Reveille for Microsoft® SharePoint® / OneDrive / Power Platform

Management Console Overview

2022

Reveille

MONITOR. ANALYZE. OPTIMIZE.

1 Reveille for SharePoint® Management Console Overview

Reveille monitors supporting SharePoint®, Microsoft 365 SharePoint Online, and OneDrive is available with Reveille. Reveille for SharePoint provides over 50 ‘out-of-the-box’ SharePoint-specific tests and more than 35 SharePoint Dashboard Metrics. This broad coverage goes beyond common platform-only monitoring to deliver active and preventive monitoring to avoid ‘red’ level issues for SharePoint content management focused environments. When attention is required, Reveille can send alert notifications to a Microsoft Teams channel. In addition, Reveille for SharePoint gathers site operating performance, detects abnormal SharePoint user behaviors or access, betters SharePoint user experience understanding, and provides granular intraday SharePoint threshold-based metrics for real-time management decision making. The Reveille collector option provides a set of the SharePoint specific tests suitable for SharePoint Online and OneDrive. Reveille dashboards and reports can be saved directly to a OneDrive folder with a click or as part of scheduled email distribution.

Reveille for SharePoint can be extended with Microsoft Power BI Reveille data connector and reports, Microsoft Power Automate customer connectors, and Microsoft Azure native services support. Reveille infrastructure wizards cover database (SQL Wizard), REST or web services-based applications, file movement (OneDrive/UNC/FTP/SFTP directories), and server (PowerShell/WMI/Performance Counters for Windows) component testing capabilities. Any custom ASP.NET based component can be added to a Reveille monitor and leverage all Reveille core functionality.

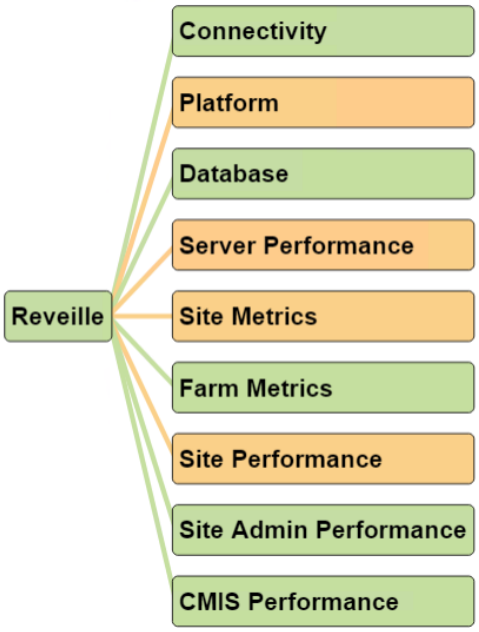

Figure 1: Example Microsoft® SharePoint® On-Premises Monitor

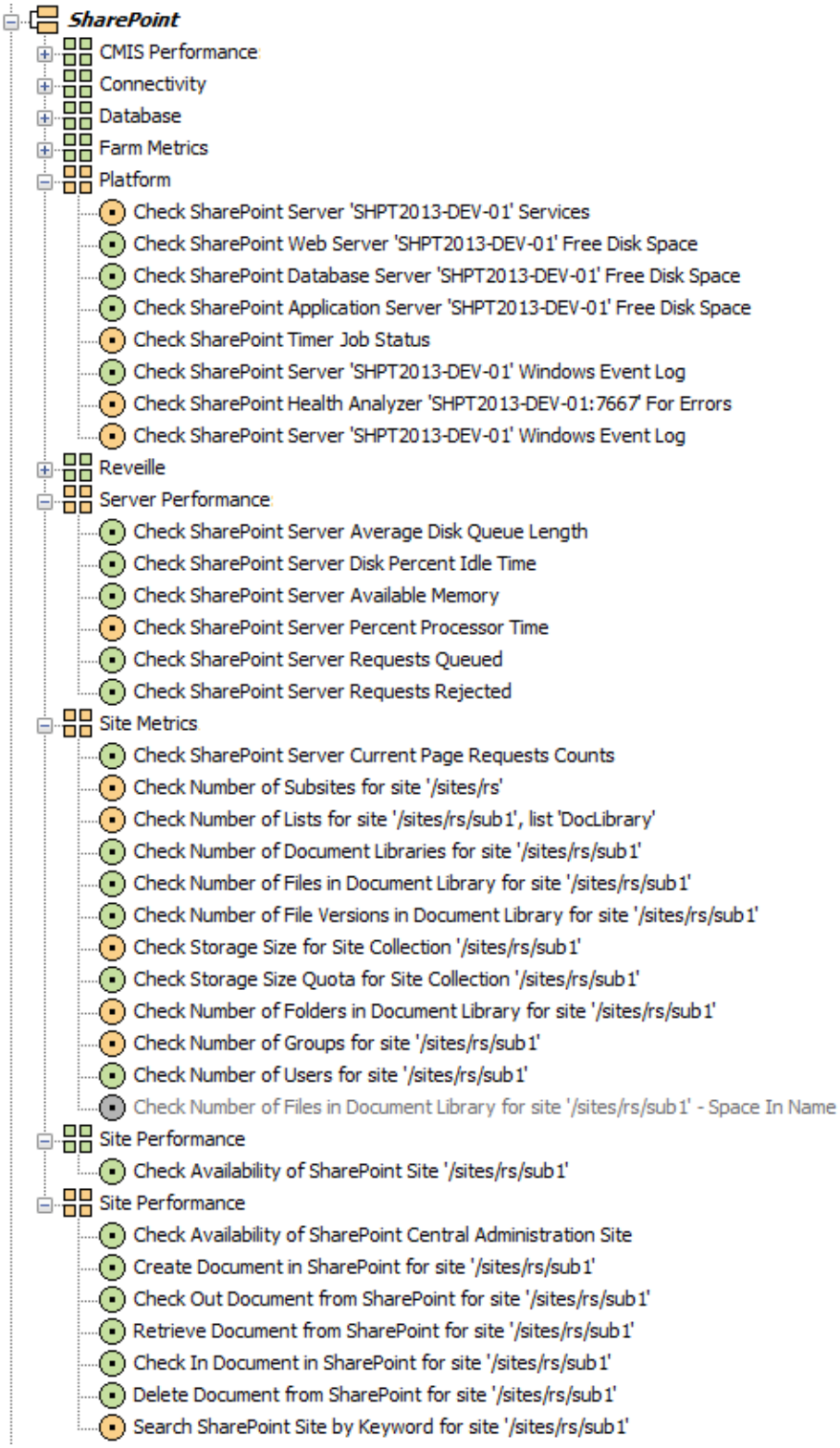

Figure 2: Microsoft SharePoint On-Premises Monitor Tests

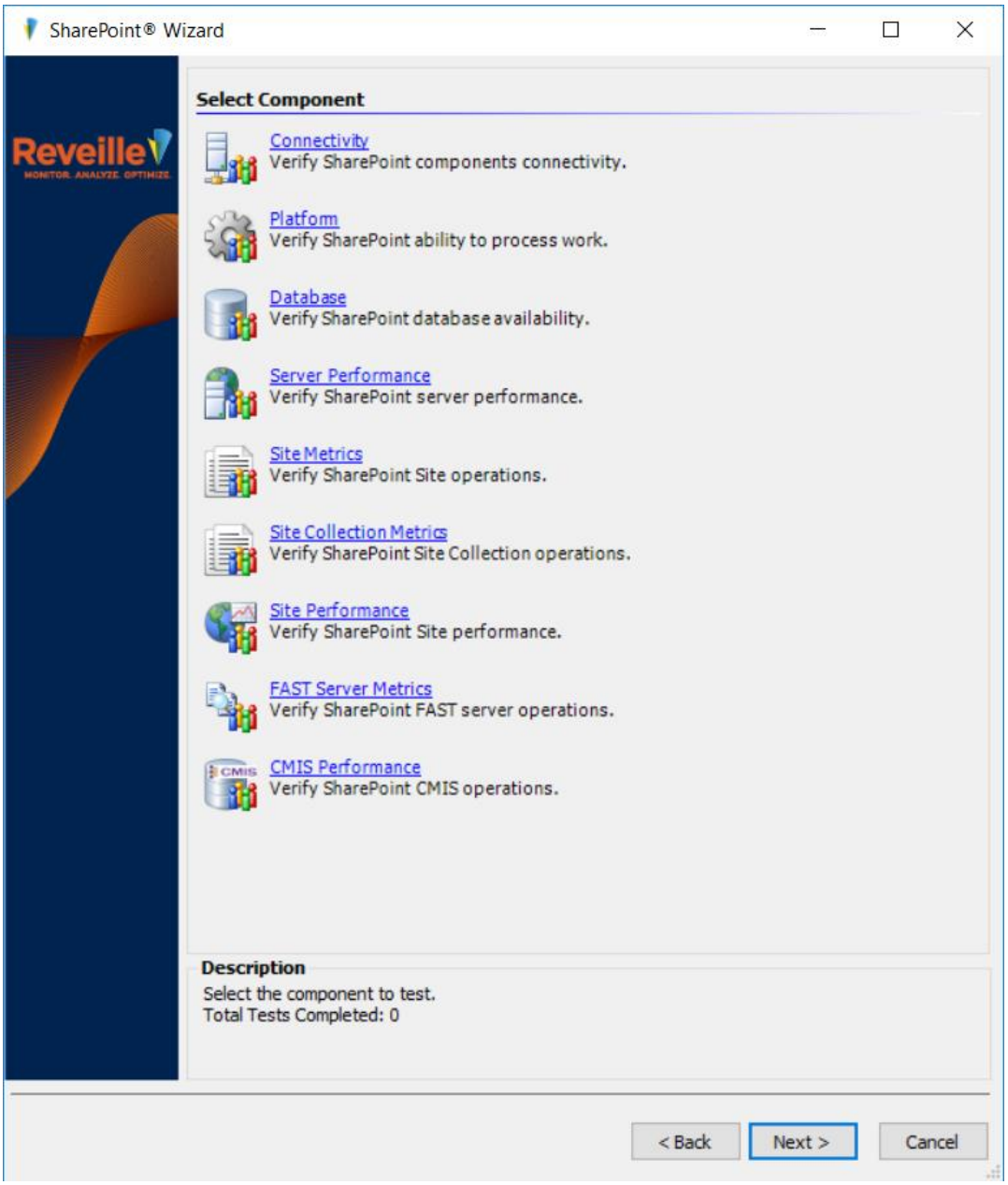

Figure 3: Microsoft SharePoint Wizard Component Selection

1.1 SharePoint On-Premises 'Out-of-the-Box' Individual Component Test Details

1.1.1 Connectivity (SharePoint Servers available)

- SharePoint web server(s) can be pinged
- SharePoint database server(s) can be pinged
- SharePoint application server(s) can be pinged

