Identifying and resolving Websense Web Security v7.6 logging issues when reports are blank

Webinar January 2012

web security | data security | email security

Webinar Presenter

Greg Didier

- Title: Support Specialist
- Accomplishments:
  - 9 years supporting Websense products
- Qualifications:
  - Technical Support Mentor
  - Product Trainer

Goals And Objectives

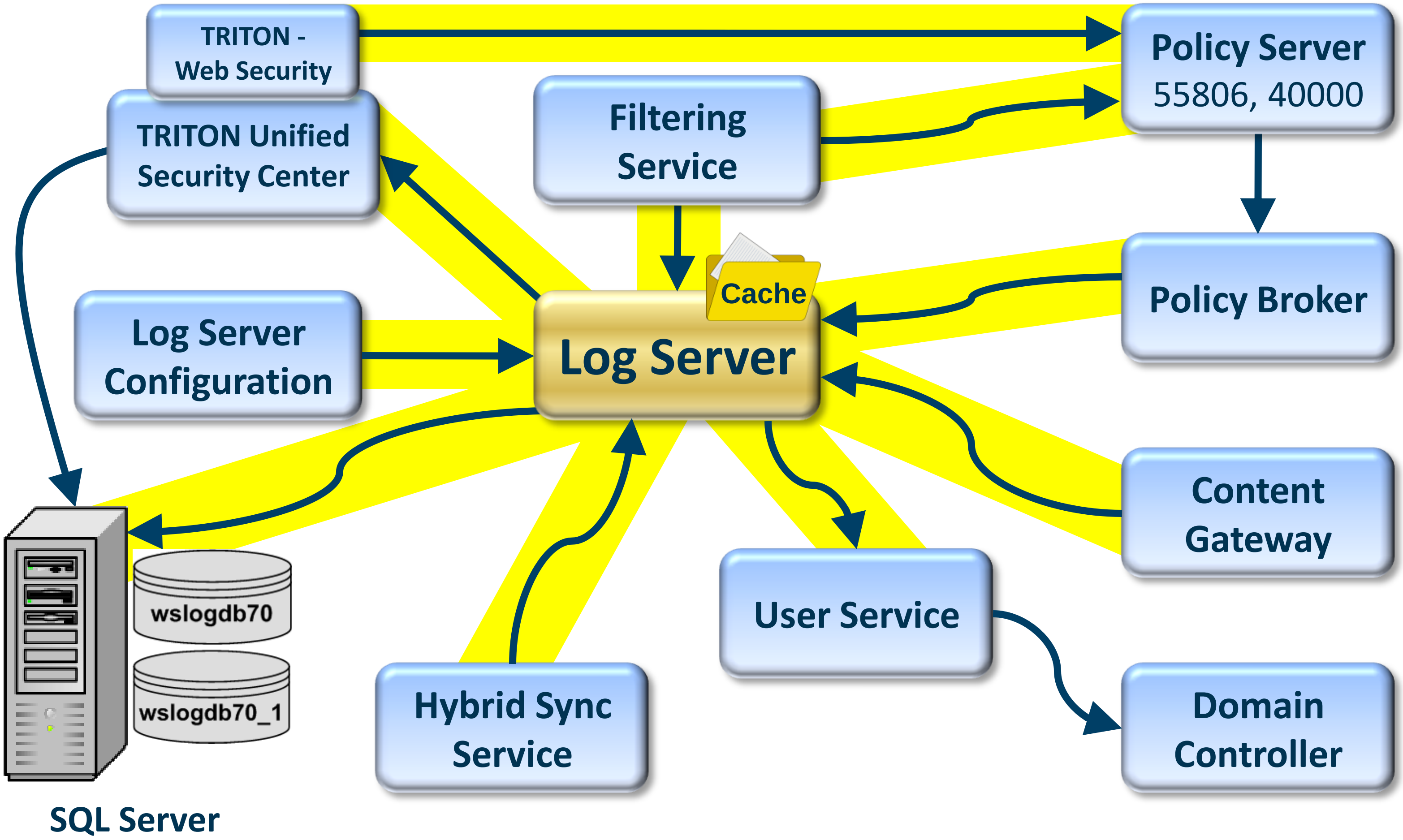
- Logging components
  - Chain of communication
  - Data flow process
- Reporting (SQL Server) database
  - Connection
  - Account permissions
- Diagnostics
- Troubleshooting
- After this webinar
  - Increased confidence in troubleshooting Websense reporting tools.

Major Components

- Microsoft SQL Server
  - Hosts the reporting database (Websense Log Database).
- Log Server
  - Accepts Web activity data and forwards to SQL Server.
- Reporting
  - Available from TRITON - Web Security management interface.
    - Investigative Reports
    - Presentation Reports
    - Status > Today and History pages

Logging

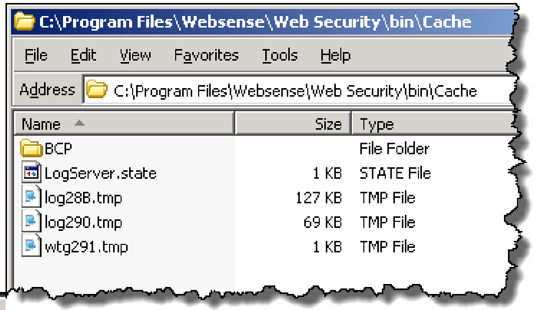
- Stepping through the flow process from the beginning.
  - First, we need SQL Server available in our network…



