



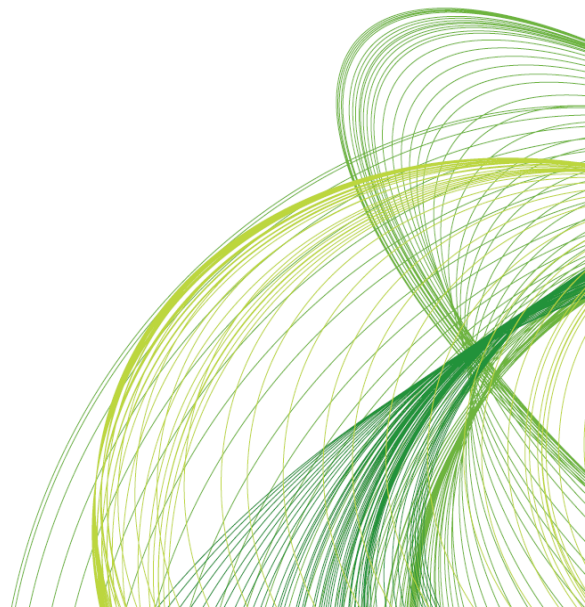
# QlikView

# Governance Dashboard 1.0

Technical Brief

March 2013

[www.qlikview.com](http://www.qlikview.com)



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## About the QlikView Governance Dashboard



The QlikView Governance Dashboard (QVGD) is a free QlikView application available on [QlikMarket](http://market.qlikview.com/) (<http://market.qlikview.com/>) that delivers a 360 degree view of a QlikView deployment. Created using QlikView and QlikView Expressor technology, the QlikView Governance Dashboard provides insight and understanding of a QlikView environment revealing how QlikView is being used in your organization. This insight helps QlikView and IT professionals follow a more manageable and repeatable process for developing QlikView applications as well as address data lineage and impact analysis type questions; ultimately maximizing data governance and return on their QlikView investment.

Built using QlikView, the QlikView Governance Dashboard puts the power of QlikView's unique associative experience in the hands of IT professionals providing immediate visibility into the operations of their QlikView estate. With these insights, IT professionals can make decisions that range from allocating new data sources and hardware to creating a repository of consistent, reusable analytical BI models to support new and existing QlikView applications.

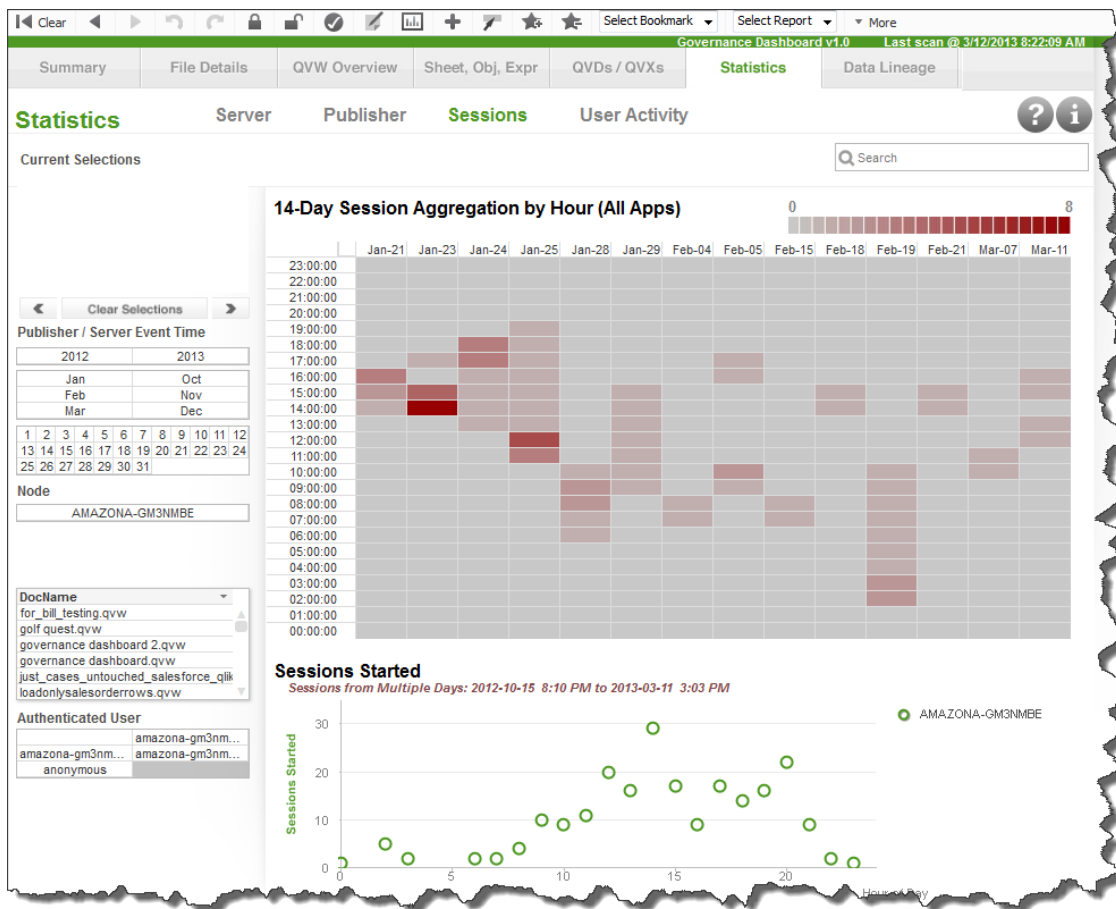


Figure 1 – The Statistics information sheet available Governance Dashboard

## What's new since Beta 2?

### Summary Sheet

There have been significant and beneficial updates to the QlikView Governance Dashboard since its Beta 2 release in December 2012. These updates include new KPIs, support for multi-node QlikView clusters, alert indicators, improved data lineage as well as navigation and usability improvements.