1.1.2 Platform (SharePoint platform available to process work)

- Check SharePoint web front end server(s) services
- Check SharePoint database server(s) services
- Check SharePoint application server(s) services
- Check SharePoint web front end server(s) free disk space
- Check SharePoint database server(s) free disk space
- Check SharePoint application server(s) free disk space
- Check SharePoint Timer Job Status
- Check SharePoint Current Health Warnings and Errors
- Check SharePoint Windows Event Logs

1.1.3 Database (SharePoint databases health)

- Check SharePoint Content Database File Size
- Check SharePoint Database File Sizes
- Check SharePoint Database is responding to query
- Check SQL Server Services

1.1.4 Server Performance (SharePoint Server Performance)

- Check SharePoint Server Average Disk Queue Length
- Check SharePoint Server Disk Percent Idle time
- Check SharePoint Server Available Memory
- Check SharePoint Server Percent Processor Time
- Check SharePoint Server Requests Queued

- Check SharePoint Server Requests Rejected

1.1.5 Site Metrics (Health Analysis)

- Check SharePoint Server Current Page Requests
- Check Number of Sub Sites for SharePoint site
- Check Number of Lists for a SharePoint site
- Check Number of SharePoint Document Libraries
- Check Number of Files in SharePoint Document Library
- Check Number of File Versions in SharePoint Document Library
- Check Number of Folders in SharePoint Document Library
- Check SharePoint Site Collection Storage Size
- Check SharePoint Site Collection Storage Quota
- Check SharePoint Groups
- Check SharePoint Users

1.1.6 Farm Metrics (Site Collection Metrics across Farm)

- Check all Document Libraries in Site and Sub sites
- Check all Document Library Folders in Site and Sub sites
- Check all Document Library Files in Site and Sub sites

1.1.7 Site Performance (Site Performance)

- Check Availability of SharePoint Site
- Check Availability of SharePoint Central Admin Site
- Create Document in SharePoint Site
- Check Out Document in SharePoint Site
- Retrieve Document from SharePoint Site
- Check In Document to SharePoint Site
- Delete Document from SharePoint Site
- Search SharePoint Site by Keyword

1.1.8 CMIS Performance (Site Performance using CMIS)

- Check SharePoint Site using CMIS
- Create Folder in SharePoint using CMIS
- Create Document in SharePoint using CMIS
- Check Out Document from SharePoint using CMIS
- Retrieve Document Information and Document from SharePoint using CMIS
- Check In Document in SharePoint using CMIS
- Delete Document from SharePoint using CMIS
- Delete Folder from SharePoint using CMIS
- Query SharePoint Site using CMIS

2 Reveille SharePoint / Microsoft 365 SharePoint Online / One Drive Collectors

The Reveille Collector is a subsystem that offloads the collection and capture of data from the monitor wizard and tests. SharePoint 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 from a 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)

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 SharePoint Online / OneDrive.

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. The Reveille collector option provides a subset of the SharePoint specific tests suitable for SharePoint Online. This reduces security risk as the SharePoint Online access credentials do not need to be provided to a third-party external monitoring agent. The Reveille collector can operate on the corporate network and still observe SharePoint Online activity.

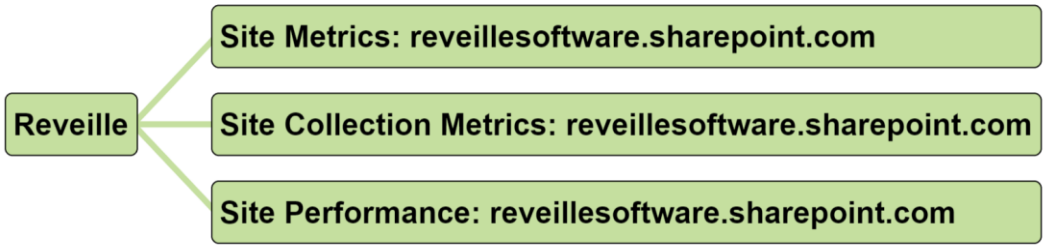

Figure 4: Example Microsoft® SharePoint® Collector Monitor

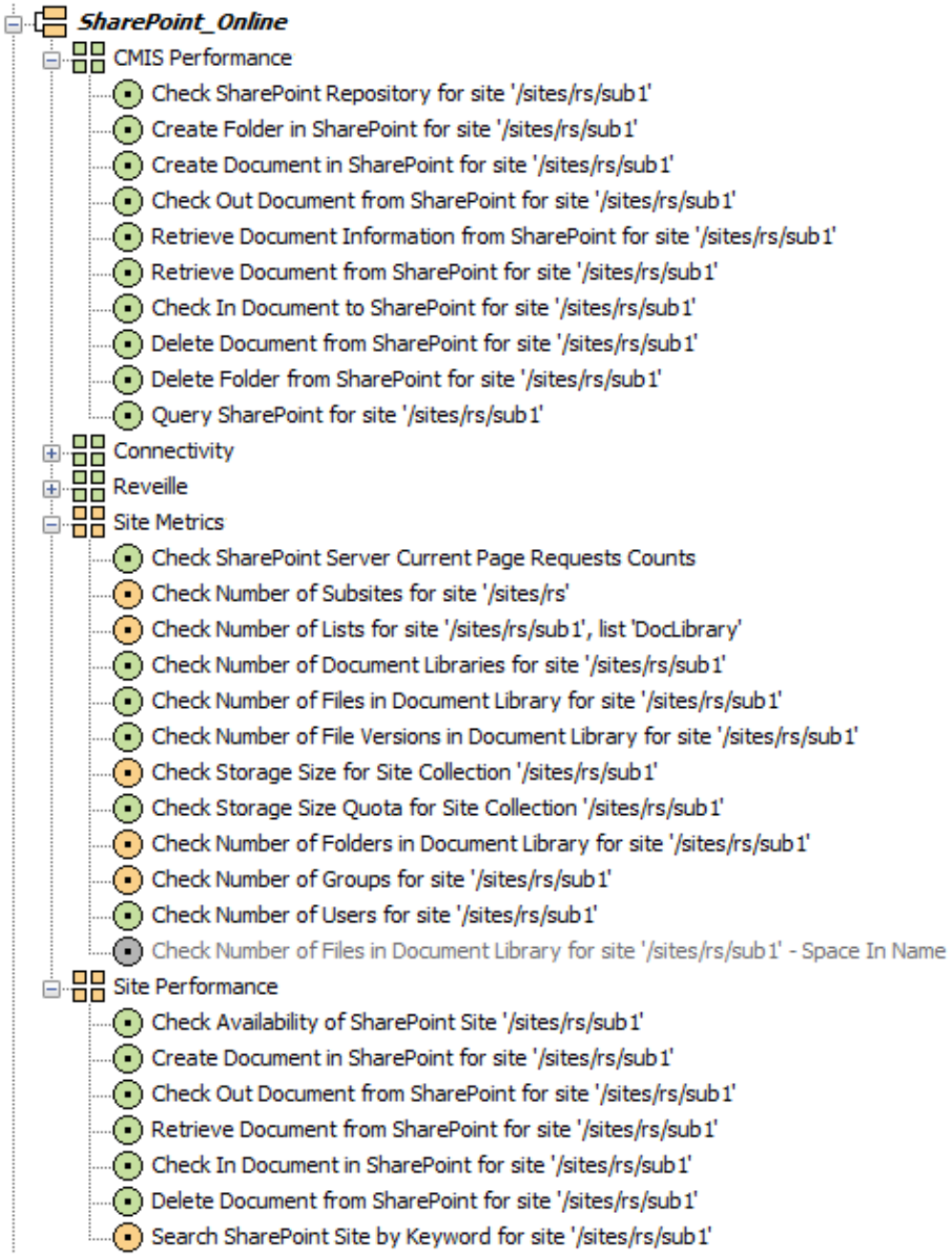

Figure 5: Microsoft SharePoint Collector Monitor Tests

2.1 SharePoint Collector 'Out-of-the-Box' Individual Component Test Details

2.1.1 Site Performance (Site Performance)

- Check Availability of SharePoint Site
- Create Document in SharePoint Site
- Check Out Document in SharePoint Site
- Retrieve Document from SharePoint Site
- Check In Document to SharePoint Site
- Delete Document from SharePoint Site
- Search SharePoint Site by Keyword

2.1.2 Site Metrics (Health Analysis)

- Check SharePoint Server Current Page Requests
- Check Number of Sub Sites for SharePoint site
- Check Number of Lists for a SharePoint site
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- Check Number of Files in SharePoint Document Library
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- Check SharePoint Site Collection Storage Quota
- Check SharePoint Groups
- Check SharePoint Users

2.1.3 Farm Metrics (Site Collection Metrics across Farm)

- Check all Document Libraries in Site and Sub sites
- Check all Document Library Folders in Site and Sub sites
- Check all Document Library Files in Site and Sub sites
- Search SharePoint Site by Keyword

2.2 OneDrive Monitor

Figure 6: Example Microsoft® OneDrive Monitor

2.2.1 OneDrive Performance

- Create Folder in OneDrive
- Upload File to OneDrive
- Download File from OneDrive
- List File Versions in OneDrive
- Delete File in OneDrive
- Delete Folder from OneDrive
- Search Folders in OneDrive

2.3 SharePoint Collector Status

Reveille continuously verifies the remote Reveille Collector system status and alerts if the Reveille Collector is not operating nor transferring information back to the Reveille server.

