pre-installation steps as described in Pre-installation  on page 11.
4.   Install the IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server warehouse enablement pack as described in the instructions in *IBM Tivoli Monitoring for Web Infrastructure Installation and Setup Guide.* Also, see the installation information in *Installing and Configuring Tivoli Enterprise Data Warehouse, Version 1, Release 1.*

     The installation media for this warehouse pack is located on the *IBM Tivoli Monitoring for Web Infrastructure, Version 5.1.0: WebSphere Application Server Software* CD in directory /tedw_apps_etl.
5.   Perform the post-installation steps described in Post-installation  on page 11.

## 3.8   Post-installation procedures

Complete the following steps after installation of the IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server warehouse enablement pack:

1.   Manually stop and restart the following Tivoli Presentation Services:

- Server for IBM Console
- Web Services for the IBM Console.

 See "Starting and Stopping Tivoli Presentation Services" in *Installing and Configuring Tivoli Enterprise Data Warehouse*.

2. If not already performed after installing the IBM Tivoli Monitoring, Version 5.1.1 warehouse enablement pack, you must update the user ID and password for the AMX_TWH_CDW_Source and the AMX_TWH_ITM_RIM_Source data sources and the AMX_TWH_CDW_Target data target. You must also configure the data source name for the AMX_TWH_ITM_RIM_Source data source to the ODBC system data source name that is created for the IBM Tivoli Monitoring middle layer database.

3. Through the IBM DB2 Data Warehouse Center, update the user ID and password for the IZY_TWH_CDW_Source data sources and the IZY_TWH_MART_Target and the IZY_TWH_MD_Target target sources.

    1. Through the IBM DB2 Data Warehouse Center, open the Warehouse Sources folder.

    2. Right-click IZY_TWH_CDW_Source and select Properties.

    3. Select the **Data Source** tab. Set the **User ID** and **Password** that were specified in the installation of the Tivoli Enterprise Data Warehouse for configuring DB2.

    4. Repeat Steps 2 and 3 for IZY_TWH_MART_Target in the Warehouse Targets folder to set the user ID and password for TWH_MART database.

    5. Repeat Steps 2 and 3 for IZY_TWH_MD_Target in the Warehouse Targets folder to set user ID and password for the TWH_MD database.

4. Follow the steps in *Installing and Configuring Tivoli Enterprise Data Warehouse* on configuring and scheduling warehouse pack ETL processes.

**Note:** The IZY_m05_s010_dimension step must be run successfully before the IZY_m10_s010_Fact step can be run. The IZY_m10_s010_Fact step must be run successfully before any of the Rollup steps can be run.

5. Edit the resource models to enable data logging for the Tivoli Enterprise Data Warehouse. See "Modifying data logging settings" in the *IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server User's Guide,* for more information.

**Note:** Do not delete IZY.STAGE_D_WAS_METRIC located in the TWH_CDW database. This table is created during the installation process and is not recreated by any of the data warehouse processes.

# 4   Maintaining

## 4.1   Backing up and restoring

Because this warehouse pack does not create any tables in the IBM Tivoli Monitoring middle layer repository, no additional backup of this database nor any special precautions are required before executing the provided warehouse processes.

## 4.2   Pruning

Pruning data from the WebSphere Application Server fact tables in the data mart database is implemented in the IZY_m10_s010_Fact step. The prune mart control table (Prune_Mart_Control) governs what data is pruned and contains a date duration value for every WebSphere Application Server fact table.

Entries in the hourly and daily fact tables are deleted after 3 months.  Entries in the corresponding weekly and monthly fact tables are deleted after a year. You can change this in the IZY.PRUNE_MART_CONTROL table in the TWH_MART database. The format for the pmartc_duration field is *yyyymmdd*, *yyyy* is number of years, *mm* is number of months and *dd* is number of days.  The default setting for the hourly and daily fact tables is 300, or 3 months.  The default value for the weekly and monthly fact tables is 10000, or 1 year.

# 5  ETL processes

Because this warehouse pack leverages the IBM Tivoli Monitoring, Version 5.1.1, warehouse enablement pack central data warehouse ETL, the IBM Tivoli Monitoring 5.1.1 warehouse process AMX_c05_ETL1_Process must run to insert WebSphere Application Server data into the central data warehouse database. Therefore, consider scheduling the AMX_c05_ETL1_Process warehouse process to run before the IZY_m05_Dimension process.

## 5.1  IZY_m05_Dimension_Process

The IZY_m05_Dimension_Process populates the dimension tables with the IBM WebSphere Application Server components monitored by the resource models.

This process has one step:

- IZY_m05_s010_Dimension

  This step populates the following tables:

  - The IZY.D_WAS_METRIC table with the measurement types

  - The IZY.D_WAS_HOST table with the IBM WebSphere Application Server nodes

  - The IZY.D_WAS_ADMINSRV table with the corresponding administration servers

  - The IZY.D_WAS_APPLSRV table with the application servers

  - The IZY.D_WAS_APPLCMP table with the application server components

  - The IZY.D_WAS_SUBCMP table with the servlets and connection pool subcomponents.

  This step must be run successfully before the IZY_m10_Fact_Process can be run.

## 5.2  IZY_m10_Fact_Process

This process populates the fact tables with the new data from the warehouse measurement (TWG.MSMT) table.

This process has the following steps:

- IZY_m10_s010_Fact

  This step populates the IZY.F_ADMINSRV_HOUR, IZY.F_APPLSRV_HOUR, IZY.F_APPLCMP_HOUR, and IZY.F_SUBCMP_HOUR tables with the new data from the warehouse measurement (TWG.MSMT) table. In addition, it prunes any expired data from the fact tables, if necessary.  See the Pruning section for more information. This step must be run successfully before any of the rollup steps below can be run.

- IZY_m10_s020_AdminSrv_Rollup

  This step rolls up the hourly data from the IZY.F_ADMINSRV_HOUR table into the IZY.F_ADMINSRV_DAY, IZY.F_ADMINSRV_WEEK, and IZY.F_ADMINSRV_MONTH tables for reports using the daily, weekly, or monthly star schemas.

- IZY_m10_s030_ApplSrv_Rollup

  This step rolls up the hourly data from the IZY F_APPLSRV_HOUR table into the IZY.F_APPLSRV_DAY, IZY.F_APPLSRV_WEEK, and IZY.F_APPLSRV_MONTH tables for reports using the daily, weekly, or monthly star schemas.

- IZY_m10_s040_ApplComp_Rollup

  This step rolls up the hourly data from the IZY.F_APPLCMP_HOUR table into the IZY.F_APPLCMP_DAY, IZY.F_APPLCMP_WEEK, and IZY.F_APPLCMP_MONTH tables for reports using the daily, weekly, or monthly star schemas.

- IZY_m10_s050_SubComp_Rollup

  This step rolls up the hourly data from the IZY F_SUBCMP_HOUR table into the IZY F_SUBCMP_DAY, IZY.F_SUBCMP_WEEK, and IZY.F_SUBCMP_MONTH tables for reports using the daily, weekly, or monthly star schemas.

# 6 Generic schema implementation

Before reading this section, read about the generic schema for the Tivoli Enterprise Data Warehouse central data warehouse, which is described in *Enabling an Application for Tivoli Enterprise Data Warehouse*. That document defines the content of each table and explains the relationships between the tables in this document.

Shaded columns in the following tables are translated. Translated columns are also identified with an asterisk (*) in the column heading.

## 6.1 Component configuration

### 6.1.1 Component type (table CompTyp)

| CompTyp_Cd CHAR(17) | CompTyp_Parent_Cd CHAR(17) | CompTyp_Nm VARCHAR(120) * | CompTyp_Strt_DtTm TIMESTAMP | CompTyp_End_DtTm TIMESTAMP |
|---|---|---|---|---|
| IP_HOST | NULL | IP Host | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_HOST | NULL | IBM WebSphere Application Server host | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_ADMIN_SERVER | NULL | IBM WebSphere Administration server | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | NULL | IBM WebSphere application server | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_DATA_SOURCE | NULL | IBM WebSphere data source | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_CONNECT_POOL | NULL | IBM WebSphere connection pool | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_EJB | NULL | IBM WebSphere Enterprise JavaBean | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_JVM | NULL | IBM WebSphere Java Virtual Machine | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_SERVLET_SESS | NULL | IBM WebSphere servlet session | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_THREAD_POOL | NULL | IBM WebSphere thread pool | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_TRANSACT_MGR | NULL | IBM WebSphere transaction manager | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_WEB_APPL | NULL | IBM WebSphere web application | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_SERVLET | NULL | IBM WebSphere servlet | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |

### 6.1.2 Component (table Comp)

| Comp_ID INTEGER | CompTyp_Cd CHAR(17) | Centr_Cd CHAR(6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR(254) | Comp_Corr_Val VARCHAR(254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR(254) |
|---|---|---|---|---|---|---|---|---|---|
| 0 | IP_HOST | CDW | 1 | 0 | eagle.raleigh.tivoli.com | | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | IP HOST |
| 1 | IP_HOST | CDW | 1 | 0 | cardinal.raleigh.tivoli.com | | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | IP HOST |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 2 | IZY_ADMIN_SERVER | CDW | 1 | 0 | eagle | eagle | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | |
| 3 | IZY_ADMIN_SERVER | CDW | 1 | 1 | cardinal | cardinal | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | |
| 4 | IZY_APPL_SERVER | CDW | 1 | 2 | Default Server | Default Server | 2002-08-16-15.02.18.18 | 9999-01-01-00.00.00.00 | |
| 5 | IZY_APPL_SERVER | CDW | 1 | 3 | Default Server | Default Server | 2002-08-16-21.22.13.13 | 9999-01-01-00.00.00.00 | |
| 6 | IZY_DATA_SOURCE | CDW | 1 | 5 | Sample DataSource | SampleDataSource | 2002-08-16-21.22.14.14 | 9999-01-01-00.00.00.00 | |
| 7 | IZY_DATA_SOURCE | CDW | 1 | 5 | sample | sample | 2002-08-16-21.22.14.14 | 9999-01-01-00.00.00.00 | |
| 8 | IZY_EJB | CDW | 1 | 5 | Access | Access | 2002-08-16-10.37.30.30 | 9999-01-01-00.00.00.00 | |
| 9 | IZY_EJB | CDW | 1 | 5 | Audit | Audit | 2002-08-16-10.37.36.36 | 9999-01-01-00.00.00.00 | |
| 10 | IZY_EJB | CDW | 1 | 5 | History | History | 2002-08-16-10.37.34.34 | 9999-01-01-00.00.00.00 | |
| 11 | IZY_EJB | CDW | 1 | 5 | IncBean | IncBean | 2002-08-16-10.37.41.41 | 9999-01-01-00.00.00.00 | |
| 12 | IZY_EJB | CDW | 1 | 5 | Leave | Leave | 2002-08-16-10.37.39.39 | 9999-01-01-00.00.00.00 | |
| 13 | IZY_EJB | CDW | 1 | 5 | WSsamples/AccountBMHome | WSsamples/AccountBMHome | 2002-08-16-10.37.31.31 | 9999-01-01-00.00.00.00 | |
| 14 | IZY_EJB | CDW | 1 | 5 | WSsamples/AccountHome | WSsamples/AccountHome | 2002-08-16-10.37.33.33 | 9999-01-01-00.00.00.00 | |

| Comp _ID INTEGER | CompTyp_Cd CHAR (17) | Centr _Cd CHAR (6) | Cust_ID INTEGER | Comp_ Corr_ID INTEGER | Comp_ Nm VARCHAR (254) | Comp_Corr _Val VARCHAR (254) | Comp_Strt_ DtTm TIMESTAMP | Comp_End_ DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 15 | IZY_EJB | CDW | 1 | 5 | WSsamples/HelloEJBHome | WSsamples/HelloEJBHome | 2002-08-16-10.37.40.40 | 9999-01-01-00.00.00.00 | |
| 16 | IZY_EJB | CDW | 1 | 5 | WSsamples/IncrementHome | WSsamples/IncrementHome | 2002-08-16-10.37.35.35 | 9999-01-01-00.00.00.00 | |
| 17 | IZY_EJB | CDW | 1 | 5 | WSsamples/TransferHome | WSsamples/TransferHome | 2002-08-16-10.37.39.39 | 9999-01-01-00.00.00.00 | |
| 18 | IZY_EJB | CDW | 1 | 5 | jndi/BeenThere | jndi/BeenThere | 2002-08-16-10.37.38.38 | 9999-01-01-00.00.00.00 | |
| 19 | IZY_JVM | CDW | 1 | 5 | JVM Runtime | JVM Runtime | 2002-08-16-10.37.24.24 | 9999-01-01-00.00.00.00 | |
| 20 | IZY_SERVLET_SESS | CDW | 1 | 5 | Servlet Session | Servlet Session | 2002-08-16-10.37.11.11 | 9999-01-01-00.00.00.00 | |
| 21 | IZY_TRANSACT_MGR | CDW | 1 | 5 | Transaction Manager | Transaction Manager | 2002-08-16-10.37.25.25 | 9999-01-01-00.00.00.00 | |
| 22 | IZY_WEB_APPL | CDW | 1 | 5 | Default Application | Default Application | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 | |
| 23 | IZY_WEB_APPL | CDW | 1 | 5 | Default Server. Default Application | Default Server.Default Application | 2002-08-16-10.37.59.59 | 9999-01-01-00.00.00.00 | |
| 24 | IZY_WEB_APPL | CDW | 1 | 5 | Default Server. Examples Application | Default Server.Examples Application | 2002-08-16-10.37.55.55 | 9999-01-01-00.00.00.00 | |

