SQL Backup policy – Adventure WORKS BELLEVILLE SITE

Date: 15th October 2024

# Overview

## Project Background and Description

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|  | With Adventure Works Corporation intending to open its new facility in Belleville there is thus a need to set a standard SQL Backup Policy. It is an effort aimed at safeguarding the credibility and functionality of vital information in the different departments of the firm including accounting, purchasing and selling, store and stock. The direction on this strategy will be provided by the Senior DBA in consultation with the IT director to ensure all systems are secure and ready for use from the grassroots. Realization of the following policy will also serve to cover important business information, as we work towards enhancing reliability in our operations due to this new era. |

## Project Scope

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|  | The goal of this work is to develop a SQL Backup Policy for the Belleville facility that will describe specific aspects essential to the organization’s stability and provide the implemented security in the given databases. With these procedures and mapping solutions in place, we will afford our team the right direction that would let them be confident about the capacity to safeguard as well as recover all our data as and when needed.  **What We’ll Do:**   * We will use full and differential backups to ensure that all our data are fully protected. * Authenticity will be strictly checked and backup and restore procedures will be tested very often. * We will develop easily understandable procedural manuals of the team’s work for everybody. * Daily auditors will help us check for the quality and compliance of the backups made.   **What we won’t do:**   * No buying new equipment: we will simply make optimal use of all available hardware systems. * Training to accomplish data recovery won’t be given focus during this stage; system implementation will be more important. * We would not get involved in migrating legacy to the new system; our areas of concern will be restricted to the establishment of new systems only. * No third-party consultants will be commissioned; all the work will be done by the company’s specialists.   **Expected Results:**   * A reliable backup system will be decided upon so that it is easy to obtain data and to also maintain its accuracy. * The team’s confidence in data recovery capabilities will be built. * Maintenance will be dispensed and hence will not interrupt the activities of an establishment or cause loss of data. * A high sense of data security and teamwork will be created in Adventure Works. |
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## Procedure

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|  | The SQL Backup Strategy must be capable of backing up, full and differential backups, data recovery should be fast, and the backups must be physically stored both on-site and off-site with encryption. It should also interface with current systems; serve important departments; display real-time results with notifications; and require periodic tests to maintain data accuracy and recoverability.  **Full Backup Procedures**  **Step 1:** Open SQL Server Management Studio (SSMS) and connect to our server. Go to Management in Object Explorer. On the Maintenance Plans page, click Maintenance Plan, right-click and select Maintenance Plan Wizard. When the wizard opens, click the Next button to continue with the next stage    **Step 2:** You will be redirected to the Select Plan Properties page. On this tab, you can give a name to your maintenance task and describe it to ensure that everyone is clear of its function. You can leave the Run option at its default, then click Next  **Step 3:** To do this click on the Maintenance Tasks tab and select the option that says Backup Database (Full). This is the main task that you are establishing here. Once selected, click Next    **Step 4**: you will see the tab to configure the maintenance task. Select the database you want to do the full backup and just click Next    **Step 5:** Now it will redirect you to the Select Report Options tab. Here set the folder to save the report file, if you care to receive it through the mail, please insert your E-mail address in the E-mail report field. Click Next when you’re ready    **Step 6**: You will see the Complete the Wizard tab, verify the choices you have made, and click on ‘Finish’.    **Step 7:** You will see success on the status of your maintenance plan. click on ‘Finish’.    **Step 8:** To view your newly created maintenance plan, refresh the Maintenance Plans section. Right-click on your plan and select Execute to run the task.  **Step 9:** If you want to change just right-click on the maintenance plan, and from the menu select Schedule. Here you can change the type of schedule you need; its frequency and duration will also be somewhat different.    **Differential Backup Procedures** To create a differential backup, begin just like the full backup in the Maintenance Plan Wizard in SSMS as shown above. When you get to Step 3, make one important change, however, do not click Backup Database (Full), instead, click Backup Database (Differential). This is important because differential backup only backs new data that has only been created after your previous full backup unlike having to create a full backup which can take a lot of time and use a lot of space. Thus, you ensure that by restoring the database you will be able to do it with fewer repercussions in terms of the quantity of lost information.        **Restoration Procedure for The Full Backup**  **Step 1:** Right-click on the database and select Restore Databases.  **Step 2:** In the Restore Database window, on the General tab, select the Device option then double-click to select the backup media type. Find the exact file that you want to recover and then right-click on it to select Add A screenshot of a computer  Description automatically generated  **Step 3:** This one will open the file dialog where you need to go to the directory where your .bak files are stored. Navigate through your computer find the latest fully backed-up file you created and click OK. A screenshot of a computer  Description automatically generated  **Step 4:**  A new tab will appear confirming that your database has been successfully restored.  A screenshot of a computer  Description automatically generated  **Restoration Procedure for The Differential Backup**  To restore the differential backup in SQL Server you can follow the same steps as you have done for the restoration of full backup with some changes. As a note for step 3, ensure to click on the most recent automatic differential backup file which has. Bak file type instead of choosing full backup. Also, make sure that you have already brought forward the last full backup as differential backup depends on it. With all these changes you will now be ready to go full throttle in restoring your differential backup.  A screenshot of a computer  Description automatically generated  A screenshot of a computer  Description automatically generated  A screenshot of a computer  Description automatically generated  Now, refresh your SQL Server Management Studio (SSMS), and you can see the databases that you have just restored.  A screenshot of a computer  Description automatically generated  **Testing procedures**  Once the restoration of the backups is complete, it is essential to test and ensure that all the files and databases have been backed up correctly and are functioning smoothly.  To perform this verification, you can go to the restored backup and examine the database diagrams or tables to check whether it is backed up or not. If your files run and contain all the data. Your restoration is successful. |

