

# **Reveille for ABBY FlexiCapture**

**Technical Overview** 

2024



# 1 Reveille for ABBYY FlexiCapture Technical Overview

Reveille supports ABBYY FlexiCapture version 12 and above. Reveille for ABBYY FlexiCapture provides over 50 'out-of-the-box' ABBYY FlexiCapture specific tests and over 100 ABBYY FlexiCapture Dashboard Metrics. This broad coverage delivers active and preventive monitoring to avoid 'red' level issues for ABBYY FlexiCapture environments, improve capture process visibility, and provide granular intraday ABBYY FlexiCapture threshold-based metrics for real-time management decision making. Reveille also provides ABBYY FlexiCapture web application transaction activity and security visibility. Reveille for ABBYY FlexiCapture creates monitor tests using templates approach to build a working ABBYY FlexiCapture monitor in minutes.

The Reveille for ABBYY FlexiCapture monitor can be extended using Reveille infrastructure wizards for additional database (SQL Wizard), REST or web services-based applications, file movement (File Access wizard for UNC/FTP/SFTP directories such as Fax input files), and server (PowerShell/WMI/Performance

Counters for Windows) component testing capabilities. Reveille conditionally triggers proactive recovery capabilities to reduce ABBYY processing bottlenecks, redrive repository connections, and can execute PowerShell based recovery scripts to restart ABBYY required services.

Reveille has over 25+ connectors available to share the Reveille gathered information across the enterprise with common SIEM's (such as Splunk) and event/incident management (ServiceNow). Reveille provides over 150 REST endpoints using common HTTP methods (GET/POST/PUT/DELETE) to administer Reveille, control operation, retrieve metrics, retrieve user activity, and check operating status.

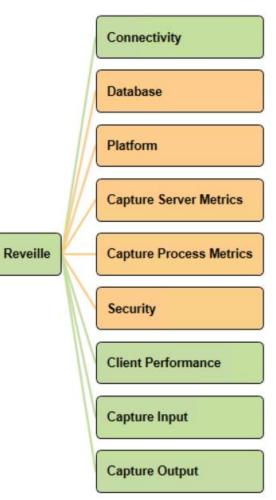
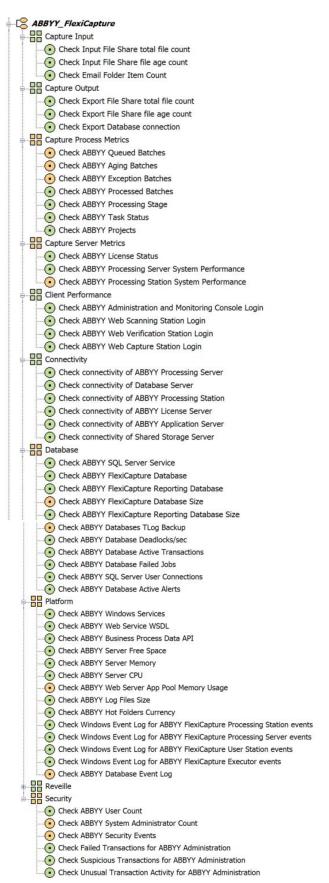


Figure 1: ABBYY FlexiCapture Monitor



**TECHNICAL OVERVIEW** 



#### Figure 2: ABBYY FlexiCapture Monitor Expanded



**TECHNICAL OVERVIEW** 

# 1.1 ABBYY FlexiCapture 'Out-of-the-Box' Individual Component Test Details

# 1.1.1 Connectivity (ABBYY FlexiCapture Servers available)

- Check connectivity of ABBYY Processing Server
- Check connectivity of ABBYY Processing Station
- Check connectivity of ABBYY License Server
- Check connectivity of ABBYY Application Server
- Check connectivity of Database Server
- Check connectivity of Shared Storage Server