| Comp _ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 25 | IZY_WEB _APPL | CDW | 1 | 5 | Default Server. Samples Web Application | Default Server.Samples Web Application | 2002-08-16-10.37.57.57 | 9999-01-01-00.00.00.00 | |
| 26 | IZY_WEB _APPL | CDW | 1 | 5 | Default Server. YourCo Web Application | Default Server.YourCo Web Application | 2002-08-16-10.38.00.00 | 9999-01-01-00.00.00.00 | |
| 27 | IZY_WEB _APPL | CDW | 1 | 5 | Default Server.theme Web Application | Default Server.theme Web Application | 2002-08-16-10.37.58.58 | 9999-01-01-00.00.00.00 | |
| 28 | IZY_WEB _APPL | CDW | 1 | 5 | Examples Application | Examples Application | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 | |
| 29 | IZY_WEB _APPL | CDW | 1 | 5 | Samples Web Application | Samples Web Application | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 | |
| 30 | IZY_WEB _APPL | CDW | 1 | 5 | YourCo Web Application | YourCo Web Application | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 | |
| 31 | IZY_WEB _APPL | CDW | 1 | 5 | theme Web Application | theme Web Application | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 | |
| 32 | IZY_CON NECT_P OOL | CDW | 1 | 6 | Connection Pool | Connection Pool | 2002-08-16-10.37.22.22 | 9999-01-01-00.00.00.00 | |
| 33 | IZY_CON NECT_P OOL | CDW | 1 | 7 | Connection Pool | Connection Pool | 2002-08-16-10.37.21.21 | 9999-01-01-00.00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 34 | IZY_SERVLET | CDW | 1 | 22 | Invoker Servlet | InvokerServlet | 2002-08-16-10.37.54.54 | 9999-01-01-00.00.00.00 | |
| 35 | IZY_SERVLET | CDW | 1 | 22 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-10.37.47.47 | 9999-01-01-00.00.00.00 | |
| 36 | IZY_SERVLET | CDW | 1 | 28 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-10.37.53.53 | 9999-01-01-00.00.00.00 | |
| 37 | IZY_SERVLET | CDW | 1 | 28 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-10.37.54.54 | 9999-01-01-00.00.00.00 | |
| 38 | IZY_SERVLET | CDW | 1 | 28 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-10.37.46.46 | 9999-01-01-00.00.00.00 | |
| 39 | IZY_SERVLET | CDW | 1 | 29 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-10.37.44.44 | 9999-01-01-00.00.00.00 | |
| 40 | IZY_SERVLET | CDW | 1 | 29 | Invoker Servlet | InvokerServlet | 2002-08-16-10.37.50.50 | 9999-01-01-00.00.00.00 | |
| 41 | IZY_SERVLET | CDW | 1 | 29 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-10.37.45.45 | 9999-01-01-00.00.00.00 | |
| 42 | IZY_SERVLET | CDW | 1 | 29 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-10.37.42.42 | 9999-01-01-00.00.00.00 | |
| 43 | IZY_SERVLET | CDW | 1 | 30 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-10.37.48.48 | 9999-01-01-00.00.00.00 | |
| 44 | IZY_SERVLET | CDW | 1 | 30 | Invoker Servlet | InvokerServlet | 2002-08-16-10.37.49.49 | 9999-01-01-00.00.00.00 | |
| 45 | IZY_SERVLET | CDW | 1 | 30 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-10.37.48.48 | 9999-01-01-00.00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 46 | IZY_SERVLET | CDW | 1 | 30 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-10.37.44.44 | 9999-01-01-00.00.00.00 | |
| 47 | IZY_SERVLET | CDW | 1 | 31 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-10.37.43.43 | 9999-01-01-00.00.00.00 | |
| 48 | IZY_SERVLET | CDW | 1 | 31 | InvokerServlet | InvokerServlet | 2002-08-16-10.37.51.51 | 9999-01-01-00.00.00.00 | |
| 49 | IZY_SERVLET | CDW | 1 | 31 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-10.37.50.50 | 9999-01-01-00.00.00.00 | |
| 50 | IZY_SERVLET | CDW | 1 | 31 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-10.37.52.52 | 9999-01-01-00.00.00.00 | |
| 72 | IZY_DATA_SOURCE | CDW | 1 | 4 | SampleDataSource | SampleDataSource | 2002-08-19-16.16.30 | 9999-01-01-00.00.00.00 | |
| 73 | IZY_DATA_SOURCE | CDW | 1 | 4 | sample | sample | 2002-08-19-16.16.30 | 9999-01-01-00.00.00.00 | |
| 74 | IZY_EJB | CDW | 1 | 4 | Access | Access | 2002-08-16-17.02.31 | 9999-01-01-00.00.00.00 | |
| 75 | IZY_EJB | CDW | 1 | 4 | Audit | Audit | 2002-08-16-17.02.48 | 9999-01-01-00.00.00.00 | |
| 76 | IZY_EJB | CDW | 1 | 4 | History | History | 2002-08-16-17.02.54 | 9999-01-01-00.00.00.00 | |
| 77 | IZY_EJB | CDW | 1 | 4 | IncBean | IncBean | 2002-08-16-17.02.59 | 9999-01-01-00.00.00.00 | |
| 78 | IZY_EJB | CDW | 1 | 4 | Leave | Leave | 2002-08-16-17.03.04 | 9999-01-01-00.00.00.00 | |
| 79 | IZY_EJB | CDW | 1 | 4 | WSsamples/AccountBMHome | WSsamples/AccountBMHome | 2002-08-16-17.02.53 | 9999-01-01-00.00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 80 | IZY_EJB | CDW | 1 | 4 | WSsamples/AccountHome | WSsamples/AccountHome | 2002-08-16-17.02.54 | 9999-01-01-00.00.00 | |
| 81 | IZY_EJB | CDW | 1 | 4 | WSsamples/HelloEJBHome | WSsamples/HelloEJBHome | 2002-08-16-17.03.00 | 9999-01-01-00.00.00 | |
| 82 | IZY_EJB | CDW | 1 | 4 | WSsamples/IncrementHome | WSsamples/IncrementHome | 2002-08-16-17.02.50 | 9999-01-01-00.00.00 | |
| 83 | IZY_EJB | CDW | 1 | 4 | WSsamples/TransferHome | WSsamples/TransferHome | 2002-08-16-17.02.46 | 9999-01-01-00.00.00 | |
| 84 | IZY_EJB | CDW | 1 | 4 | jndi/BeenThere | jndi/BeenThere | 2002-08-16-17.02.52 | 9999-01-01-00.00.00 | |
| 85 | IZY_JVM | CDW | 1 | 4 | JVM Runtime | JVM Runtime | 2002-08-16-17.03.15 | 9999-01-01-00.00.00 | |
| 86 | IZY_SERVLET_SESS | CDW | 1 | 4 | Servlet Session | Servlet Session | 2002-08-17-03.00.04 | 9999-01-01-00.00.00 | |
| 87 | IZY_TRANSACT_MGR | CDW | 1 | 4 | Transaction Manager | Transaction Manager | 2002-08-16-17.03.05 | 9999-01-01-00.00.00 | |
| 88 | IZY_WEB_APPL | CDW | 1 | 4 | Default Application | Default Application | 2002-08-19-16.16.37 | 9999-01-01-00.00.00 | |
| 89 | IZY_WEB_APPL | CDW | 1 | 4 | Default Server. Default Application | Default Server.Default Application | 2002-08-16-17.00.33 | 9999-01-01-00.00.00 | |

| Comp _ID INTEGER | CompTyp_Cd CHAR (17) | Centr _Cd CHAR (6) | Cust_ID INTEGER | Comp_ Corr_ID INTEGER | Comp_ Nm VARCHAR (254) | Comp_Corr _Val VARCHAR (254) | Comp_Strt_ DtTm TIMESTAMP | Comp_End_ DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 90 | IZY_WEB _APPL | CDW | 1 | 4 | Default Server. Exampl es Applicati on | Default Server.Exam ples Application | 2002-08-16-17.00.24 | 9999-01-01-00.00.00 | |
| 91 | IZY_WEB _APPL | CDW | 1 | 4 | Default Server. Sample s Web Applicati on | Default Server.Samp les Web Application | 2002-08-16-17.00.13 | 9999-01-01-00.00.00 | |
| 92 | IZY_WEB _APPL | CDW | 1 | 4 | Default Server. YourCo Web Applicati on | Default Server.Your Co Web Application | 2002-08-16-17.00.31 | 9999-01-01-00.00.00 | |
| 93 | IZY_WEB _APPL | CDW | 1 | 4 | Default Server.t heme Web Applicati on | Default Server.them e Web Application | 2002-08-16-17.00.29 | 9999-01-01-00.00.00 | |
| 94 | IZY_WEB _APPL | CDW | 1 | 4 | Exampl es Applicati on | Examples Application | 2002-08-19-16.16.37 | 9999-01-01-00.00.00 | |
| 95 | IZY_WEB _APPL | CDW | 1 | 4 | Sample s Web Applicati on | Samples Web Application | 2002-08-19-16.16.37 | 9999-01-01-00.00.00 | |
| 96 | IZY_WEB _APPL | CDW | 1 | 4 | YourCo Web Applicati on | YourCo Web Application | 2002-08-19-16.16.37 | 9999-01-01-00.00.00 | |
| 97 | IZY_WEB _APPL | CDW | 1 | 4 | theme Web Applicati on | theme Web Application | 2002-08-19-16.16.37 | 9999-01-01-00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 98 | IZY_CONNECT_POOL | CDW | 1 | 72 | Connection Pool | Connection Pool | 2002-08-16-17.03.28 | 9999-01-01-00.00.00 | |
| 99 | IZY_CONNECT_POOL | CDW | 1 | 73 | Connection Pool | Connection Pool | 2002-08-16-17.03.21 | 9999-01-01-00.00.00 | |
| 100 | IZY_SERVLET | CDW | 1 | 88 | Invoker Servlet | InvokerServlet | 2002-08-16-17.01.27 | 9999-01-01-00.00.00 | |
| 101 | IZY_SERVLET | CDW | 1 | 88 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-17.01.38 | 9999-01-01-00.00.00 | |
| 102 | IZY_SERVLET | CDW | 1 | 94 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-17.01.39 | 9999-01-01-00.00.00 | |
| 103 | IZY_SERVLET | CDW | 1 | 94 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-17.01.05 | 9999-01-01-00.00.00 | |
| 104 | IZY_SERVLET | CDW | 1 | 94 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-17.00.52 | 9999-01-01-00.00.00 | |
| 105 | IZY_SERVLET | CDW | 1 | 95 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-17.00.54 | 9999-01-01-00.00.00 | |
| 106 | IZY_SERVLET | CDW | 1 | 95 | HelloEJB.jsp | HelloEJB.jsp | 2002-08-16-17.02.17 | 9999-01-01-00.00.00 | |
| 107 | IZY_SERVLET | CDW | 1 | 95 | Invoker Servlet | InvokerServlet | 2002-08-16-17.00.47 | 9999-01-01-00.00.00 | |
| 108 | IZY_SERVLET | CDW | 1 | 95 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-17.01.18 | 9999-01-01-00.00.00 | |
| 109 | IZY_SERVLET | CDW | 1 | 95 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-17.01.56 | 9999-01-01-00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 110 | IZY_SERVLET | CDW | 1 | 95 | StockQuoteHTMLNotConnected.jsp | StockQuoteHTMLNotConnected.jsp | 2002-08-17-03.00.49 | 9999-01-01-00.00.00 | |
| 111 | IZY_SERVLET | CDW | 1 | 95 | StockQuoteHTMLRequest.jsp | StockQuoteHTMLRequest.jsp | 2002-08-16-17.01.07 | 9999-01-01-00.00.00 | |
| 112 | IZY_SERVLET | CDW | 1 | 95 | StockQuoteHTMLResponse.jsp | StockQuoteHTMLResponse.jsp | 2002-08-16-17.02.10 | 9999-01-01-00.00.00 | |
| 113 | IZY_SERVLET | CDW | 1 | 95 | StockQuoteServlet | StockQuoteServlet | 2002-08-16-17.01.34 | 9999-01-01-00.00.00 | |
| 114 | IZY_SERVLET | CDW | 1 | 95 | WebSphereSamples.HelloEJB.HelloEJBServlet | WebSphereSamples.HelloEJB.HelloEJBServlet | 2002-08-16-17.02.06 | 9999-01-01-00.00.00 | |
| 115 | IZY_SERVLET | CDW | 1 | 95 | WebSphereSamples.Increment.VisitIncrementSite | WebSphereSamples.Increment.VisitIncrementSite | 2002-08-16-17.00.37 | 9999-01-01-00.00.00 | |
| 116 | IZY_SERVLET | CDW | 1 | 95 | WebSphereSamples.StockQuote.StockQuoteServlet | WebSphereSamples.StockQuote.StockQuoteServlet | 2002-08-16-17.01.42 | 9999-01-01-00.00.00 | |
| 117 | IZY_SERVLET | CDW | 1 | 96 | ByDayResults.jsp | ByDayResults.jsp | 2002-08-16-17.01.16 | 9999-01-01-00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 118 | IZY_SERVLET | CDW | 1 | 96 | ByNameResults.jsp | ByNameResults.jsp | 2002-08-16-17.01.00 | 9999-01-01-00.00.00 | |
| 119 | IZY_SERVLET | CDW | 1 | 96 | ByRoomResults.jsp | ByRoomResults.jsp | 2002-08-16-17.01.55 | 9999-01-01-00.00.00 | |
| 120 | IZY_SERVLET | CDW | 1 | 96 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-17.02.03 | 9999-01-01-00.00.00 | |
| 121 | IZY_SERVLET | CDW | 1 | 96 | InvokerServlet | InvokerServlet | 2002-08-16-17.02.02 | 9999-01-01-00.00.00 | |
| 122 | IZY_SERVLET | CDW | 1 | 96 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-17.01.31 | 9999-01-01-00.00.00 | |
| 123 | IZY_SERVLET | CDW | 1 | 96 | JobQueryResults.jsp | JobQueryResults.jsp | 2002-08-16-17.01.43 | 9999-01-01-00.00.00 | |
| 124 | IZY_SERVLET | CDW | 1 | 96 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-17.01.30 | 9999-01-01-00.00.00 | |
| 125 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.Customization.Center | WebSphereSamples.YourCo.Customization.Center | 2002-08-16-17.01.35 | 9999-01-01-00.00.00 | |
| 126 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.JobListing.JobQuery | WebSphereSamples.YourCo.JobListing.JobQuery | 2002-08-16-17.02.11 | 9999-01-01-00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 127 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.News.NewsServlet | WebSphereSamples.YourCo.News.NewsServlet | 2002-08-16-17.01.36 | 9999-01-01-00.00.00 | |
| 128 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.Scheduler.ByDay | WebSphereSamples.YourCo.Scheduler.ByDay | 2002-08-16-17.01.12 | 9999-01-01-00.00.00 | |
| 129 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.Scheduler.ByRoom | WebSphereSamples.YourCo.Scheduler.ByRoom | 2002-08-16-17.00.55 | 9999-01-01-00.00.00 | |
| 130 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.Scheduler.SelectNames | WebSphereSamples.YourCo.Scheduler.SelectNames | 2002-08-16-17.02.15 | 9999-01-01-00.00.00 | |
| 131 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.WhitePages.ByName | WebSphereSamples.YourCo.WhitePages.ByName | 2002-08-16-17.01.17 | 9999-01-01-00.00.00 | |
| 132 | IZY_SERVLET | CDW | 1 | 96 | WebSphereSamples.YourCo.WhitePages.SelectNames | WebSphereSamples.YourCo.WhitePages.SelectNames | 2002-08-16-17.01.09 | 9999-01-01-00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 133 | IZY_SERVLET | CDW | 1 | 96 | YourCo Expiring HTMLEveningPage.jsp | YourCoExpiringHTMLEveningPage.jsp | 2002-08-16-17.01.41 | 9999-01-01-00.00.00 | |
| 134 | IZY_SERVLET | CDW | 1 | 96 | YourCo Expiring HTMLGoodMorningPage.jsp | YourCoExpiringHTMLGoodMorningPage.jsp | 2002-08-17-00.00.57 | 9999-01-01-00.00.00 | |
| 135 | IZY_SERVLET | CDW | 1 | 96 | YourCo Expiring HTMLLateAfternoonPage.jsp | YourCoExpiringHTMLLateAfternoonPage.jsp | 2002-08-16-17.01.51 | 9999-01-01-00.00.00 | |
| 136 | IZY_SERVLET | CDW | 1 | 96 | YourCo Expiring HTMLLunchPage.jsp | YourCoExpiringHTMLLunchPage.jsp | 2002-08-18-03.16.23 | 9999-01-01-00.00.00 | |
| 137 | IZY_SERVLET | CDW | 1 | 96 | YourCo Expiring HTMLPMBreakPage.jsp | YourCoExpiringHTMLPMBreakPage.jsp | 2002-08-18-02.47.00 | 9999-01-01-00.00.00 | |
| 138 | IZY_SERVLET | CDW | 1 | 96 | index.jsp | index.jsp | 2002-08-16-17.00.56 | 9999-01-01-00.00.00 | |
| 139 | IZY_SERVLET | CDW | 1 | 96 | jobs.jsp | jobs.jsp | 2002-08-16-17.01.54 | 9999-01-01-00.00.00 | |
| 140 | IZY_SERVLET | CDW | 1 | 96 | login.jsp | login.jsp | 2002-08-16-17.02.14 | 9999-01-01-00.00.00 | |
| 141 | IZY_SERVLET | CDW | 1 | 96 | meetings.jsp | meetings.jsp | 2002-08-16-17.02.05 | 9999-01-01-00.00.00 | |
| 142 | IZY_SERVLET | CDW | 1 | 96 | nav.jsp | nav.jsp | 2002-08-16-17.01.25 | 9999-01-01-00.00.00 | |

