PowerConnect
for SAP & Splunk

What are the Top Problems SAP Customers Face?

Lack of SAP Visibility impacts your business

$2.5B

Average total annual cost of unplanned downtime for critical applications (Fortune 1000)[1]

$334K

Average hourly cost of application failures[2]

56

Median number of days before security breach is discovered[3]

60%

Attacks are caused by insider threats[4]

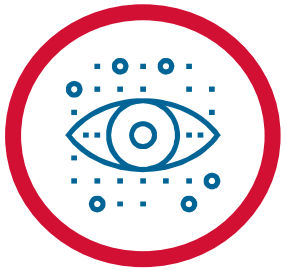
[1]IDC, DevOps and the Cost of Downtime: Fortune 1000 Best Practice Metrics Quantified
[2]Gartner, Ensure Cost Balances Out With Risk in High-Availability Data Centers
[3]FireEye Mandiant M-Trends Report 2020
[4]IBM 2016 Cyber Security Intelligence Index

SAP Operational and Organizational Challenges

Misaligned, Siloed Teams

Misalignment and low-level tech metrics

Fragmented Visibility



Lack of full-stack visibility

Reactive Responses

Reactive, chaotic responses to service disruptions

Poor Customer Experience

Root cause analysis takes time and effort

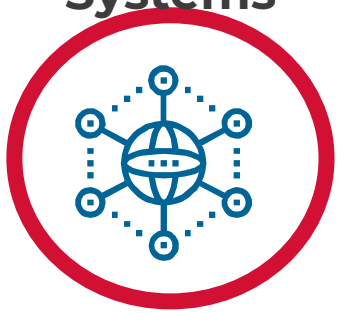
Risks to Revenue

Customer churn and diminishing loyalty

Understanding SAP Service Health

Lack of visibility and insight into SAP services

Increasingly Complex Systems



No automated alerts or actions. Manual health checks are slow and error-prone

Massive Amounts of Data

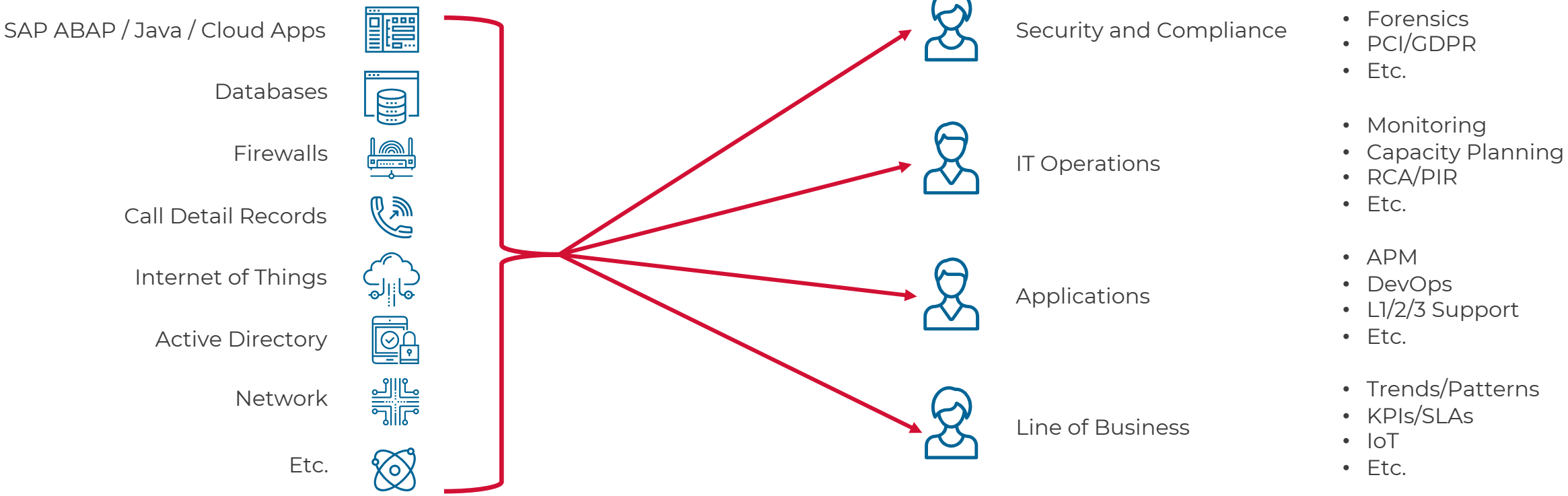
Lack of integrations and poor data quality disrupts operations

Lack of Correlated Business Analysis

Difficult to extract SAP data, no easy way to gather insights, silos

Ingest Data Once.... Use Multiple Times

SAP Machine Data → **SAP Insights**



- SIEM
- Forensics
- PCI/GDPR
- Etc.