The most noticeable enhancement is the QVGD Summary sheet. The Summary sheet immediately presents key areas of a QlikView deployment to which IT Pros can easily navigate to gather insight on the environment. Its icons act like hyperlinks to corresponding subsets of data available in the various sheets of the Governance Dashboard. Alert bubbles overlay these icons which represent critical monitoring areas and report the number of outstanding errors and warnings associated with each area. For example, by clicking on the Server alert bubble in the Summary page, the page updates to display the server errors and/or warnings indicated by the alert.

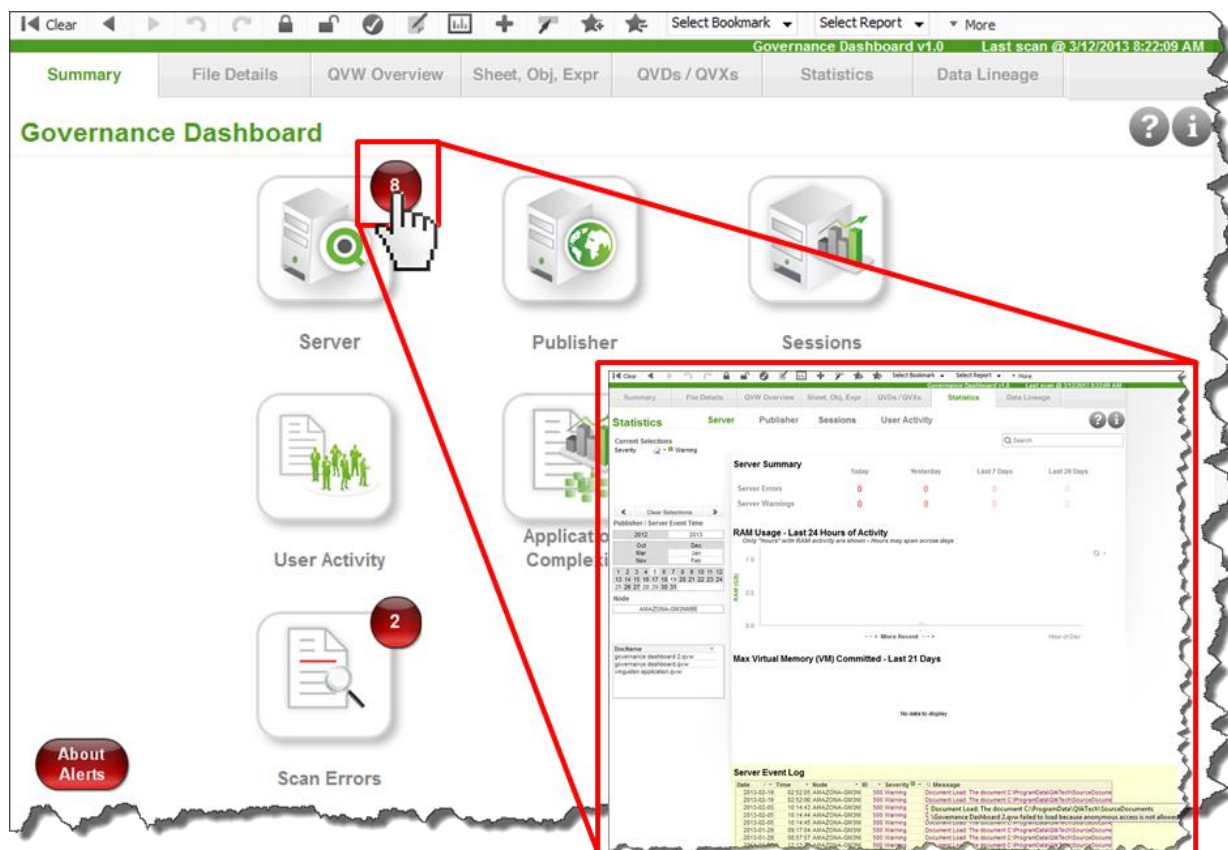


Figure 2 – Warning detail provided after clicking on the Server object from the Summary sheet

## File Details

The File Details information sheet has an improved look and provides summary and detail data on the QlikView files that have been scanned within a QlikView deployment; facts include the number of files and their respective types as well as scan history, scan errors and detail on the files being monitored. Use this sheet to gather an overall perspective of the various files used in your deployment such as .log, .qvw, .qvd, .qvx and .xml.

The screenshot displays the 'File Details' section of the Governance Dashboard. It features a navigation bar with tabs for Summary, File Details (active), QVW Overview, Sheet, Obj, Expr, QVDs / QVXs, Statistics, and Data Lineage. The main content area is titled 'File & Scan Details' and includes several sub-sections:

- Current Selections:** A sidebar with a 'Clear Selections' button and a 'Scan Date' calendar for 2013.
- Total Errors in Last Scan:** 2 in 2 files. A search bar is provided.
- Error Messages Table:**

Ext	FileName	FileTime	Message	Stat...
qvw	C:\ProgramData\QlikTech\SourceDocuments\lqv_sales_analysis_complete_mod_AVG.qvw	2012-11-01 10:11-01	MSG_QVW_HEADER_PARSER_ERROR: An XML section of the QVW file 'C:\ProgramData\QlikTech\SourceDocuments\lqv_sales_analysis_complete_mod_AVG.qvw'	W
qvw	C:\ProgramData\QlikTech\SourceDocuments\backup\lqv_sales_analysis_complete_mod.qvw	2012-10-25 16:10-25	MSG_QVW_HEADER_PARSER_ERROR: An XML section of the QVW file 'C:\ProgramData\QlikTech\SourceDocuments\backup\lqv_sales_analysis_complete_mod.qvw'	W
- File Scan Summary:**

Performance Log Files -	1	Session Log Files -	1	QVW Files -	32
QVP Task Result Files -	9	Server Log Entries -	42,268	QVW Log Files -	2
Event Log Files -	1	Audit Log Files -	1	QVD Files -	6
				QVX Files -	6
- File Scan History: 2012/10/16 to 2013/03/12:**
  - 2013/03/12 last scan
  - 135 total days captured
  - 6.4 average scans per week
- Sheets, Objects, and Expressions:**

Type	Count
Variable	4,864
Text Object	1,165
Expression	1,092
Dimension	816
- All Files Monitored:** Last Updated: 2013/03/12. A table listing files with columns for Ext, Document Name, Scan Date, Author, FileDate, Size (Bytes), Generate Log?, and Path.