Figure 7: Example Microsoft® SharePoint® Collectors Monitor

2.4 SharePoint Collector Groups

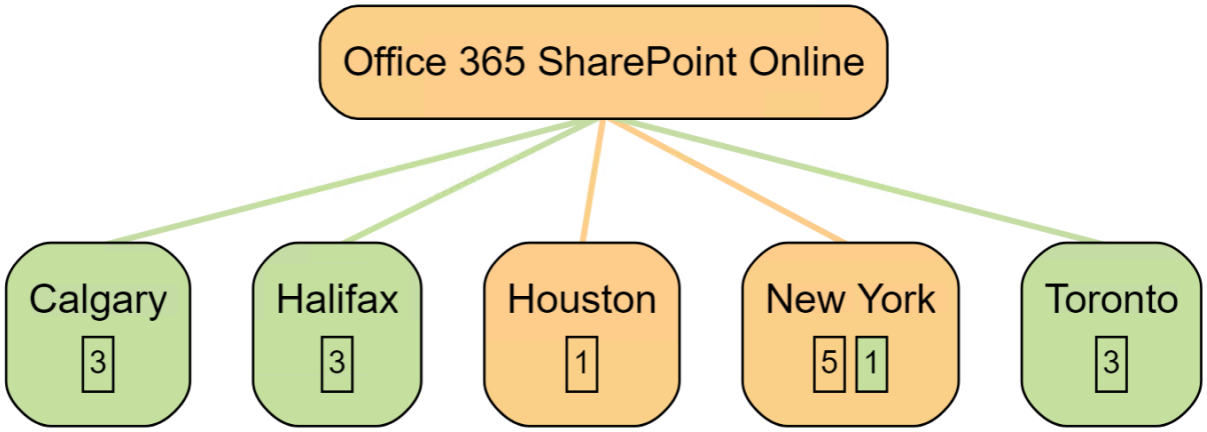


Figure 8: Example Microsoft® SharePoint® Groups

Reveille grouping provides a way to aggregate Reveille Collector Monitors for SharePoint into logical groups based upon user-defined criteria, such as geographic location, company, function, and so on. Each business view can then be secured at individual group levels using Windows Domain security. This feature enhances the communication of application status and service levels using relevant business semantics or terminology.

3 SharePoint Dashboard Metrics

The dashboard metric capabilities expand Reveille's agentless application management into measurement of ECM operational key performance indicators (KPI's). The dashboard functionality includes the ability to track site and server exception thresholds, exposing high risk areas such as service delivery attainment, operational efficiency, and compliance issues with Microsoft SharePoint. 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 SharePoint operating performance and capacity
- Tracking SharePoint operating exceptions
- Tracking SharePoint site performance
- Tracking SharePoint site activity and use
- Tracking OneDrive performance and activity
- Tracking SharePoint database health

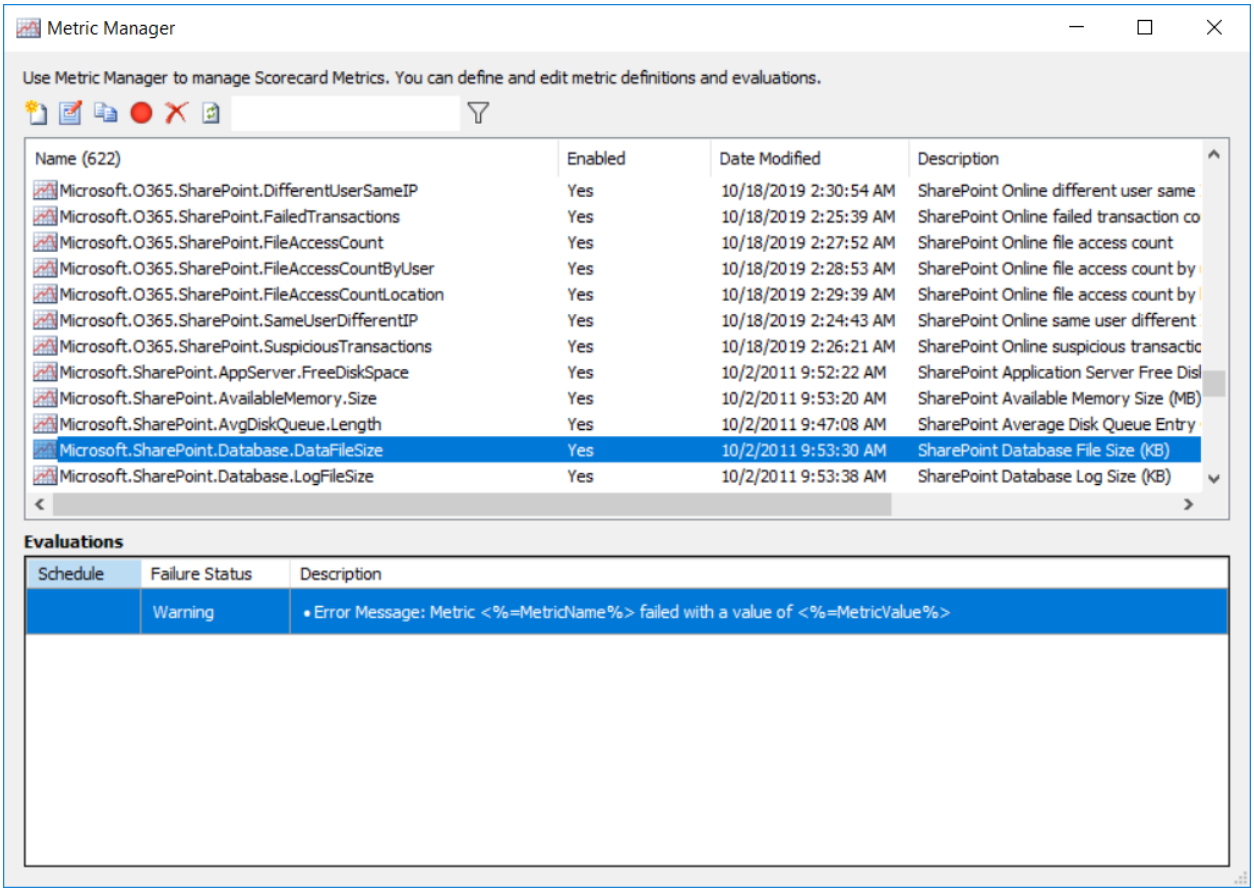


Figure 9: Reveille Metric Manager

3.1 SharePoint Dashboard Examples

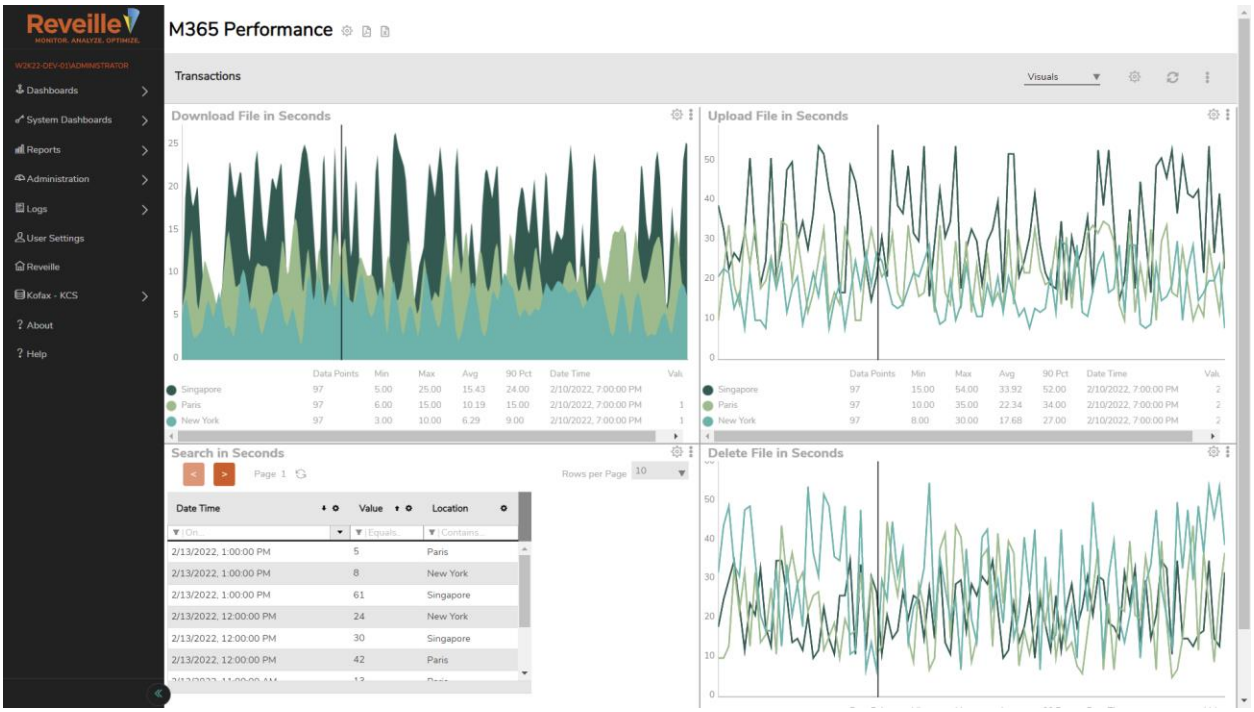


Figure 10: Microsoft SharePoint Online Dashboard Metrics

Dashboard metrics view can be created for multiple metric combinations. The above example shows a comparison of document creation/retrieval times in OneDrive for several geographic locations. This information is helpful for tracking SharePoint operating capacity.