| Comp_ID INTEGER | CompTyp_Cd CHAR (17) | Centr_Cd CHAR (6) | Cust_ID INTEGER | Comp_Corr_ID INTEGER | Comp_Nm VARCHAR (254) | Comp_Corr_Val VARCHAR (254) | Comp_Strt_DtTm TIMESTAMP | Comp_End_DtTm TIMESTAMP | Comp_Ds VARCHAR (254) |
|---|---|---|---|---|---|---|---|---|---|
| 143 | IZY_SERVLET | CDW | 1 | 96 | search.jsp | search.jsp | 2002-08-16-17.00.49 | 9999-01-01-00.00.00 | |
| 144 | IZY_SERVLET | CDW | 1 | 97 | DirectoryBrowsingServlet | DirectoryBrowsingServlet | 2002-08-16-17.02.00 | 9999-01-01-00.00.00 | |
| 145 | IZY_SERVLET | CDW | 1 | 97 | InvokerServlet | InvokerServlet | 2002-08-16-17.01.23 | 9999-01-01-00.00.00 | |
| 146 | IZY_SERVLET | CDW | 1 | 97 | JSP 1.1 Processor | JSP 1.1 Processor | 2002-08-16-17.01.59 | 9999-01-01-00.00.00 | |
| 147 | IZY_SERVLET | CDW | 1 | 97 | SimpleFileServlet | SimpleFileServlet | 2002-08-16-17.01.14 | 9999-01-01-00.00.00 | |
| 168 | IZY_SERVLET | CDW | 1 | 96 | YourCoExpiringHTMLAfternoonPage.jsp | YourCoExpiringHTMLAfternoonPage.jsp | 2002-08-19-17.01.16 | 9999-01-01-00.00.00 | |
| 169 | IZY_SERVLET | CDW | 1 | 96 | YourCoExpiringHTMLBreakfastPage.jsp | YourCoExpiringHTMLBreakfastPage.jsp | 2002-08-19-17.01.16 | 9999-01-01-00.00.00 | |
| 196 | IZY_THREAD_POOL | CDW | 1 | 5 | ORB.thread.pool | ORB.thread.pool | 2002-08-20-10.00.39.000000 | 9999-01-01-00.00.00.000000 | |
| 197 | IZY_THREAD_POOL | CDW | 1 | 5 | Servlet.Engine.Transports | Servlet.Engine.Transports | 2002-08-20-10.00.40.000000 | 9999-01-01-00.00.00.000000 | |
| 198 | IZY_THREAD_POOL | CDW | 1 | 192 | ORB.thread.pool | ORB.thread.pool | 2002-08-20-10.00.29.000000 | 9999-01-01-00.00.00.000000 | |

### 6.1.3 Component relationship type (table RelnTyp)

| RelnTyp_Cd CHAR(6) | RelnTyp_Nm VARCHAR(120) * |
|---|---|
| PCHILD | Parent child relationship |

### 6.1.4 Component relationship rule (table RelnRul)

| CompTyp_Source_Cd CHAR(17) | CompTyp_Target_Cd CHAR(17) | RelnTyp_Cd CHAR(6) | RelnRul_Strt_DtTm TIMESTAMP | RelnRul_End_DtTm TIMESTAMP |
|---|---|---|---|---|
| IP_HOST | IZY_ADMIN_SERVER | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IP_INTERFACE | IZY_ADMIN_SERVER | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_HOST | IZY_ADMIN_SERVER | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_ADMIN_SERVER | IZY_APPL_SERVER | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_DATA_SOURCE | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_DATA_SOURCE | IZY_CONNECT_POOL | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_EJB | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_JVM | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_SERVLET_SESS | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_THREAD_POOL | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_TRANSACT_MGR | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_APPL_SERVER | IZY_WEB_APPL | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |
| IZY_WEB_APPL | IZY_SERVLET | PCHILD | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 |

### 6.1.5 Component relationship (table CompReln)

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 1 | 0 | 2 | PCHILD | 2002-08-16-21.22.12.12 | 9999-01-01-00.00.00.00 |
| 2 | 1 | 3 | PCHILD | 2002-08-16-21.22.12.12 | 9999-01-01-00.00.00.00 |
| 3 | 2 | 4 | PCHILD | 2002-08-16-21.22.14.14 | 9999-01-01-00.00.00.00 |
| 4 | 3 | 5 | PCHILD | 2002-08-16-21.22.14.14 | 9999-01-01-00.00.00.00 |
| 5 | 5 | 6 | PCHILD | 2002-08-16-21.22.14.14 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 6 | 5 | 7 | PCHILD | 2002-08-16-21.22.14.14 | 9999-01-01-00.00.00.00 |
| 7 | 5 | 8 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 8 | 5 | 9 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 9 | 5 | 10 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 10 | 5 | 11 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 11 | 5 | 12 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 12 | 5 | 13 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 13 | 5 | 14 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 14 | 5 | 15 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 15 | 5 | 16 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 16 | 5 | 17 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 17 | 5 | 18 | PCHILD | 2002-08-16-21.22.15.15 | 9999-01-01-00.00.00.00 |
| 18 | 5 | 19 | PCHILD | 2002-08-16-21.22.16.16 | 9999-01-01-00.00.00.00 |
| 19 | 5 | 20 | PCHILD | 2002-08-16-21.22.16.16 | 9999-01-01-00.00.00.00 |
| 20 | 5 | 21 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 21 | 5 | 22 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 22 | 5 | 23 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 23 | 5 | 24 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 24 | 5 | 25 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 25 | 5 | 26 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 26 | 5 | 27 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 27 | 5 | 28 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 28 | 5 | 29 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 29 | 5 | 30 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 30 | 5 | 31 | PCHILD | 2002-08-16-21.22.18.18 | 9999-01-01-00.00.00.00 |
| 31 | 6 | 32 | PCHILD | 2002-08-16-21.22.19.19 | 9999-01-01-00.00.00.00 |
| 32 | 7 | 33 | PCHILD | 2002-08-16-21.22.19.19 | 9999-01-01-00.00.00.00 |
| 33 | 22 | 34 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 34 | 22 | 35 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 35 | 28 | 36 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 36 | 28 | 37 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 37 | 28 | 38 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 38 | 29 | 39 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 39 | 29 | 40 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 40 | 29 | 41 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 41 | 29 | 42 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 42 | 30 | 43 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 43 | 30 | 44 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 44 | 30 | 45 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 45 | 30 | 46 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 46 | 31 | 47 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 47 | 31 | 48 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 48 | 31 | 49 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 49 | 31 | 50 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 73 | 4 | 72 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 74 | 4 | 73 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 75 | 4 | 74 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 76 | 4 | 75 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 77 | 4 | 76 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 78 | 4 | 77 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 79 | 4 | 78 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 80 | 4 | 79 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 81 | 4 | 80 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 82 | 4 | 81 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 83 | 4 | 82 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 84 | 4 | 83 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 85 | 4 | 84 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 86 | 4 | 85 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 87 | 4 | 86 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 88 | 4 | 87 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 89 | 4 | 88 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 90 | 4 | 89 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 91 | 4 | 90 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 92 | 4 | 91 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 93 | 4 | 92 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 94 | 4 | 93 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 95 | 4 | 94 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 96 | 4 | 95 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 97 | 4 | 96 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 98 | 4 | 97 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 99 | 72 | 98 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 100 | 73 | 99 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 101 | 88 | 100 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 102 | 88 | 101 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 103 | 94 | 102 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 104 | 94 | 103 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 105 | 94 | 104 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 106 | 95 | 105 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 107 | 95 | 106 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 108 | 95 | 107 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 109 | 95 | 108 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 110 | 95 | 109 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 111 | 95 | 110 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 112 | 95 | 111 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 113 | 95 | 112 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 114 | 95 | 113 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 115 | 95 | 114 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 116 | 95 | 115 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 117 | 95 | 116 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 118 | 96 | 117 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 119 | 96 | 118 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 120 | 96 | 119 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 121 | 96 | 120 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 122 | 96 | 121 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 123 | 96 | 122 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 124 | 96 | 123 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 125 | 96 | 124 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 126 | 96 | 125 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 127 | 96 | 126 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 128 | 96 | 127 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 129 | 96 | 128 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 130 | 96 | 129 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 131 | 96 | 130 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 132 | 96 | 131 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 133 | 96 | 132 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 134 | 96 | 133 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 135 | 96 | 134 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 136 | 96 | 135 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 137 | 96 | 136 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 138 | 96 | 137 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 139 | 96 | 138 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 140 | 96 | 139 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 141 | 96 | 140 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 142 | 96 | 141 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 143 | 96 | 142 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 144 | 96 | 143 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 145 | 97 | 144 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 146 | 97 | 145 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 147 | 97 | 146 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |

| CompReln_ID INTEGER | Comp_Source_ID INTEGER | Comp_Target_ID INTEGER | RelnTyp_Cd CHAR(6) | CompReln_ Strt_DtTm TIMESTAMP | CompReln_ End_DtTm TIMESTAMP |
|---|---|---|---|---|---|
| 148 | 97 | 147 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 169 | 96 | 168 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 170 | 96 | 169 | PCHILD | 2002-08-16-21.22.20.20 | 9999-01-01-00.00.00.00 |
| 171 | 5 | 196 | PCHILD | 2002-08-21-19.00.40.103001 | 9999-01-01-00.00.00.000000 |
| 172 | 5 | 197 | PCHILD | 2002-08-21-19.00.40.103001 | 9999-01-01-00.00.00.000000 |
| 173 | 192 | 198 | PCHILD | 2002-08-21-19.00.40.103001 | 9999-01-01-00.00.00.000000 |

### 6.1.6    Attribute type (table AttrTyp)

| AttrTyp_Cd CHAR(17) | AttrTyp_Nm VARCHAR(120) * |
|---|---|
| LAST_IP_ADDRESS | Last IP Address |
| IZY_WAS_VERSION | Version of IBM WebSphere Application Server |
| IZY_OS_TYPE | Operating system |
| IZY_POLICY_REGION | Tivoli policy region |
| AMX_EID | IBM Tivoli Monitoring Endpoint Identifier |
| AMX_GMT_OFFSET | IBM Tivoli Monitoring Endpoint GMT Offset |

### 6.1.7    Attribute rule (table AttrRul)

| CompTyp_Cd CHAR(17) | AttrTyp_Cd CHAR(17) | AttrRul_Strt_ DtTm TIMESTAMP | AttrRul_End _DtTm TIMESTAMP | AttrRul_Dom_Ind CHAR |
|---|---|---|---|---|
| IP_HOST | LAST_IP_ADDRESS | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 | N |
| IZY_HOST | AMX_EID | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 | N |
| IZY_HOST | AMX_GMT_OFFSET | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 | N |
| IZY_ADMIN_SERVER | IZY_WAS_VERSION | 2002-01-19-11.36.54.000000 | 9999-01-01-00.00.00.000000 | N |
| IZY_ADMIN_SERVER | IZY_OS_TYPE | 2002-01-19- | 9999-01-01- | N |

| CompTyp_Cd CHAR(17) | AttrTyp_Cd CHAR(17) | AttrRul_Strt_ DtTm TIMESTAMP | AttrRul_End _DtTm TIMESTAMP | AttrRul_Dom_Ind CHAR |
|---|---|---|---|---|
| | | 11.36.54.000 000 | 00.00.00.000 000 | |
| IZY_ADMIN_SERVER | IZY_POLICY_REGION | 2002-01-19-11.36.54.000 000 | 9999-01-01-00.00.00.000 000 | N |

### 6.1.8 Attribute domain (table AttrDom)

This warehouse pack does not place data in the attribute domain table.

### 6.1.9 Component attribute (table CompAttr)

| CompAttr_ID INTEGER | Comp_ID INTEGER | AttrTyp_Cd CHAR(17) | CompAttr_St rt_DtTm TIMESTAMP | CompAttr_E nd_DtTm TIMESTAMP | CompAttr_Val VARCHAR(254) |
|---|---|---|---|---|---|
| 1 | 0 | AMX_EID | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | 5 |
| 2 | 1 | AMX_EID | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | 4 |
| 3 | 0 | AMX_GMT_OFFSET | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | -300 |
| 4 | 1 | AMX_GMT_OFFSET | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | -300 |
| 5 | 0 | LAST_IP_ADDRESS | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | 146.84.80.237 |
| 6 | 1 | LAST_IP_ADDRESS | 2002-08-16-21.22.11.11 | 9999-01-01-00.00.00.00 | 146.84.80.62 |
| 7 | 3 | IZY_OS_TYPE | 2002-08-16-10.37.11.11 | 9999-01-01-00.00.00.00 | Windows_NT CARDINAL 5.0 2195+Service_Pack_2 Penti |
| 8 | 2 | IZY_OS_TYPE | 2002-08-16-15.01.20.20 | 9999-01-01-00.00.00.00 | AIX eagle 1 5 002453034C00 |
| 9 | 3 | IZY_POLICY_REGION | 2002-08-16-10.37.11.11 | 9999-01-01-00.00.00.00 | LMD_PolicyRegion |
| 10 | 2 | IZY_POLICY_REGION | 2002-08-16-15.01.20.20 | 9999-01-01-00.00.00.00 | LMD_PolicyRegion |
| 11 | 3 | IZY_WAS_VERSION | 2002-08-16-10.37.11.11 | 9999-01-01-00.00.00.00 | 4.0.2 |
| 12 | 2 | IZY_WAS_VERSION | 2002-08-16-15.01.20.20 | 9999-01-01-00.00.00.00 | 4.0.2 |

## *6.2 Component measurement*

### 6.2.1 Measurement group type (table MGrpTyp)

| MGrpTyp_Cd<br>CHAR(6) | MGrpTyp_Nm<br>VARCHAR(120) * |
|---|---|
| CATEG | Category |
| GROUP | Aggregate Types or Group Functions |
| STATE | State |