- Monitoring
- Capacity Planning
- RCA/PIR
- Etc.

- APM
- DevOps
- L1/2/3 Support
- Etc.

- Trends/Patterns
- KPIs/SLAs
- IoT
- Etc.

PowerConnect Use Cases

Hundreds of high value, out-of-the-box use cases in each subject area

Service Observability

E2E Process Monitoring
Cross-System Data Validation
Business Process Monitoring

Performance and User Experience

Root Cause Analysis
End-User Experience
Correlation to Infrastructure

Cloud Migrations and Upgrades

Establish Baseline
Comparative Monitoring
Impact Analysis

Security and Compliance

User Behavior Analytics
Automated Audit Reporting
Access Monitoring
Threat Correlation

SAP® Certified
Integration with SAP NetWeaver®

SAP® Certified
Integration with SAP S/4HANA® Cloud

SAP® Certified
Integration with SAP S/4HANA®

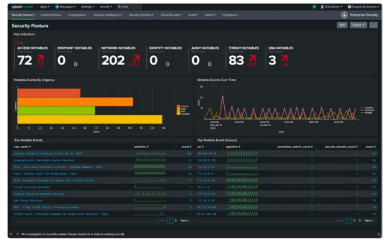
Unlock Your Enterprise SAP Data

PowerConnect For Splunk

Splunk IT Service Intelligence (ITSI)

splunk>

Splunk Enterprise Security



SAP ABAP

- SAP Business Warehouse
- SAP ERP
- SAP S/4 HANA
- SAP Fiori
- SAP NetWeaver
- SAP BW/4HANA
- SAP S/4 HANA

SAP Java

- SAP BusinessObjects
- SAP Data Services
- SAP PO
- SAP EP

SAP Cloud

- SAP Cloud Platform
- SAP Ariba
- SAP Fieldglass
- SAP SuccessFactors

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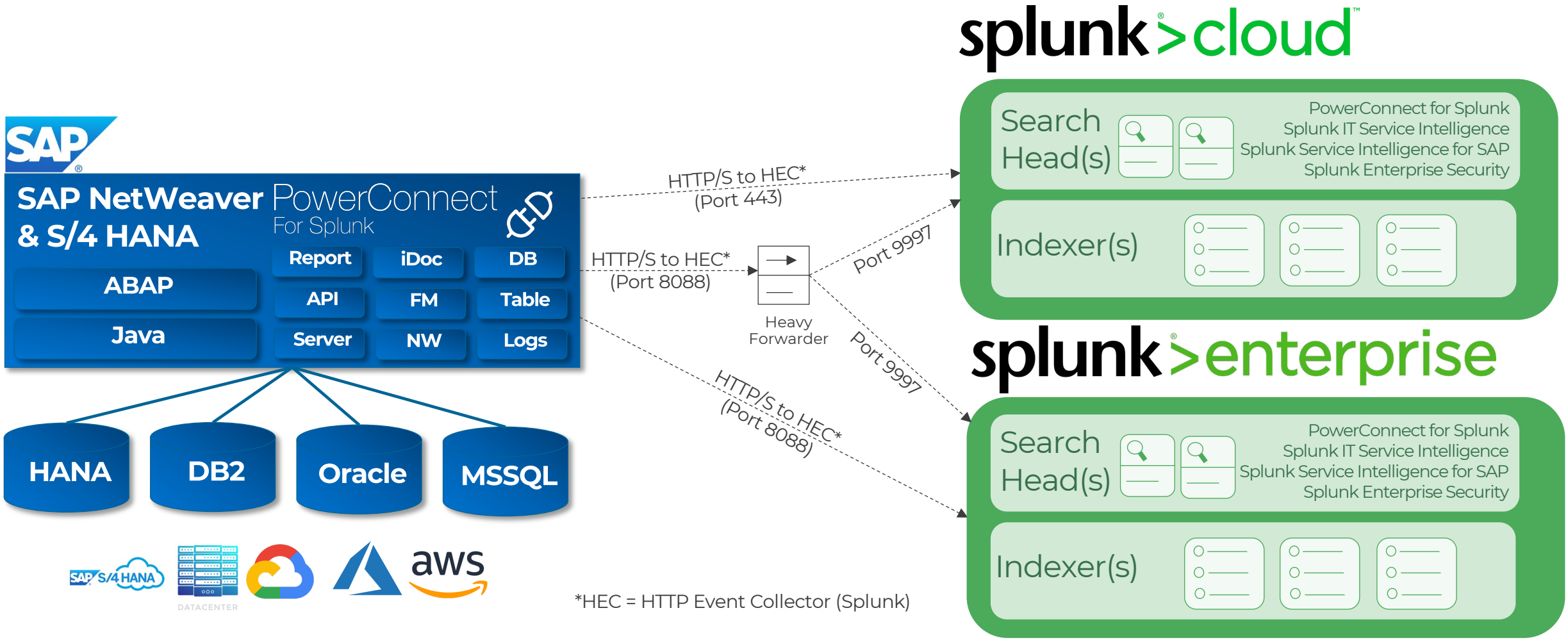
PowerConnect Data Provider