The pre-packaged SharePoint metrics enable the quick configuration of robust metric definitions using a wizard-based approach. By using wizards, metrics are easy to create, saving time and money. The out-of-the-box metrics comparisons include:

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

Once defined and initiated, the SharePoint 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.

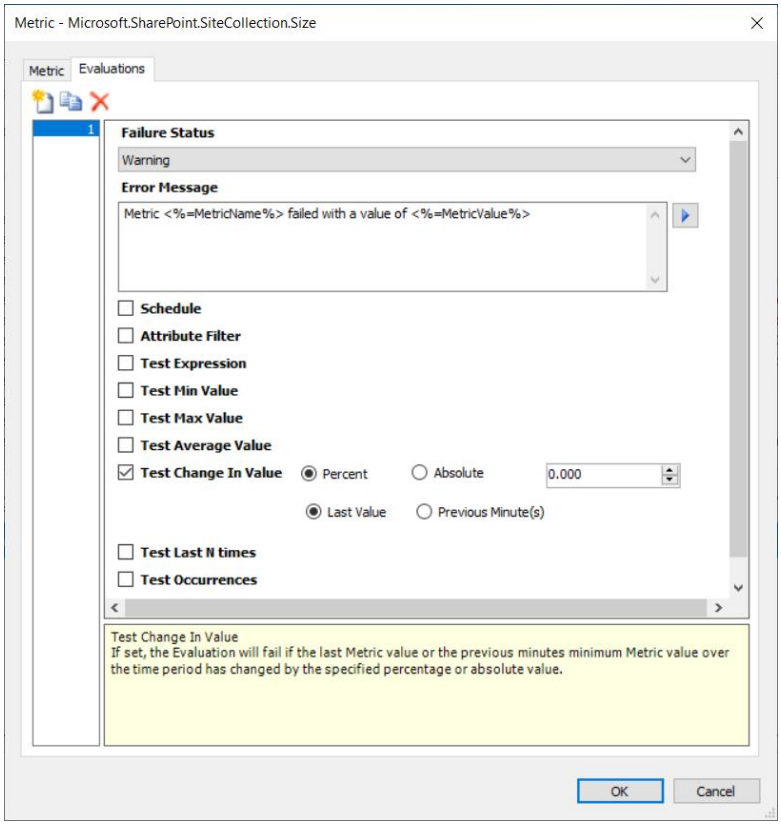


Figure 11: Metric Evaluation Definition

4 SharePoint / Microsoft 365 SharePoint Online / OneDrive User Analytics

Beyond operating KPI's, Reveille dashboards have out of the box visuals for understanding SharePoint and OneDrive user activity and user behavior. This includes Microsoft Teams as adding a document to a public Teams channel by default will store the content in SharePoint Online with One Drive as another storage option. Reveille gathers this information using patented Reveille collectors to provide:

- Continuously observe the actual based user experience from your SharePoint investments.
- Communicate user activity and user adoption information through dashboards, reports and notification processes.
- Rapidly identify user response time service level issues.
- Detect suspicious or abnormal user behavior indicating a possible content access breach from insider threats.
- Reduce mean time to threat detection and time to respond with leading endpoint detection solution integration options such as OpenText EnCase Endpoint Security or Microsoft Defender Advanced Threat Protection.