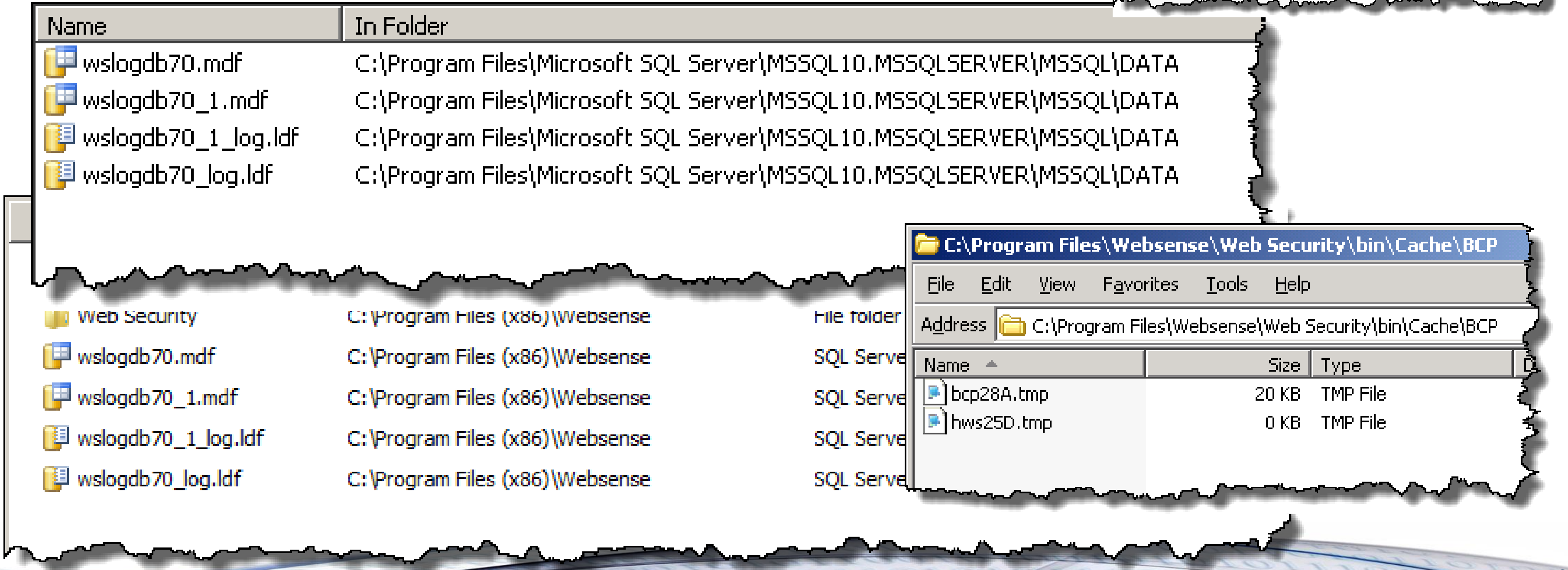
Logging and Database Files

websense
ESSENTIAL INFORMATION PROTECTION™

- Physical files
  - Websense Log Database files.
    - One catalog database: **wslogdb70**
    - One or more partition databases: **wslogdb70_x**
  - Log Server “\bin\Cache” files
  - Log Server “\bin\Cache\BCP” files


C:\Program Files\Websense\Web Security\bin\Cache
File Edit View Favorites Tools Help
Address C:\Program Files\Websense\Web Security\bin\Cache

Name	Size	Type
BCP		File Folder
LogServer.state	1 KB	STATE File
log28B.tmp	127 KB	TMP File
log290.tmp	69 KB	TMP File
wtg291.tmp	1 KB	TMP File



Name	In Folder
wslogdb70.mdf	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA
wslogdb70_1.mdf	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA
wslogdb70_1_log.ldf	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA
wslogdb70_log.ldf	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA

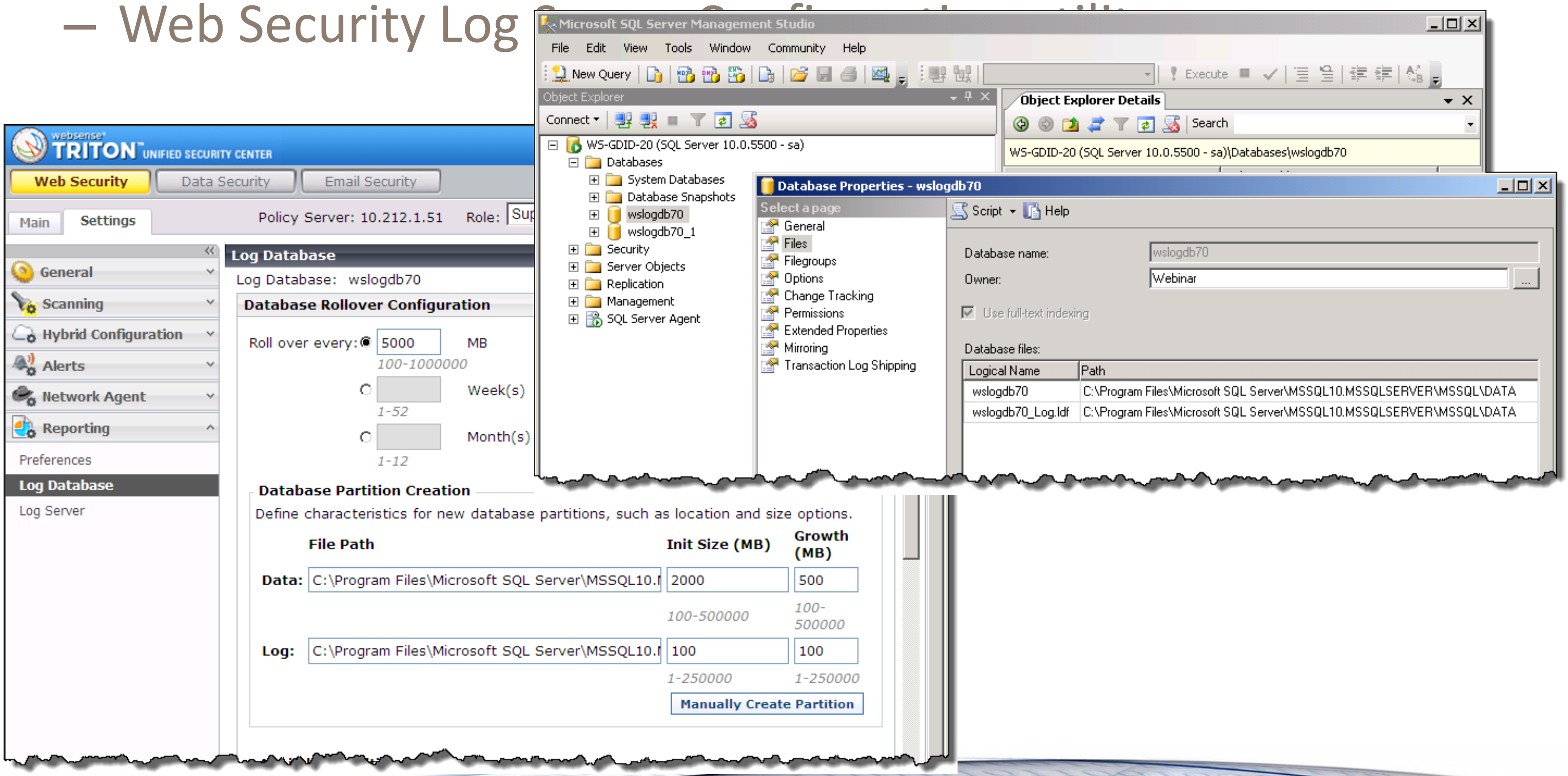
Web Security	C:\Program Files (x86)\Websense	File folder
wslogdb70.mdf	C:\Program Files (x86)\Websense	SQL Serve
wslogdb70_1.mdf	C:\Program Files (x86)\Websense	SQL Serve
wslogdb70_1_log.ldf	C:\Program Files (x86)\Websense	SQL Serve
wslogdb70_log.ldf	C:\Program Files (x86)\Websense	SQL Serve

C:\Program Files\Websense\Web Security\bin\Cache\BCP
File Edit View Favorites Tools Help
Address C:\Program Files\Websense\Web Security\bin\Cache\BCP

Name	Size	Type
bcp28A.tmp	20 KB	TMP File
hws25D.tmp	0 KB	TMP File

Logging and Database Files

- File paths:
  - TRITON - Web Security management interface
  - Microsoft SQL Server Management Studio
  - Web Security Log



Policy Server: 10.212.1.51 Role: Sup

Log Database

Log Database: wslogdb70

Database Rollover Configuration

Roll over every: ● 5000 MB (100-1000000)

○ Week(s) (1-52)

○ Month(s) (1-12)

Database Partition Creation

Define characteristics for new database partitions, such as location and size options.

