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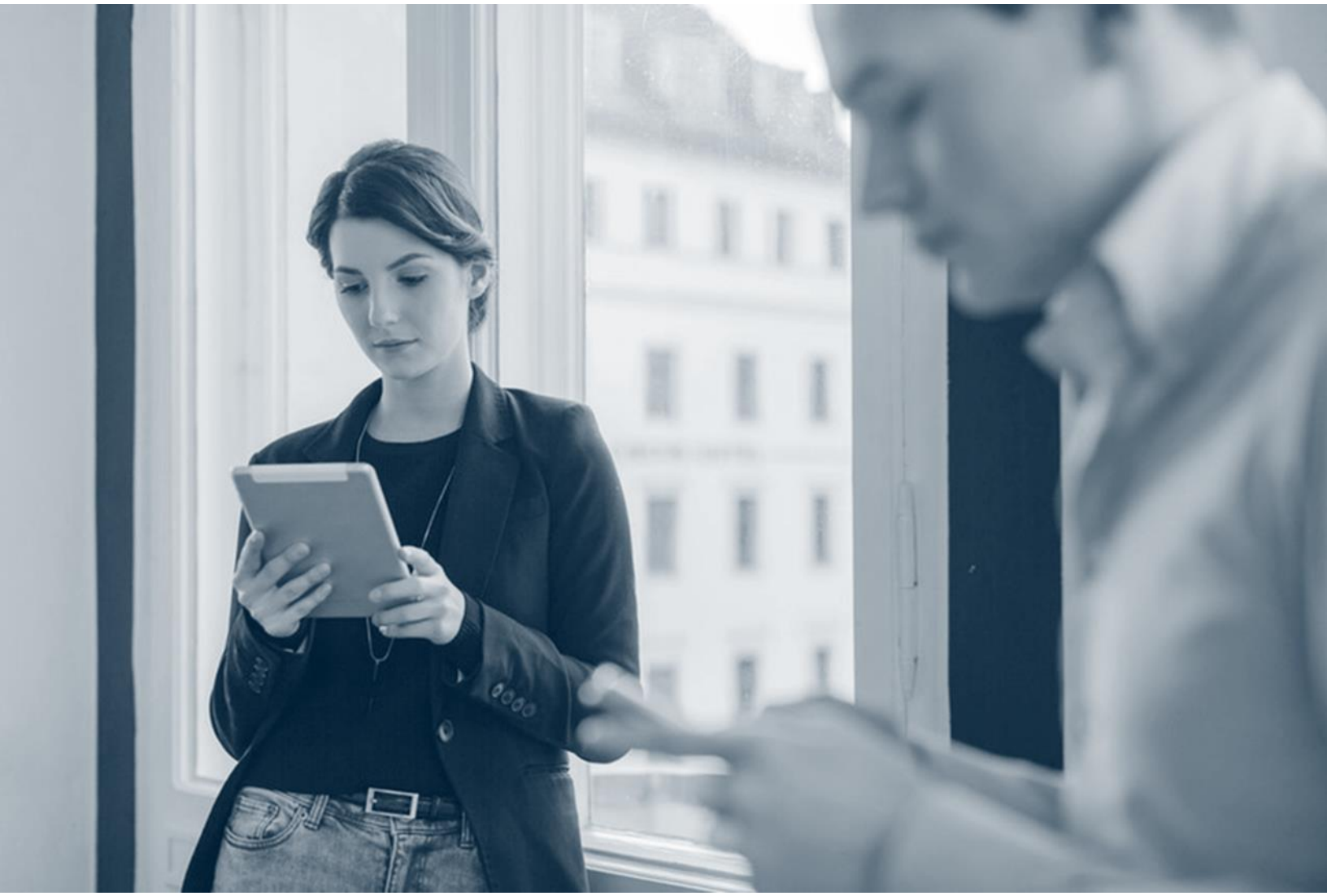
Commvault Compliance with CIS Level 1 Security Controls

CIS Microsoft SQL Server 2019 Benchmark v1.2.0

Friday, 11 February 2022

Commvault Compliance with the Level 1 Controls of CIS Microsoft SQL Server 2019 Benchmark v1.2.0

The **CIS Microsoft SQL Server 2019 Benchmark v1.2.0** provides prescriptive guidance for establishing a secure configuration posture to develop, deploy, assess, or secure solutions that incorporate Microsoft SQL Server 2019 on a Linux environment.