# 1.1.2 Platform (ABBYY FlexiCapture platform available to process work)

- Check ABBYY Windows Services
- Check ABBYY Web Service WSDL
- Check ABBYY Business Process Data API
- Check ABBYY Server Free Space
- Check ABBYY Server Memory
- Check ABBYY Server CPU
- Check ABBYY Web Server App Pool Memory Usage
- Check ABBYY Log Files Size
- Check ABBYY Hot Folders Currency
- Check Windows Event Log for ABBYY FlexiCapture Processing Server events
- Check Windows Event Log for ABBYY FlexiCapture User Station events
- Check Windows Event Log for ABBYY FlexiCapture Executor events
- Check Windows Event Log for ABBYY FlexiCapture Processing Station events
- Check ABBYY Database Event Log

# 1.1.3 Database (ABBYY FlexiCapture databases available and health)

- Check ABBYY SQL Server Service
- Check ABBYY FlexiCapture Database
- Check ABBYY FlexiCapture Database Size
- Check ABBYY FlexiCapture Reporting Database
- Check ABBYY FlexiCapture Reporting Database Size
- Check ABBYY Databases Transaction Log Backup
- Check ABBYY Database Deadlocks/sec
- Check ABBYY Database Active Transactions



- Check ABBYY Database Failed Jobs
- Check ABBYY SQL Server User Connections
- Check ABBYY Database Active Alerts

# 1.1.4 Server Metrics (ABBYY FlexiCapture server efficiency and license status)

- Check ABBYY License Status
- Check ABBYY Processing Server System Performance
- Check ABBYY Processing Station System Performance

# 1.1.5 Process Metrics (ABBYY FlexiCapture operating throughput and exceptions)

- Check ABBYY Queued Batches
- Check ABBYY Aging Batches
- Check ABBYY Exception Batches
- Check ABBYY Processed Batches
- Check ABBYY Processing Stage
- Check ABBYY Task Status
- Check ABBYY Projects

# 1.1.6 Security Exceptions (ABBYY FlexiCapture security events)

- Check ABBYY User Count
- Check ABBYY System Administrator Count
- Check ABBYY Security Events
- Check Failed Transactions for ABBYY Administration
- Check Suspicious Transactions for ABBYY Administration
- Check Unusual Transaction Activity for ABBYY Administration

# 1.1.7 Capture Input (Input source availability, currency, and processing)

- Check input file share total file count
- Check input file share file age count
- Check email folder for number of items

# 1.1.8 Capture Output (Export target availability, currency, and processing)

- Check export database connection
- Check export file share total file count
- Check input file share file age count

# 1.1.9 Capture Clients (Verify ABBYY FlexiCapture Clients Availability)

- Check ABBYY Administration and Monitoring Console Login
- Check ABBYY Web Scanning Station Login



- Check ABBYY Web Verification Station Login
- Check ABBYY Web Capture Station Login



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# **1.2 Reveille Collector**

The Reveille Collector is a subsystem that offloads the collection and capture of data from the monitor wizard and tests, a perfect solution for cloud or secured environments. ABBYY FlexiCapture data is collected either locally or remotely and saved in an xml file that is then used by the monitor instead of calling the application APIs directly. If the data is collected remotely, then it is sent to the Reveille Server through web services. The data is compressed and optionally encrypted during the transfer to the Reveille server. The Reveille Collector:

- Is a cloud friendly (web services communication for push of data to Reveille server, configure data source from the Reveille server)
- Uses a small footprint (single Windows service)
- Reduces network latency and log file size impact (Collector located near or at application target)
- Reduced application processing (maintain application login state)
- Optionally control operation, updates, and configuration from a Reveille server.

The Collector is designed to support multiple Reveille Servers and each server can have multiple data sources. A data source defines how to connect to ABBYY FlexiCapture. The Collector runs as a Windows service and starts a process for each data source defined. The data sources run a collector cycle immediately so a data package will be available and then schedules the next cycle at a random time. Each cycle from then on will be based on the defined data source interval.