	File Path	Init Size (MB)	Growth (MB)
Data:	C:\Program Files\Microsoft SQL Server\MSSQL10.I	2000 100-500000	500 100-500000
Log:	C:\Program Files\Microsoft SQL Server\MSSQL10.I	100 1-250000	100 1-250000

Manually Create Partition

WS-GDID-20 (SQL Server 10.0.5500 - sa)

WS-GDID-20 (SQL Server 10.0.5500 - sa)\Databases\wslogdb70

Database name: wslogdb70

Owner: Webinar

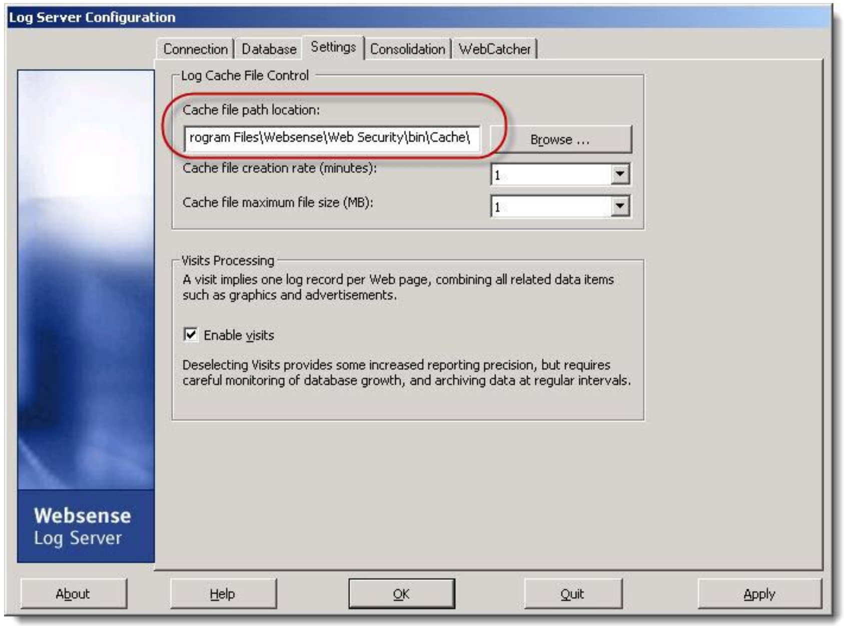
☑ Use full-text indexing

Database files:

Logical Name	Path
wslogdb70	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA
wslogdb70_Log.ldf	C:\Program Files\Microsoft SQL Server\MSSQL10.MSSQLSERVER\MSSQL\DATA

Logging and Database Files

- File paths:
  - TRITON - Web Security management interface
  - Microsoft SQL Server Management Studio
  - Web Security Log Server Configuration utility



Log Cache File Control

Cache file path location: rogram Files\Websense\Web Security\bin\Cache\

Cache file creation rate (minutes): 1

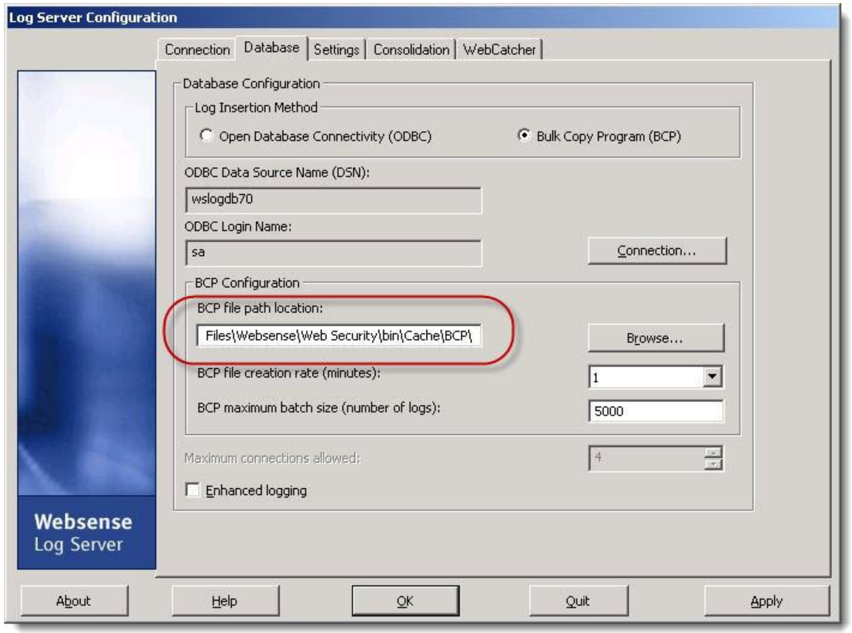
Cache file maximum file size (MB): 1

Visits Processing

A visit implies one log record per Web page, combining all related data items such as graphics and advertisements.

☑ Enable visits

Deselecting Visits provides some increased reporting precision, but requires careful monitoring of database growth, and archiving data at regular intervals.



Database Configuration

Log Insertion Method

○ Open Database Connectivity (ODBC) ● Bulk Copy Program (BCP)

ODBC Data Source Name (DSN): wslogdb70

ODBC Login Name: sa

BCP Configuration

BCP file path location: Files\Websense\Web Security\bin\Cache\BCP\

BCP file creation rate (minutes): 1

BCP maximum batch size (number of logs): 5000

Maximum connections allowed: 4

□ Enhanced logging

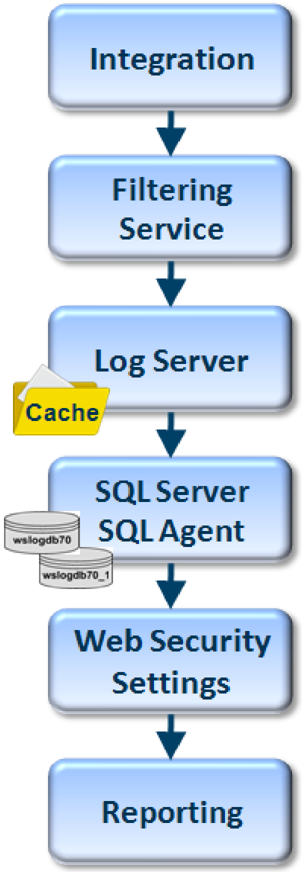
Recap

- Structured environment:

1. **Integration** sends filtering requests to Filtering Service.
2. **Filtering Service** sends Web activity data to Log Server.
   - Log Server is identified in TRITON - Web Security.
3. **Log Server** processes data and forwards it to SQL Server.
   - Cache files (ODBC or BCP)
   - ODBC connection
4. **SQL Server** places data in the catalog database (wslogdb70).
   - **SQL Server Agent** moves data to a partition.
     - Websense_ETL_Job_wslogdb70
   - **Service Broker** (SQL Server 2008 R2 Express) moves data to a partition.
5. **TRITON - Web Security** defines database settings.
6. **Reports** display user Web activity.