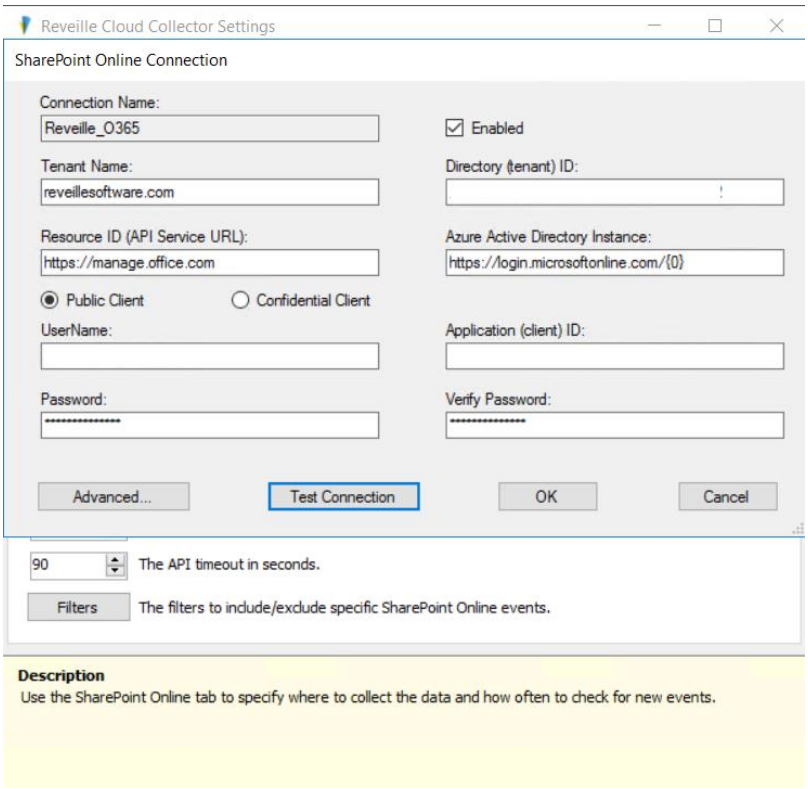


Figure 12: SharePoint Cloud Collector

Figure 13: SharePoint User Behavior Dashboard

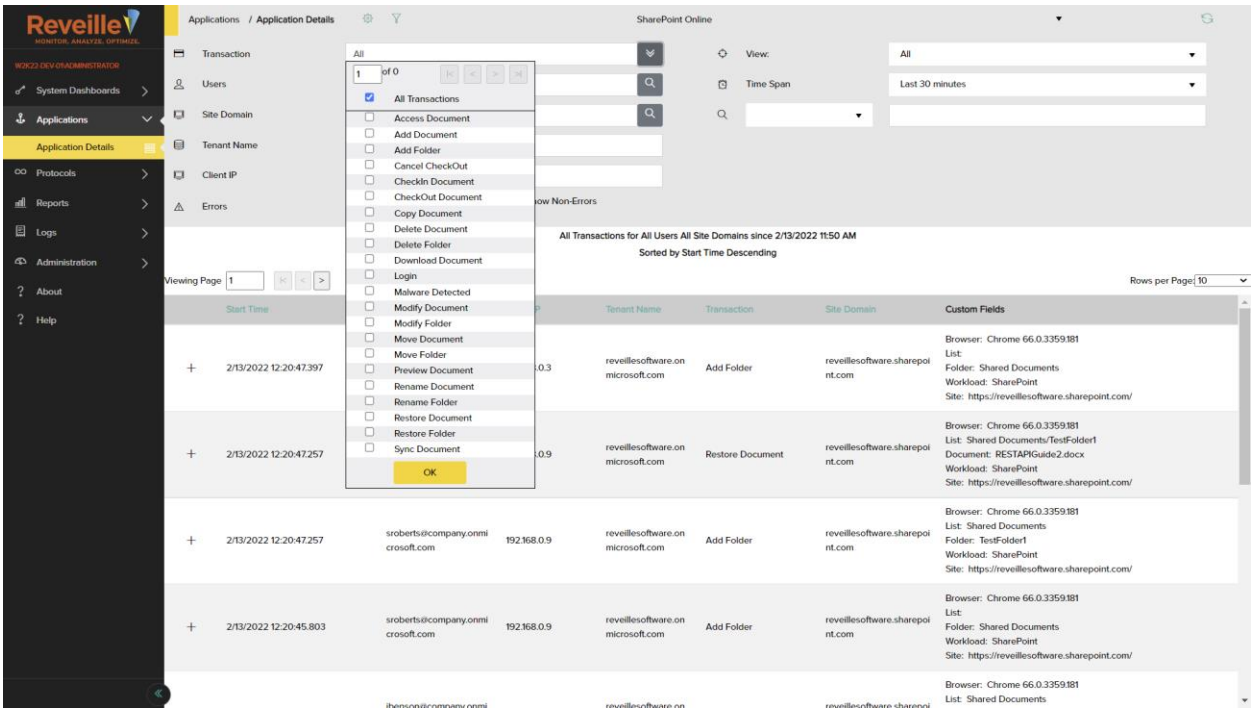


Figure 14: SharePoint Online User Activity Details

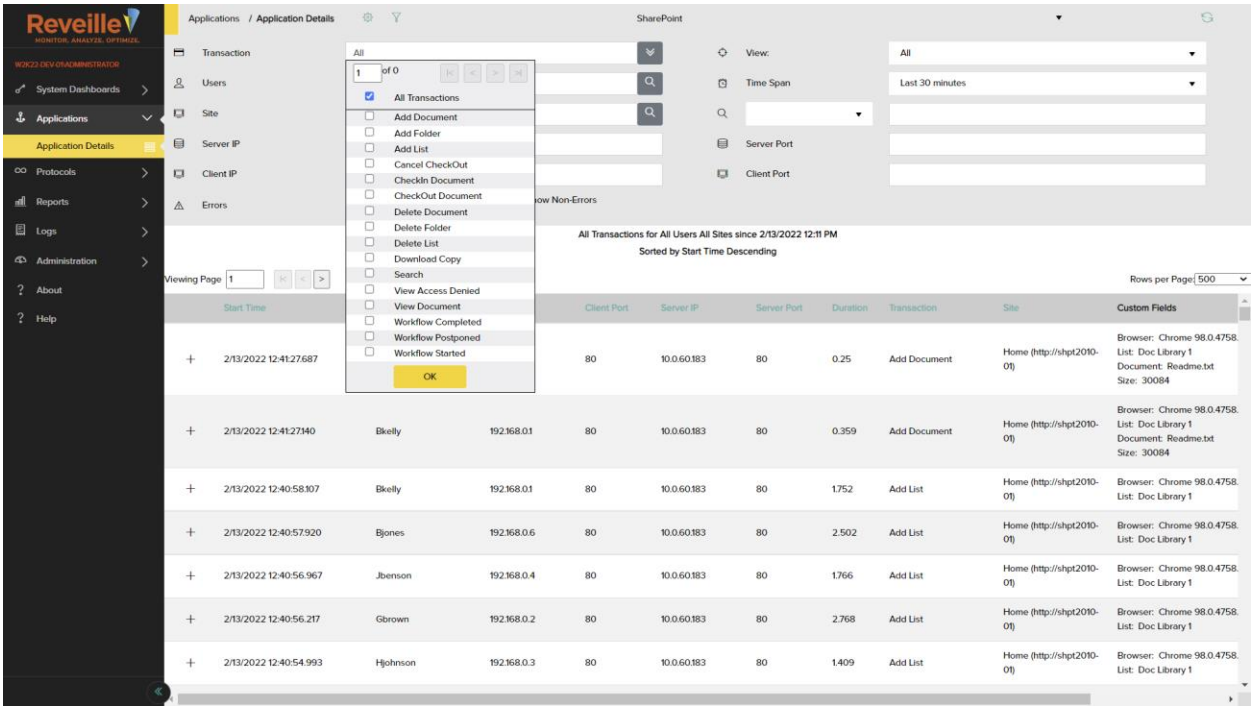


Figure 15: SharePoint On-Premises User Activity Details

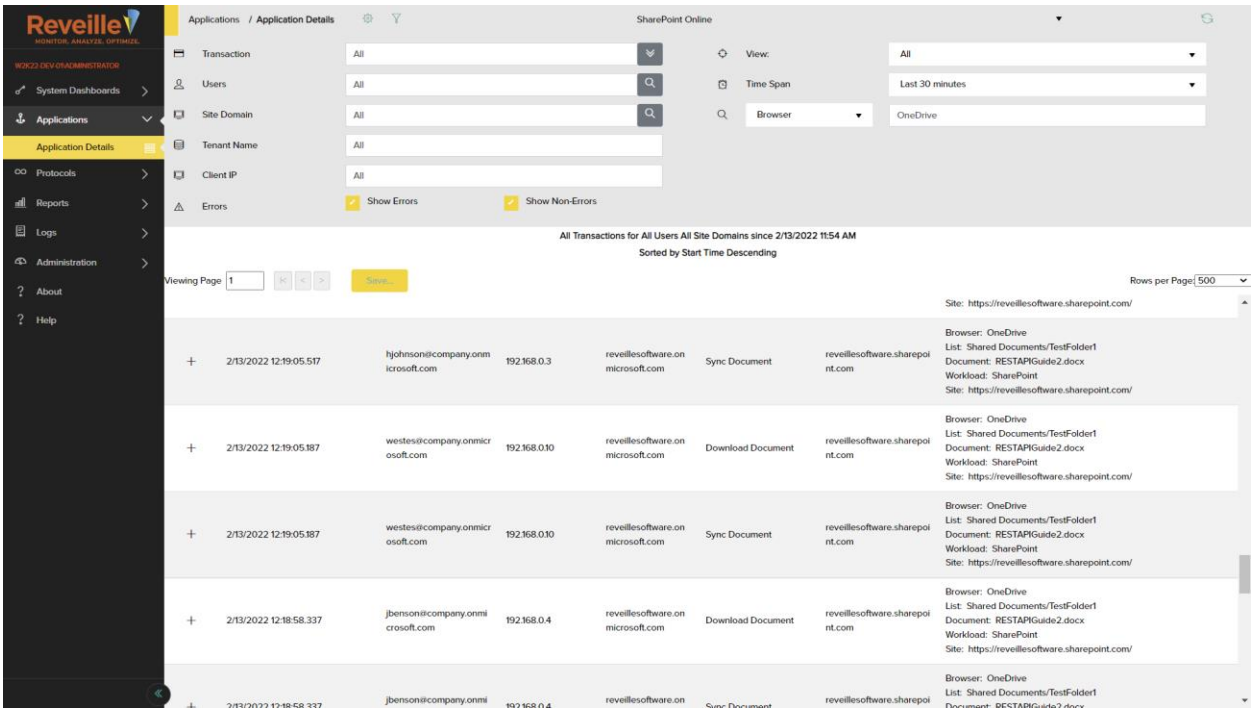


Figure 16: OneDrive User Activity Details

Dashboard data can be displayed in sortable row columns, exported as a spreadsheet xlsx format file , or saved as a PDF. All dashboard metric views can be scheduled for automatic creation and email distribution. The Reveille dashboards and reports can be saved directly to a OneDrive folder with a simple click or as part of scheduled email distribution.

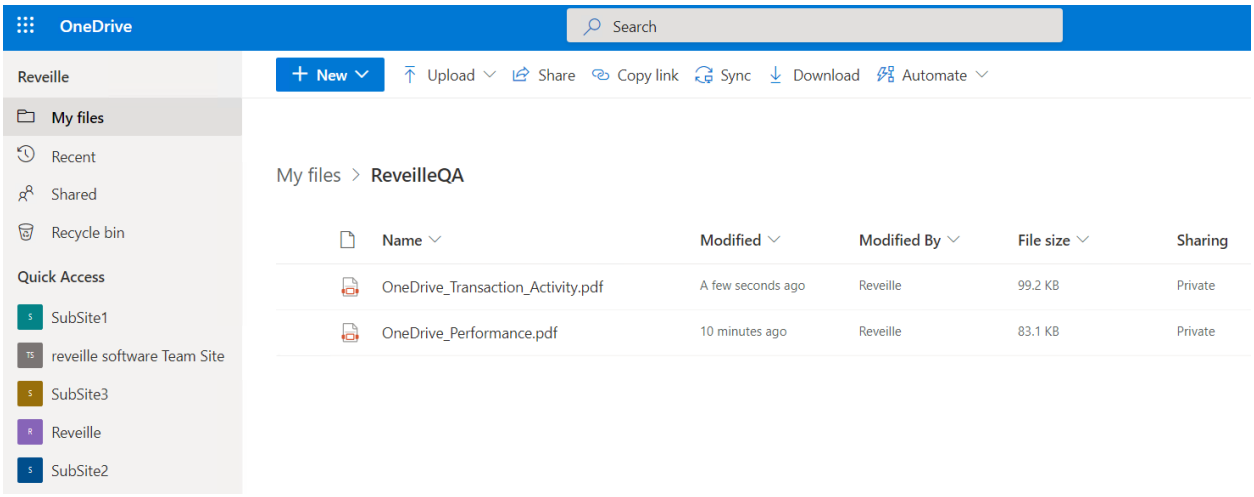


Figure 17: Save Dashboard to OneDrive Example

5 Reveille with Microsoft Power BI

Reveille provides Microsoft Power BI trusted data connectors to access the powerful Reveille and RUA REST APIs. This allows Reveille deep content systems data to be consumed by the Power BI data analysis and report creation tools. Reveille is providing both trusted signed and unsigned Power BI custom connectors. Once the Reveille data is in Power BI, any Power BI features can be used. Power BI Desktop is a free application one can install on your local computer that lets you connect to, transform, and visualize your data. With Power BI Desktop, one can connect to multiple different sources of data, and combine them (often called modeling) into a data model. This data model lets one build visuals, and collections of visuals one can share as reports, with others inside the organization. The Reveille Power BI data connectors are:

- Reveille Dashboard Metrics
- Reveille Metric Attributes
- Reveille Monitor Availability
- Reveille Monitor Incidents
- Reveille Monitor Notifications
- Reveille Monitor Status
- Reveille Operating Status
- Reveille User Analytics Application Details
- Reveille User Analytics Message Details
- Reveille User Analytics Operating Status
- Reveille User Analytics Protocol Summary
- Reveille User Analytics Users by Application

To call the Reveille REST APIs you will need to know the address of the Reveille Server and use either OAuth 2.0 for authorization and or direct Windows domain NTLM for authentication.