### 6.2.2 Measurement group (table MGrp)

| MGrp_Cd<br>CHAR(6) | MGrpTyp_Cd<br>CHAR(6) | MGrp_Parent_Cd<br>CHAR(6) | MGrp_Nm<br>VARCHAR(120) * |
|---|---|---|---|
| PERF | CATEG | NULL | Performance |
| UTIL | CATEG | NULL | Utilization |
| AVL | CATEG | NULL | Availability |
| STATE | CATEG | NULL | Percentage State measurements |
| STORAG | CATEG | NULL | Storage |
| AVG_E | GROUP | NULL | Average value exists |
| MIN_E | GROUP | NULL | Minimum value exists |
| MAX_E | GROUP | NULL | Maximum value exists |
| TOT_E | GROUP | NULL | Total value exists |
| IZY_ST | STATE | NULL | IBM WebSphere Application Server states |

### 6.2.3 Measurement group member (table MGrpMbr)

| MGrp_Cd<br>CHAR(6) | MGrpTyp_Cd<br>CHAR(6) | MsmtTyp_ID<br>INTEGER |
|---|---|---|
| MIN_E | GROUP | 1 |
| MAX_E | GROUP | 1 |
| AVG_E | GROUP | 1 |
| MIN_E | GROUP | 2 |
| MAX_E | GROUP | 2 |
| AVG_E | GROUP | 2 |
| TOT_E | GROUP | 3 |
| MIN_E | GROUP | 4 |
| MAX_E | GROUP | 4 |
| AVG_E | GROUP | 4 |
| TOT_E | GROUP | 5 |
| MIN_E | GROUP | 6 |
| MAX_E | GROUP | 6 |
| AVG_E | GROUP | 6 |
| MIN_E | GROUP | 7 |
| MAX_E | GROUP | 7 |

| MGrp_Cd CHAR(6) | MGrpTyp_Cd CHAR(6) | MsmtTyp_ID INTEGER |
|---|---|---|
| AVG_E | GROUP | 7 |
| MIN_E | GROUP | 8 |
| MAX_E | GROUP | 8 |
| AVG_E | GROUP | 8 |
| TOT_E | GROUP | 9 |
| MIN_E | GROUP | 10 |
| MAX_E | GROUP | 10 |
| AVG_E | GROUP | 10 |
| MIN_E | GROUP | 11 |
| MAX_E | GROUP | 11 |
| AVG_E | GROUP | 11 |
| TOT_E | GROUP | 12 |
| MIN_E | GROUP | 13 |
| MAX_E | GROUP | 13 |
| AVG_E | GROUP | 13 |
| TOT_E | GROUP | 14 |
| MIN_E | GROUP | 15 |
| MAX_E | GROUP | 15 |
| AVG_E | GROUP | 15 |
| MIN_E | GROUP | 16 |
| MAX_E | GROUP | 16 |
| AVG_E | GROUP | 16 |
| MIN_E | GROUP | 17 |
| MAX_E | GROUP | 17 |
| AVG_E | GROUP | 17 |
| TOT_E | GROUP | 18 |
| AVG_E | GROUP | 19 |
| AVG_E | GROUP | 20 |
| AVG_E | GROUP | 21 |
| AVG_E | GROUP | 22 |
| IZY_ST | STATE | 19 |
| IZY_ST | STATE | 20 |
| IZY_ST | STATE | 21 |
| IZY_ST | STATE | 22 |

### 6.2.4    Measurement unit category (table MUnitCat)

| MunitCat_Cd CHAR(6) | MunitCat_Nm VARCHAR(120) * |
|---|---|
| TM | Time Duration |
| QTY | Quantity |
| PRC | Percentage |
| RT | Rate |

### 6.2.5    Measurement unit (table MUnit)

| MUnit_Cd CHAR(6) | MUnitCat_Cd CHAR(6) | Munit_Nm VARCHAR(120) * |
|---|---|---|
| PRC | PRC | Percentage |
| Bps | RT | Bytes per second |
| MBps | RT | Megabytes per second |
| KBps | RT | Kilobytes per second |
| Rps | RT | Requests per second |
| Qps | RT | Quantity per second |
| Qpm | RT | Quantity per minute |
| QTY | QTY | Quantity |
| GB | QTY | Gigabytes |
| KB | QTY | Kilobytes |
| MB | QTY | Megabytes |
| B | QTY | Bytes |
| Msec | TM | Milliseconds |
| Sec | TM | Seconds |
| Min | TM | Minutes |
| Hr | TM | Hours |
| Day | TM | Days |
| HSc | TM | Hundredths of a second |

### 6.2.6    Time summary (table TmSum)

The period over which a measurement can be summarized.

| TmSum_Cd CHAR | TmSum_Nm VARCHAR(120) * |
|---|---|
| H | Hourly |
| D | Daily |
| W | Weekly |
| M | Monthly |
| Q | Quarterly |
| Y | Yearly |

### 6.2.7    Measurement source (table MSrc)

| MSrc_Cd CHAR(6) | MSrc_Parent_Cd CHAR(6) | MSrc_Nm VARCHAR(120) * |
|---|---|---|
| Tivoli | NULL | Tivoli Application |
| AMX | Tivoli | IBM Tivoli Monitoring |
| IZY | AMX | IBM Tivoli Monitoring for Web Infrastructure, Version 5.1.0: WebSphere Application Server |

### 6.2.8 Measurement type (table MsmtTyp)

The values for MsmtTyp_Nm are stored in the central data warehouse database as a short string, but are displayed in reports as descriptive, translated phrases. In the reports, the values of the MsmtTyp_Nm do not contain the underscores.

| MsmtTyp_ID INTEGER | MUnit_Cd CHAR(6) | MSrc_Cd CHAR (6) | MsmtTyp_Nm VARCHAR(120) * | MsmtTyp_Ds VARCHAR(254) * |
|---|---|---|---|---|
| 1 | MSec | IZY | Average_connection_pool_wait_time | Connection pool average wait time per cycle |
| 2 | PRC | IZY | Average_connection_pool_percent_used | Average percent of the connection pool that is in use |
| 3 | QTY | IZY | Connection_pool_faults | Number of connection pool faults (e.g. time out) in connection pool |
| 4 | MSec | IZY | Average_EJB_response_time | Average total method response time for the remote methods of the bean for the cycle |
| 5 | QTY | IZY | EJB_request_rate | Number of calls to the remote methods of the bean per minute |
| 6 | QTY | IZY | Average_concurrent_EJB_requests | Average number of concurrently active beans (entity and stateful) in the cycle |
| 7 | PRC | IZY | Percent_EJB_returns_discarded | Percent of the EJB returns discarded |
| 8 | B | IZY | Used_JVM_memory | Used memory in JVM Runtime |
| 9 | B | IZY | Total_JVM_memory | Total memory in JVM Runtime |
| 10 | PRC | IZY | Active_threads_to_pool_size_ratio | Ratio of active threads to pool size |
| 11 | MSec | IZY | Average_servlet_response_time | Recent servlet response time (average) |
| 12 | QTY | IZY | Servlet_request_rate | Number of requests that a servlet processed per minute |
| 13 | QTY | IZY | Concurrent_servlet_requests | Number of servlet requests that are being concurrently processed (load) |
| 14 | QTY | IZY | Servlet_error_rate | Servlet errors per cycle |
| 15 | QTY | IZY | Live_servlet_sessions | Number of concurrently live servlet sessions (load) |
| 16 | Sec | IZY | Transaction_response_time | Recent transaction response time |
| 17 | QTY | IZY | Transaction_request_rate | Transaction requests per minute |
| 18 | PRC | IZY | Transaction_exceptions | Transaction time outs to total transactions |
| 19 | PRC | IZY | WebSphere_server_state_up | Server state is up |
| 20 | PRC | IZY | WebSphere_server_state_down | Server state is down |
| 21 | PRC | IZY | WebSphere_server_state_initializing | Server state is initializing |
| 22 | PRC | IZY | WebSphere_server_state_unknown | Server state is unknown |

### 6.2.9 Component measurement rule (table MsmtRul)

| CompTyp_Cd CHAR(17) | MsmtTyp_ID INTEGER |
|---|---|
| IZY_CONNECT_POOL | 1 |
| IZY_CONNECT_POOL | 2 |
| IZY_CONNECT_POOL | 3 |
| IZY_EJB | 4 |
| IZY_EJB | 5 |
| IZY_EJB | 6 |
| IZY_EJB | 7 |
| IZY_JVM | 8 |
| IZY_JVM | 9 |
| IZY_THREAD_POOL | 10 |
| IZY_WEB_APPLICATION | 11 |
| IZY_WEB_APPLICATION | 12 |
| IZY_WEB_APPLICATION | 13 |
| IZY_WEB_APPLICATION | 14 |
| IZY_SERVLET | 11 |
| IZY_SERVLET | 12 |
| IZY_SERVLET | 13 |
| IZY_SERVLET | 14 |
| IZY_SERVLET_SESS | 15 |
| IZY_TRANSACT_MGR | 16 |
| IZY_TRANSACT_MGR | 17 |
| IZY_TRANSACT_MGR | 18 |
| IZY_APPL_SERVER | 4 |
| IZY_APPL_SERVER | 5 |
| IZY_APPL_SERVER | 6 |
| IZY_APPL_SERVER | 7 |
| IZY_APPL_SERVER | 11 |
| IZY_APPL_SERVER | 12 |
| IZY_APPL_SERVER | 13 |
| IZY_APPL_SERVER | 14 |
| IZY_APPL_SERVER | 19 |
| IZY_APPL_SERVER | 20 |
| IZY_APPL_SERVER | 21 |
| IZY_APPL_SERVER | 22 |
| IZY_ADMIN_SERVER | 19 |
| IZY_ADMIN_SERVER | 20 |
| IZY_ADMIN_SERVER | 21 |
| IZY_ADMIN_SERVER | 22 |