Data Source -	ABBYY FlexiCapture	e (SQL Query)				—		×
Data Source	Connection Timer	Properties						
Name:								
ABBYY Flexi	Capture							
Type:								_
SQL Query								~
Enabled Recycle	process every	1,440	minute(s)					
C Location	ABBBY-Server-01							
				Data Source Par	rameters	OK	Can	cel

#### Figure 4: ABBYY FlexiCapture Collector Definition





# 2 ABBYY FlexiCapture Dashboard Metrics

The dashboard metric capabilities expand Reveille's agentless application management into measurement of intelligent automation operational key performance indicators (KPI's). The dashboard functionality includes the ability to track batch and server exception thresholds, exposing elevated risk areas such as service delivery attainment, operational efficiency, and compliance issues with ABBYY FlexiCapture. Additional metrics can be defined and added based on customer requirements. For companies with business-critical content management applications, the dashboard metric capabilities allow:

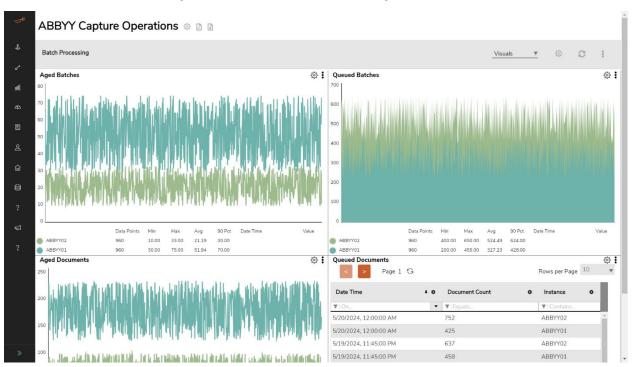
- Tracking ABBYY Capture process exceptions
- Tracking ABBYY Capture process batch service levels
- Tracking ABBYY FlexiCapture server performance and capacity
- Tracking Capture Input data sources such as fax input and hot folders
- Tracking Capture Output data sources such as NAS shares or databases

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ame (103)		Enabled	Date Modified	Description		
ABBYY.Ana	lyzedDocuments.Proces	Yes	5/28/2024 11:33:55 PM	Documents prcoessed analyzed count		
ABBYY.App	Pool.Monitoring.Memory	Yes	5/29/2024 12:04:51 AM	AppPool in use memory		_
ABBYY.Bate	ch.AgingCount	Yes	5/20/2024 11:39:11 PM	Batch aging count		
ABBYY.Bato	ch.ExceptionsCount	Yes	5/28/2024 11:29:20 PM	Batch exceptions count		
ABBYY.Bate	ch.ProcessedCount	Yes	5/28/2024 11:31:32 PM	Batch processed count		
ABBYY.Bate	ch.QueueCount	Yes	5/20/2024 11:37:42 PM	Batch queue count		
ABBYY.Data	abase.ActiveAlerts	Yes	5/29/2024 7:52:33 AM	Database active alerts		
ABBYY.Data	abase.ActiveTransactions	Yes	5/29/2024 7:53:55 AM	Database active transactions		
ABBYY.Data	abase.Deadlocks	Yes	5/29/2024 7:54:50 AM	Database deadlocks per second		
ABBYY.Data	abase.FailedJobs	Yes	5/29/2024 7:53:25 AM	Database failed jobs		
ABBYY.Data	abase.TLogBackup.Days	Yes	5/29/2024 7:55:57 AM	Days since database transaction log backup		
ABBYY.Data	abase.UserConnections	Yes	5/29/2024 7:53:02 AM	Database user connections		
ABBYY.Doc	cuments.AgingCount	Yes	5/20/2024 11:39:39 PM	Documents aging count	 	
aluations						
chedule	Failure Status Des	cription				
	Warning • Er	ror Message: M	etric <%=MetricName%> failed	with a value of <%=MetricValue%>		

Figure 5: ABBYY FlexiCapture Dashboard Metrics



TECHNICAL OVERVIEW



# 2.1 ABBYY FlexiCapture Dashboard Example

#### Figure 6: ABBYY FlexiCapture Dashboard

Dashboard metrics view can be created for multiple metric combinations. The above example shows ABBYY FlexiCapture process batch and document queue and aging levels. This information is helpful for tracking ABBYY FlexiCapture process service levels. The out-of-the-box metrics comparisons are quickly implemented using metric evaluations. Almost any evaluation scenario is possible per the below options.