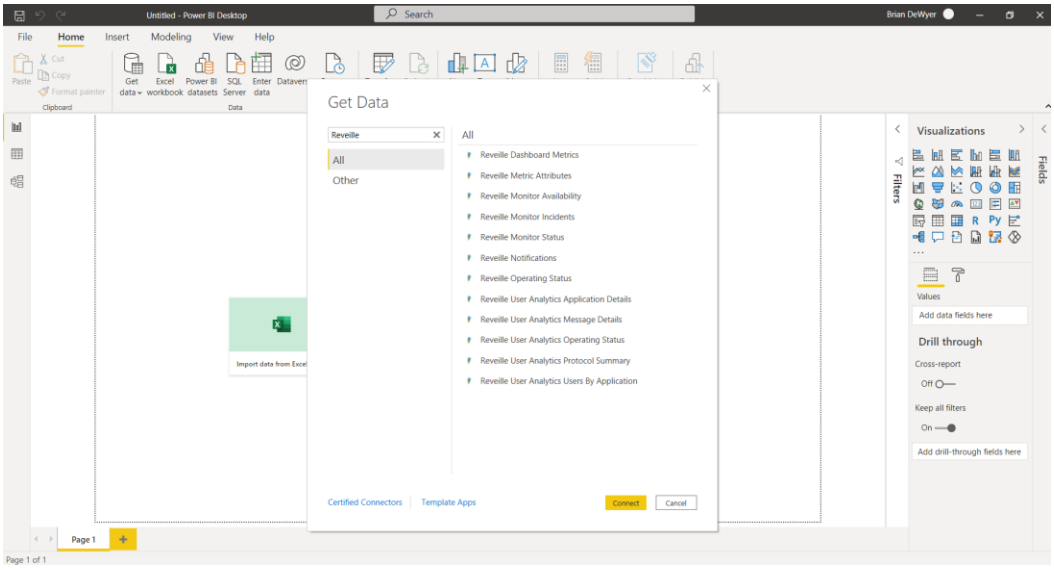
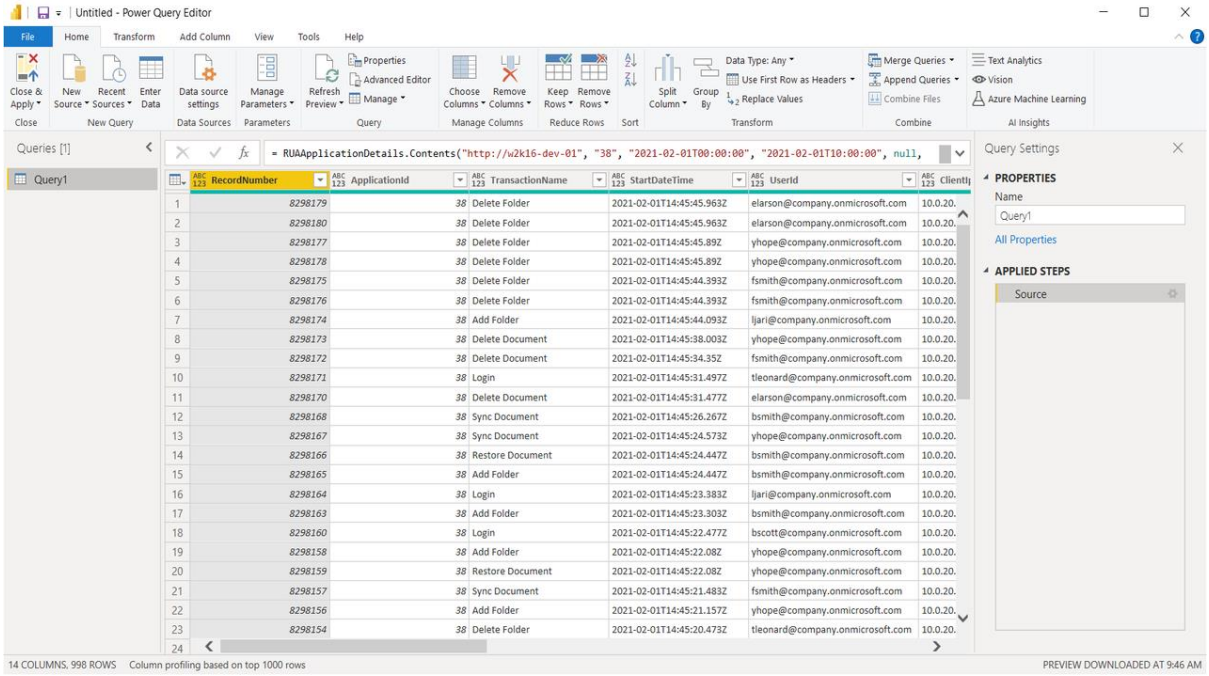


Figure 18: Microsoft Power BI Reveille Data Connectors



	RecordNumber	ApplicationId	TransactionName	StartDateTime	UserId	ClientIp
1	8298179	38	Delete Folder	2021-02-01T14:45:45.963Z	elarson@company.onmicrosoft.com	10.0.20.
2	8298180	38	Delete Folder	2021-02-01T14:45:45.963Z	elarson@company.onmicrosoft.com	10.0.20.
3	8298177	38	Delete Folder	2021-02-01T14:45:45.89Z	yhope@company.onmicrosoft.com	10.0.20.
4	8298178	38	Delete Folder	2021-02-01T14:45:45.89Z	yhope@company.onmicrosoft.com	10.0.20.
5	8298175	38	Delete Folder	2021-02-01T14:45:44.393Z	fsmith@company.onmicrosoft.com	10.0.20.
6	8298176	38	Delete Folder	2021-02-01T14:45:44.393Z	fsmith@company.onmicrosoft.com	10.0.20.
7	8298174	38	Add Folder	2021-02-01T14:45:44.093Z	ljari@company.onmicrosoft.com	10.0.20.
8	8298173	38	Delete Document	2021-02-01T14:45:38.003Z	yhope@company.onmicrosoft.com	10.0.20.
9	8298172	38	Delete Document	2021-02-01T14:45:34.35Z	fsmith@company.onmicrosoft.com	10.0.20.
10	8298171	38	Login	2021-02-01T14:45:31.497Z	tleonard@company.onmicrosoft.com	10.0.20.
11	8298170	38	Delete Document	2021-02-01T14:45:31.477Z	elarson@company.onmicrosoft.com	10.0.20.
12	8298168	38	Sync Document	2021-02-01T14:45:26.267Z	bsmith@company.onmicrosoft.com	10.0.20.
13	8298167	38	Sync Document	2021-02-01T14:45:24.573Z	yhope@company.onmicrosoft.com	10.0.20.
14	8298166	38	Restore Document	2021-02-01T14:45:24.447Z	bsmith@company.onmicrosoft.com	10.0.20.
15	8298165	38	Add Folder	2021-02-01T14:45:24.447Z	bsmith@company.onmicrosoft.com	10.0.20.
16	8298164	38	Login	2021-02-01T14:45:23.383Z	ljari@company.onmicrosoft.com	10.0.20.
17	8298163	38	Add Folder	2021-02-01T14:45:23.303Z	bsmith@company.onmicrosoft.com	10.0.20.
18	8298160	38	Login	2021-02-01T14:45:22.477Z	bscott@company.onmicrosoft.com	10.0.20.
19	8298158	38	Add Folder	2021-02-01T14:45:22.08Z	yhope@company.onmicrosoft.com	10.0.20.
20	8298159	38	Restore Document	2021-02-01T14:45:22.08Z	yhope@company.onmicrosoft.com	10.0.20.
21	8298157	38	Sync Document	2021-02-01T14:45:21.483Z	fsmith@company.onmicrosoft.com	10.0.20.
22	8298156	38	Add Folder	2021-02-01T14:45:21.157Z	yhope@company.onmicrosoft.com	10.0.20.
23	8298154	38	Delete Folder	2021-02-01T14:45:20.473Z	tleonard@company.onmicrosoft.com	10.0.20.

Figure 19: Microsoft Power BI Query Editor with Reveille User Transaction Data

Reveille also provides Power BU report templates use the Power BI Reveille data connectors to access Reveille data. The Power BI report templates (.pbit files) can be used to create custom Power BI reports (.pbix files) as shown in the following example.

