



EV technologies

Compliance Monitoring with Sherlock

In 2013, we added a new customer from the healthcare industry to our growing client list. As with most customers, we were engaged to install **Sherlock** and perform an initial metadata assessment. The best part of our assessments is tailoring them to specific use cases envisioned by our customers. This enables us to provide the right information immediately, while also taking some time to show our customers the many things Sherlock can do to augment their information and deployment monitoring requirements.

This customer was headed towards the first compliance milestone for the then-new ICD-10 coding standard. Essentially, International Classification of Diseases is a standardized system for documenting health problems diagnosed by medical professionals. It involves a series of codes that medical professionals use to document the specific diagnosis for a specific patient at a specific time. Among other things, it allows governing bodies and research institutions within the healthcare industry to determine how prevalent certain diseases and conditions are worldwide. (If you're not familiar with ICD, or the International Classification of Diseases, then a quick review of the World Health Organization's website would be useful.)

A Simplified Approach

Sherlock was useful in this scenario - our report inspector engine is able to index not only the structure of a report, but also details about the data source to which the report is connecting. This allowed us to quickly determine the reports that were connecting to the database tables that contained the ICD-9 codes so that they could then have a short list of reports to modify and point to the new tables containing the ICD-10 codes. This helped **reduce the number of reports that they would need "touch" from about 12,000 down to fewer than 500.**

The sample list of reports below shows just a few of the almost 500 reports that were identified using the ICD-9 tables. As you can tell, in addition to getting the report name, we also returned the full folder path where the report is located, the user who created the report, and the last time that an action was taken on that report. In this case, the actions considered for the query were either a view or a refresh. This data came from our Sherlock KPI component released in version 2.3.0.

In this particular scenario, there were also a few reports using command objects in the Crystal Reports content rather than just querying basic tables. These command objects allow a report developer to build custom SQL where the results are presented as a table inside Crystal Reports. The data from these command objects can then be pulled into the report just like any other table dataset.

Actionable Depth

We were able to identify all reports using command objects due to the fact that, when a command object is used, we capture the Table name 'Command' with our report inspector. By filtering the reports list on 'Command', we could return a list of field names used inside the reports from those command objects. We then filtered further to see which reports used specific fields from the command objects for fields that were known to contain ICD-9 code data.

The sample data below shows some data for a single report. You can see that in the object long name we capture the table name as 'Command' and then the field name after (e.g., 'ADT_PAT_CLASS_C'). You could also just pull in the object name rather than the object long name to get the field names.

Report Name	Object Long Name	Object Name
Pain Mgmt Missing Intervention	Command.ADT_PAT_CLASS_C	ADT_PAT_CLASS_C
Pain Mgmt Missing Intervention	Command.BIRTH_DATE	BIRTH_DATE
Pain Mgmt Missing Intervention	Command.COMMENT2	COMMENT2

In the screenshot below, you can see a sample list of reports that are using a command object with a field name of 'ICD9_CODE'. Again, we returned the report name, full folder path, and the owner. The last activity date wasn't required in this case as the list of reports was fewer than 10.

ICD9_CODE

Folder Path Name	User Name	Report Name
Diabetes Education/Endocrine	Administrator	Educational Timelines
My Children's/Quality Indicators	DANBRO	007d PCMH 2D Factor 2 Obesity BMI
My Children's/Quality Indicators	lymil2	007d PCMH 2D Factor 2 Obesity BMI
My Children's/Quality Indicators	lymil2	014 Patients Without 4 DTaP Vaccines
		015 PCMH 6A Factor 1 - First

Final Word

This case study highlights just one scenario where Sherlock was used to assist an organization with a compliance-related activity. In this scenario, it was related to the ICD standard for a healthcare provider; however, the same activities can be applied to any number of governance, risk, and compliance scenarios within any organization.