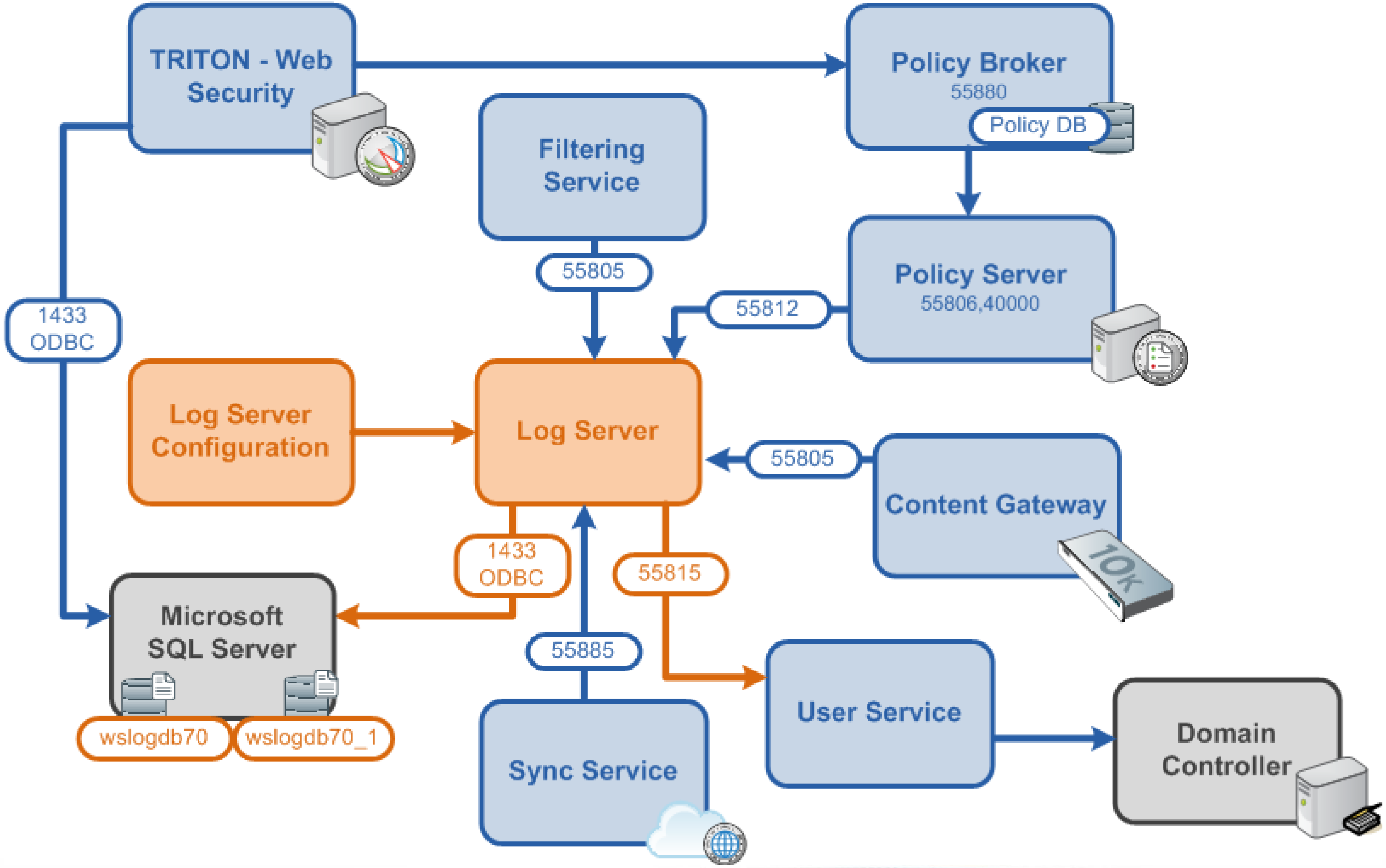
Reporting Issue Appears

- The first symptom may be that reports contain no Web activity data.
- **TIP:** Schedule a daily report.
  - A blank report indicates that a problem exists.
- Where to start troubleshooting?
- Start by diagnosing the issue.
  - Identify the *point-of-failure*.
    - Components communicate in a logical chain of events.
    - A verification can be performed at each step.
- When the *point-of-failure* is identified.
  - Start troubleshooting.



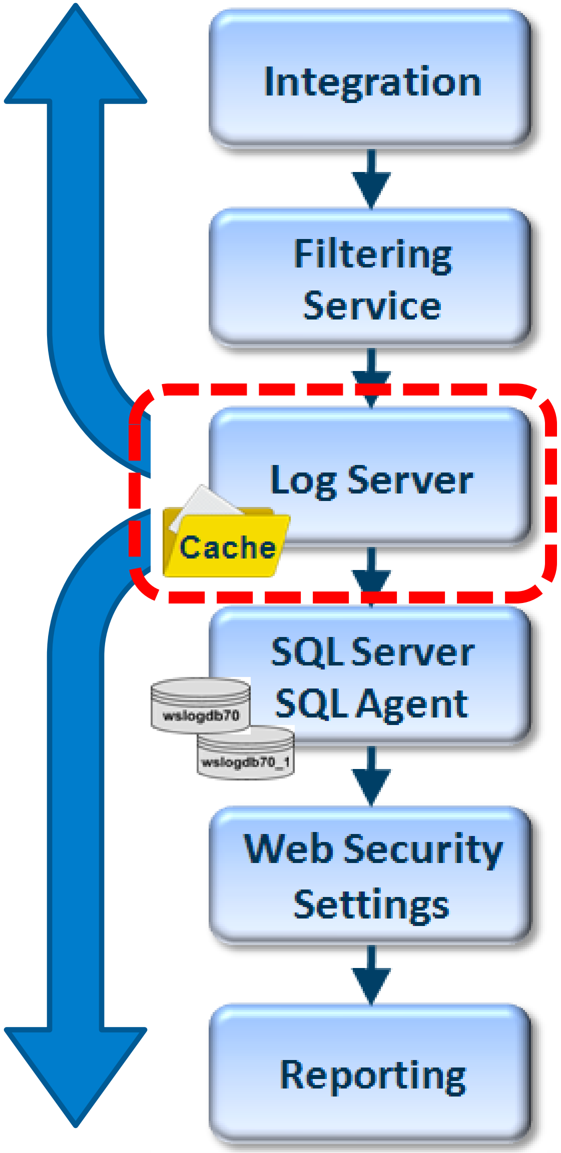
Simplified Logging Diagram

- We only need to examine the handful of services that interact with Websense Log Server.