PowerConnect Java and ABAP Architecture



13 SAP Certifications Ensure High-Quality Compatibility with SAP Products

Reduce implementation effort and accelerate invocation

SAP® Certified
Integration with SAP NetWeaver®

SAP® Certified
Integration with SAP S/4HANA® Cloud

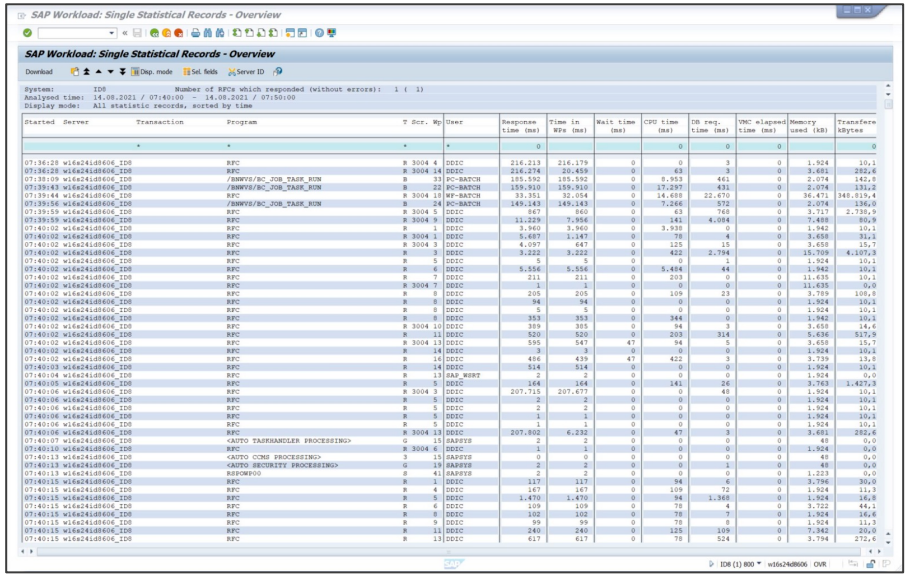
SAP® Certified
Integration with SAP S/4HANA®

- SAP Certified for SAP S/4HANA Cloud 2022 Extended Edition
- SAP Certified for **SAP S/4HANA Cloud 2022 (RISE + HEC)**
- SAP Certified for **SAP S/4HANA Cloud 2021 (RISE + HEC)**
- SAP Certified for **SAP S/4HANA Cloud 1909 (RISE + HEC)**
- SAP Certified for **SAP S/4HANA 2021**
- SAP Certified for **SAP S/4HANA 2020**
- SAP Certified for **SAP S/4HANA 1909**
- SAP Certified for **SAP S/4HANA 1809**
- SAP Certified for **SAP S/4HANA 1709**
- SAP Certified for **SAP S/4HANA 1610**
- SAP Certified for **SAP NetWeaver 7.5 ABAP**
- SAP Certified for **SAP NetWeaver 7.5 ABAP Add-on Deployment**
- SAP Certified for **SAP NetWeaver 7.5 JAVA**