### 6.2.10 Measurement (table Msmt)

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 19 | 8 | H | 2002-08-16 | 13:00:24 | 1.2500000000000E+07 | 2.9000000000000E+07 | 2.0400000000000E+07 | | | |
| 1 | 19 | 8 | H | 2002-08-16 | 14:00:03 | 1.2500000000 | 2.8900000000 | 2.0100000000 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 0000E+07 | 0000E+07 | 0000E+07 | | | |
| 2 | 19 | 9 | H | 2002-08-16 | 13:00:24 | | | | 1.66000000000E+09 | | |
| 3 | 19 | 9 | H | 2002-08-16 | 14:00:03 | | | | 1.35000000000E+09 | | |
| 4 | 19 | 8 | H | 2002-08-16 | 15:00:06 | 1.24000000000E+07 | 2.91000000000E+07 | 2.10000000000E+07 | | | |
| 5 | 19 | 8 | H | 2002-08-16 | 16:00:46 | 1.24000000000E+07 | 2.91000000000E+07 | 2.04000000000E+07 | | | |
| 6 | 19 | 9 | H | 2002-08-16 | 15:00:06 | | | | 1.75000000000E+09 | | |
| 7 | 19 | 9 | H | 2002-08-16 | 16:00:46 | | | | 1.23000000000E+09 | | |
| 8 | 4 | 11 | H | 2002-08-16 | 17:00:05 | 7.24035873413085E+01 | 8.39728393554688E+01 | 7.75683212280273E+01 | | | |
| 9 | 4 | 11 | H | 2002-08-16 | 18:00:02 | 1.64490798950195E+02 | 2.04351196289063E+02 | 1.83216506958008E+02 | | | |
| 10 | 4 | 11 | H | 2002-08-16 | 19:00:08 | 1.19976303100586E+02 | 1.27930496215820E+02 | 1.24135299682617E+02 | | | |
| 11 | 4 | 12 | H | 2002-08-16 | 17:00:05 | | | | 1.12427296875000E+05 | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 4 | 12 | H | 2002-08-16 | 18:00:02 | | | | 3.31466699218750E+03 | | |
| 13 | 4 | 12 | H | 2002-08-16 | 19:00:08 | | | | 7.11600000000000E+03 | | |
| 14 | 4 | 13 | H | 2002-08-16 | 17:00:05 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 15 | 4 | 13 | H | 2002-08-16 | 18:00:09 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 16 | 4 | 13 | H | 2002-08-16 | 19:00:08 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 17 | 4 | 14 | H | 2002-08-16 | 17:00:05 | | | | 0.00000000000000E+00 | | |
| 18 | 4 | 14 | H | 2002-08-16 | 18:00:09 | | | | 0.00000000000000E+00 | | |
| 19 | 4 | 14 | H | 2002-08-16 | 19:00:08 | | | | 0.00000000000000E+00 | | |
| 20 | 32 | 1 | H | 2002-08-16 | 19:03:21 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 21 | 32 | 1 | H | 2002-08-16 | 20:01:45 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 22 | 32 | 1 | H | 2002-08-16 | 21:00:49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 23 | 32 | 1 | H | 2002-08-16 | 22:00:41 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 24 | 32 | 1 | H | 2002-08-16 | 23:00:55 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 25 | 32 | 1 | H | 2002-08-17 | 00:00:55 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 26 | 32 | 1 | H | 2002-08-17 | 01:00:38 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 27 | 32 | 1 | H | 2002-08-17 | 02:00:13 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 28 | 32 | 2 | H | 2002-08-16 | 19:00:28 | 6.80E-05 | 1.28E-04 | 9.46E-05 | | | |
| 29 | 32 | 2 | H | 2002-08-16 | 20:00:46 | 2.71E-05 | 3.37E-05 | 3.01E-05 | | | |
| 30 | 32 | 2 | H | 2002-08-16 | 21:00:53 | 2.08E-05 | 2.53E-05 | 2.28E-05 | | | |
| 31 | 32 | 2 | H | 2002-08-16 | 22:00:45 | 1.66E-05 | 1.96E-05 | 1.81E-05 | | | |
| 32 | 32 | 2 | H | 2002-08-16 | 23:00:56 | 1.22E-05 | 1.37E-05 | 1.30E-05 | | | |
| 33 | 32 | 2 | H | 2002-08-17 | 00:00:56 | 1.12E-05 | 1.17E-05 | 1.15E-05 | | | |
| 34 | 32 | 2 | H | 2002-08-17 | 01:00:39 | 9.92E-06 | 1.08E-05 | 1.03E-05 | | | |
| 35 | 32 | 2 | H | 2002-08-17 | 02:00:14 | 8.19E-06 | 8.57E-06 | 8.38E-06 | | | |
| 36 | 32 | 3 | H | 2002-08-16 | 19:00:28 | | | | 0.00E+00 | | |
| 37 | 32 | 3 | H | 2002-08-16 | 20:00:46 | | | | 0.00E+00 | | |
| 38 | 32 | 3 | H | 2002-08-16 | 21:00:53 | | | | 0.00E+00 | | |
| 39 | 32 | 3 | H | 2002-08-16 | 22:00:45 | | | | 0.00E+00 | | |
| 40 | 32 | 3 | H | 2002-08-16 | 23:00:56 | | | | 0.00E+00 | | |
| 41 | 32 | 3 | H | 2002-08-17 | 00:00:06 | | | | 0.00E+00 | | |
| 42 | 32 | 3 | H | 2002-08-17 | 01:00:30 | | | | 0.00E+00 | | |
| 43 | 32 | 3 | H | 2002-08-17 | 02:00:04 | | | | 0.00E+00 | | |
| 44 | 33 | 1 | H | 2002-08-16 | 19:00:21 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 45 | 33 | 1 | H | 2002-08-16 | 20:00:45 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 46 | 33 | 1 | H | 2002-08-16 | 21:00:49 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 47 | 33 | 1 | H | 2002-08-16 | 22:00:41 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 48 | 33 | 1 | H | 2002-08-16 | 23:00:55 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 49 | 33 | 1 | H | 2002-08-17 | 00:00:55 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 50 | 33 | 1 | H | 2002-08-17 | 01:00:38 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 51 | 33 | 1 | H | 2002-08-17 | 02:00:13 | 0.00E+00 | 0.00E+00 | 0.00E+00 | | | |
| 52 | 33 | 2 | H | 2002-08-16 | 19:00:21 | 5.77E+00 | 6.03E+00 | 5.93E+00 | | | |
| 53 | 33 | 2 | H | 2002-08-16 | 20:00:45 | 1.03E+01 | 1.35E+01 | 1.20E+01 | | | |
| 54 | 33 | 2 | H | 2002-08-16 | 21:00:49 | 1.43E+01 | 1.65E+01 | 1.55E+01 | | | |
| 55 | 33 | 2 | H | 2002-08-16 | 22:00:41 | 1.71E+01 | 1.85E+01 | 1.78E+01 | | | |
| 56 | 33 | 2 | H | 2002-08-16 | 23:00:55 | 1.99E+01 | 2.06E+01 | 2.03E+01 | | | |
| 57 | 33 | 2 | H | 2002-08-17 | 00:00:55 | 2.09E+01 | 2.11E+01 | 2.10E+01 | | | |
| 58 | 33 | 2 | H | 2002-08-17 | 01:00:38 | 2.13E+01 | 2.18E+01 | 2.16E+01 | | | |
| 59 | 33 | 2 | H | 2002-08-17 | 02:00:13 | 2.33E+01 | 2.39E+01 | 2.36E+01 | | | |
| 60 | 33 | 3 | H | 2002-08-16 | 19:00:21 | | | | 0.00E+00 | | |
| 61 | 33 | 3 | H | 2002-08-16 | 20:00:45 | | | | 0.00E+00 | | |
| 62 | 33 | 3 | H | 2002-08-16 | 21:00:49 | | | | 0.00E+00 | | |
| 63 | 33 | 3 | H | 2002-08-16 | 22:00:41 | | | | 0.00E+00 | | |
| 64 | 33 | 3 | H | 2002-08-16 | 23:00:55 | | | | 0.00E+00 | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 65 | 33 | 3 | H | 2002-08-17 | 00:00:55 | | | | 0.00E+00 | | |
| 66 | 33 | 3 | H | 2002-08-17 | 01:00:38 | | | | 0.00E+00 | | |
| 67 | 33 | 3 | H | 2002-08-17 | 02:00:13 | | | | 0.00E+00 | | |
| 68 | 4 | 4 | H | 2002-08-16 | 17:00:21 | 3.68971405029297E+01 | 4.00971107482910E+01 | 3.90015411376953E+01 | | | |
| 69 | 4 | 4 | H | 2002-08-16 | 18:00:50 | 5.21494598388672E+01 | 5.91457595825195E+01 | 5.65307388305664E+01 | | | |
| 70 | 4 | 4 | H | 2002-08-16 | 19:00:41 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 71 | 4 | 4 | H | 2002-08-16 | 20:00:36 | 5.55324287414551E+01 | 5.86425209045410E+01 | 5.75030097961426E+01 | | | |
| 72 | 4 | 5 | H | 2002-08-16 | 17:00:21 | | | | 1.79426699218750E+04 | | |
| 73 | 4 | 5 | H | 2002-08-16 | 18:00:22 | | | | 2.13840000000000E+04 | | |
| 74 | 4 | 5 | H | 2002-08-16 | 19:00:40 | | | | 7.10400000000000E+03 | | |
| 75 | 4 | 5 | H | 2002-08-16 | 20:00:42 | | | | 3.21200000000000E+03 | | |
| 76 | 4 | 6 | H | 2002-08-16 | 18:00:50 | 0.00000000000000E+ | 2.0000000000 | 0.0519600000 0000 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 00 | E+00 | E+00 | | | |
| 77 | 4 | 6 | H | 2002-08-16 | 19:00:32 | 0.0000000000000E+00 | 3.0000000000E+00 | 0.04252000000000E+00 | | | |
| 78 | 4 | 6 | H | 2002-08-16 | 20:00:29 | 0.0000000000000E+00 | 2.0000000000E+00 | 0.01550000000000E+00 | | | |
| 79 | 4 | 7 | H | 2002-08-16 | 17:00:42 | 0.0000000000000E+00 | 0.0000000000000E+00 | 0.0000000000000E+00 | | | |
| 80 | 4 | 7 | H | 2002-08-16 | 18:00:45 | 0.0000000000000E+01 | 0.0000000000000E+00 | 0.0000000000000E+00 | | | |
| 81 | 4 | 7 | H | 2002-08-17 | 19:00:34 | 0.0000000000000E+00 | 0.0000000000000E+00 | 0.0000000000000E+00 | | | |
| 82 | 4 | 7 | H | 2002-08-17 | 20:00:36 | 0.0000000000000E+00 | 0.0000000000000E+00 | 0.0000000000000E+00 | | | |
| 83 | 81 | 4 | H | 2002-08-16 | 17:00:00 | 2.8659880161E+00 | 3.5751810073 8525E+00 | 3.2407500743 8660E+00 | | | |
| 84 | 81 | 4 | H | 2002-08-16 | 18:00:40 | 3.1042149066 925E+00 | 3.4662001132 9651E+00 | 3.2775020599 3652E+00 | | | |
| 85 | 81 | 4 | H | 2002-08-16 | 19:00:42 | 3.1516718864 4409E+00 | 3.5206179618 8354E+00 | 3.3132100105 2856E+00 | | | |
| 86 | 81 | 4 | H | 2002-08-16 | 20:00:32 | 3.0695359706 8787E+00 | 4.0661859512 3291E+00 | 3.5473580360 4126E+00 | | | |
| 87 | 81 | 4 | H | 2002- | 21:00:42 | 3.2764 | 4.1354 | 3.8096 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-16 | | 8091316223$^{E}$+00 | 7086715698E+00 | 5590476990E+00 | | | |
| 88 | 81 | 4 | H | 2002-08-17 | 22:00:49 | 3.8327379226684E+00 | 4.34824609756470E+00 | 4.09049177169800E+00 | | | |
| 89 | 81 | 4 | H | 2002-08-17 | 23:00:33 | 3.32912898063660E+00 | 5.05742883682250E+00 | 4.04846620559692E+00 | | | |
| 90 | 81 | 4 | H | 2002-08-17 | 00:00:24 | 3.80934095382690E+00 | 4.61004114151000E+00 | 4.20969104766846E+00 | | | |
| 91 | 81 | 5 | H | 2002-08-16 | 17:00:00 | | | | 5.98800000000000E+03 | | |
| 92 | 81 | 5 | H | 2002-08-16 | 18:00:40 | | | | 7.10400000000000E+03 | | |
| 93 | 81 | 5 | H | 2002-08-16 | 19:00:42 | | | | 6.42400000000000E+03 | | |
| 94 | 81 | 5 | H | 2002-08-16 | 20:00:32 | | | | 7.87200000000000E+03 | | |
| 95 | 81 | 5 | H | 2002-08-16 | 21:00:42 | | | | 7.18800000000000E+03 | | |
| 96 | 81 | 5 | H | 2002-08-17 | 22 :00:49 | | | | 5.28400000000000E+03 | | |
| 97 | 81 | 5 | H | 2002-08-17 | 23:00:33 | | | | 7.24400000000000E+ | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 03 | | |
| 98 | 81 | 5 | H | 2002-08-17 | 00:00:24 | | | | 4.92000000000E+03 | | |
| 99 | 81 | 6 | H | 2002-08-16 | 17:00:00 | 0.00000000000000E+00 | 1.0000000000000E+00 | 0.00196000000000E+00 | | | |
| 100 | 81 | 6 | H | 2002-08-16 | 18:00:40 | 0.00000000000000E+00 | 1.00000000000000E+00 | 0.00252000000000E+00 | | | |
| 101 | 81 | 6 | H | 2002-08-16 | 19:00:42 | 0.00000000000000E+00 | 1.00000000000000E+00 | 0.005500000000000E+00 | | | |
| 102 | 81 | 7 | H | 2002-08-16 | 17:00:00 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 103 | 81 | 7 | H | 2002-08-16 | 18:00:40 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 104 | 81 | 7 | H | 2002-08-16 | 19:00:42 | 0.000000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 105 | 82 | 4 | H | 2002-08-16 | 17:00:50 | 5.21494598388672$^E$+01 | 5.91457595825195E+01 | 5.65307388305664E+01 | | | |
| 106 | 82 | 4 | H | 2002-08-16 | 18:00:32 | 5.51009407043457E+01 | 5.98119583129883E+01 | 5.81157989501953E+01 | | | |
| 107 | 82 | 4 | H | 2002-08-16 | 19:00:36 | 5.55324287414551E+01 | 5.86425209045410E+01 | 5.75030097961426E+01 | | | |
| 108 | 82 | 4 | H | 2002- | 20:00:26 | 5.4470 | 6.0848 | 5.7940 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-16 | | 3292846680$^E$+01 | 2513427734E+01 | 4716491699E+01 | | | |
| 109 | 82 | 4 | H | 2002-08-16 | 21:00:34 | 5.74056091308594E+01 | 6.42799835205078E+01 | 5.98997306823730E+01 | | | |
| 110 | 82 | 4 | H | 2002-08-17 | 22 :00:42 | 5.75496406555176 1E+01 | 6.16370582580566E+01 | 5.95933494567871E+01 | | | |
| 111 | 82 | 4 | H | 2002-08-17 | 23:00:23 | 5.9719619750 9766$^E$+01 | 6.06744384765625E+01 | 6.01067695617676E+01 | | | |
| 112 | 82 | 4 | H | 2002-08-17 | 00:00:13 | 6.06590003967285E+01 | 6.11969909667969E+01 | 6.09280014038086E+01 | | | |
| 113 | 82 | 5 | H | 2002-08-16 | 17:00:50 | | | | 1.19933300781250E+04 | | |
| 114 | 82 | 5 | H | 2002-08-16 | 18:00:32 | | | | 1.42253300781250E+04 | | |
| 115 | 82 | 5 | H | 2002-08-16 | 19:00:36 | | | | 1.28706699218750E+04 | | |
| 116 | 82 | 5 | H | 2002-08-16 | 20 :00:26 | | | | 1.56960000000000E+04 | | |
| 117 | 82 | 5 | H | 2002-08-16 | 21:00:34 | | | | 1.43933300781250E+04 | | |
| 118 | 82 | 5 | H | 2002-08-17 | 22:00:42 | | | | 1.05426699218750E+ | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 04 | | |
| 119 | 82 | 5 | H | 2002-08-17 | 23:00:23 | | | | 1.45480000000000E+04 | | |
| 120 | 82 | 5 | H | 2002-08-17 | 00:00:13 | | | | 9.86400000000000E+03 | | |
| 121 | 82 | 6 | H | 2002-08-16 | 18:00:50 | 0.00000000000000E+00 | 1.00000000000000E+00 | 0.00303000000000000E+00 | | | |
| 122 | 82 | 6 | H | 2002-08-16 | 19:00:32 | 0.00000000000000E+00 | 1.00000000000000E+00 | 0.53200000000000E+00 | | | |
| 123 | 82 | 7 | H | 2002-08-16 | 17:00:50 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 124 | 82 | 7 | H | 2002-08-16 | 18:00:32 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 125 | 82 | 7 | H | 2002-08-16 | 19:00:36 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 126 | 82 | 7 | H | 2002-08-16 | 20:00:26 | 0.00000000000000E+00 | 0.00000000000000E+00 | 0.00000000000000E+00 | | | |
| 127 | 21 | 16 | H | 2002-08-16 | 19:00:05 | 5.27682800292969E+01 | 6.08372688293457E+01 | 5.74342117309570E+01 | | | |
| 128 | 21 | 16 | H | 2002-08-16 | 20:00:22 | 5.65352516174316E+01 | 6.01913795471191E+01 | 5.85748100280762E+01 | | | |
| 129 | 21 | 16 | H | 2002- | 21:00:28 | 5.5420 | 6.1228 | 5.8626 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-16 | | 9594726563E+01 | 2981872559E+01 | 6403198242E+01 | | | |