- Maximum or Minimum
- Numeric Range
- Percentage Change
- Average
- Change in Value
- Number of Occurrences
- Last N Times
- .NET expressions



**TECHNICAL OVERVIEW** 

Once defined and initiated, the ABBYY FlexiCapture monitors will evaluate metric thresholds and send a notification if a threshold violation occurs. The evaluation results are stored in a metrics database and presented to users via online web reporting.

Warning					v
Error Message					
Metric <%=MetricName%> 1	ailed with a value of	<%=MetricValu	e%>	^	
Schedule					
Attribute Filter					
Test Expression					
Test Min Value					
Test Max Value		1211			
Test Average Value	0.000	0	÷	minute(s)	
Test Change In Value	Percent	O Absolute	0.000		•
	Last Value	O Previous	Minute(s)		
Test Last N times					
Test Occurrences	0	: 0	:	minute(s)	
Test by Type					
Test Average Value If set, the Evaluation will fail i specified average value.	f the average Metr	ic values over ti	he specified tim	e range is gr	eater

Figure 7: ABBYY FlexiCapture Metric Evaluation Definition

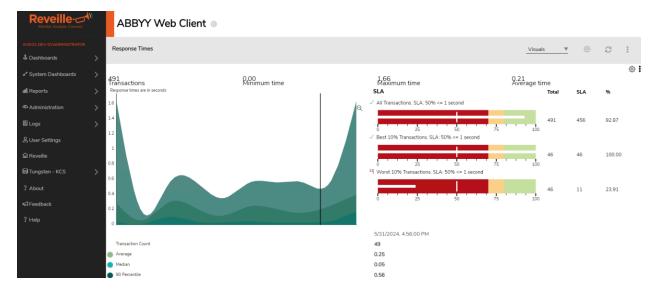




# **3 ABBYY FlexiCapture User Analytics**

Beyond operating KPI's, Reveille dashboards have out of the box visuals for understanding ABBYY FlexiCapture web based application activity and behavior. Reveille gathers this information using patented collectors to provide the following:

- Continuously observe the actual HTTP/HTTPS based user experience from your ABBYY FlexiCapture web applications, including encrypted (SSL) using RSA based ciphers.
- Communicate device activity and application adoption information through dashboards, reports, and notification processes.
- Rapidly identify device response time service level issues.
- Detect suspicious or abnormal user behavior indicating a possible ABBYY application access breach from insider threats.
- Reduce mean time to threat detection and time to respond with leading endpoint detection solution integration options such as Microsoft Defender for EndPoint.







**TECHNICAL OVERVIEW** 

d.	Ap	plications / Application Details				ABBYY Web	Client				•	Θ
ځ	Transaction		All	All Transactions		×	O Vie	w:		All		•
	L Users □ TenantName					<u>م</u>	🕲 Tim	ie Span		Today		•
\$				Add New Batch Add New Document		٩	Q					
	-			Close Batch		<u>ч</u>	Q		•			
8				Complete Task			🗐 Ser	ver Port				
<u></u>		Client IP		Get Task			🗖 Clie	ent Port				
	ier Client IP		0	Login			En ClencPort					
E	▲ Errors			Logout								
				Retrieve Queue List		for All Users A	II TenantNames sir	nce 5/31/2024 1	2:00 AM			
				Select Project and Role			Start Time Descen					
	the second	Page 1 K K S		Send Batch				D	per Page: 500 v			
	Viewing Page 1		ок							Nows pair age. 500		
	Start Time		L			rer IP	Server Port	Duration	Transaction	TenantName	Custom Fields	
	+	5/31/2024 16:32:49.350	Jsmith	10.0.20.165	56302	127.0.0.1	80	0.028	Logout	Default		
	+	5/31/2024 16:32:48.430	Sroberts	10.0.20.169	56290	127.0.0.1	80	0.563	Get Task	Default	Project: Banking_eng Role: Senior Verification Operator GueueName: Verification BatchName: Batch HF_JD23	
	+	5/31/2024 16:32:46.280	Jsmith	10.0.20.165	56300	127.0.0.1	80	0.011	Retrieve Queue Lis	st Default	Project: Banking_eng Role: Senior Verification Operator QueueName: Verification	
	+	5/31/2024 16:32:46.247	Jsmith	10.0.20.165	56302	127.0.0.1	80	0.059	Retrieve Queue Lis	st Default	Project: Banking_eng Role: Senior Verification Operator QueueName: Verification	

