

Data Integrity Services

Overview:

C4 implements the below policies on all managed MS SQL Server devices. In addition to our standard policies, we have developed SQL Server specific policies to ensure customer success. Alerts are tracked in C4 CRM for reporting purposes and emailed real-time to approved client recipients.

Each month clients receive the following reports based upon listed monitors:

- Executive Summary - Represents capability of the network to perform two standards, including disk and memory capacity. Rates open monitoring alerts for the network
- Device Activity - Shows the duration of time C4 has worked on all managed devices by task
- Device Health - Displays overall health of the devices under C4 management

C4 also sends scheduled SQL specific reports:

- Database Summary - Each Saturday morning, we run a database summary breakdown of the growth of each database on every server
- SQL job report - Weekly job report catalogs SQL Server jobs sharing success or failure
- Email report - Used internally to monitor email connectivity and status



Metrics:

We have standard monitors for all servers and additional specific monitors for all editions of the Microsoft SQL Server software. They include but are not limited to:

- Common metrics:
 - Priority level
 - Response status
 - Ticket created
- Performance metrics:
 - CPU – varies from overall use and uptime, to percentage within time limits
 - Memory and disk space – percentages, use within time frames
 - Downtime – critical extended stop times, device off-line
- Capacity metrics:
 - File size percentages of critical directories
 - Usage of critical directories
 - Amount of targeted codes in user and event logs
- Microsoft SQL Server specific for SSRS, SSIS & SSMS:
 - Application / service errors & warnings
 - CPU and memory usage

Microsoft SQL Server Real-time Alerts:

- SQL Triggers - Enabled, disabled, deleted, created
- SQL Jobs - Enabled, disabled, deleted, created
- SQL Auto Growth on all System & User databases - Data and log files
- SQL Alerts -
 - C4_FatalError - Sev 025
 - C4_FatalError:CurrentProcess - Sev 020
 - C4_FatalError:DatabaseProcesses - Sev 021
 - C4_FatalError:Hardware - Sev 024
 - C4_FatalError:LogicalConsistency - Error: 824
 - C4_FatalError:Resource - Sev 019
 - C4_FatalError:TableIntegrity - Sev 022
 - C4_InsufficientResources - Sev 017
 - C4_MiscUser - Sev 016
 - C4_NonfatalInternal - Sev 018
 - C4_OperationFailed I/O - Error: 823
 - C4_ReadRetry I/O - Error: 825



Scheduled Microsoft SQL Server Jobs:

- C4_CheckLISQueue
- C4_CheckRDSQueue
- C4_Maintenance_CommandLog_Cleanup
- C4_Maintenance_DatabaseBackup_SYSTEM_DATABASES_FULL
- C4_Maintenance_DatabaseBackup_USER_DATABASES_DIFF
- C4_Maintenance_DatabaseBackup_USER_DATABASES_FULL
- C4_Maintenance_DatabaseBackup_USER_DATABASES_LOG
- C4_Maintenance_DatabaseIntegrityCheck_SYSTEM_DATABASES
- C4_Maintenance_DatabaseIntegrityCheck_USER_DATABASES
- C4_Maintenance_IndexOptimize_USER_DATABASES
- C4_Maintenance_Output_File_CleanUp
- C4_Maintenance_SP_Delete_BackupHistory
- C4_Maintenance_SP_Purge_JobHistory
- C4_Report_Create_DBSummary
- C4_Report_Create_Job
- C4_Report_Create_Mail
- C4_Report_Email_DBSummary
- C4_Report_Email_Job
- C4_Report_Email_Mail