Figure 3 – File and Scan Details show stats and information on all files used in your QlikView deployment.

## QVW Overview

The QVW Overview sheet is now arranged to provide insight on individual QlikView applications including a detailed complexity analysis of all QlikView applications defined in the scanned path.

### Application Complexity

Application complexity can be defined by utilizing a set of user defined thresholds. Use this sheet to identify what QlikView applications are deemed the most complex and refine the process of developing QlikView applications.

Thresholds include:

- Cardinality of data
- Size of the application in megabytes
- # of fields
- # of tables
- # of rows
- # of sheets and objects
- # of expressions, long expressions, calculated and normal dimensions
- # of set analyses used

QVWs that are used often and exceed the threshold of one or more attributes are probably those whose performance could be improved by reducing their complexity. Their improvement is also likely to benefit the QlikView Server performance by reducing system resource requirements.

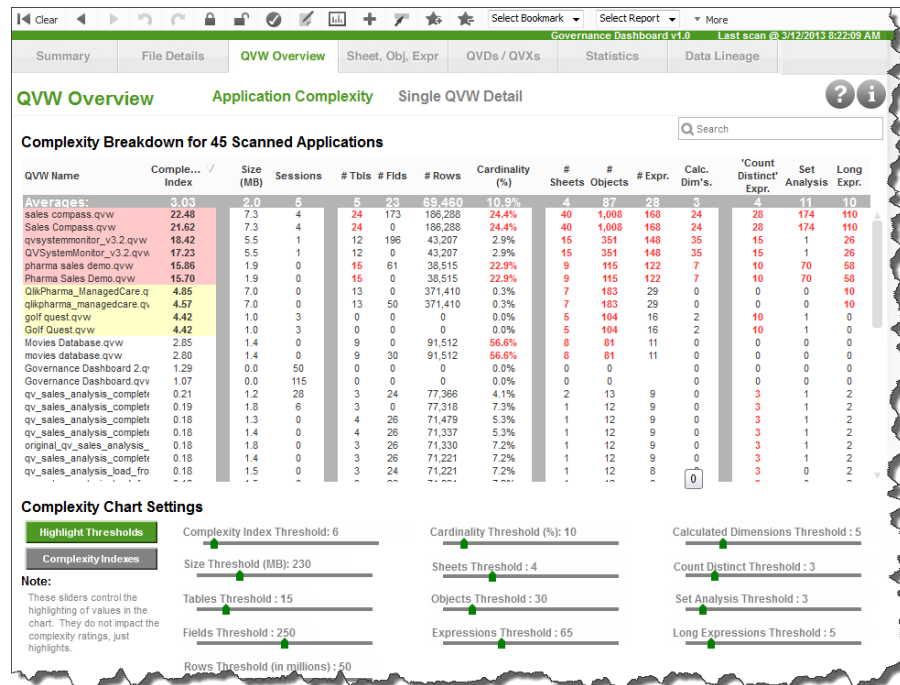


Figure 4 – Application Complexity with user defined thresholds

## Single QVW Detail

Single QVW Detail has had some minor usability improvements and updates with its selection interface. This sheet provides general information for the selected Qlikview application such as the author, title, file size and create date. It also displays metrics on the types of objects used, the number of data sources the QlikView applications accesses and its usage showing the number of sessions and users. This sheet is helpful when identifying the number and types of sources of data used by a QlikView application including how often the application is used.

The screenshot shows the 'Single QVW Detail' view in the Governance Dashboard. The main content area is titled 'qv\_sales\_analysis\_complete.qvw' and includes the following sections:

- Current Selections:** Shows the file path 'C:\ProgramData\QlikTech\SourceDocuments\qv\_sales\_analysis\qv\_sales\_analysis.qvw' and the QVW Name 'qv\_sales\_analysis'.
- General Information:**
  - Document: Sales Analysis - Complete Direct Data
  - Document Author: Michael Tarallo
  - File Size: 1.20MB
  - Created on: 2012-10-25
- Objects:**
  - Sheets: 2
  - Total Objects: 34
  - Variables: 39
  - Charts: 2
  - Tables: 1
  - List Boxes: 7
- Data Model:**
  - Number of Tables: 3
  - Number of Fields: 24
  - Total # of Rows: 77,366
  - % Distinct: 42%
- Sources:**
  - Total Sources: 7
  - QVD Sources: 0
  - Excel Sources: 1
  - Other Sources: 6
- Usage:**
  - Total Sessions: 28
  - Total Users: 0
  - Last 90 Days: 4
  - Last 14 Days: 0
- Tables and Fields:** A table listing QVWTableNames, QVWTableComments, QVWFieldNames, Comments, and Cardinalities.

The 'Tables and Fields' section contains the following data:

QVWTableName	QVWTableComment	QVWFieldName	Comment	Cardinal
_zoom_level	-	_zoom_level	-	10
INLFED	-	_maptype	-	5
ProfitAndAnalysisTable	-	City	-	129
ProfitAndAnalysisTable	-	Latitude	-	133
ProfitAndAnalysisTable	-	LINE_COGS	-	5,466
ProfitAndAnalysisTable	-	LINEPRICE	-	32,597
ProfitAndAnalysisTable	-	Longitude	-	133

Figure 5 – Single QVE detail displaying data source, data model and other general detail information of a QVW



## Sheet Objects and Expressions

The Sheet Objects and Expressions sheet provides an inventory of expressions, object types, labels and variables used overall or for a selected QlikView application. It is separated into two sub-sheets.