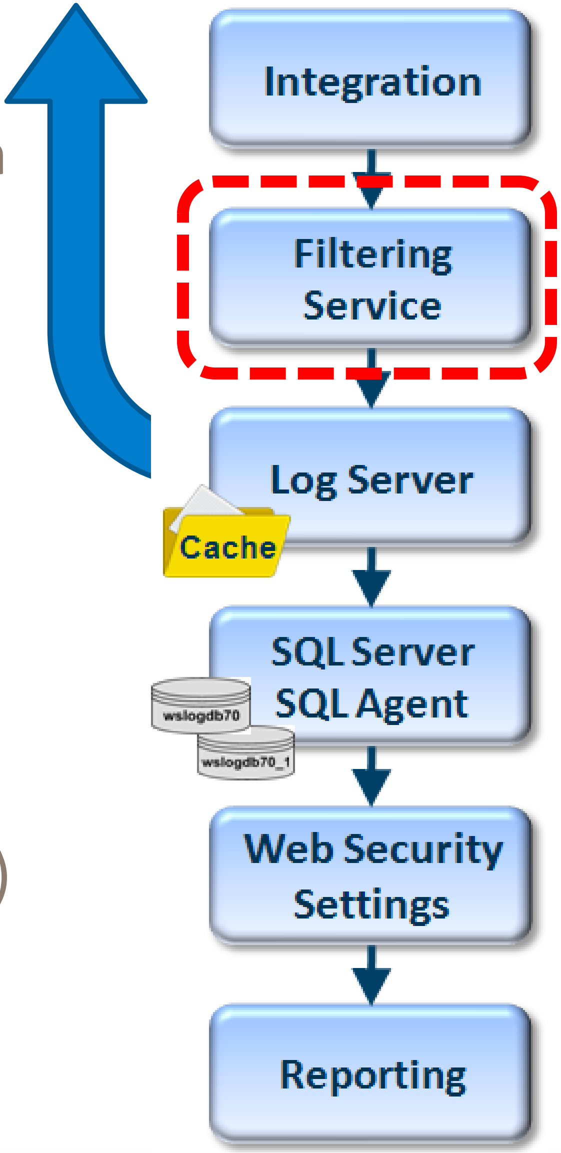
Diagnostic Demonstration

- Log Server
  - Receives Web activity data from Filtering Service and forwards it to SQL Server.
- Begin diagnostics with Log Server
- Diagnostics
  - New **.tmp** files appearing in either **Cache** or **BCP** directories? (no)
  - Log Server running? (yes)
- Demonstration



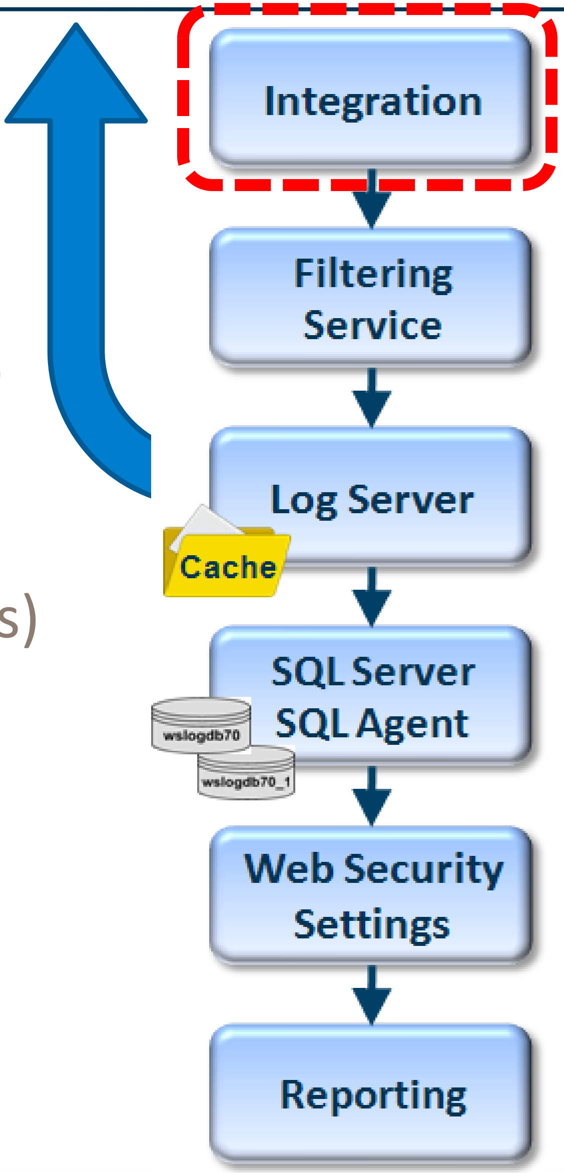
Diagnostic Demonstration

- Filtering Service
  - Receives filtering requests from integration and forwards Web activity data to Log Server.
- Diagnostics
  - Filtering Service running? (yes)
  - Log Server location identified? (yes)
  - Log Server port 55805 open? (yes)
  - URL Categories enabled? (yes)
  - Integration sending filtering requests? (no)
- Demonstration



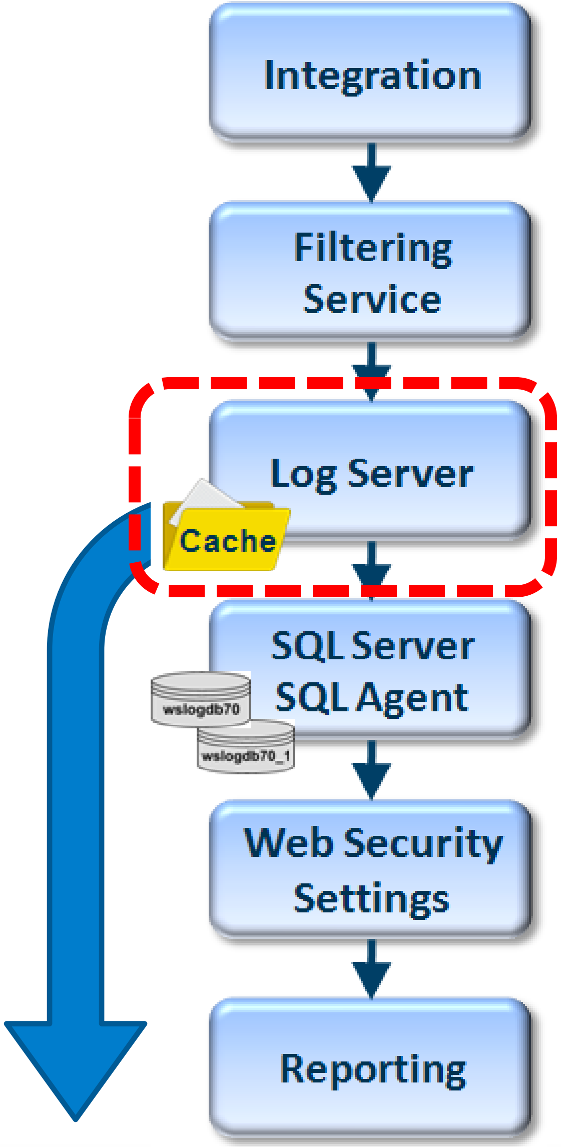
Diagnostic Demonstration

- Integration
  - – Sends filtering requests to Filtering Service
- Diagnostics
  - – Integration sending filtering request? (yes)
    - Check WISP integration statistics.
    - Re-configure the integration.
  - – Validation, users receiving block page? (yes)
- Demonstration