The security controls in Level 1 provide a clear security benefit. The following table presents the compliance of the Commvault software with the Level 1 controls.

Control		Support for the Control	Comments, if not supported
1	**Installation, Updates and Patches**		
1.1	Ensure Latest SQL Server Service Packs and Hotfixes are Installed (Not Scored)	**Yes**	The workflow engine that is built-in with the Commvault software performs automatic updates of the SQL server.
1.2	Ensure Single-Function Member Servers are Used (Not Scored)	**Yes**	The control is supported when required configurations are performed during the deployment of the Commvault software.
2	**Surface Area Reduction**		
2.1	Ensure 'Ad Hoc Distributed Queries' Server Configuration Option is set to '0' (Scored)	**Yes**	
2.2	Ensure 'CLR Enabled' Server Configuration Option is set to '0' (Scored)	**No**	The Commvault software uses the CLR functionality and the functionality cannot be disabled. So, the software does not support this control.
2.3	Ensure 'Cross DB Ownership Chaining' Server Configuration Option is set to '0' (Scored)	**Yes**	
2.4	Ensure 'Database Mail XPs' Server Configuration	**Yes**	

Control		Support for the Control	Comments, if not supported
	Option is set to '0' (Scored)		
2.5	Ensure 'Ole Automation Procedures' Server Configuration Option is set to '0' (Scored)	Yes	OLE automation procedures were used previously, but the procedures are not needed from Commvault software version **FR 11.25** onwards as the procedures have CLR equivalents currently.
2.6	Ensure 'Remote Access' Server Configuration Option is set to '0' (Scored)	Yes	
2.7	Ensure 'Remote Admin Connections' Server Configuration Option is set to '0' (Scored)	Yes	
2.8	Ensure 'Scan For Startup Procs' Server Configuration Option is set to '0' (Scored)	Yes	
2.9	Ensure 'Trustworthy' Database Property is set to 'Off' (Scored)	Yes	
2.10	Ensure Unnecessary SQL Server Protocols are set to 'Disabled' (Not Scored)	N/A	These protocols are not applicable to a Linux environment. Please refer the link for more information, see Named Pipes Properties.

Control		Support for the Control	Comments, if not supported
2.11	Ensure SQL Server is configured to use non-standard ports (Not Scored)	**Yes**	A default installation of SQL Server 2014 and later versions uses a dynamic port. For security reasons, you can configure a different port. For instructions, see [Configure a Server to Listen on a Specific TCP Port](#).
2.12	Ensure 'Hide Instance' option is set to 'Yes' for Production SQL Server instances (Scored)	**N/A**	MS SQL browser service is not applicable to an MS SQL server in a Linux environment. There is no impact even if SQL instance is not hidden as there is no mechanism to discover it. For more information, see [Editions and supported features of SQL Server 2019 on Linux](#).
2.13	Ensure the 'sa' Login Account is set to 'Disabled' (Scored)	**Yes**	
2.14	Ensure the 'sa' Login Account has been renamed (Scored)	**Yes**	
2.15	Ensure 'AUTO_CLOSE' is set to 'OFF' on contained databases (Scored)	**Yes**	
2.16	Ensure no login exists with the name 'sa' (Scored)	**Yes**	
2.17	Ensure 'clr strict security' Server Configuration Option is set to '1' (Automated)	**No**	