### Sheets & Objects

Sheets & Objects provides a summary of all the object types used within all or selected QlikView applications that are available in the QVGD scanning path. These objects include charts, variables, labels and their definitions. This sheet may be helpful when defining QlikView development best practices by analyzing various objects used in QlikView applications. Let's say that there is a large usage of bar and pie charts. This may indicate a training and education issue as those responsible for QlikView development may not be familiar with how or when to use other types of chart objects to visualize data.

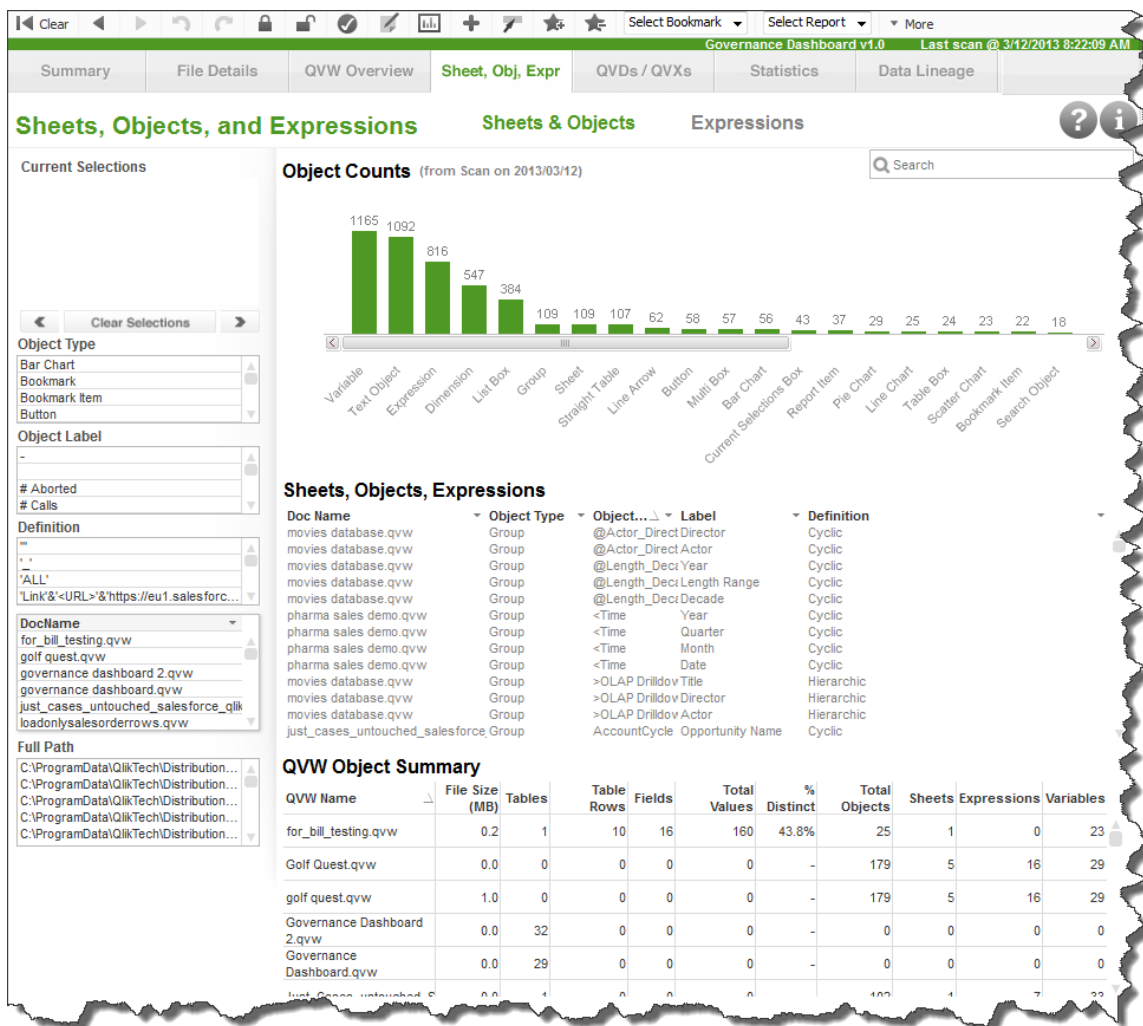


Figure 6 – Sheets and Objects – depicting a summary of object types used



## Expressions

The Expressions sub-sheet allows for the recognition of redundant column labels and expressions that are used across all the QlikView applications. Here one can identify what and where expressions are being used and what labels they are associated with or vice versa. This can identify areas to help reduce redundancy and introduce consistency and conformance.

