

DAT244x

# SQL Server Disaster Recovery

## Lab 01 | Planning a Disaster Recovery Solution

Estimated time to complete this lab is 30 minutes

### Overview

You need to implement a database recovery strategy. Your manager has provided the availability needs for the databases on your new SQL Server instance. You need to plan how you will meet the requirements, and then implement your strategy.

*The labs in this course are accumulative. You cannot complete the following labs if this lab has not been successfully completed.*

### What You'll Need

To complete this lab, you will need the following:

- To have completed the previous labs in this course.

### Supporting Documentation

#### ***Business Database Continuity Requirements for Databases on your SQL Server Instance (for Exercises 1 and 2)***

##### **Recovery Time Objectives**

1. The MarketDev database must never be unavailable for longer than eight hours.
2. The Research database must never be unavailable for longer than two hours.

##### **Recovery Point Objectives**

1. When the MarketDev database is recovered from a failure, no more than 30 minutes of transactions may be lost.
3. When the Research database is recovered from a failure, all transactions that were completed up to the end of the previous weekday must be recovered.

### Projected Characteristics

Characteristic	Estimated Value
MarketDev database size	20 GB
Research database size	200 MB

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Total backup throughput	100 MB/minute
Total restore throughput	80 MB/minute
Average rate of change to the MarketDev database during office hours	1 GB/hour
Average rate of change to the Research database during office hours	10 MB/hour
Percentage of the MarketDev database changed each day (average)	1.2%
Percentage of the Research database changed each day (average)	80%
Office hours (no full database backups permitted during these hours)	08:00 to 18:00

### ***Business Database Continuity Requirements for Databases on the CustomerService Server Instance (for Exercise 3)***

#### **Recovery Time Objectives**

2. The CreditControl database must never be unavailable for longer than two hours.
4. The PotentialIssue database must never be unavailable for longer than one hour.

#### **Recovery Point Objectives**

3. When the CreditControl database is recovered from a failure, no more than five minutes of transactions may be lost.
5. When the PotentialIssue database is recovered from a failure, no more than 30 minutes of transactions may be lost.

### **Projected Characteristics**

Characteristic	Estimated Value
CreditControl database size	20 GB
PotentialIssue database size (at the start of each week after archiving activity is complete)	200 MB
Total backup throughput	100 MB/minute
Total restore throughput	80 MB/minute
Average rate of change to the CreditControl database during office hours	500 MB/hour
Average rate of change to the PotentialIssue database (constant all week long, 24 hours per day)	10 MB/hour
Percentage of the CreditControl database changed each day (average)	60%
Percentage of the PotentialIssue database changed each day (average)	50%
Office hours (no full database activity permitted during these hours)	08:00 to 19:00

### **Existing Backup Strategy for CreditControl Database**

Recovery Model: **Full**

Type of Backup

Schedule

Full

Saturday 06:00  
Wednesday 06:00

Differential

Sunday 22:00  
Monday 22:00  
Tuesday 22:00  
Thursday 22:00  
Friday 22:00

Transaction Log

Every 60 minutes on the hour

### Existing Backup Strategy for Potential Issue Database

Recovery Model: **Full**

Type of Backup

Schedule

Full

Sunday 22:00

Log

Every 15 minutes, starting at 10 minutes past the hour

# Exercise 1: Plan a Backup Strategy

You need to plan a backup strategy for the two databases on your new SQL Server instance. You have been provided with RPO (recovery point objectives) and RTO (recovery time objectives) for both databases, as part of a business continuity statement.

The main tasks for this exercise are as follows:

1. Review the Business Requirements
2. Determine an Appropriate Backup Strategy

## Review the Business Requirements

Review the supplied business requirements in the supporting documentation for this exercise.

## ► Determine an Appropriate Backup Strategy

Determine an appropriate backup strategy for each database including:

- The recovery model that should be used.
- The type of backup.
- The backup schedule.



**Note:** To meet the business requirements, each database might need more than one backup type and schedule.

**Lab Check – *You will need these answers for the module quiz – write them down!***

### **Lab 01 ► Planning a Disaster Recovery Solution**

Approximately how long would a full backup of the MarketDev database take?

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Approximately how long would a log backup of the MarketDev database take?

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Approximately how long would a full backup of the Research database take?

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*You have now completed the lab.*