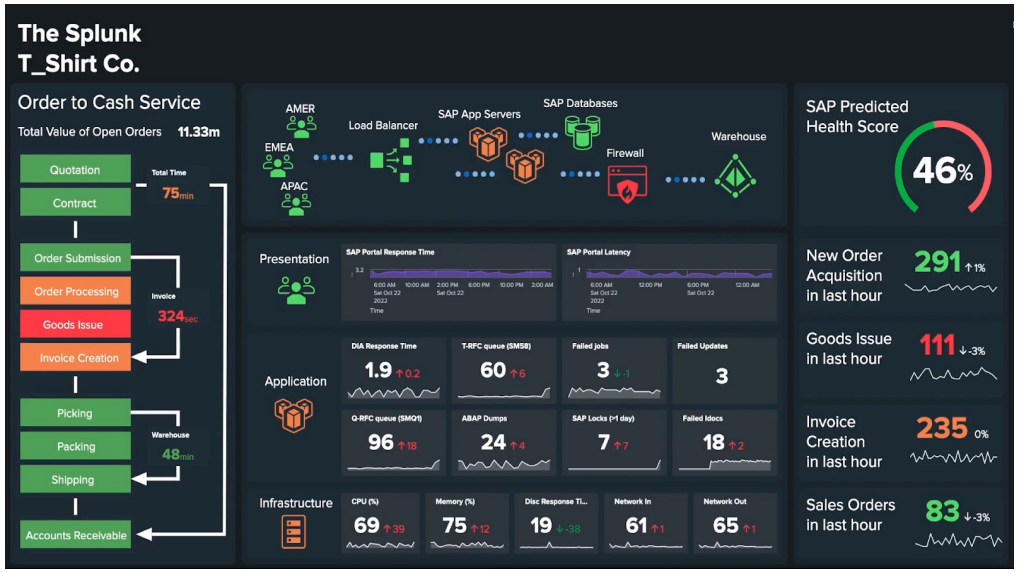
SAP Available on the App Center

SAP Partner

From SAP Monitoring to SAP Resilience



SAP monitoring with SAP – no access to data from outside SAP, restricted access (BASIS) from inside SAP, limited visualization and analytics capabilities



SAP monitoring using Splunk's SAP Service Observability – end-to-end process monitoring, cross-system data correlation and validation, security and compliance

What ROI Have SAP Customers Seen?

▼ 65%

Unplanned Downtime

▼ 70%

Mean-Time-to-Resolve

40min

Outages Predicted in Advance

▼ 90%

Mean-Time-to-Investigate

SAP Security

Case Study – European National Broadcasting Company

The CISO of this organization needed a homogenous view of SAP security in their centralized SOC. They required visibility and alerting into anomalous user behavior, unauthorized connections, sensitive data access and fraud detection.

They are using PowerConnect and Splunk in their SOC and sending the SAP Data to Splunk® Enterprise and Splunk® Enterprise Security.

SAP Performance

Customer Testimonial – Fortune 500 US Retail Company

"Splunk helped us achieve transparency into our SAP Landscape that was not previously available using standard tools. The ability to customize dashboard metrics in real time has proved invaluable as technical teams are now able to monitor key performance metrics and catch potential problems **before the business is impacted**.

The technical monitoring capabilities of Splunk with PowerConnect, in our opinion, are **far more robust** than standard SAP Solution Manager Techmon. We are able to develop and deliver alerts in real-time and customize on the fly based on our exact needs. What's more - when an exact alert isn't available, the team always goes above and beyond to develop a custom alert and deliver it in future releases."

- SAP Basis Platform Lead

SAP Service Observability

Customer Case Study - Fortune 100 Manufacturing Company

This customer required a modern solution to prevent costly outages in their outbound delivery, impacting Advanced Shipping Notification document processes.

They transformed SAP operations by ingesting SAP data into Splunk through PowerConnect and Service Intelligence for SAP which gave correlated views into application, infrastructure and business process layers. Interactive dashboards tracked the end-to-end business process where each step generated a health score, and Splunk further automated critical notifications with auto-healing resolutions.

SAP Service Observability

Customer Case Study - Fortune 100 Logistics Company

This organization has used PowerConnect and Splunk for over two years to extract delivery information from their SAP ERP solution. With the help of Splunk, they compare and correlate SAP and the technology stack with delivery information from an external tracking system. This delivers real-time insights to ensure that all deliveries are made, that there are no missing packages, and no missing boxes without a consignment.

Previously, reports on missing packages were received the following day.