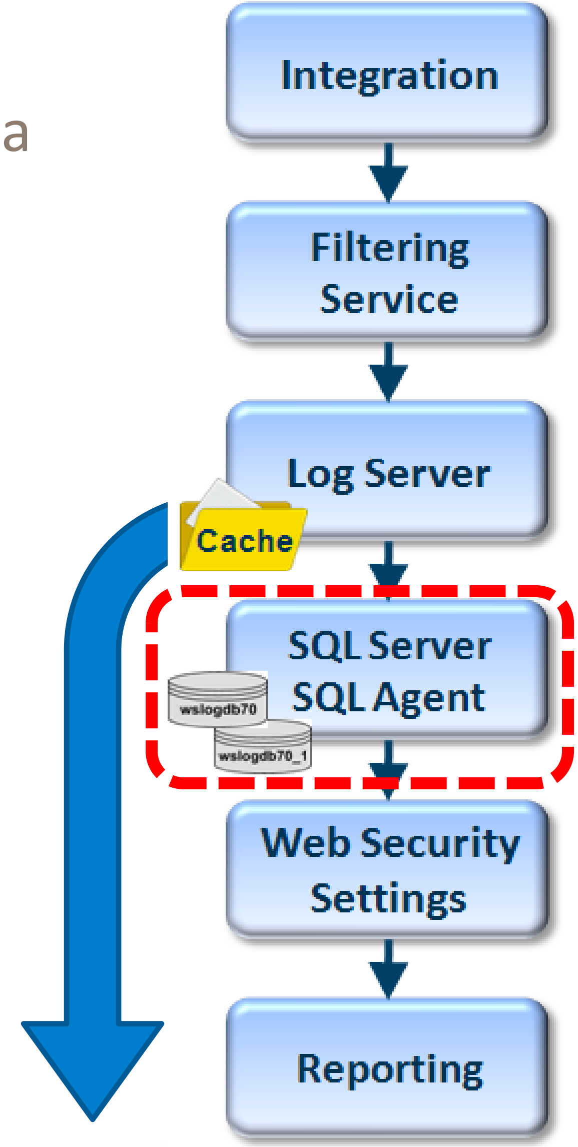
Diagnostic Demonstration

- Log Server
  - Receives Web activity data from Filtering Service and forwards it to SQL Server.
- Diagnostics
  - Log Server running? (yes)
  - Filtering Service sending data? (yes)
  - New **.tmp** files backing up in either **Cache** or **BCP** directories? (no)
  - Connect to SQL Server port 1433? (yes)
  - Reset ODBC and Log Server connections credentials? (yes)
- Demonstration



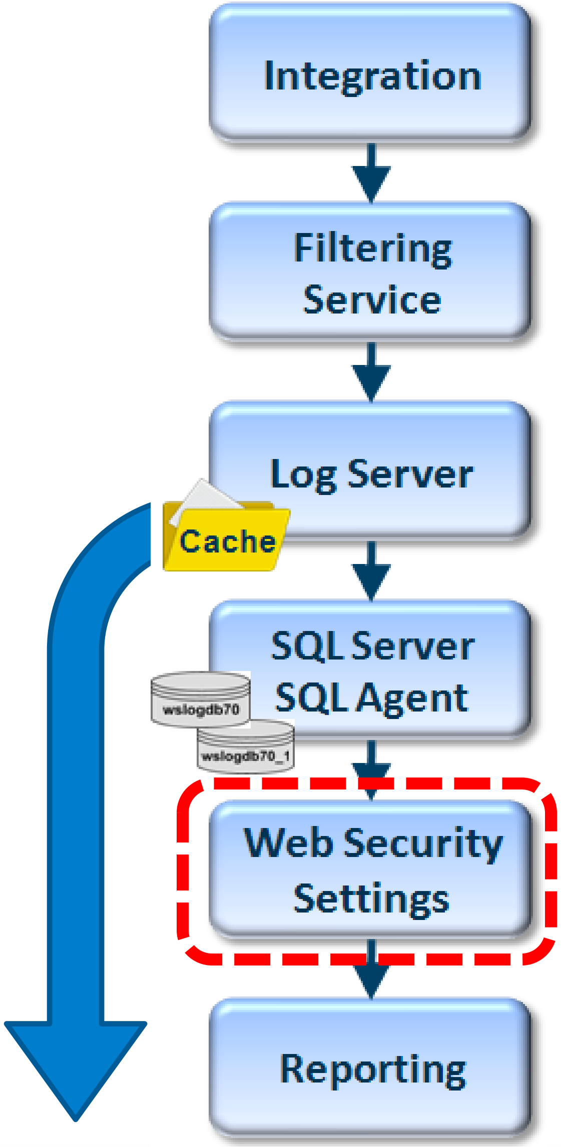
Diagnostic Demonstration

- SQL Server
  - Accepts logging data and then moves it to a partition.
- Diagnostics
  - SQL Server running? (yes)
  - SQL Agent running? (yes)
  - Websense SQL Jobs exist? (yes)
  - ETL_Job runs without error? (yes)
  - Data moving in and out of the INCOMINGBUFFER table? (yes)
  - Daily top 10 hits changing? (yes)
  - Examine databases? (yes)
- Demonstration



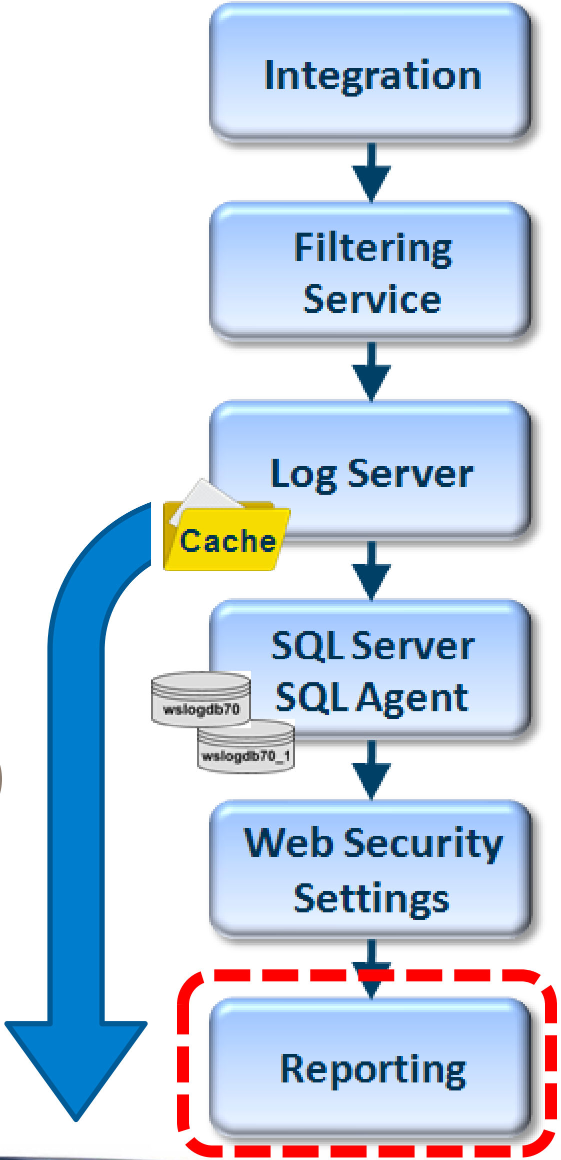
Diagnostic Demonstration

- TRITON - Web Security
  - Offers database options and settings.
- Diagnostics
  - Error Log Activity? (no)
  - Databases available and enabled? (yes)
  - Create new database partition? (yes)
- Demonstration