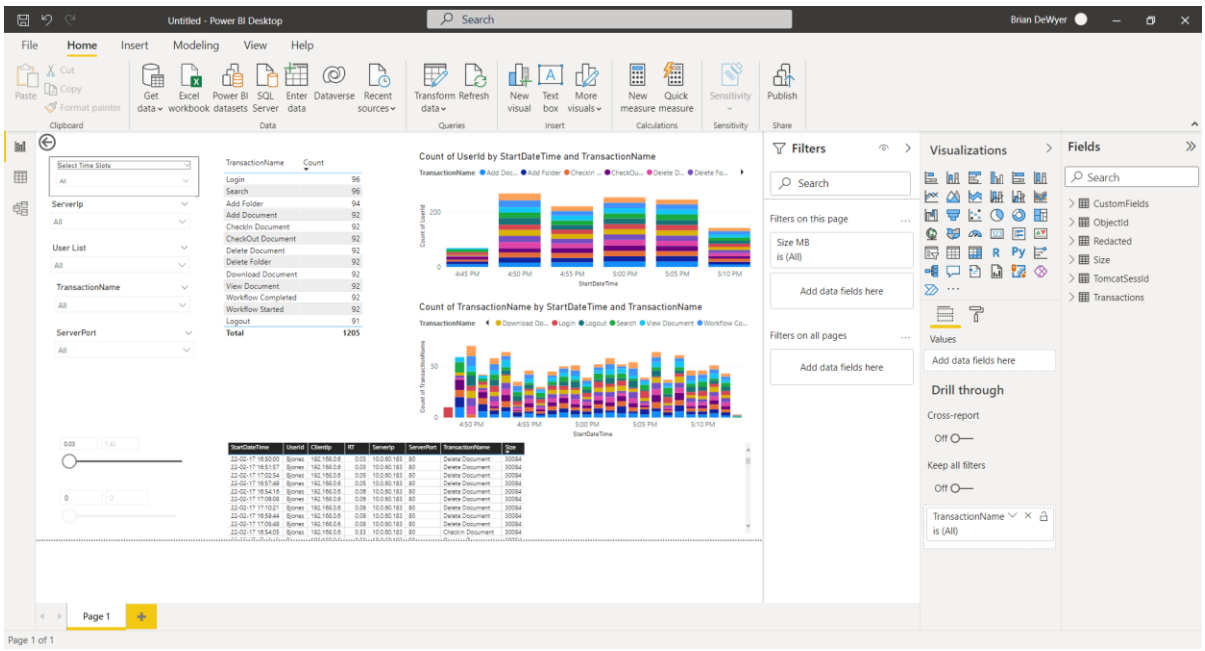


Figure 20: Microsoft Power BI Query Editor with Reveille User Transaction Data

6 Reveille and Microsoft Power Automate

The Microsoft Power Platform aligns with the emerging need for hyperautomation, and Microsoft Power Automate serves as the critical automation service supporting an organization's push for hyperautomation. Power Automate and Power Platform can help enterprise architects define an automation strategy, leverage DigitalOps, and augment their business with AI. See here for more Microsoft Power Automation information.

Reveille now participates with the Power Automate platform. Reveille provides example Reveille custom connectors and Cloud Flows for integrating Reveille's information on content system service levels, performance, operating health, and user activity. The Reveille custom connectors interface with the Reveille REST API set.

A Reveille Power Automate custom connector can:

- Invoke any of the 140+ Reveille REST API endpoints
- Connect using basic authentication or OAuth 2 authorization to a Reveille REST endpoint
- Use the REST API endpoint JSON response in further Cloud Flow processing

Possible Cloud Flow use cases include:

- Verify application status before passing data to the application
- Gathering application service level and performance information as part of an automated performance management reporting process
- Obtaining repository storage consumption and application transaction volume and user counts to feed a chargeback analysis
- Feeding content system focused operating health, performance, and activity data for IT scorecard flow process
- Communicating event status as part IT incident management process
- Signaling Reveille to take a recovery action (run a PowerShell script, move files, update configuration, start a process or service, start a Docker container, etc.) based on a previous Power Flow action.

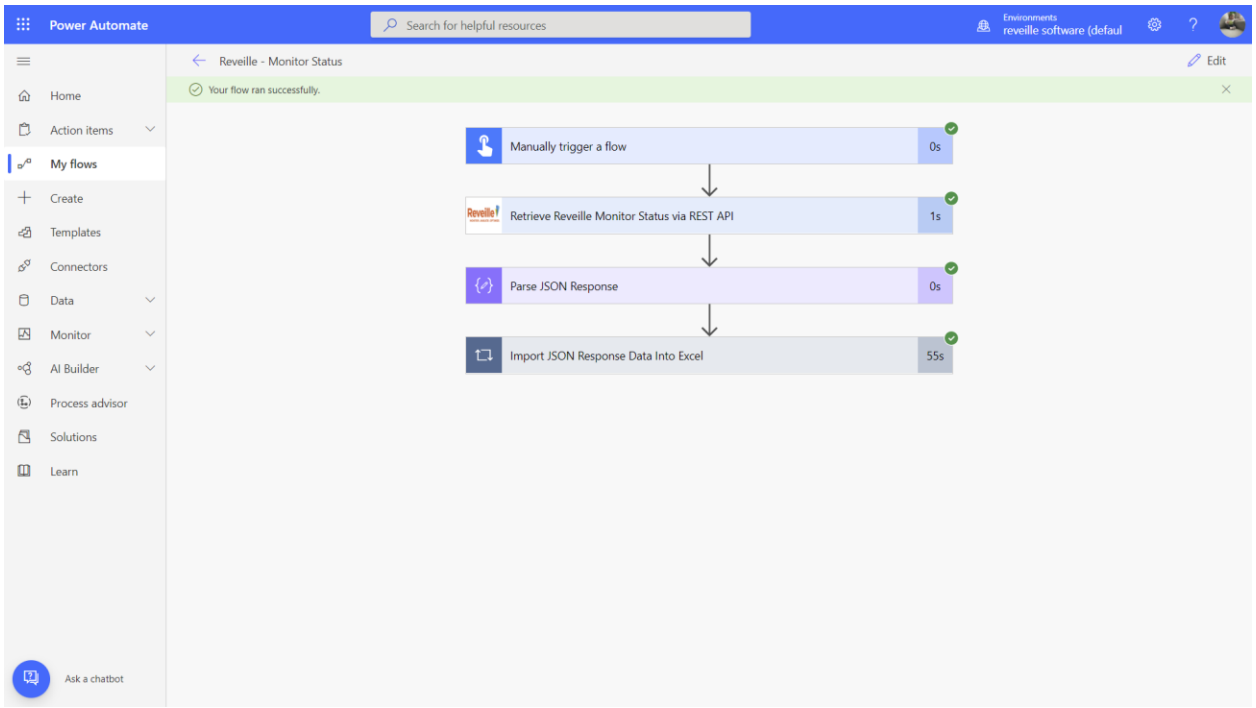


Figure 21: Microsoft Power Automate with Reveille Cloud Flow

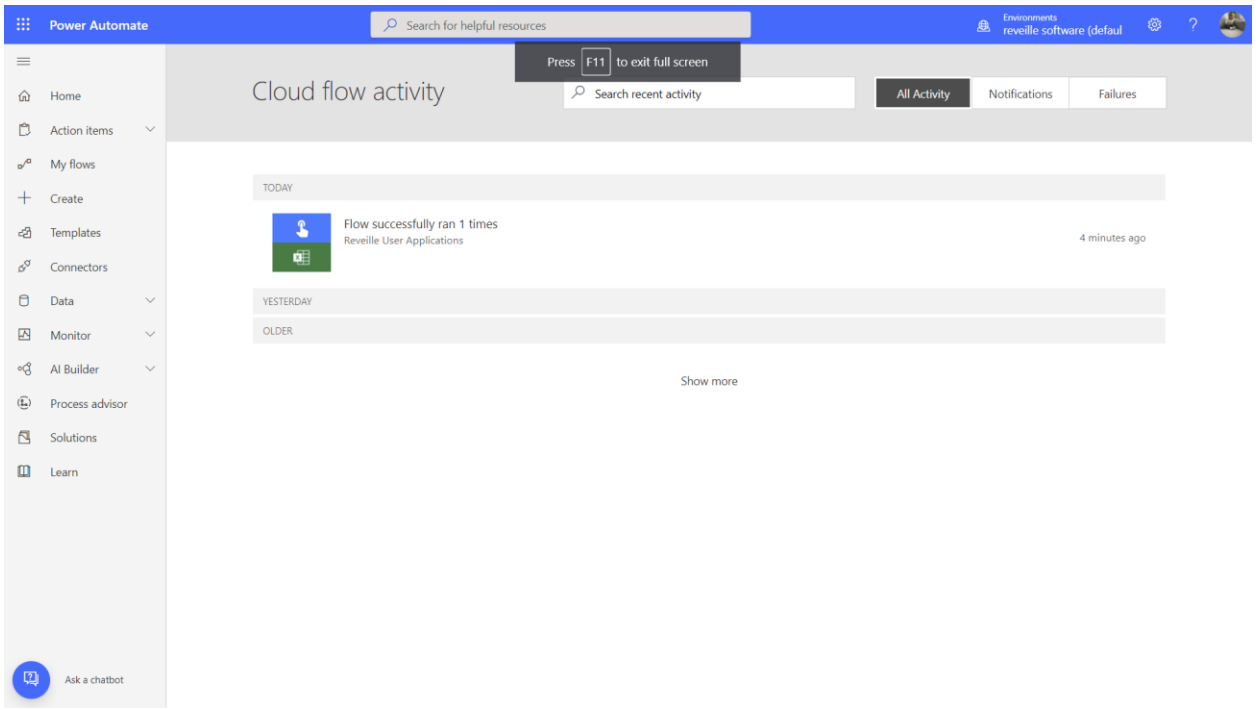


Figure 22: Microsoft Power Automate Reveille Cloud Flow Activity

7 Reveille and Microsoft Azure

Reveille has native Azure support for the following Azure services:

- Full Reveille operation with Azure VM
- Reveille collectors in Azure and Reveille servers on-premises
- Reveille collectors on-premises and Reveille server in Azure
- Monitoring Azure Blob storage performance and availability
- Notifications using Azure Communication Services (ACS)
- Support for Azure SQL databases
- Publish Reveille metrics to Azure Monitor
- Reveille event integration with Azure Sentinel (SIEM)
- Reveille event Integration with Azure Log