| 130 | 21 | 16 | H | 2002-08-16 | 22:00:38 | 5.43437194824219E+01 | 6.34836502075195E+01 | 5.86800117492676E+01 | | | |
| 131 | 21 | 16 | H | 2002-08-6 | 23:00:48 | 5.72776985168457E+01 | 6.57694931030273E+01 | 6.06272087097167E+01 | | | |
| 132 | 21 | 16 | H | 2002-08-17 | 0:00:30 | 5.92938308715820E+01 | 6.41212234497070E+01 | 6.13366203308105E+01 | | | |
| 133 | 21 | 16 | H | 2002-08-17 | 1:00:15 | 6.19629707336426E+01 | 6.23414497375488E+01 | 6.21522102355957E+01 | | | |
| 134 | 21 | 16 | H | 2002-08-17 | 2:00:28 | 6.23970489501953E+01 | 6.25375900268555E+01 | 6.24673194885254E+01 | | | |
| 135 | 21 | 17 | H | 2002-08-16 | 19:00:05 | 2.07200000000000E+03 | 3.79266699218750E+03 | 2.66533300781250E+03 | | | |
| 136 | 21 | 17 | H | 2002-08-16 | 20:00:22 | 2.00933300781250E+03 | 2.84400000000000E+03 | 2.36316699218750E+03 | | | |
| 137 | 21 | 17 | H | 2002-08-16 | 21:00:28 | 2.43600000000000E+03 | 3.11466699218750E+03 | 2.88244091799688E+03 | | | |
| 138 | 21 | 17 | H | 2002-08-16 | 22:00:38 | 2.12466699218750E+03 | 3.56533300781250E+03 | 2.60800000000000E+03 | | | |
| 139 | 21 | 17 | H | 2002-08-16 | 23:00:48 | 3.03133300781250E+ | 3.95000000000E+ | 3.54111108398438E+ | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 03 | 03 | 03 | | | |
| 140 | 21 | 17 | H | 2002-08-17 | 00:00:30 | 2.95866992 18750E+03 | 3.1840 0000000 0000E+03 | 3.0368 889160 1563E+03 | | | |
| 141 | 21 | 17 | H | 2002-08-17 | 01:00:15 | 3.5753 330078 1250E+03 | 4.0406 669921 8750E+03 | 3.8080 0000000 0000E+03 | | | |
| 142 | 21 | 17 | H | 2002-08-17 | 02:00:28 | 3.1360 0000000 0000E+03 | 3.5120 0000000 0000E+03 | 3.3240 0000000 0000E+03 | | | |
| 143 | 21 | 18 | H | 2002-08-16 | 18:00:05 | | | | 0.0000 0000000 0000E+00 | | |
| 144 | 21 | 18 | H | 2002-08-16 | 19:00:22 | | | | 0.0000 0000000 0000E+00 | | |
| 145 | 21 | 18 | H | 2002-08-16 | 20:00:28 | | | | 0.0000 0000000 0000E+00 | | |
| 146 | 21 | 18 | H | 2002-08-16 | 21:00:38 | | | | 0.0000 0000000 0000E+00 | | |
| 147 | 21 | 18 | H | 2002-08-16 | 22:00:48 | | | | 0.0000 0000000 0000E+00 | | |
| 148 | 21 | 18 | H | 2002-08-17 | 00:00:30 | | | | 0.0000 0000000 0000E+00 | | |
| 149 | 51 | 18 | H | 2002-08-17 | 01:00:15 | | | | 0.0000 0000000 0000E+00 | | |
| 150 | 51 | 18 | H | 2002- | 02:00:28 | | | | 0.0000 | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-17 | | | | | 0000000000E+00 | | |
| 151 | 2 | 19 | H | 2002-08-18 | 06:00:37 | | | 100.00 | | | |
| 152 | 2 | 20 | H | 2002-08-18 | 06:00:37 | | | 0.00 | | | |
| 153 | 2 | 21 | H | 2002-08-18 | 06:00:37 | | | 0.00 | | | |
| 154 | 2 | 22 | H | 2002-08-18 | 06:00:37 | | | 0.00 | | | |
| 155 | 4 | 19 | H | 2002-08-18 | 06:00:47 | | | 100.00 | | | |
| 156 | 4 | 20 | H | 2002-08-18 | 06:00:47 | | | 0.00 | | | |
| 157 | 4 | 21 | H | 2002-08-18 | 06:00:47 | | | 0.00 | | | |
| 158 | 4 | 22 | H | 2002-08-18 | 06:00:47 | | | 0.00 | | | |
| 159 | 2 | 19 | H | 2002-08-18 | 07:00:49 | | | 100.00 | | | |
| 160 | 2 | 19 | H | 2002-08-18 | 08:00:39 | | | 100.00 | | | |
| 161 | 2 | 19 | H | 2002-08-18 | 09:00:40 | | | 100.00 | | | |
| 162 | 2 | 20 | H | 2002-08-18 | 07:00:49 | | | 0.00 | | | |
| 163 | 2 | 20 | H | 2002-08-18 | 08:00:48 | | | 0.00 | | | |
| 164 | 2 | 20 | H | 2002-08-18 | 09:00:49 | | | 0.00 | | | |
| 165 | 2 | 21 | H | 2002-08-18 | 07:00:49 | | | 0.00 | | | |
| 166 | 2 | 21 | H | 2002-08-18 | 08:00:48 | | | 0.00 | | | |
| 167 | 2 | 21 | H | 2002-08-18 | 09:00:49 | | | 0.00 | | | |
| 168 | 2 | 22 | H | 2002- | 07:00:49 | | | 0.00 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-18 | | | | | | | |
| 169 | 2 | 22 | H | 2002-08-18 | 08:00:48 | | | 0.00 | | | |
| 170 | 2 | 22 | H | 2002-08-18 | 09:00:49 | | | 0.00 | | | |
| 171 | 4 | 19 | H | 2002-08-18 | 07:00:49 | | | 100.00 | | | |
| 172 | 4 | 19 | H | 2002-08-18 | 08:00:48 | | | 100.00 | | | |
| 173 | 4 | 19 | H | 2002-08-18 | 09:00:49 | | | 100.00 | | | |
| 174 | 4 | 20 | H | 2002-08-18 | 07:00:49 | | | 0.00 | | | |
| 175 | 4 | 20 | H | 2002-08-18 | 08:00:48 | | | 0.00 | | | |
| 176 | 4 | 20 | H | 2002-08-18 | 09:00:49 | | | 0.00 | | | |
| 177 | 4 | 21 | H | 2002-08-18 | 07:00:49 | | | 0.00 | | | |
| 178 | 4 | 21 | H | 2002-08-18 | 08:00:48 | | | 0.00 | | | |
| 179 | 4 | 21 | H | 2002-08-18 | 09:00:49 | | | 0.00 | | | |
| 180 | 4 | 22 | H | 2002-08-18 | 07:00:49 | | | 0.00 | | | |
| 181 | 4 | 22 | H | 2002-08-18 | 08:00:48 | | | 0.00 | | | |
| 182 | 20 | 15 | H | 2002-08-18 | 14:00:39 | 2.10000000000E+02 | 3.4000000000+E02 | 2.590000000E+02 | | | |
| 183 | 20 | 15 | H | 2002-08-18 | 15:00:07 | 3.40000000000E+02 | 4.00000000000E+02 | 4.00000000000E+02 | | | |
| 184 | 20 | 15 | H | 2002-08-18 | 16:00:44 | 1.690000000E+02 | 5.880000000E+02 | 3.89000000000E+02 | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 185 | 106 | 11 | H | 2002-08-19 | 00:00:26 | 1.59151306152344E+02 | 1.84802398681641E+02 | 1.69006103515625E+02 | | | |
| 186 | 106 | 11 | H | 2002-08-19 | 01:00:13 | 1.56765106201172E+02 | 1.79674102783203E+02 | 1.68219604492188E+02 | | | |
| 187 | 106 | 12 | H | 2002-08-19 | 02:00:08 | | | | 5.07963012695313E+02 | | |
| 188 | 106 | 12 | H | 2002-08-19 | 00:00:26 | | | | 2.44800000000000E+03 | | |
| 189 | 106 | 12 | H | 2002-08-19 | 01:00:13 | | | | 1.58000000000000E+03 | | |
| 190 | 106 | 13 | H | 2002-08-19 | 02:00:08 | 0.00E+00 | 2.00E+00 | 1.00$^E$+00 | | | |
| 191 | 106 | 13 | H | 2002-08-19 | 00:00:26 | 0.00E+00 | 8.00E+00 | 4.47E+00 | | | |
| 192 | 106 | 13 | H | 2002-08-19 | 01:00:13 | 2.00E+00 | 10.00E+00 | 6.36E+00 | | | |
| 193 | 106 | 14 | H | 2002-08-19 | 02:00:08 | | | | 4.8215180635 4523E-01 | | |
| 194 | 106 | 14 | H | 2002-08-19 | 00:00:26 | | | | 0.00000000000000E+00 | | |
| 195 | 106 | 14 | H | 2002-08-19 | 01:00:13 | | | | 0.00000000000000E+00 | | |
| 196 | 106 | 11 | H | 2002-08-19 | 02:00:08 | 0.00000000000E+ | 0.00000000000E+ | 0.00000000000E+ | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 00 | 00 | 00 | | | |
| 197 | 107 | 11 | H | 2002-08-19 | 00:00:13 | 1.23795196533203E+02 | 1.27818901062012E+02 | 1.25490600585938E+02 | | | |
| 198 | 107 | 11 | H | 2002-08-19 | 01:00:10 | 1.24031799316406E+02 | 1.25443298339844E+02 | 1.24737503051758E+02 | | | |
| 199 | 107 | 12 | H | 2002-08-19 | 02:00:44 | | | | 3.92457489013672E+02 | | |
| 200 | 107 | 12 | H | 2002-08-19 | 00:00:13 | | | | 2.05533300781250E+03 | | |
| 201 | 107 | 12 | H | 2002-08-19 | 01:00:10 | | | | 1.49666699218750E+03 | | |
| 202 | 107 | 13 | H | 2002-08-19 | 02 :00:44 | 0.00000000000000E+00 | 7.00000000000000E+00 | 3.03800000000000E+00 | | | |
| 203 | 107 | 13 | H | 2002-08-19 | 00:00:13 | 0.00000000000000E+00 | 3.00000000000000E+00 | 2.15300000000000E+00 | | | |
| 204 | 107 | 13 | H | 2002-08-19 | 01:00:10 | 0.00000000000000E+00 | 1.00000000000000E+00 | 0.59313800930977E-01 | | | |
| 205 | 107 | 14 | H | 2002-08-19 | 02:00:44 | | | | 0.00000000000000E+00 | | |
| 206 | 107 | 14 | H | 2002-08-19 | 00:00:13 | | | | 0.00000000000000E+00 | | |
| 207 | 107 | 14 | H | 2002- | 01:00:10 | | | | 0.0000 | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-19 | | | | | 0000000000E+00 | | |
| 208 | 107 | 14 | H | 2002-08-19 | 02 :00:44 | | | | 0.00000000000000E+00 | | |
| 209 | 196 | 10 | H | 2002-08-21 | 12:00:39 | 0.00000000000000E+00 | 3.99999991059303E-02 | 1.99999995529652E-02 | | | |
| 210 | 196 | 10 | H | 2002-08-21 | 13:00:33 | 0.00000000000000E+00 | 3.99999991059303E-02 | 3.79999987781048E-02 | | | |
| 211 | 196 | 10 | H | 2002-08-21 | 14:00:33 | 0.00000000000000E+00 | 3.99999991059303E-02 | 1.77699998021126E-02 | | | |
| 212 | 196 | 10 | H | 2002-08-21 | 15:00:33 | 0.00000000000000E+00 | 3.99999991059303E-02 | 3.59999984502792E-02 | | | |
| 213 | 27 | 11 | H | 2002-08-26 | 17:00:14 | 3.80349993705750E+00 | 4.55620002746582E+00 | 4.08557987213135E+00 | | | |
| 214 | 27 | 11 | H | 2002-08-26 | 18:00:14 | 3.91160011291504E+00 | 4.66330003738403E+00 | 4.17820978164673E+00 | | | |
| 215 | 27 | 11 | H | 2002-08-26 | 19:00:14 | 3.97749996185303E+00 | 6.14919996261597E+00 | 4.37750005722046E+00 | | | |
| 216 | 27 | 11 | H | 2002-08-26 | 20:00:14 | 3.93129992485046E+00 | 8.01080036163330E+00 | 4.41784000396729E+00 | | | |
| 217 | 27 | 11 | H | 2002-08-26 | 21:00:14 | 4.06230020523071E+ | 5.98929977416992E+ | 4.40599012374878E+ | | | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 00 | 00 | 00 | | | |
| 218 | 27 | 11 | H | 2002-08-26 | 22:00:15 | 4.10270023345947E+00 | 6.26620006561279E+00 | 4.52548980712891E+00 | | | |
| 219 | 27 | 11 | H | 2002-08-26 | 23:00:14 | 4.22200012207031E+00 | 7.21140003204346E+00 | 4.61647987365723E+00 | | | |
| 220 | 27 | 11 | H | 2002-08-27 | 00:00:15 | 4.78630018234253E+00 | 8.76340007781982E+00 | 5.79425001144409E+00 | | | |
| 221 | 27 | 11 | H | 2002-08-27 | 01:00:15 | 4.18109989166260E+00 | 9.86649990081787E+00 | 5.48865985870361E+00 | | | |
| 222 | 27 | 11 | H | 2002-08-27 | 02:00:15 | 4.32840013504028E+00 | 8.92080020904541E+00 | 5.78148984909058E+00 | | | |
| 223 | 27 | 11 | H | 2002-08-27 | 03:00:16 | 5.06269979476929E+00 | 9.26659965515137E+00 | 6.54583978652954E+00 | | | |
| 224 | 27 | 11 | H | 2002-08-27 | 04:00:17 | 5.29430007934570E+00 | 1.53833999633789E+01 | 7.03866004943848E+00 | | | |
| 225 | 27 | 11 | H | 2002-08-27 | 05:00:18 | 6.02010011672974E+00 | 1.21875000000000E+01 | 7.34462976455688E+00 | | | |
| 226 | 27 | 11 | H | 2002-08-27 | 06:00:17 | 6.38630008697510E+00 | 1.94857997894287E+01 | 8.67479038238525E+00 | | | |
| 227 | 27 | 11 | H | 2002-08-27 | 07:00:17 | 6.51060009002686E+00 | 1.31975002288818E+01 | 8.51626014709473E+00 | | | |
| 228 | 27 | 12 | H | 2002- | 17:00:14 | | | | 5.9537 | E+005 | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-26 | | | | | 4000000000E+00 | | |
| 229 | 27 | 12 | H | 2002-08-26 | 18:00:14 | | | | 5.91748000000000E+00 | E+005 | |
| 230 | 27 | 12 | H | 2002-08-26 | 19:00:14 | | | | 5.73818000000000E+00 | E+005 | |
| 231 | 27 | 12 | H | 2002-08-26 | 20:00:14 | | | | 5.74684000000000E+00 | E+005 | |
| 232 | 27 | 12 | H | 2002-08-26 | 21:00:14 | | | | 5.73286000000000E+00 | E+005 | |
| 233 | 27 | 12 | H | 2002-08-26 | 22:00:25 | | | | 5.51495000000000E+00 | E+005 | |
| 234 | 27 | 12 | H | 2002-08-26 | 23:00:14 | | | | 5.59220000000000E+00 | E+005 | |
| 235 | 27 | 12 | H | 2002-08-27 | 00:00:15 | | | | 5.03682000000000E+00 | E+005 | |
| 236 | 27 | 12 | H | 2002-08-27 | 01:00:15 | | | | 5.05812000000000E+00 | E+005 | |
| 237 | 27 | 12 | H | 2002-08-27 | 02:00:15 | | | | 4.98161000000000E+00 | E+005 | |
| 238 | 27 | 12 | H | 2002-08-27 | 03:00:16 | | | | 4.82320000000000E+ | E+005 | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 00 | | |
| 239 | 27 | 12 | H | 2002-08-27 | 04:00:17 | | | | 4.59024000000000E+00 | E+005 | |
| 240 | 27 | 12 | H | 2002-08-27 | 05:00:18 | | | | 4.54568000000000E+00 | E+005 | |
| 241 | 27 | 12 | H | 2002-08-27 | 06:00:17 | | | | 4.24083000000000E+00 | E+005 | |
| 242 | 27 | 12 | H | 2002-08-27 | 07:00:17 | | | | 4.18577000000000E+00 | E+005 | |
| 243 | 27 | 13 | H | 2002-08-26 | 17:00:14 | 0.00000000000000E+00 | 1.00000000000000E+00 | 0.72300000000000E+00 | | | |
| 244 | 27 | 13 | H | 2002-08-26 | 18:00:14 | 0.00000000000000E+00 | 5.00000000000000E+00 | 3.10200000000000E+00 | | | |
| 245 | 27 | 13 | H | 2002-08-26 | 19:00:14 | 0.00000000000000E+00 | 3.00000000000000E+00 | 1.26729995012283E+00 | | | |
| 246 | 27 | 13 | H | 2002-08-26 | 20:00:14 | 0.00000000000000E+00 | 1.00000000000000E+00 | 6.01760000000000E-01 | | | |
| 247 | 27 | 14 | H | 2002-08-26 | 17:00:14 | | | | 0.00000000000000E+00 | E+000 | |
| 248 | 27 | 14 | H | 2002-08-26 | 18:00:14 | | | | 0.00000000000000E+00 | E+000 | |
| 249 | 27 | 14 | H | 2002- | 19:00:14 | | | | 0.0000 | E+000 | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 08-26 | | | | | 0000000000E+00 | | |
| 250 | 27 | 14 | H | 2002-08-26 | 20:00:14 | | | | 0.00000000000000E+00 | E+000 | |
| 251 | 27 | 14 | H | 2002-08-26 | 21:00:14 | | | | 0.00000000000000E+00 | E+000 | |
| 252 | 27 | 14 | H | 2002-08-26 | 22:00:15 | | | | 0.00000000000000E+00 | E+000 | |
| 253 | 27 | 14 | H | 2002-08-26 | 23:00:14 | | | | 0.00000000000000E+00 | E+000 | |
| 254 | 27 | 14 | H | 2002-08-27 | 00:00:15 | | | | 0.00000000000000E+00 | E+000 | |
| 255 | 27 | 14 | H | 2002-08-27 | 01:00:15 | | | | 0.00000000000000E+00 | E+000 | |
| 256 | 27 | 14 | H | 2002-08-27 | 02:00:15 | | | | 0.00000000000000E+00 | E+000 | |
| 257 | 27 | 14 | H | 2002-08-27 | 03:00:16 | | | | 0.00000000000000E+00 | E+000 | |
| 258 | 27 | 14 | H | 2002-08-27 | 04:00:17 | | | | 0.00000000000000E+00 | E+000 | |
| 259 | 27 | 14 | H | 2002-08-27 | 05:00:18 | | | | 0.00000000000000E+ | E+000 | |