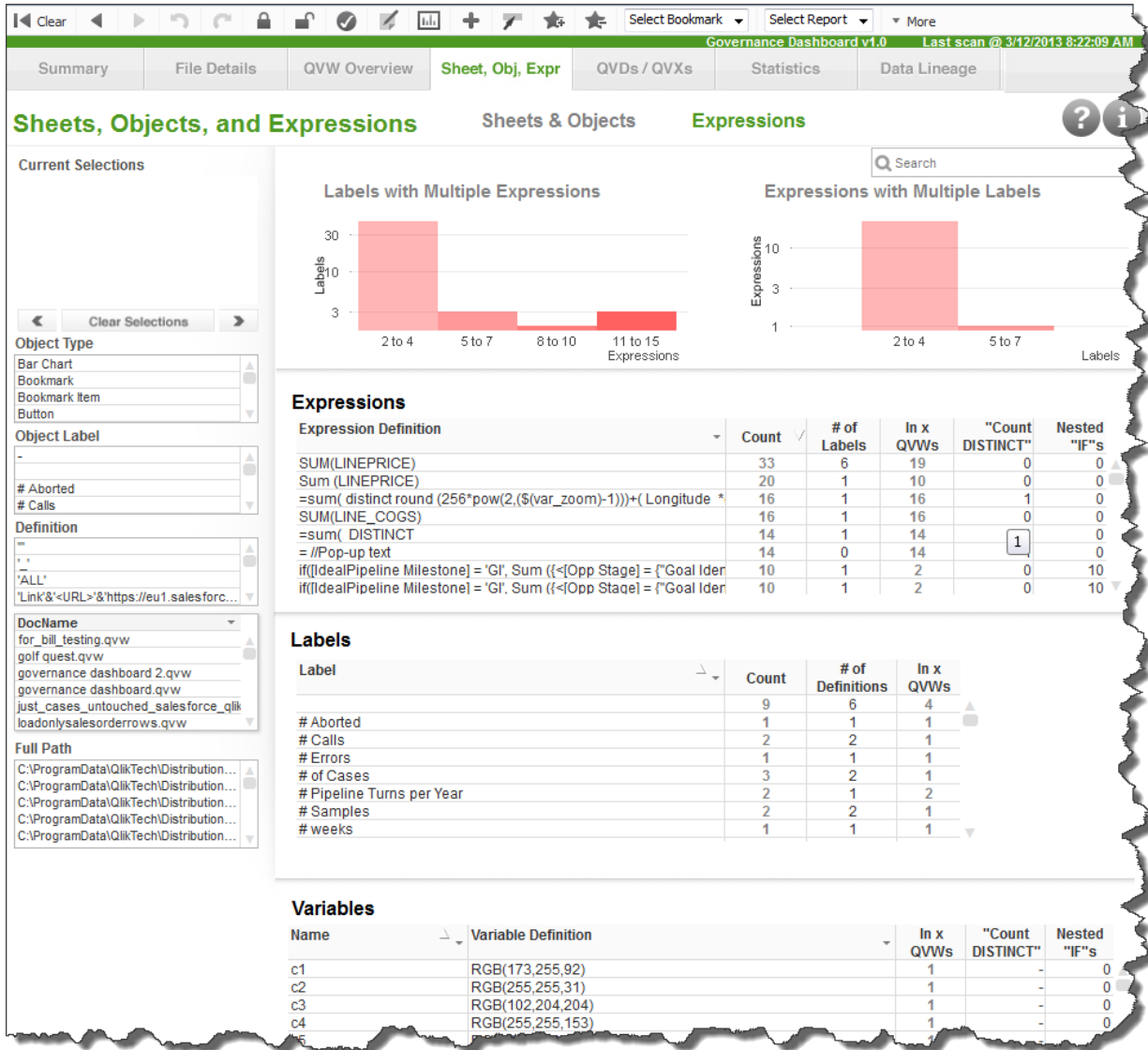


Figure 7 – Distribution of expressions and labels and variables

## QVD/QVXs

The QVD/QVXs sheet provides change analysis on QVD and QVX data files and table models as well as information related to the fields used in those tables. It is defined by 2 sub-sheets files and fields. The data available relates to the table models used in those files, the files' reload history and size change over time measured in both KB and record / row counts.

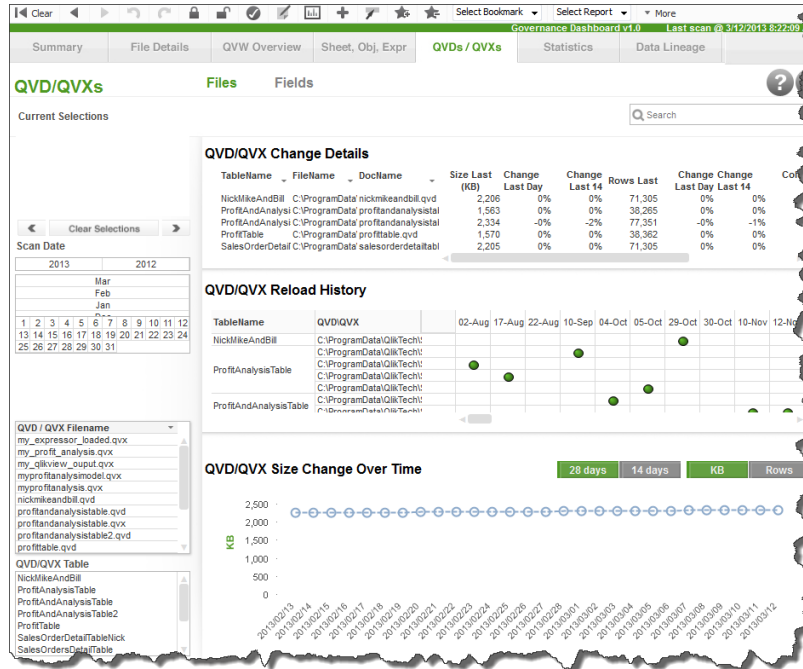


Figure 8 – Files, Change analysis on file sizes and record counts

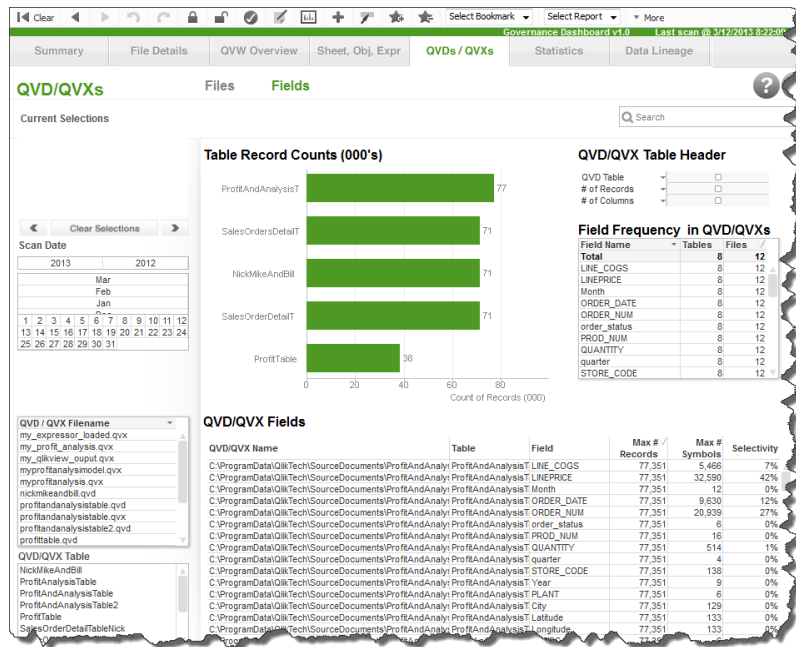


Figure 9 – Fields, Field frequency, tables and files

## Statistics

The Statistics sheet contains a variety of sub-sheets that help with understanding usage of the QlikView applications, server nodes and related processes such as tasks, sessions, user activity and user selections. This information can help those planning to expand QlikView and provide data that can help with future sizing and other expansion requirements.

