SQL sEcurity policy – Adventure WORKS BELLEVILLE SITE

Date: 15th November 2024

1. **PROJECT BACKGROUND AND DESCRIPTION**

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|  | After this year, Adventure Works Corporation is pleased to announce the up and running of the new facility in Belleville as from November 15. These include the core departments to be covered by this new site, which are accounting, purchasing, sales, and inventory. Because of this, creating a strong and proper SQL security policy is paramount to avoiding any unfortunate incidence leaving our SQL databases insecure. This document aims at presenting information on how security can be achieved on our SQL databases before implementing it. |
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1. **PROJECT SCOPE**

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|  | The idea of this policy is to protect the Adventure Works database since it focuses on the creation of SQL users, its Authentication and permission rights at different levels. This can simply be said to be our main aim of providing security to the information that we deal with so that only the persons or rather departments that should have access to such information do so. |
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1. **PROCEDURE**

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| **Creating SQL Users**   1. Open your SSMS and login using windows authentication by providing your correct username and password.   A computer screen shot of a computer screen  Description automatically generated   1. Go to the logins and check your password of System administrator in case if you don’t know the password you can change it because you must connect your database engine as SA before creating the users.      1. Log to the SQL Server with the system administrator login. Choose the SQL server Authentication mode and then enter your right login details and password and click on connect.   A computer screen shot of a computer screen  Description automatically generated   1. To access this section, sign in as the administrator, click on the down arrow to expand the security folder and then logins, right-click logins and go to new login.   A screenshot of a computer  Description automatically generated   1. In the login name box, key in the username of your preference, choose SQL Server Authentication then type in a password before clicking ‘Ok’. Here it is name as Rikit\_User\_1   A screenshot of a computer  Description automatically generated   1. Perform the same steps as stated above and create the second user .Here, Iam using Rikit\_User2.   A screenshot of a computer  Description automatically generated  **Server Level Permissions**   1. Go to the Properties and right click on Rikit\_User1.   A computer screen shot of a computer  Description automatically generated   1. In the Login Properties window you are at the Server Roles page make and provide the public role.   A screenshot of a computer  Description automatically generated   1. Click the ‘User Mapping’ link on the page, on this page, choose the Adventure Works database. Then add the roles db\_datareader and db\_datawriter to it and click on OK. A screenshot of a computer     Description automatically generated 2. Next there will be another secure page which requires permission to connect the sql and click on ok.   A computer screen shot of a computer screen  Description automatically generated   1. On the status page grant permission to connect to the database engine and enable the login, then click ok.      1. The second user to which the roles that we have created have to be assigned should follow the same instructions as above.   A screenshot of a computer  Description automatically generated      **Assign Table-Level Permissions  Granting the permission for user 1**   1. Expand the Adventure Works database and select adventureWorks2019.click on the security options and then users. A computer screen shot of a computer     Description automatically generated 2. On the users section you can view the users that include the ones that you have created. Click on Rikit\_User1 and click on the properties on the right click.      1. As to the database User – Rikit\_user1- leave the general page as a default. In the Owned schemas page, you must tick the schemas which that has to be owned by this user.   A screenshot of a computer  Description automatically generated   1. On the membership page select the database role membership for this user and click ok button.   A screenshot of a computer  Description automatically generated   1. On the securable page click on search and then the program will ask you what objects you want to add. Select all, then go to select specific objects and click ok.      1. Now, click on the object types and select the types of objects you want to look for. Here I again am choosing the Tables. After you have made the selection regarding the object type click ok.   A screenshot of a computer  Description automatically generated   1. Go to the table by clicking browse option and click ok on the table also.      1. On the next one you will see the table which you have chosen, and you can change the permissions as you wish It. Once you have selected your permission click on OK. For the user one we will give permission to select and update this table SalesLT. [Product].   **Denying permission for user 2**  Repeat the same process for user 2 but this time deny the permission.            **Test the Security Policies:**  **Test for User 1**   1. Login as as the first user to whom you have granted the permissions. A computer screen shot of a computer screen     Description automatically generated 2. Click on databases and select AdventureWorksLT2019 and Locate to the table and run the query. you must be able to run the select and update query without any problems. A computer screen shot of a computer     Description automatically generated   A screenshot of a computer  Description automatically generated  **Test for User2.**   1. Login as the second user to whom we have denied permission.   A computer screen with a computer screen and a computer screen  Description automatically generated   1. Locate the table and try to run the query. This time you will get the SQL execution error as this user does not have the permission to do so.   A screenshot of a computer  Description automatically generated |  |
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1. **DELIVERABLES**

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|  | The final artefacts are a document that is titled ‘SQL Security Policy followed by checkpoints, guidelines on how to implement the policy measures, and actual screenshots of permitted user permissions as well as the implementation of access control measures; there is testing of the SQL Security Policy. |
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1. **AFFECTED PARTIES**

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|  | This policy mainly implicates the IT Department, Database Administrators, accounting managers, purchasing managers, sales managers, and inventory managers as they shall be using the secure SQL resources. |
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1. **AFFECTED BUSINESS SYSTEMS OR PROCESSES**

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|  | The policy is focused on SQL Server databases used by Accounting, Purchasing, Sales, and Inventory departments that is critical for core functions of the organizations to enhance data security and efficiency of data access. |
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1. **SPECIFIC EXCLUSIONS FROM SCOPE**

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|  | Any data that is not stored or processed in an SQL based database or any data source external to Adventure Works is excluded from the policy’s purview so that it is easy to specifically concentrate only on the SQL Server database security of Adventure Works. |
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1. **IMPLEMENTATION PLAN**

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|  | The policy implementation will follow a step-by-step approach: before fine-tuning the document, performing a pilot in a restricted development environment, and releasing it for production during the new facility launch. |

1. **HIGH-LEVEL TIMELINE/SCHEDULE**

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|  | We have clearly defined the following sequence of actions: first, the policy should be drafted not later than Nov 10th , and its testing and production no later than November 11. We will check the readiness and close the online course by November 13th though it will be fully secured and running by November 15th. |
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**APPOROVAL AND AUTHORITY TO PROCEED**

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

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| Name | Title | Date |
| Rikit Thapa | Senior database Administrator | 13th November,2024 |
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