## Deliverables

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|  | **Backup and Restoration Plans:** I will include step-by-step procedures on how to perform backup and restoration on the databases to ensure that anyone reading the documentation can do it.  **Training Manuals:** Straight-forward checklists made for the IT crew so that they feel comfortable performing the backup.  **Audit Reports:** Keeping daily operational logs that show the health and, more to the point, reliability of the backups to ensure that all components are functioning properly. |

## Affected Parties

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|  | The project will impact these key processes:  **Data Management:** Civilized practices that improve security and compliance.  **Reporting:** Real-time provision of accurate data for informed decision-making skills.  **Disaster Recovery:** Faster and more effective procedures to reduce losses due to time lost in product turn-around times. |
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## Affected Business Processes or Systems

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|  | The SQL Backup Policy is going to improve many vital business activities, contributing to more effectiveness and accuracy of informational work. Standardized backup procedures will guarantee that data is always retrievable and safely stored, and thus enable departments to work and make sound decisions based on the information. |

## Specific Exclusions from Scope

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|  | To avoid confusion, the following will not feature in this project: This includes:   * Old systems that no longer fit the current structure we have in the organization. * Modules that can be from outside the system can make the implementation process a bit cumbersome. * No other hardware will be purchased as we will make the best use of all available equipment. |

## Implementation Plan

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|  | The implementation of the SQL Backup Policy will occur in a structured, phased approach:  **Initial Phase:** Backup routines should be set down and rigorous testing should be done so that the backup solution is noted to be trustworthy.  **Training Phase:** Deliver/internal training procedures to all the team with new processes or technologies.  **Documentation Phase:** Develop simple procedures that are generally easy to follow to back up data.  **Final Phase:** Implement the design completely, review for potential problems, and collect end-user feedback for upgrade |

## High-Level Timeline/Schedule

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|  | **Phase 1: Planning & Configuration (October 17th -October 19th, 2024)**  Design and define the high-level content of backup strategies for important sectors (Accounting, Sales, Purchasing, Inventory).  **Phase 2: Testing & Training (October 20th - October 24th, 2024)**  Try BMS in a developmental environment and educate the IT staff regarding the backup process.  **Phase 3: Analyses & Documentation Book-Closing (October 25th - October 30th, 2024)**  Review the procedures of backups and accomplish all paperwork.  **Phase 4: Go-Live Preparation (October 31st, 2024)**  Undergo some final verifications before the actual implementation of live operations from November 1, 2024. |

# Approval and Authority to Proceed

We approve the project as described above, and authorize the team to proceed.

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| Name | Title | Date |
| James Miller | Director of IT | 17th October 2024 |
| Michael Davis | Regional IT Manager | 17th October 2024 |
| Andrew Williams | Chief Financial Officer (CFO): | 17th October 2024 |
| Rikit Thapa | Senior Database Administrator | 17th October 2024 |

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| Approved By |  |  | Date |  | Approved By |  |  | Date |