These include:

- Server
  - Errors and Warnings and event log information
  - Reports the last 24 hours in which RAM usage occurred which could span more than one day
  - Maximum RAM used (GB) per day
  - Maximum number of documents (QVDs/QVXs) loaded into memory on Server at one time

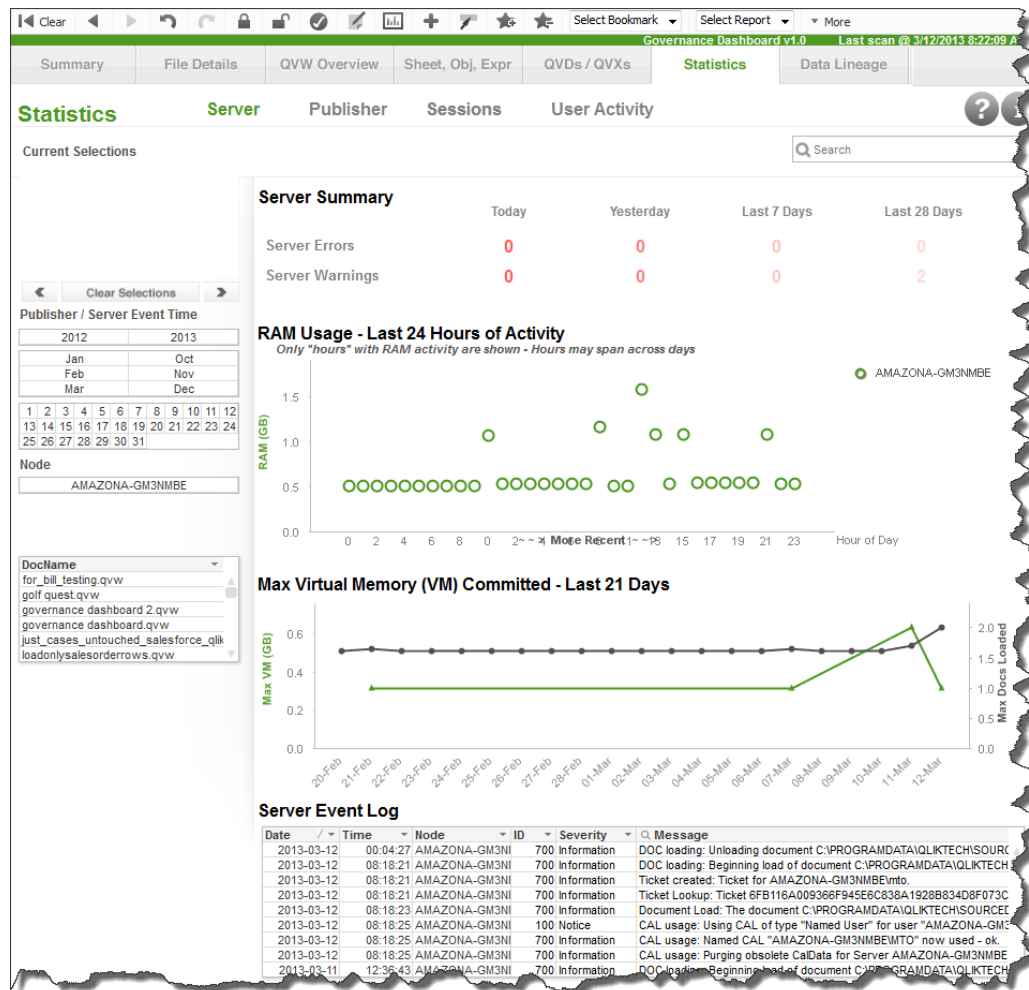


Figure 10 – Server stats

- Publisher
  - Lists tasks and statuses on selected Publisher nodes
  - Doc tasks started by hour on selected node
  - Complete document task lists displaying various associated properties

**Publisher Task "Last Run" Status**

Task Name	Node_Name	StartedAt	Finished	Duration	Status	Warn-in	Internal Error	Marked As Aborted
Add row of data	AMAZONA-GM3	2013-03-12 08:00:32	2013-03-12 08:00:32	00:00:00	Finished	False	False	False
Reload Governance Dashboard	AMAZONA-GM3	3/12/2013 8:21:55 AM			Started	False	False	False
Reload Governance Dashboard 2	AMAZONA-GM3	2013-03-11 10:00:00	2013-03-11 10:00:28	00:00:28	Finished	False	False	False
Reload of Profit Analysis Complete	AMAZONA-GM3	2013-03-12 06:00:00	2013-03-12 06:00:18	00:00:18	Finished	False	False	False
Reload QV Sales Analysis Mod_A	AMAZONA-GM3	2013-03-12 06:00:00	2013-03-12 06:00:20	00:00:20	Finished	False	False	False

**Doc Tasks Started by Hour**

Tasks Started vs Hour of Day for Node: AMAZONA-GM3NMBE

Hour of Day	Tasks Started
6	2.0
10	1.0
23	2.0

**Complete Document Task List**

Task Name	DocName	Enabled	Trigger	Reload	Distribution	Allow Plugin	Allow Download	Allow ZFC
Add row of data	-	Enabled	Hourly	-	No Distribution	Prohibit	Prohibit	Prohibit
Reload Governance Dashboard	governance dashboard.qvw	Enabled	Daily	Full	No Distribution	Allow	Prohibit	Allow
Reload Governance Dashboard 2.0	governance dashboard 2.qvw	Disabled	Daily	Full	No Distribution	Allow	Prohibit	Allow
Reload of Profit Analysis Complete	qv_sales_analysis_com	Enabled	Daily	Full	No Distribution	Allow	Prohibit	Allow
Reload QV Sales Analysis Mod_AVG	qv_sales_analysis_com	Enabled	Daily	Full	No Distribution	Allow	Prohibit	Allow