Figure 9: ABBYY FlexiCapture Web Applications User Activity





# 4 Common Reveille ABBYY FlexiCapture Use Cases

Reveille provides quick benefits for these typical ABBYY FlexiCapture use case scenarios; described in the format of:

#### Use case category:

Use case question

• Reveille feature(s) that, together, provide solutions to the use case.

#### 4.1.1 Platform operating environment use cases:

Is the ABBYY FlexiCapture platform operating correctly?

- Check the Capture servers connectivity.
- Check the Capture server resource utilization and capacity.

Are the related capture input sources (fax directories, hot folders, email import, etc.) available?

• Check that the input sources are available and online.

Are the related capture output targets (file directories, archives, repositories, etc.) available?

• Check that the output sources are available and exported files are processed.

Are there any application platform errors or exceptions?

• Check the Capture server event log and database event log.

Are the Capture Web Clients available and operating within acceptable response times?

• Check the Capture Web Client login performance.

# 4.1.2 Capture operating environment use cases

Are batches being processed in a timely manner and within service levels?

- Check batch aging for all or a specific ABBYY FlexiCapture queues.
- Check for batches in exception status.
- Check the task levels for each task status.

Is work being created in a timely manner?

• Check that batches are being created and capture input sources are moving files.

Are there any application platform errors or exceptions?





• Check the ABBYY FlexiCapture server event log and database event log.

#### 4.1.3 Operations management use cases:

Are batches being process in a timely manner and within service levels?

- Check batch aging for all or specific ABBYY FlexiCapture process.
- Check for batches in exception status.
- Check the task levels for each task status.

Is work being created in a timely manner?

• Check that batches are being created and capture input sources are moving files.

Are there any server level exceptions?

• Check the ABBYY FlexiCapture server event log and database log.

#### 4.1.4 Resource and capacity use cases:

What is the Capture server performance? What are the transaction levels?

- Check ABBYY Processing Server performance metrics.
- Check ABBYY Process Station performance metrics
- Check Capture server free disk space.

#### Are customer SLA's being met?

- Batch service level reporting.
- Dashboard batch level metrics for each queues.

Given a unit cost, what is the cost to process batches?

• Dashboard batch level metrics with the unit cost of a process.

Is there enough ABBYY FlexiCapture capacity for processing? What is my page use count?





- Check the ABBYY license expiration and remaining page count.
- Check ABBYY task activity and task duration.
- Check the ABBYY Processing Station performance levels.
- Check the ABBYY Processing Server performance levels.

# **5** Summary

Reveille for ABBYY FlexiCapture, in conjunction with other Reveille infrastructure capabilities, delivers unmatched, comprehensive monitors to track, diagnose, repair, and report the ABBYY FlexiCapture specific operational exceptions – with ABBYY FlexiCapture specific metrics and web application user behavior visibility. Reveille's agentless approach provides controlled capabilities beyond other agent-based techniques focused just on transaction segment response time. By adding Reveille User Analytics functionality to extend the Reveille core, Reveille delivers complete monitoring of the ABBYY FlexiCapture web application transaction activity (at the ABBYY FlexiCapture web application transaction level) and of the ABBYY FlexiCapture platform. Reveille for ABBYY FlexiCapture integrates with existing SIEM platforms (such as Splunk) and incident management systems (such as ServiceNow) to extend your existing IT investments.



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