

# **SQL Server 2000: DTS and Transformations**

## **Table of Contents**

INTRODUCTION .....	INTRO-1
Courseware Conventions .....	INTRO-2
The Practice Disks .....	INTRO-3
Chapter Files .....	INTRO-3
Attaching the SQL Server Whistler Database .....	INTRO-3
About the Author .....	INTRO-6
INTRODUCTION TO DATA WAREHOUSES AND CUBES .....	1-1
Database Technology .....	1-2
Transactional Databases .....	1-2
Analysis Databases .....	1-4
Data Warehouses.....	1-6
Developing the Schema.....	1-7
Star Schemas .....	1-8
Snowflake Schema.....	1-10
Data Marts.....	1-11
OLAP Cubes .....	1-13
Definition.....	1-13
Storage Options.....	1-13
Partitions.....	1-14
Virtual Cube.....	1-14
Data Transformation Services .....	1-16
DTS in the Data Mart .....	1-16
DTS in OLAP .....	1-17
DTS and Data Analysis.....	1-17
DTS IMPORT/EXPORT WIZARD .....	2-1
What Is the Import/Export Wizard?.....	2-2
Wizard Functionality .....	2-2
Wizard Applications .....	2-3
Data Transfer Plan.....	2-3
Copying .....	2-5
Planning the Copy .....	2-5
Transferring SQL Server Objects .....	2-15
Selecting Objects.....	2-17
Object Copy Options.....	2-17

## *Table of Contents*

---

Prototype Package .....	2-19
Employee Dimension .....	2-19
Planning the Dimension Load .....	2-20
LAB 2: DTS IMPORT/EXPORT WIZARD.....	2-32
Lab 2 Overview .....	2-33
Copy a Table.....	2-34
Transfer Database Objects.....	2-37
Create a Prototype Package .....	2-40
DTS PACKAGES.....	3-1
DTS Package .....	3-2
DTS Package Designer.....	3-3
Menus.....	3-3
Toolbars .....	3-4
Design Sheet .....	3-5
Connections .....	3-6
Sources .....	3-6
Configuring .....	3-7
Deploying.....	3-8
Employee_dim Package .....	3-9
Maintenance .....	3-15
Tasks .....	3-20
Transform Data.....	3-20
Manage Data.....	3-21
Job Function.....	3-22
Creating Tasks.....	3-23
Steps.....	3-31
Precedence .....	3-31
Step Properties.....	3-32
Creating the Workflow.....	3-33
Package Cleanup .....	3-35
LAB 3: DTS PACKAGES .....	3-39
Lab 3 Overview .....	3-40
Modify and Set Up Connections .....	3-41
Add DTS Tasks .....	3-47
Define Steps.....	3-52
DTS COMMON TASKS .....	4-1

Bulk Insert Task .....	4-2
Bulk Insert Task Options.....	4-3
Format Files.....	4-6
Applying the Bulk Insert Task.....	4-8
Staging Tables.....	4-9
Bulk Insert Package.....	4-9
Execute SQL Task .....	4-17
Parameterized Queries.....	4-17
Dynamic Queries .....	4-19
Query Results.....	4-19
Table_delete.....	4-21
Transform Data Task.....	4-25
The DTS Data Pump .....	4-25
Creating Transformations .....	4-27
Building Transformations .....	4-31
Error Handling .....	4-40
SQL Server Optimization .....	4-43
Configuring Options .....	4-45
LAB 4: DTS COMMON TASKS.....	4-53
Lab 4 Overview .....	4-54
Load Staging Tables .....	4-55
Create Time Dimension.....	4-63
Load Warehouse Dimension .....	4-67
EXTENDING TRANSFORMATIONS .....	5-1
Transformation Scripts .....	5-2
Script Components .....	5-3
Constants .....	5-5
Script Management.....	5-6
ActiveX Script .....	5-8
Advanced Transformations.....	5-13
One Row Into Many .....	5-14
Lookup Queries .....	5-21
Best Practices.....	5-21
Lookup Query Implementation .....	5-22
Multiphase Data Pump .....	5-30
Phases .....	5-30
Applications .....	5-33

---

*Table of Contents*

Data Driven Query Task .....	5-35
Practical Example .....	5-36
LAB 5: EXTENDING TRANSFORMATIONS.....	5-47
Lab 5 Overview .....	5-48
Load Company Dimension .....	5-49
Load Market Stage .....	5-55
Multiphase Data Pump .....	5-61
PACKAGE ADMINISTRATION .....	6-1
Overview of Administration.....	6-2
Package Versions .....	6-2
Storing DTS Packages .....	6-4
SQL Server.....	6-4
Meta Data Services .....	6-4
Structured Storage File.....	6-5
Visual Basic File .....	6-6
Securing Packages.....	6-7
Using Metadata .....	6-9
Meta Data Services .....	6-9
Data Lineage .....	6-11
Executing Packages.....	6-17
Package Execution Utilities.....	6-18
Execution Logs .....	6-24
Modular Packages .....	6-26
Managing Properties .....	6-31
Disconnected Edit.....	6-31
Dynamic Properties Task.....	6-35
Connection Properties .....	6-38
LAB 6: PACKAGE ADMINISTRATION.....	6-43
Lab 6 Overview .....	6-44
Using Data Lineage.....	6-45
Using the Dynamic Properties Task.....	6-51
INDEX.....	INDEX-1