SAP Cloud Migration and Upgrade

Customer Case Study - Fortune 200 Insurance Company

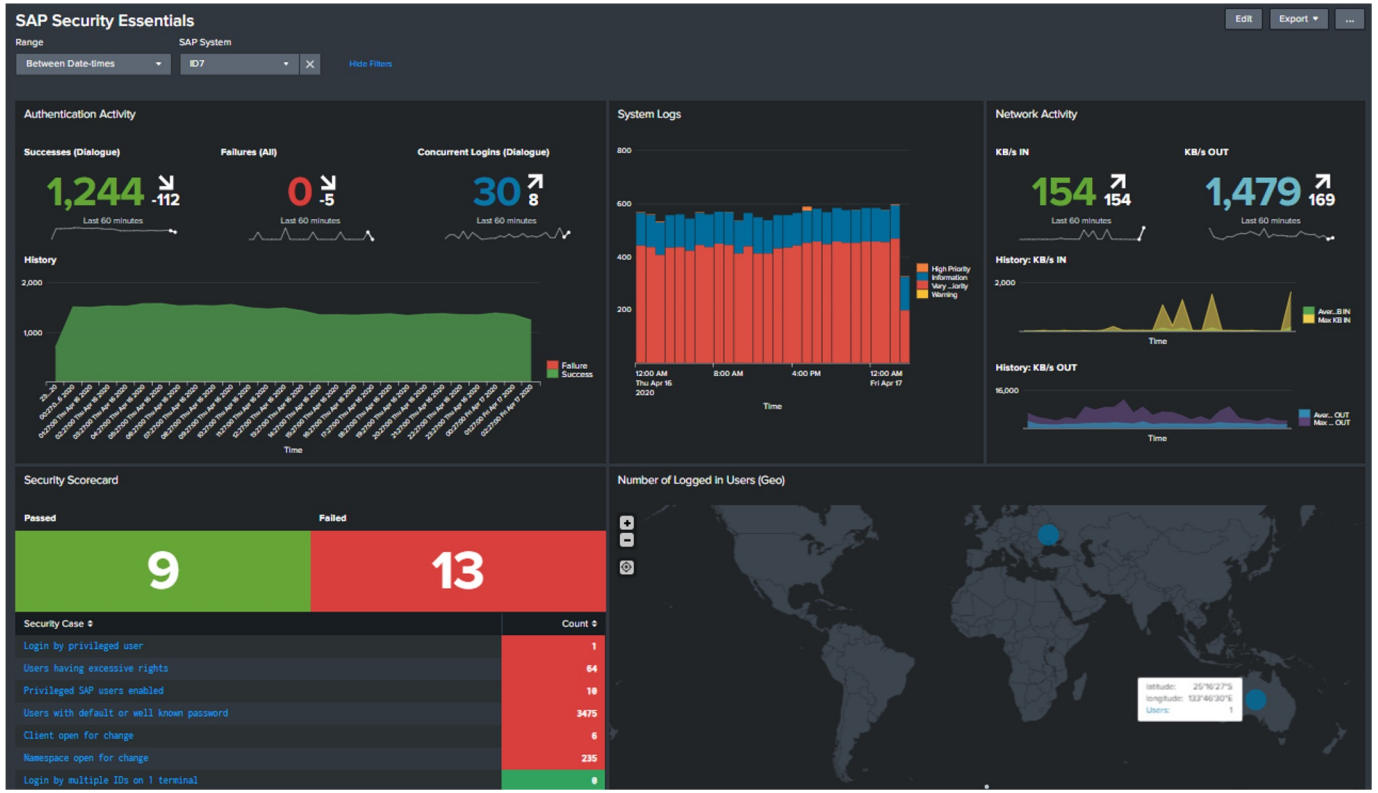
Our customer is a pioneer in using the latest SAP products and technology.

They first utilised PowerConnect and Splunk to monitor SAP performance while migrating SAP S/4HANA® on-prem to SAP S/4HANA® Cloud. After two years, they moved their SAP Landscape to AWS. With the help of our solution, they were able to monitor and get insights into SAP from blueprint to the migration phase, to go-live and post go-live.