Figure 11 – Publisher stats showing “Last Run” and Doc Task Started by Hour

- Sessions
  - Heat chart of most active sessions and applications
  - Number of sessions started by hour of day
  - Session log detail

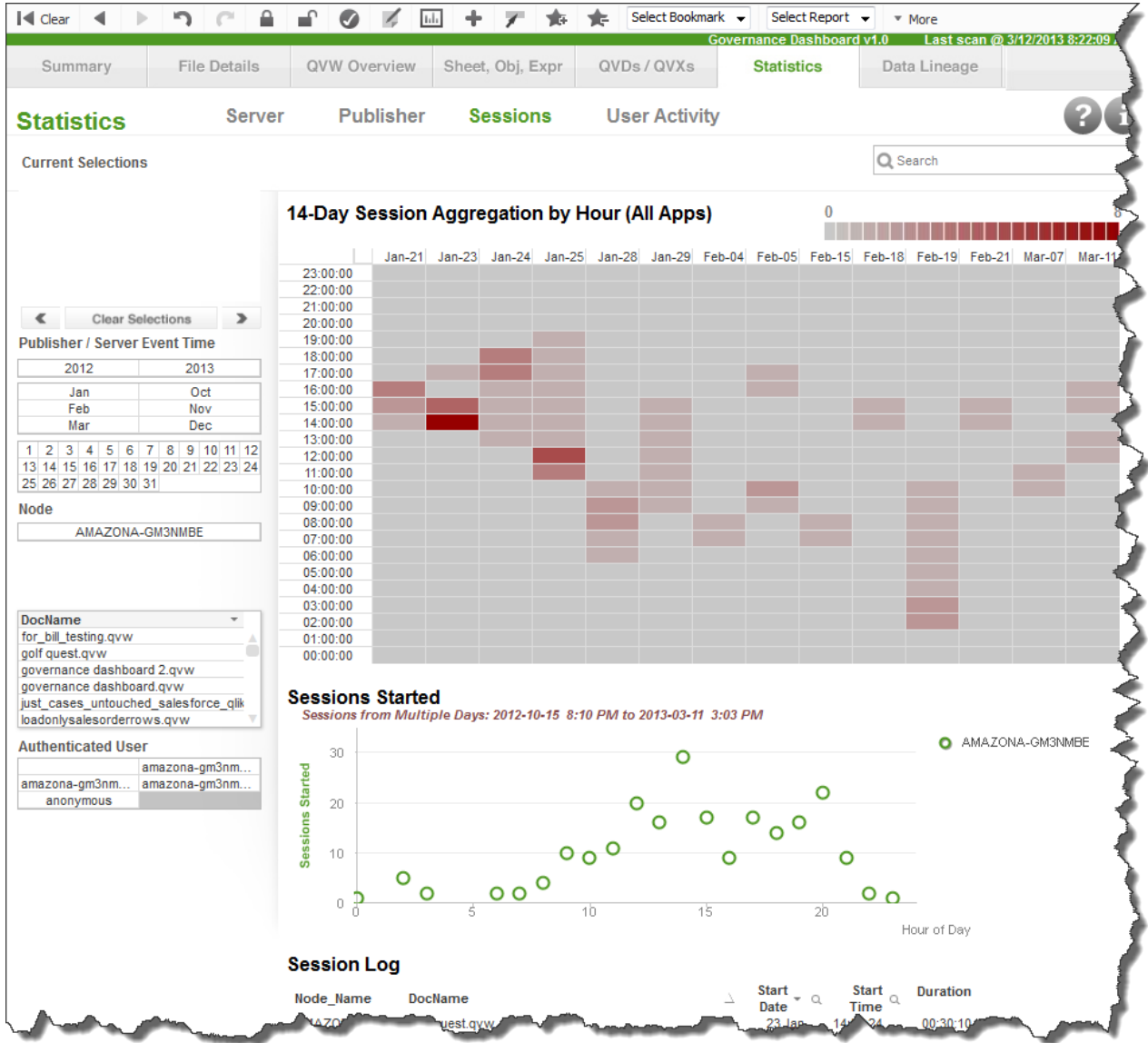


Figure 12 – Session stats depicting the most active sessions per hour over the last 14 days

- User Activity
  - Activity by node – active sessions, active users, selections
  - Doc Usage – user actions, selections, session duration, number of users
  - User Activity from the audit log – doc name, filter selections, user and time

**Node Activity Summary**

Node	Year	Month	Day	Hour	Events	Session Starts	Active Doc Sessions	Active Users	CPU Load	Session Calls	MBytes Sent + Rec'd	User Selections	User Actions (Audit Log)	
AMAZONA-GM3NMBE	2012	Oct	15	20	0	1	1	1	2	137	2.3	5	0	
				21	0	1	1	0	0	0.0	0	0	0	
				16	14	0	5	4	2	251	2.4	0	0	
				15	0	1	1	1	0	0.0	0	0		
				17	3	0	1	1	0	0	50	0.5	0	0
				19	15	0	1	0	0	0	1	0.0	0	0
				17	0	1	1	0	0	13	0.3	0	0	
				18	0	0	0	0	1	0	0.0	0	0	
				19	0	2	1	1	0	85	0.8	0	4	
				20	0	7	0	0	1	248	5.7	6	9	
21	0	3	0	0	0	203	2.6	2	6					
22	0	0	1	0	0	0	0.0	0	0					