| Msmt_ID BIGINT | Comp_ID INTEGER | MsmtTyp_ID INTEGER | TmSum_Cd CHAR | Msmt_Strt_Dt DATE | Msmt_Strt_Tm TIME | Msmt_Min_Val FLOAT | Msmt_Max_Val FLOAT | Msmt_Avg_Val FLOAT | Msmt_Tot_Val FLOAT | Msmt_Smpl_Cnt INTEGER | Msmt_Err_Cnt INTEGER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 00 | | |
| 260 | 27 | 14 | H | 2002-08-27 | 06:00:17 | | | | 0.00000000000000E+00 | E+000 | |
| 261 | 27 | 14 | H | 2002-08-27 | 07:00:17 | | | | 0.00000000000000E+00 | E+000 | |
| 262 | 27 | 14 | H | 2002-08-27 | 08:00:17 | | | | 0.00000000000000E+00 | E+000 | |
| 263 | 27 | 14 | H | 2002-08-27 | 09:00:21 | | | | 0.00000000000000E+00 | E+000 | |
| 264 | 27 | 14 | H | 2002-08-27 | 10:00:48 | | | | 0.00000000000000E+00 | E+000 | |

## 6.3  Helper tables

The Tivoli central data warehouse data model supports a multicustomer and multicenter environment. For more information, refer to the "Customers and centers" section in the *Enabling an Application for Tivoli Enterprise Data Warehouse* document. To support an environment with multiple customers or centers, you must update the AMX.Cust_Lookup and the AMX.Centr_Lookup tables provided in the Tivoli central data warehouse database by the IBM Tivoli Monitoring, Version 5.1.1, warehouse pack.

## 6.4  Exception tables

This warehouse pack does not place data in exception tables.

## 6.5  Incremental extraction

This warehouse pack uses incremental extraction to extract data from the central data warehouse and store it in the data mart tables. The data in the TWG.Extract_Control table controls this process.

# 7 IBM Tivoli Monitoring integration

## 7.1 Metadata tables for applications that use the resource model ETL

This section defines the data in the Tivoli Enterprise Data Warehouse central data warehouse.

### 7.1.1 Resource translation (table Resource_Transl)

| Resource | CompTyp_cd |
|---|---|
| WebSphereASAdminServer | IZY_ADMIN_SERVER |
| WebSphereASApplicationServer | IZY_APPL_SERVER |
| WebSphereASDataSource | IZY_DATA_SOURCE |
| WebSphereASConnectionPool | IZY_CONNECT_POOL |
| WebSphereASEJB | IZY_EJB |
| WebSphereASJVMRuntime | IZY_JVM |
| WebSphereASServletSession | IZY_SERVLET_SESS |
| WebSphereASTransaction | IZY_TRANSACT_MGR |
| WebSphereASThreadPool | IZY_THREAD_POOL |
| WebSphereASWebApplication | IZY_WEB_APPL |
| WebSphereASServlet | IZY_SERVLET |

### 7.1.2 Category translation (table Category_Transl)

| Category | MSrc_cd |
|---|---|
| WebSphereAS | IZY |

### 7.1.3 Component type translation (table CompTyp_Transl)

| MSrc_Cd | ITM_Key_Property[1] | CompTyp_Cd | Comp_Format_Nm[1] |
|---|---|---|---|
| IZY | WebSphereASAdminServer.Name | IZY_ADMIN_SERVER | IZY_AdminSrvName |
| IZY | WebSphereASApplicationServer.Name | IZY_APPL_SERVER | IZY_ApplSrvName |
| IZY | WebSphereASDataSource.Name | IZY_DATA_SOURCE | IZY_DataSrcName |
| IZY | WebSphereASConnectionPool.Name | IZY_CONNECT_POOL | IZY_ConnectPlName |
| IZY | WebSphereASEJB.Name | IZY_EJB | IZY_EJBName |
| IZY | WebSphereASJVMRuntime.Name | IZY_JVM | IZY_JVMName |
| IZY | WebSphereASServletSession.Name | IZY_SERVLET_SESS | IZY_ServletSsName |
| IZY | WebSphereASThreadPool.Name | IZY_THREAD_POOL | IZY_ThreadPlName |
| IZY | WebSphereASTransaction.Name | IZY_TRANSACT_MGR | IZY_TransactName |
| IZY | WebSphereASWebApplication.Name | IZY_WEB_APPL | IZY_WebApplName |
| IZY | WebSphereASServlet.Name | IZY_SERVLET | IZY_ServletName |

[1] Use a semicolon (;) to separate values in ITM__Key_Property and Comp_Format_Nm. Do not put a semicolon after the last value.

### 7.1.4    Attribute translation (table AttrTyp_Transl)

| MSrc_cd | ITM_Attr_Property | AttrTyp_Cd |
|---------|-------------------|------------|
| IZY | WebSphereASAdminServer.WasVersion | IZY_WAS_VERSION |
| IZY | WebSphereASAdminServer.OSType | IZY_OS_TYPE |
| IZY | WebSphereASAdminServer.PolicyRegion | IZY_POLICY_REGION |

### 7.1.5    Component relationship rule translation (table RelnRul_Transl)

This warehouse pack does not place data in the component relationship rule translation table.

## 7.2   IBM Tivoli Monitoring resource models

The following sections contain information in the IBM Tivoli Monitoring database that is used as the operational data source for Tivoli Enterprise Data Warehouse. For more information about resource models, see the *IBM Tivoli Monitoring Workbench User's Guide*. For information about the resource models specific to IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server, see the *IBM Tivoli Monitoring for Web Infrastructure: WebSphere Application Server User's Guide*.

### 7.2.1    Resource model for WebSphereAS Administration Server Status

| ITM Table Name | Column Name | Value |
|----------------|-------------|-------|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=name; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | State |
| Metrics | Name VARCHAR(128) | WebSphere_server_state_up |
| | | WebSphere_server_state_down |
| | | WebSphere_server_state_initializing |
| | | WebSphere_server_state_unknown |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.2    Resource model for WebSphereAS Application Server Status

| ITM Table Name | Column Name | Value |
|----------------|-------------|-------|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=name; WebSphereASAdminServer.Name=name; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |

| | | WebSphereASAdminServer.WasVersion |
|---|---|---|
| Resources | Context VARCHAR(64) | State |
| Metrics | Name VARCHAR(128) | WebSphere_server_state_up |
| | | WebSphere_server_state_down |
| | | WebSphere_server_state_initializing |
| | | WebSphere_server_state_unknown |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.3    Resource model for WebSphereAS DB Pools

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=Connection Pool; |
| | | WebSphereASAdminServer.Name=name; |
| | | WebSphereASApplicationServer.Name=name; |
| | | WebSphereASDataSource.Name=name; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Performance |
| Metrics | Name VARCHAR(128) | Average_connection_pool_percent_used |
| | | Average_connection_pool_wait_time |
| | | Connection_pool_faults |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.4    Resource model for WebSphereAS EJBs

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=name; |
| | | WebSphereASAdminServer.Name=name; |
| | | WebSphereASApplicationServer.Name=name; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Performance |

| Metrics | Name<br>VARCHAR(128) | Average_EJB_response_time |
| | | Average_concurrent_EJB_requests |
| | | EJB_request_rate |
| | | Percent_EJB_returns_discarded |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.5  Resource model for WebSphereAS EJBs (Application server)

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key<br>VARCHAR(2096) | Name=name;<br><br>WebSphereASAdminServer.Name=name; |
| Categories | Name<br>VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context<br>VARCHAR(64) | Performance |
| Metrics | Name<br>VARCHAR(128) | Average_EJB_response_time |
| | | Average_concurrent_EJB_requests |
| | | EJB_request_rate |
| | | Percent_EJB_returns_discarded |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.6  Resource model for WebSphereAS JVM

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key<br>VARCHAR(2096) | Name=JVM Runtime;<br><br>WebSphereASApplicationServer.Name=Name;<br><br>WebSphereASAdminServer.Name=name; |
| Categories | Name<br>VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context<br>VARCHAR(64) | Performance |
| Metrics | Name<br>VARCHAR(128) | Total_JVM_memory |
| | | Used_JVM_memory |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.7    Resource model forWebSphereAS Http Sessions

| ITM Table Name | Column Name | Value |
| --- | --- | --- |
| Instances[1] | Instance_Key VARCHAR(2096) | Name=Servlet Session; WebSphereASAdminServer.Name=*name*; WebSphereASApplicationServer.Name=*name*; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Performance |
| Metrics | Name VARCHAR(128) | Live_servlet_sessions |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.8    Resource model for WebSphereAS Thread Pools

| ITM Table Name | Column Name | Value |
| --- | --- | --- |
| Instances[1] | Instance_Key VARCHAR(2096) | Name=*name*; WebSphereASAdminServer.Name=*name*; WebSphereASApplicationServer.Name=*name*; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Availability |
| Metrics | Name VARCHAR(128) | Active_threads_to_pool_size_ratio |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.9    Resource model for WebSphereAS Transactions

| ITM Table Name | Column Name | Value |
| --- | --- | --- |
| Instances[1] | Instance_Key VARCHAR(2096) | Name=Transaction Manager; WebSphereASAdminServer.Name=*name*; WebSphereASApplicationServer.Name=*name*; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |

| ITM Table Name | Column Name | Value |
|---|---|---|
| Resources | Context VARCHAR(64) | Performance |
| Metrics | Name VARCHAR(128) | Transaction_response_time |
| | | Transaction_request_rate |
| | | Transaction_exceptions |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.10 Resource Model fore WebSphereAS Web Applications (Application server)

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=name; |
| | | WebSphereASAdminServer.Name=name; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Performance |
| Metrics | Name VARCHAR(128) | Average_servlet_response_time |
| | | Servlet_request_rate |
| | | Concurrent_servlet_requests |
| | | Servlet_error_rate |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.11 Resource Model fore WebSphereAS Web Applications (Web application)

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=*name*; |
| | | WebSphereASAdminServer.Name=*name*; |
| | | WebSphereASApplicationServer.Name=*name*; |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Performance |
| Metrics | Name | Average_servlet_response_time |

| ITM Table Name | Column Name | Value |
|---|---|---|
| | VARCHAR(128) | Servlet_request_rate |
| | | Concurrent_servlet_requests |
| | | Servlet_error_rate |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

### 7.2.12  Resource Model fore WebSphereAS Web Applications (Servlet)

| ITM Table Name | Column Name | Value |
|---|---|---|
| Instances[1] | Instance_Key VARCHAR(2096) | Name=*name*; |
| | | WebSphereASAdminServer.Name=*name*; |
| | | WebSphereASApplicationServer.Name=*name*; |
| | | WebSphereASWebApplication.Name=*name;* |
| Categories | Name VARCHAR(128) | WebSphereASAdminServer.OSType |
| | | WebSphereASAdminServer.PolicyRegion |
| | | WebSphereASAdminServer.WasVersion |
| Resources | Context VARCHAR(64) | Performance |
| Metrics | Name VARCHAR(128) | Average_servlet_response_time |
| | | Servlet_request_rate |
| | | Concurrent_servlet_requests |
| | | Servlet_error_rate |
| [1] Use a semicolon (;) to separate values within Instances. Put a semicolon after the last value. | | |

# 8 Data mart schema information

The following sections contain the definitions of star schemas, metric dimension tables, data marts, and reports provided with the IBM Tivoli Monitoring for Web Infrastructure 5.1.0: WebSphere Application Server Warehouse Enablement Pack.

## 8.1 Star schemas

Before using this section, read about the star schemas in *Enabling an Application for Tivoli Enterprise Data Warehouse*. That document defines the content of each table and explains the relationships between the tables in this document.

This warehouse pack provides the following star schemas.

### 8.1.1 IZY Hourly Administration Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the hourly fact table for the WebSphere administration server components. |
|---|---|
| Name of fact table | IZY.F_ADMINSRV_HOUR |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

#### 8.1.1.1 Fact table IZY.F_ADMINSRV_HOUR

This warehouse pack places data in the IZY.F_ADMINSRV_HOUR fact table. This table has the following columns:

- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_hour (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.2 IZY Daily Administration Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the daily fact table for the WebSphere administration server components. |
|---|---|
| Name of fact table | IZY.F_ADMINSRV_DAY |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.2.1    Fact table IZY.F_ADMINSRV_DAY

This warehouse pack places data in the IZY.F_ADMINSRV_DAY fact table. This table has the following columns:

- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (timestamp)

### 8.1.3    IZY Weekly Administration Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the weekly fact table for the WebSphere administration server components. |
|---|---|
| Name of fact table | IZY.F_ADMINSRV_WEEK |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.3.1    Fact table IZY.F_ADMINSRV_WEEK

This warehouse pack places data in the IZY.F_ADMINSRV_WEEK fact table. This table has the following columns:

- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (timestamp)

### 8.1.4    IZY Monthly Administration Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the monthly fact table for the WebSphere administration server components. |
|---|---|
| Name of fact table | IZY.F_ADMINSRV_MONTH |

| | |
|---|---|
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.4.1    Fact table IZY.F_ADMINSRV_MONTH

This warehouse pack places data in the IZY.F_ADMINSRV_MONTH fact table. This table has the following columns:

- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.5    IZY Hourly Application Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| | |
|---|---|
| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the hourly fact table for the WebSphere application servers. |
| Name of fact table | IZY.F_APPLSRV_HOUR |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.5.1    Fact table IZY.F_ APPLSRV_HOUR

This warehouse pack places data in the IZY.F_APPLSRV_HOUR fact table. This table has the following columns:

- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_hour (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.6    IZY Daily Application Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the daily fact table for the WebSphere application servers. |
|---|---|
| Name of fact table | IZY.F_APPLSRV_DAY |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.6.1    Fact table IZY.F_ APPLSRV_DAY

This warehouse pack places data in the IZY.F_APPLSRV_DAY fact table. This table has the following columns:

- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.7    IZY Weekly Application Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the weekly fact table for the WebSphere application servers. |
|---|---|
| Name of fact table | IZY.F_APPLSRV_WEEK |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.7.1    Fact table IZY.F_ APPLSRV_WEEK