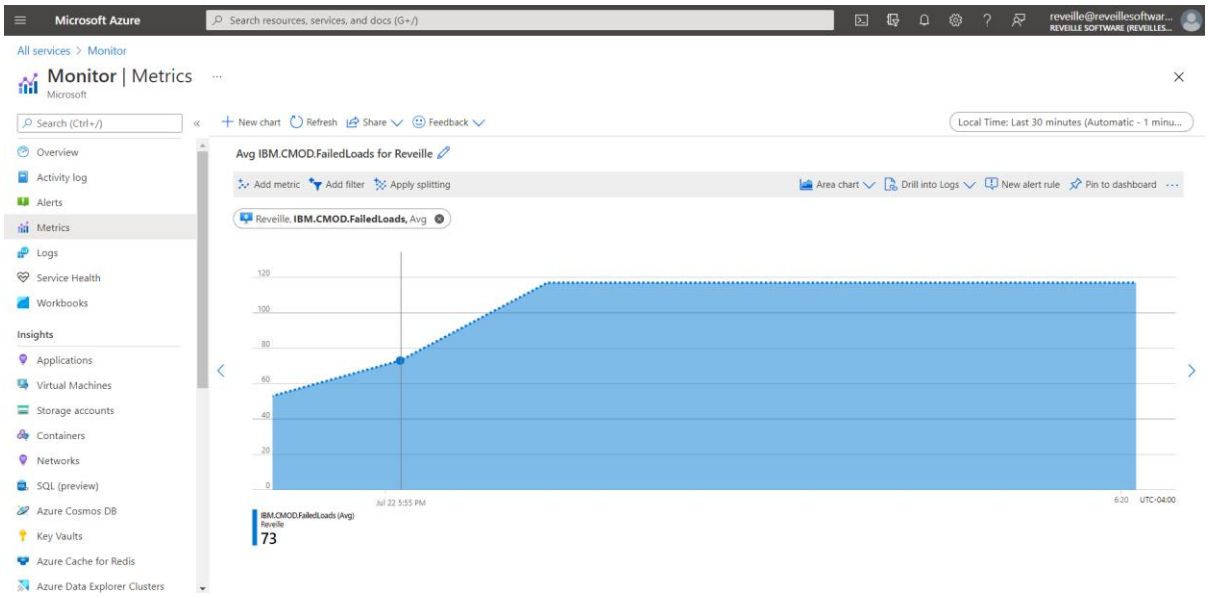


Figure 23: Azure Monitor Metric using Reveille Published Data

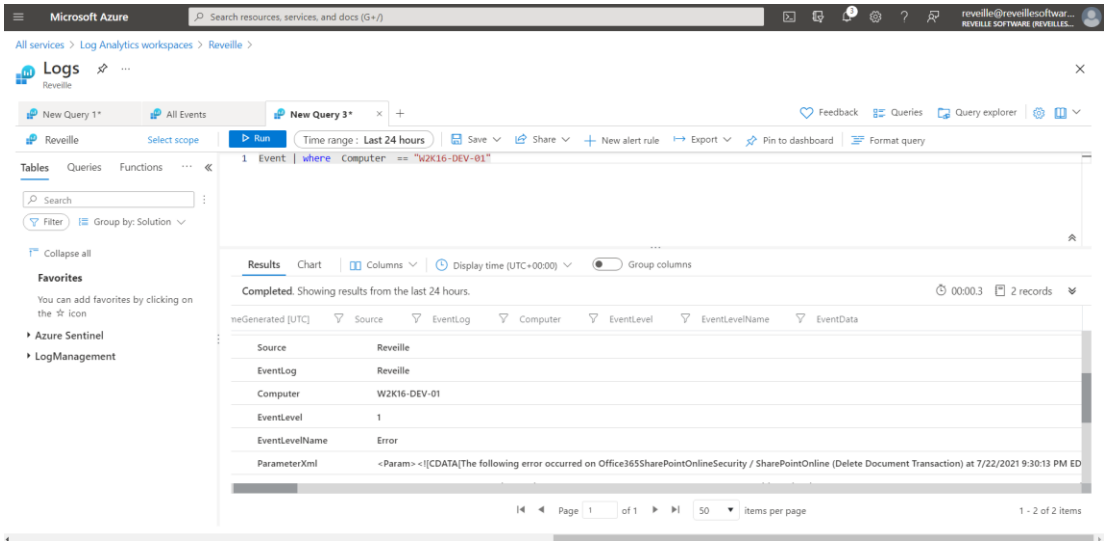


Figure 24: Azure Log Analytics with Reveille Event

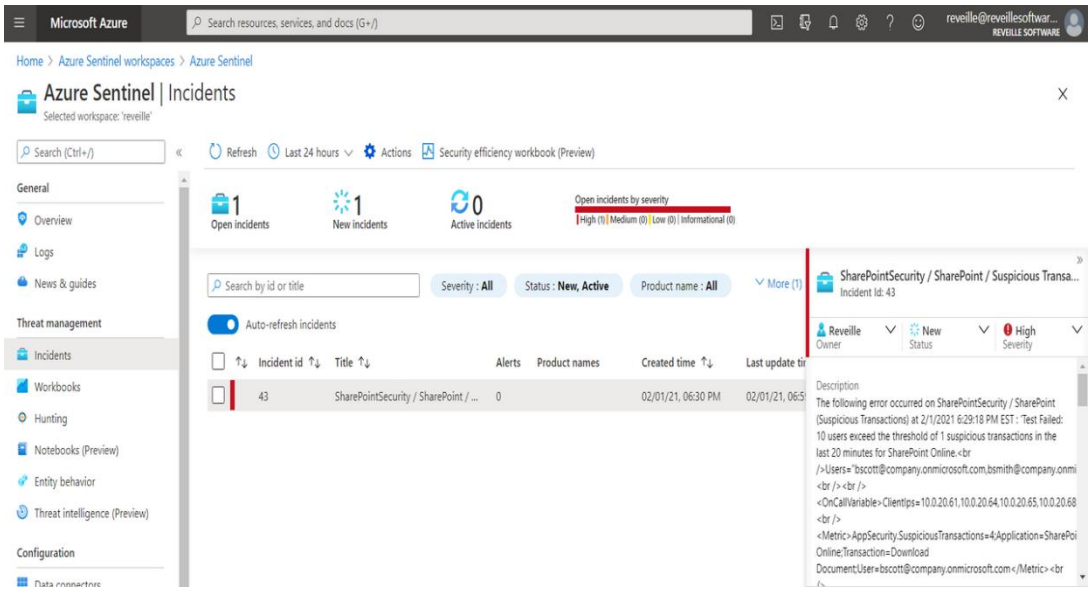


Figure 25: Azure Sentinel with Reveille Event

8 Common Reveille for Microsoft SharePoint /OneDrive Use Cases

How can we reduce the amount for manual observation / execution of manual checklists for monitoring SharePoint and SharePoint online?

- Eliminate SharePoint application 'babysitting' – observing/tracking/communicating.
- Reduce time for opening incidents with help desk after the fact so incidents are historically tracked.

How can we know who accessed what document from what SharePoint site and when? How can we know when abnormal access has taken place? How can we know what is stored in a Teams channel?

- Reveille captures the actual user activity of who accessed what document during what time period to assist with audit/compliance/capacity planning reviews and detecting abnormal security user access patterns.

How can we reduce the MTTR (Mean Time To Resolution) and 'after the fact' group problem determination meetings/conference calls?

- Reveille proactively communicates degrading conditions when they happen, reducing surprise impacts causing bridge calls that extend manual recovery workflows.

We need to collect of key troubleshooting data during the critical moments after an event is detected.

- Reveille collects information that is necessary for troubleshooting issues that is often challenging to obtain manually after the fact.

How can we objectively measure how the SharePoint application environment is performing? How can we have a baseline? How can we compare on-premises SharePoint with SharePoint Online and OneDrive?

- Reveille reports are created that answer questions like: How did we do today? This week or month? How are our KPI's? Examples:
    - Dashboard metrics – SharePoint Site Activity
    - Dashboard metrics – SharePoint Site Performance
    - Dashboard metrics – SharePoint User Activity

How can we implement quickly and leverage best practice monitoring?

- Reveille has a large amount of “out of the box” components for SharePoint
- Reveille’s SharePoint monitor template jumpstarts monitor creation
- The Reveille implementation team has deep content services experience

How can we plan capacity needs to handle user growth?

- Reveille dashboard metrics gather baselines of SharePoint operating performance
- Reveille User Analytics objectively understands SharePoint user transaction volumes, search hit counts, ‘hot’ content, query activity, and response times

We need to spend more time on new application delivery and less time on production support in a constrained resource environment.

- The Reveille solution decreases the amount of time spent supporting the SharePoint applications by:
    - Customers typically see a reduced number of support tickets for SharePoint
    - Customers typically see shortened MTTR for remaining, legitimate application issues
    - Coordination with support resources is greatly enhanced

We need a SharePoint application monitoring tool that does not require relearning of SharePoint, heavy customer ‘integration’ and maintenance, and keeps pace with SharePoint platform advances.

- Reveille also works ‘out of the box’ with many content services platforms such as IBM FileNet P8, IBM CMOD Multiplatforms, IBM Datacap, OpenText Documentum, OpenText Intelligent Capture and Kofax, and maintains currency with Microsoft SharePoint products
- Reveille Software primary focus is content services platform (CSP) or ECM application management, user analytics, and detecting content access breaches

9 Summary

Reveille for SharePoint, in conjunction with other Reveille wizard tests, deliver unmatched, comprehensive monitors to track, diagnose, repair, and report the SharePoint specific operational exceptions – with SharePoint specific metrics and 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 server

core, Reveille delivers complete monitoring of the SharePoint user activity (at the SharePoint application transaction level) and of the SharePoint platform. Reveille for SharePoint integrates with existing ITOM platforms (such as Splunk or Microsoft Sentinel / Azure Logs) and incident management systems (such as ServiceNow) to extend your existing IT investments.

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