**Doc Usage**

Document	Sessions	Unique Users	User Selections	Selections per Session	Avg Session Duration (Min)	MBytes Sent + Rec'd	Session Calls	Opened on x Nodes
<b>Total</b>	<b>218</b>	<b>5</b>	<b>247</b>	<b>1.1</b>	<b>35.8</b>	<b>274.8</b>	<b>30,249</b>	<b>1</b>
golf quest.qvw	3	4	3	1.0	30.8	4.1	92	1
governance dashboard 2.qvw	50	4	20	0.4	44.2	63.0	10,310	1
governance dashboard.qvw	115	3	170	1.5	30.2	155.0	15,530	1
loadonlysalesordererrors.qvw	3	1	0	0.0	30.1	0.1	9	1
qv_regional_analysis_using_qvd.qvw	1	1	5	5.0	39.9	1.4	235	1
qv_sales_analysis_complete.qvw	28	4	30	1.1	29.3	37.6	3,294	1
qv_sales_analysis_complete_mod_avg.qvw	6	2	0	0.0	39.1	2.3	108	1
qvqdb_profit_analysis_1.qvw	3	2	2	0.7	30.3	2.7	80	1
qvsystemmonitor_v3.2.qvw	1	2	5	5.0	94.7	4.7	244	1
sales compass.qvw	4	1	2	0.5	23.4	1.2	146	1
vinuiden.application.qvw	4	2	10	2.5	140.4	2.8	201	1

**User Activity (Audit Log)**  
*Audit Log Must Be Enabled in QEMC*

Doc Name	Node	Timestamp	User	Type	Field or Message
golf quest.qvw	AMAZONA-GM3	2012-10-29 15:10:25	anonymous	Sheet	Activated sheet Document\SH02
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 16:08:19	anonymous	Sheet	Activated sheet SHQVD
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 16:08:26	anonymous	Sheet	Activated sheet SHStat
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 16:08:30	anonymous	Sheet	Activated sheet SHSessionUsage
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 16:09:27	anonymous	Selection	Clear All
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 16:09:35	anonymous	Selection	Month of Year
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 17:11:18	anonymous	Sheet	Activated sheet SHStat
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 17:11:43	anonymous	Sheet	Activated sheet SHSessionUsage
governance dashboard 2.qvw	AMAZONA-GM3	2012-12-18 17:13:07	anonymous	Sheet	Activated sheet SHStatPub

Figure 13 – User activity summary and audit log information

## Data Lineage

The Data Lineage sheet has been greatly improved to provide a more complete view of all data sources, targets and their associated lineage used in a QlikView deployment. An administrator can identify sources and targets and their respective types that are being used by QlikView applications. They can trace those sources to generated targets such as QVDs and QVXs or vice versa.

The QVGD has also been updated to include QlikView Expressor data sources (initiated from the QlikView Expressor Connector - QVEC). QlikView applications that use the QVEC as a data source are now displayed and identify the QlikView Expressor workspace, deployment package, project name and dataflow lineage information.

The parameters list boxes on the left enables IT pros to easily filter on the most meaningful criteria which include timeframes, data sources, QlikView applications, QlikView Expressor dataflows, data targets, connection strings, load statements and sub-processes. And with the QlikView associative experience there isn't any predetermined starting point, so admins can easily filter anywhere to reveal the most important information immediately.

The screenshot displays the 'Data Lineage' interface. At the top, there's a navigation bar with tabs: Summary, File Details, QVW Overview, Sheet, Obj, Expr, QVDs / QVXs, Statistics, and Data Lineage. The main content area is titled 'Data Lineage' and includes a 'Current Selections' section with a 'Scan Date' calendar (set to 2013) and a 'Source' list. A central 'QVD/QVX Data Source Type Summary' table shows counts for various source types. Below this are sections for 'Sources', 'Processes', 'Generated QVDs/QVXs', and 'Load, Select Statements (Database & Expressor Sources)'. The interface is interactive with various filters and buttons like 'Source to Target' and 'Target to Source'.

Total	AutoGener	Database	Excel	Expressor	Inline	QVD	QVX	Resident	Unknown
168	1	6	4	2	1	16	27	50	62

Source	Source_Type	Used by # QVWs
INLINE	Inline	6
AUTOGENERATE	AutoGenerate	4
"qve_workshop".dbo.PlantLookUp	Database	3
"qve_workshop".dbo.SalesOrderDetail	Database	3
SalesRepOrders_c	Database	3
e:\qvdocuments\inventory_data.xls	Excel	3
c:\programdata\qliktech\source\documents\profitandanalysis\table.qvd	QVD	3
"qve_workshop".dbo."location_table"	Database	2

Process	QVDs/QVXs Generated
<b>Total</b>	<b>4</b>
DeploymentPac...-Project3.0::Dataflow1 (E:\QlikViewExpressor\Workspaces\QVE\Workspace_1\Metadat	1
QVDDeployment...Total Profit:Project2.0::SalesOrderDataflow (E:\QlikViewExpressor\Workspaces\QVE\Work	1
C:\ProgramData\QlikTech\Source\Documents\qv_sales_analysis_complete_mod.qvw	1
C:\ProgramData\QlikTech\Source\Documents\qv_sales_analysis_complete.qvw	1
C:\ProgramData\QlikTech\Source\Documents\mike_profit_analysis_demo_2.qvw	0
QVDDeploymentPackageProfit:Project2.0::SalesOrderDataflow::Step_1 (E:\QlikViewExpressor\Workspaces\Q	0
C:\ProgramData\QlikTech\Source\Documents\backup\for_bill_testing.qvw	0

Figure 14 – Data Lineage sheet



## References

Product Documentation - <http://documentation.qlikview.com/governance-dashboard/1.0/index.htm>

Product Page - <http://www.qlikview.com/us/explore/products/governance-dashboard>

Product Download - <http://market.qlikview.com/qlikview-governance-dashboard.html>

Datasheet - [http://d3jm4hfh69p4ug.cloudfront.net/docs/Data-Governance\\_Datasheet.pdf](http://d3jm4hfh69p4ug.cloudfront.net/docs/Data-Governance_Datasheet.pdf)

FAQ - [http://d3jm4hfh69p4ug.cloudfront.net/docs/Data-Governance\\_FAQ.pdf](http://d3jm4hfh69p4ug.cloudfront.net/docs/Data-Governance_FAQ.pdf)