This warehouse pack places data in the IZY.F_APPLSRV_WEEK fact table. This table has the following columns:

- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)

- Total_value (double)
- Sample_count (integer)


### 8.1.8    IZY Monthly Application Server Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the monthly fact table for the WebSphere application servers. |
|---|---|
| Name of fact table | IZY.F_APPLSRV_MONTH |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

#### 8.1.8.1    Fact table IZY.F_ APPLSRV_MONTH

This warehouse pack places data in the IZY.F_APPLSRV_MONTH fact table. This table has the following columns:

- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)


### 8.1.9    IZY Hourly Application Server Component Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the hourly fact table for the WebSphere application server components, such as data sources, EJBs, JVMs, web applications, thread pools, servlet sessions and transaction managers. |
|---|---|
| Name of fact table | IZY.F_APPLCMP_HOUR |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |


#### 8.1.9.1    Fact table IZY.F_ APPLCMP_HOUR

This warehouse pack places data in the IZY.F_APPLCOMP_HOUR fact table. This table has the following columns:

- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_hour (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.10   IZY Daily Application Server Component Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the daily fact table for the WebSphere application server components, such as data sources, EJBs, JVMs, web applications, thread pools, servlet sessions and transaction managers. |
| --- | --- |
| Name of fact table | IZY.F_APPLCMP_DAY |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

#### 8.1.10.1   Fact table IZY.F_ APPLCMP_DAY

This warehouse pack places data in the IZY.F_ APPLCMP_DAY fact table. This table has the following columns:
- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.11   IZY Weekly Application Server Component Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the weekly fact table for the WebSphere application server |
| --- | --- |

| | components, such as data sources, EJBs, JVMs, web applications, thread pools, servlet sessions and transaction managers. |
|---|---|
| Name of fact table | IZY.F_APPLCMP_WEEK |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.11.1   Fact table IZY.F_ APPLCMP_WEEK

This warehouse pack places data in the IZY.F_ APPLCMP_WEEK fact table. This table has the following columns:

- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.12   IZY Monthly Application Server Component Star Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the monthly fact table for the WebSphere application server components, such as data sources, EJBs, JVMs, web applications, thread pools, servlet sessions and transaction managers. |
|---|---|
| Name of fact table | IZY.F_APPLCMP_MONTH |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.12.1   Fact table IZY.F_ APPLCMP_MONTH

This warehouse pack places data in the IZY.F_ APPLCMP_MONTH fact table. This table has the following columns:

- ApplCmp_Comp_ID (integer)

- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.13   IZY Hourly Application Server Subcomponent Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the hourly fact table for the WebSphere application server subcomponents, such as connection pools and servlets. |
|---|---|
| Name of fact table | IZY.F_SUBCMP_HOUR |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_SUBCMP |
| | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

#### 8.1.13.1   Fact table IZY.F_ SUBCMP_HOUR

This warehouse pack places data in the IZY.F_ SUBCMP_HOUR fact table. This table has the following columns:
- SubCmp_Comp_ID (integer)
- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_hour (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.14   IZY Daily Application Server Subcomponent Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in | Star schema with dimension tables associated with the daily |
|---|---|

| IWH_STARSCHEMA) | fact table for the WebSphere application server subcomponents, such as connection pools and servlets. |
|---|---|
| Name of fact table | IZY.F_SUBCMP_DAY |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_SUBCMP |
| | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.14.1    Fact table IZY.F_ SUBCMP_DAY

This warehouse pack places data in the IZY.F_ SUBCMP_DAY fact table. This table has the following columns:

- SubCmp_Comp_ID (integer)
- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.15    IZY Weekly Application Server Subcomponent Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the weekly fact table for the WebSphere application server subcomponents; such as servlets and connection pools. |
|---|---|
| Name of fact table | IZY.F_SUBCMP_WEEK |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_SUBCMP |
| | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

### 8.1.15.1    Fact table IZY.F_ SUBCMP_WEEK

This warehouse pack places data in the IZY.F_ SUBCMP_DAY fact table. This table has the following columns:

- SubCmp_Comp_ID (integer)
- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

### 8.1.16  IZY Monthly Application Server Subcomponent Schema

The following table defines the star schema. The description of the star schema is translated.

| Description of star schema (in IWH_STARSCHEMA) | Star schema with dimension tables associated with the monthly fact table for the WebSphere application server subcomponents, such as connection pools and servlets. |
|---|---|
| Name of fact table | IZY.F_SUBCMP_MONTH |
| Name of metric dimension table | IZY.D_WAS_METRIC |
| Names of other dimension tables | IZY.D_WAS_SUBCMP |
| | IZY.D_WAS_APPLCMP |
| | IZY.D_WAS_APPLSRV |
| | IZY.D_WAS_ADMINSRV |
| | IZY.D_WAS_HOST |

#### 8.1.16.1  Fact table IZY.F_ SUBCMP_MONTH

This warehouse pack places data in the IZY.F_ SUBCMP_MONTH fact table. This table has the following columns:

- SubCmp_Comp_ID (integer)
- ApplCmp_Comp_ID (integer)
- ApplSrv_Comp_ID (integer)
- AdminSrv_Comp_ID (integer)
- XQ_AdminSrv_Dttm (timestamp)
- Host_ID (integer)
- Metric_ID (integer)
- Meas_date (timestamp)
- Min_value (double)
- Max_value (double)
- Avg_value (double)
- Total_value (double)
- Sample_count (integer)

## 8.2  Metric dimension tables

This section describes the metric dimension tables used by the star schemas in this warehouse pack.

**8.2.1    IZY.D_WAS_METRIC**

This dimension table has the following columns:

- Metric_ID
- Met_category*
- Met_desc*
- Met_name*
- Met_units*
- Min_exists
- Max_exists
- Avg_exists
- Total_exists
- Msrc_nm*

**NOTES:**
1. The values for MsmtTyp_Nm are stored in the central data warehouse database as a short string, but are displayed in reports as descriptive, translated phrases.  In the reports, the Met_name value does not contain the underscores as defined in the MsmtTyp_Nm value.
2. Do not delete IZY.STAGE_D_WAS_METRIC located in the TWH_CDW database. This table is created during the installation process and is not recreated by any of the data warehouse processes.

## *8.3   Dimension tables*

The following sections describe the dimension tables (other than metric dimension tables) used by the star schemas in this warehouse pack.

**8.3.1    Dimension table IZY.D_WAS_HOST**

This dimension table has the following columns:

- HOST_ID
- HOST_NAME
- CENTER_NM
- CUST_NAME
- 

**8.3.2    Dimension table IZY.D_WAS_ADMINSRV**

This dimension table has the following columns:

- ADMINSRV_COMP_ID

- ADMINSRV_COMP_NAME

- XQ_ADMINSRV_DTTM

- ADMINSRV_OS_TYPE

- ADMINSRV_WAS_VER

- ADMINSRV_POLICYREG

**NOTE:** In some cases, the ADMINSRV_OS_TYPE value might appear to be truncated in the dimension table. This is actually the entire value logged by the resource model.

**8.3.3    Dimension table IZY.D_WAS_APPLSRV**

This dimension table has the following columns:

- APPLSRV_COMP_ID

- APPLSRV_COMP_NAME

### 8.3.4    Dimension table IZY.D_WAS_APPLCMP

This dimension table has the following columns:

- APPLCMP_COMP_ID
- APPLCMP_COMP_NAME
- APPLCMP_TYPECD

### 8.3.5    Dimension table IZY.D_WAS_SUBCMP

This dimension table has the following columns:

- SUBCMP_COMP_ID
- SUBCMP_COMP_NAME
- SUBCMP_TYPECD

## 8.4   Data marts and reports

This warehouse pack provides the following data marts.

### 8.4.1    Data mart IZY Monitoring for WebSphere Application Server

This data mart uses the following star schemas:

- IZY Hourly Administration Server Schema
- IZY Daily Administration Server Schema
- IZY Weekly Administration Server Schema
- IZY Monthly Administration Server Schema
- IZY Hourly Application Server Schema
- IZY Daily Application Server Schema
- IZY Weekly Application Server Schema
- IZY Monthly Application Server Schema
- IZY Hourly Application Server Component Schema
- IZY Daily Application Server Component Schema
- IZY Weekly Application Server Component Schema
- IZY Monthly Application Server Component Schema
- IZY Hourly Application Server Subcomponent Schema
- IZY Daily Application Server Subcomponent Schema
- IZY Weekly Application Server Subcomponent Schema
- IZY Monthly Application Server Subcomponent Schema

#### 8.4.1.1    Reports

This data mart provides the following prepackaged reports

##### 8.4.1.1.1    IZY EJBs with the Most Hits

This extreme case report shows the top 25 Enterprise JavaBeans (EJBs) with the highest weekly average total requests.

Group By: EJB name
Aggregate Function:  maximum
Metric:  EJB_request_rate (throughput: number of calls to bean's remote methods)
Star Schema tables: IZY Weekly WebSphere Application Server Component Star Schema
Time Interval: Week
Start/End time: current date – 7 days/current date (can be changed at report run time)
Order By: output of maximum aggregation function
Order Type: Descending

### 8.4.1.1.2    IZY Servlets with the Highest Response Time

This extreme report shows the top 25 servlets with the highest weekly average response time.

Group By: servlet name
Aggregate Function:  maximum
Metric: Average_servlet_response_time
Star Schema tables:  IZY Weekly WebSphere Application Server Subcomponent Star Schema
Time Interval: Week
Start/End time: current date – 7 days/current date
Order By: output of maximum aggregation function
Order Type: Descending

### 8.4.1.1.3    IZY Servlets with the Most Hits

This extreme report shows the top 25 servlets with the highest weekly average total requests.

Group By: servlet name
Aggregate Function:  maximum
Metric:  Servlet_request_rate (throughput: number of servlet requests)
Star Schema tables:  IZY Weekly WebSphere Application Server Subcomponent Star Schema
Time Interval: Week
Start/End time: current date – 7 days/current date (can be changed at report run time)
Order By: output of maximum aggregation function
Order Type: Descending

### 8.4.1.1.4    IZY EJB Performance Health

This health check report compares the performance (method response time), load (concurrent active), and throughput (total requests), aggregated for the application server.

Group By (time unit on X-axis): Hour
Aggregate Function:  average
Metric: Average_EJB_response_time, Average_concurrent_EJB_requests and EJB_request_rate
Star Schema tables: IZY Hourly WebSphere Application Server Star Schema
Time Column: Day
Start/End time: current date -1 day (can be changed at report run time)
Time Interval: Hour
Order By: Group by attribute

**Note:** Due to the fact that the EJB_request_rate can be a very large number and the Average_EJB_response_time and Average_concurrent_EJB_requests are small numbers, the IZY EJB Performance Health report does not scale well. This is currently a limitation in the Tivoli Enterprise Data Warehouse Reporting Interface.

#### 8.4.1.1.5 IZY Servlet Performance Health

This health check report compares the performance (servlet response time), load (concurrent requests), and throughput (servlet requests), aggregated for the application server level.

Group By (time unit on X-axis): Hour
Aggregate Function:  average
Metric:  Average_servlet_response_time, Concurrent_servlet_requests and Servlet_request_rate
Star Schema tables: IZY Hourly WebSphere Application Server Star Schema
Time Column: Day
Start/End time: current date -1 day (can be changed at report run time)
Time Interval: Hour
Order By: Group by attribute

**Note:** Due to the fact that the Servlet_request_rate can be a very large number and the Average_servlet_response_time and concurrent_servlet_requests are small numbers, the IZY Servlet Performance Health report does not scale well. This is currently a limitation in the Tivoli Enterprise Data Warehouse Reporting Interface.

#### *8.4.1.1.6*   **IZY Enterprise JavaBean Resource Model Summary**

This summary report examines the minimum, maximum, average, and total values, as applicable, for Enterprise JavaBean resource model measurements grouped by operating system, node, and application server.

Group By: IZY_OS_TYPE, IP_HOST, APPLICATION_SRV
Aggregate Function: corresponding minimum, maximum, average, or total
Metric: Average_EJB_response_time, EJB_request_rate, Average_concurrent_EJB_requests, Percent_EJB_returns_discarded
Star Schema tables: IZY Weekly WebSphere Application Server Star Schema
Time Column: Week
Start/End time: Current date – 7 days/current date (can be changed at report run time)
Time Interval: Week
Order By: IZY_OS_TYPE, IP_Host, APPLICATION_SRV
Order Type:  Ascending

#### 8.4.1.1.7   **IZY JVM Runtime Resource Model Summary**

This summary report examines the minimum, maximum, average, and total values, as applicable, for all Java Virtual Machine (JVM) Runtime resource model measurements grouped by operating system, node and application server.

Group By: IZY_OS_TYPE, IP_HOST, APPLICATION_SRV
Aggregate Function: corresponding minimum, maximum and average for used memory, total for total Memory
Metric: Used_JVM_memory, Total_JVM_memory
Star Schema tables: IZY Weekly WebSphere Application Server Component Star Schema
Time Column: Week
Start/End time: Current date –  7 days/current date (can be changed at report run time)
Time Interval: Week
Order By: IZY_OS_TYPE, IP_Host, APPLICATION_SRV
Order Type:  Ascending

#### 8.4.1.1.8   **IZY Transaction Manager Resource Model Summary**

This summary report examines the minimum, maximum, average, and total values, as applicable, for transaction manager resource model measurements grouped by operating system, node, and application server.

Group By: IZY_OS_TYPE, IP_HOST, APPLICATION_SRV

Aggregate Function: corresponding minimum, maximum, average, or total
Metric:  Transaction_response_time, Transaction_request_rate, Transaction_exceptions
Star Schema tables: IZY Weekly WebSphere Application Server Component Star Schema
Time Column: Week
Start/End time: Current date – 7 days/current date
Time Interval: Week
Order By: IZY_OS_TYPE, IP_Host, APPLICATION_SRV
Order Type:  ascending


### 8.4.1.1.9    IZY Web Application Resource Model Summary

This summary report examines the minimum, maximum, average, and total values, as applicable, for Web Application resource model measurements grouped by operating system, node, and application server.

Group By: IZY_OS_TYPE, IP_HOST, APPLICATION_SRV
Aggregate Function: corresponding minimum, maximum and average
Metric:  Average_servlet_response_time, Servlet_request_rate, Concurrent_servlet_requests, Servlet_error_rate
Star Schema tables: IZY Weekly WebSphere Application Server Star Schema
Time Column: Week
Start/End time: current date – 7 days/current date
Time Interval: Week
Order By: IZY_OS_TYPE, IP_Host, APPLICATION_SRV
Order Type:  ascending


### 8.4.1.1.10   IZY Servlet Session Resource Model Summary

This summary report examines the minimum, maximum, average, and total values, as applicable, for servlet session resource model measurements grouped by operating system, node, and application server.

Group By: IZY_OS_TYPE, IP_HOST, APPLICATION_SRV
Aggregate Function: corresponding minimum, maximum, or average
Metric:  Live_servlet_sessions
Star Schema tables: IZY Weekly WebSphere Application Server Component Star Schema
Time Column: Week
Start/End time: current date – 7 days/current date
Time Interval: Week
Order By: IZY_OS_TYPE, IP_Host, APPLICATION_SRV
Order Type:  ascending