SAP Security and Compliance

Security Insights Provided

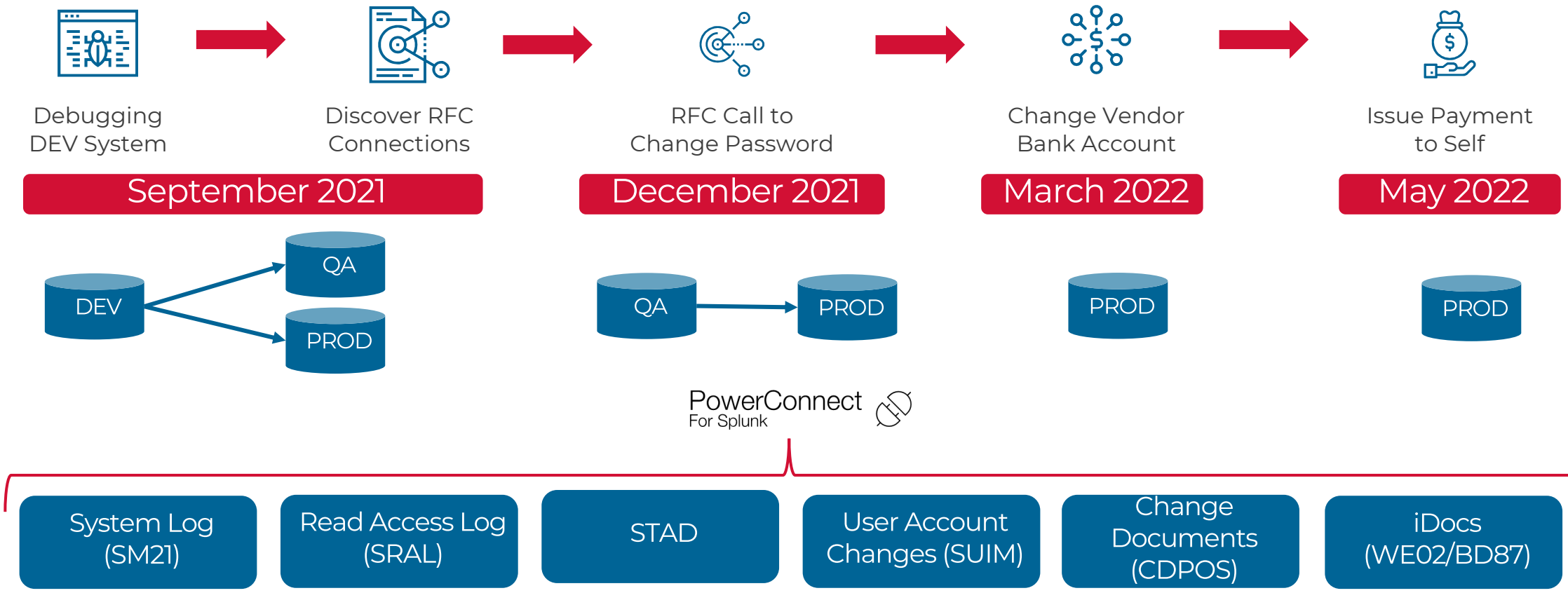
- Monitor, alert, action and automate SAP Compliance Audits and reports with **179 out-of-the-box use cases** across **26 Security Dashboards**
- Analyze and mitigate risks with user behavior analytics of suspicious login activity, execution of sensitive transactions or data theft
- Alert on STRUST Certificate Monitoring, anomalies in system logs, increased message frequency or non-compliant systems
- Detect SAP interface and configurational changes, deleted audit logs, changed destinations, changed roles and access levels, unauthorized downloads



Out-of-the-box content driven by SAP **48 transactions** including **SLG1, SLICENSE, RZ10, SCC4, SC06, SM04, SM19, SM20, SU53, ATC, SUIM, STRUST, SRAL + + +**

SAP Breaches Create Material Risk

Real-world example of SAP breach and fraud timeline



SAP applications are constrained by historical data parameters and Security datasets are only available for a short period of time. Splunk enables historical analysis and correlation across multiple environments and timeframes to create proactive alerts and mitigate risks before fraud or security breaches occur

SAP Solution Performance

SAP Data Analyzed

- SAP transaction STAD
- Work Process utilization
- RFC Connection Status
- SAP server availability
- JVM load and memory
- User Transaction Performance
- User Experience by Geo

Insights Provided

- Real-time and historic view of load and response by user, transaction code or any field in the dataset
- Availability of SAP solution components

Out-of-the-box content driven by SAP transactions **SM04, ST03, SM51, SM58, SMC1, SMQ1** and many others