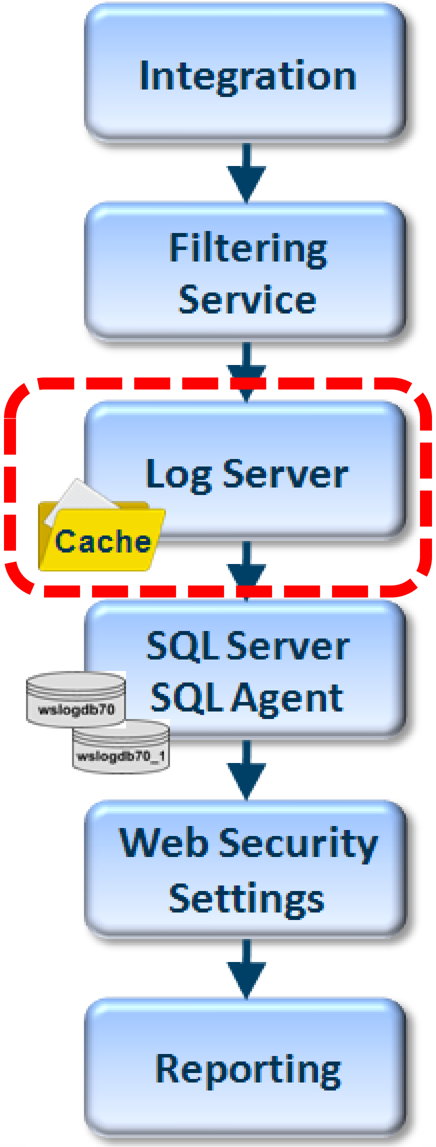
Diagnostic Demonstration

- Reporting
  - Displays Web activity.
- Diagnostics
  - Investigative Reports displaying correct database? (yes)
  - Presentation Reports displaying Web activity? (yes)
  - Today page displaying Web activity? (yes)
  - History page displaying Web activity? (yes)
  - Validation? (yes)
- Demonstration



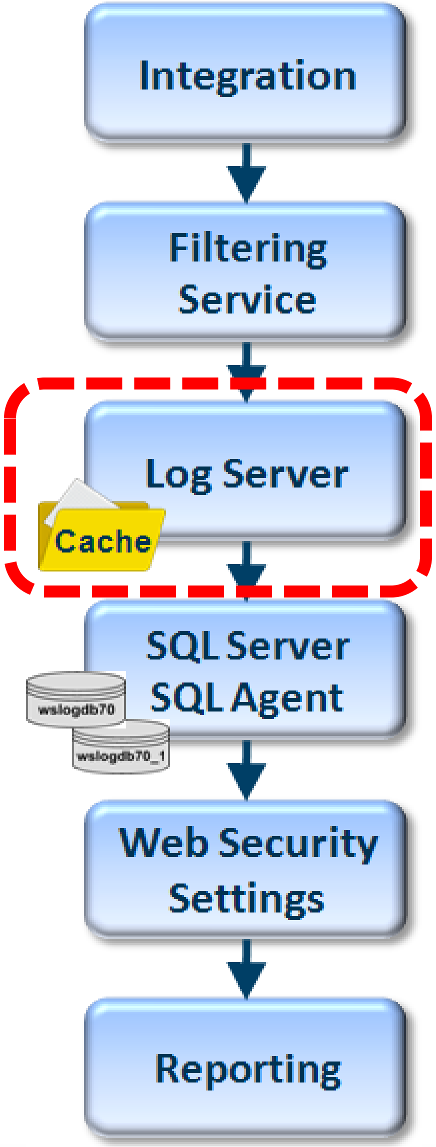
Diagnostics Recap

- Multiple components:
  1. Integration
  2. Filtering Service
  3. Log Server
  4. SQL Server
  5. TRITON - Web Security settings
  6. Reporting
- Start diagnostics with Log Server.
- Troubleshooting starts when you identify the point of failure.



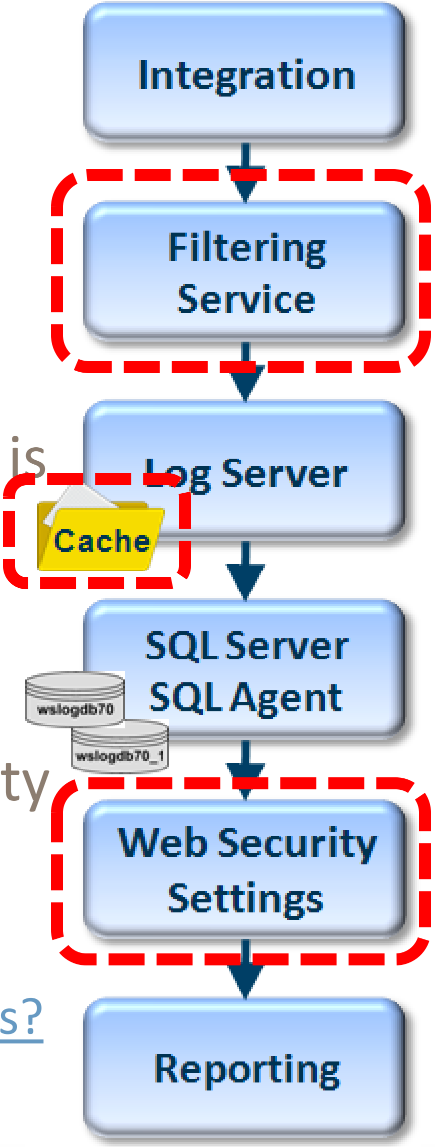
Troubleshooting Resources

- First, ensure Web filtering is working.
- Log Server running?
  - If not starting, then run Log Server debug.
    - Log Server is not running
    - Stopping and starting Websense services
    - Web Log Server does not start



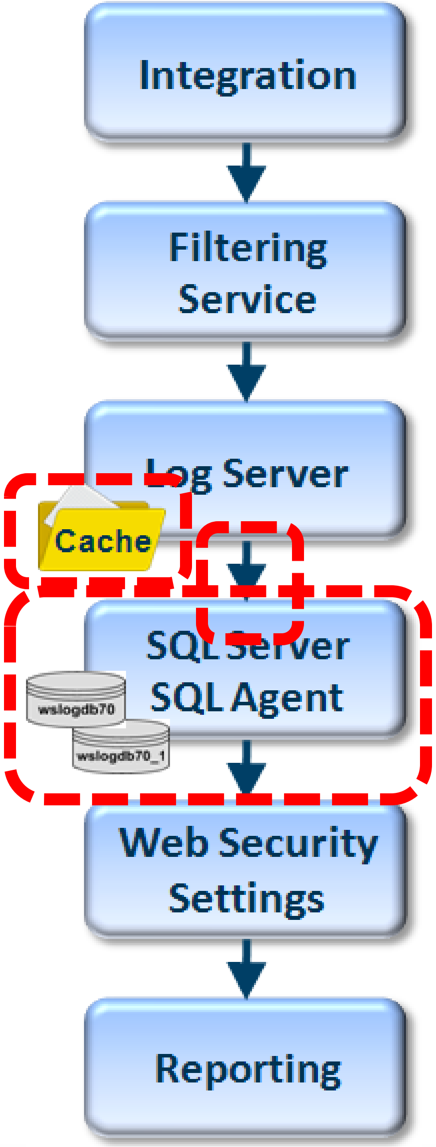
Troubleshooting Resources

- **No** log files entering the **\bin\cache** folder
  - Run TestLogServer to check for incoming logs.
    - Using TestLogServer with Websense Web Filter
    - How do I run TestLogServer without stopping the Log Server service?
  - If no traffic appears, verify that Filtering Service is running and seeing traffic. Run a WISP debug.
    - Websense isn't filtering integration traffic
    - Component statistics and diagnostics
  - If no traffic appears, check TRITON - Web Security logging settings.
    - No Log Server is installed for a Policy Server
    - Can I keep internal traffic from being logged in reports?