Control		Support for the Control	Comments, if not supported
3	**Authentication and Authorization**		
3.1	Ensure 'Server Authentication' Property is set to 'Windows Authentication Mode' (Scored)	**Yes**	To enable this control in your environment, follow the instructions in <u>Tutorial: Use Active Directory authentication with SQL Server on Linux</u>.
3.2	Ensure CONNECT permissions on the 'guest' user is Revoked within all SQL Server databases excluding the master, msdb and tempdb (Scored)	**Yes**	
3.3	Ensure 'Orphaned Users' are Dropped From SQL Server Databases (Scored)	**Yes**	
3.4	Ensure SQL Authentication is not used in contained databases (Scored)	**Yes**	
3.5	Ensure the SQL Server's MSSQL Service Account is Not an Administrator (Not Scored)	**No**	Primary interaction with the Commvault SQL Server instance is done using the sqladmin_cv account. The sqladmin_cv account has sysadmin role for the CommServe database and public role for all databases in the SQL instance. The sqlexec_cv user has public role for all databases. The Commvault software

Control		Support for the Control	Comments, if not supported
			requires these permissions. So, this control cannot be supported.
3.6	Ensure the SQL Server's SQLAgent Service Account is Not an Administrator (Not Scored)	**No**	Primary interaction with the Commvault SQL Server instance is done using the sqladmin_cv account. The sqladmin_cv account has sysadmin role for the CommServe database and public role for all databases in the SQL instance. The sqlexec_cv user has public role for all databases. The Commvault software requires these permissions. So, this control cannot be supported.
3.7	Ensure the SQL Server's Full–Text Service Account is Not an Administrator (Not Scored)	**N/A**	The Commvault software does not contain Full–Text Service Account. So, this control is not applicable.
3.8	Ensure only the default permissions specified by Microsoft are granted to the public server role (Scored)	**Yes**	
3.9	Ensure Windows BUILTIN groups are not SQL Logins (Scored)	**Yes**	
3.10	Ensure Windows local groups are not SQL Logins (Scored)	**Yes**	
3.11	Ensure the public	**Yes**	

Control		Support for the Control	Comments, if not supported
	role in the msdb database is not granted access to SQL Agent proxies (Scored)		
4	**Password Policies**		
4.1	Ensure 'MUST_CHANGE' Option is set to 'ON' for All SQL Authenticated Logins (Not Scored)	**N/A**	The Commvault software creates sqladmin_cv and sqlexec_cv users that are used only by Commvault software to access the CommServe database. So, this control is not applicable.
4.2	Ensure 'CHECK_EXPIRATION' Option is set to 'ON' for All SQL Authenticated Logins Within the Sysadmin Role (Scored)	**No**	
4.3	Ensure 'CHECK_POLICY' Option is set to 'ON' for All SQL Authenticated Logins (Scored)	**No**	Windows policy is designed based on the organization requirements. So, without an understanding of the organization Windows policy, this control cannot be supported.
5	**Auditing and Logging**		
5.1	Ensure 'Maximum number of error log files' is set to greater than or equal to '12'	**Yes**	

Control		Support for the Control	Comments, if not supported
	(Scored)		
5.2	Ensure 'Default Trace Enabled' Server Configuration Option is set to '1' (Scored)	Yes	
5.3	Ensure 'Login Auditing' is set to 'failed logins' (Scored)	Yes	
5.4	Ensure 'SQL Server Audit' is set to capture both 'failed' and 'successful logins' (Scored)	Yes	
6	**Application Development**		
6.1	Ensure Database and Application User Input is Sanitized (Not Scored)	No	
6.2	Ensure 'CLR Assembly Permission Set' is set to 'SAFE_ACCESS' for All CLR Assemblies (Scored)	Yes	MS SQL Server on a Linux environment does not allow UNSAFE/EXTERNAL ACCESS.
7	**Encryption**		
7.1	Ensure 'Symmetric Key encryption	Yes	

Control		Support for the Control	Comments, if not supported
	algorithm' is set to 'AES_128' or higher in non-system databases (Scored)		
7.2	Ensure Asymmetric Key Size is set to 'greater than or equal to 2048' in non-system databases (Scored)	**Yes**	
8	**Appendix: Additional Considerations**		
8.1	Ensure 'SQL Server Browser Service' is configured correctly (Not Scored)	**N/A**	This control is disabled by default on a Linux environment. For more information, see Editions and supported features of SQL Server 2019 on Linux.

Visit the [Commvault Documentation](#) website for complete documentation of Commvault products.

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