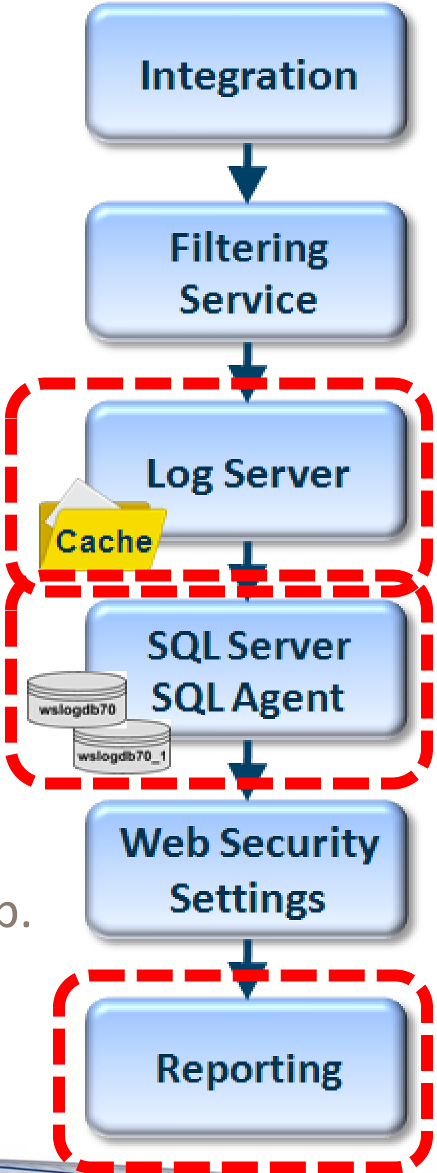
Troubleshooting Resources

- Log files amassing in the **\bin\cache** folder.
  - – Is SQL Server service is running?
    - Log Database is not available
  - – Reset the ODBC connection.
    - How to update the ODBC and the Log Server connections
  - – Is SQL Server Agent service running?
    - Diagnostic steps for when logging is not working
    - Error message: "Summary tables used by Investigative Reports are empty“
  - – Useful Database queries.
    - Can I query the SQL database for hits on a particular day?



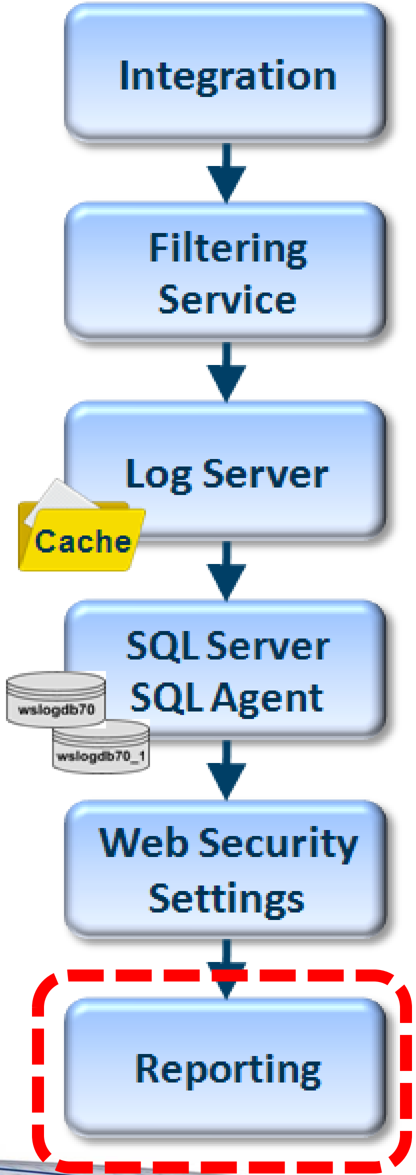
Troubleshooting Resources

- Log files amassing in the **\bin\cache** folder (cont.).
  - Run Log Server debug.
    - Debugging Websense Log Server
  - Verify SQL has available free disk space.
    - Log Server is not recording data in the Log Database
    - Reducing the size of the Log Database
  - Verify partition: online status and quantity.
    - Diagnostic steps for when logging is not working
  - Verify Websense components are same version.
    - Right click executable, check the Version or Details tab.



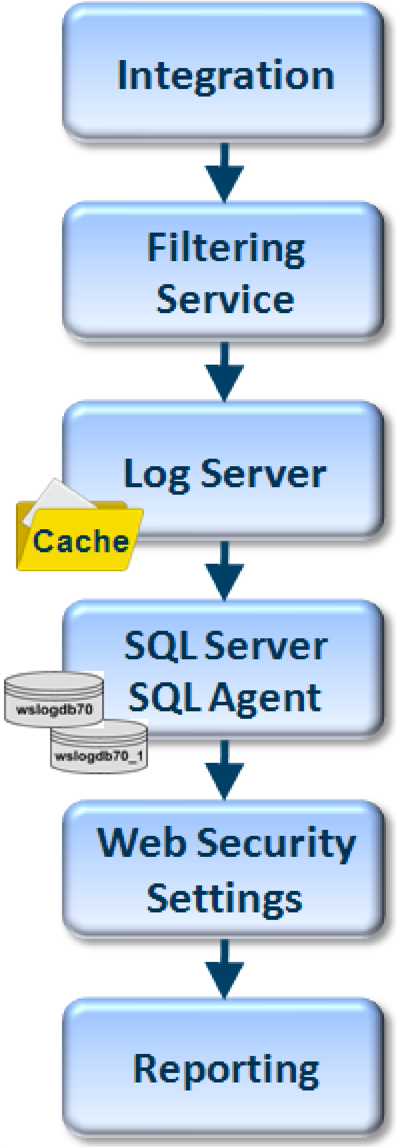
Troubleshooting Resources

- Reports
  - Pointed to correct database?
    - Database connection and report defaults
- Check for errors
  - Application Event Log and websense.log file.
- Check for available hotfixes
- Quick remedies:
  - Run the CreateDbU process.
    - Can I manually create a new catalog database?
  - Remove and reinstall Log Server.
    - Web Security Log Server
    - Log Server installation
- Demonstration



Additional Resources

- Knowledge Base articles:
  - Why is data not being logged to the database?
  - Reports have no data or no recent data and Log Server is not logging data (my favorite article)
  - Log Server FAQs
  - Log Server and Log Database issues
  - Ensure Proper Data Logging in Websense Enterprise and Websense Web Security Suite
  - Which permission sets does Websense require?
- Documents:
  - Deployment and Installation Center
  - Detailed Websense component diagram
  - Simplified Web filtering logging diagram
  - Web Security default ports



Support Online Resources

Knowledge Base

- Search or browse the knowledge base for documentation, downloads, top knowledge base articles, and solutions specific to your product.

Support Forums

- Share questions, offer solutions and suggestions with experienced Websense Customers regarding product Best Practices, Deployment, Installation, Configuration, and other product topics.

Tech Alerts

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Webinar Announcement

Webinar

Update

Title: **Making best use of Websense Web Security delegated administration and reporting**

Date: **February 22nd, 2012**

Time: **8:30 AM PDT (GMT -8)**

How to register: http://www.websense.com/content/SupportWebinars.aspx

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