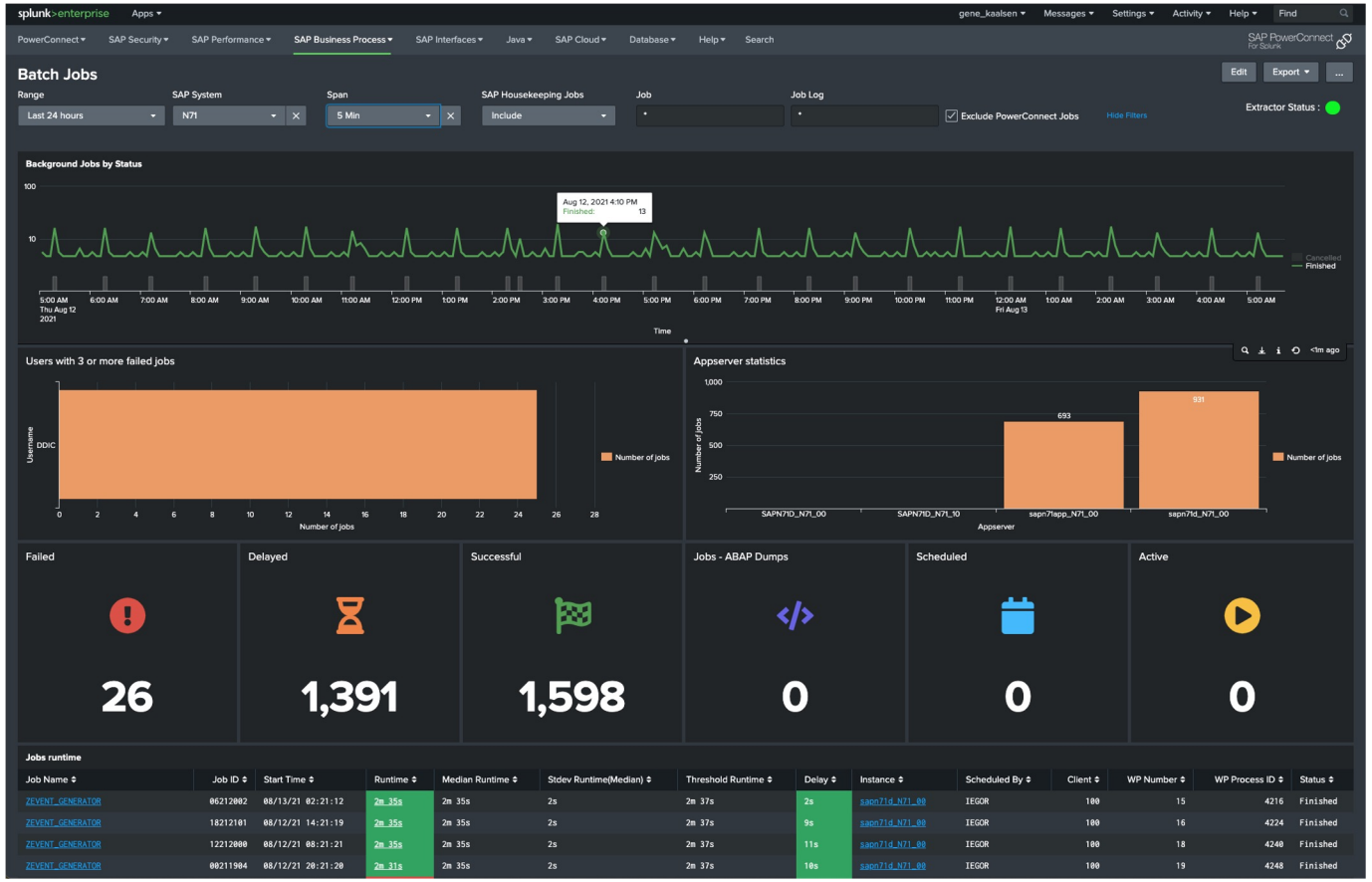
SAP Process Monitoring

SAP Data Analyzed

- IDoc & Change documents processing
- PI/PO message – payload, logs
- BI Process Chains
- Batch Processes
- Number Range

Insights Provided

- Status of critical business processes
- Business process context via IDoc content, e.g. sales data or PO without PR



Out-of-the-box content driven by SAP transactions **SM37, WE02, NRIV, SXMB_MONI** and many others

SAP Migrations and Upgrades

Baseline every SAP KPI and metric - Fast Time to Value - Days to Implement

DATACENTER

During Migration

Compare historical on-prem to destination environments

Ensure migration of dependent services

Continually monitor SAP system health

Ensure uptime of business-critical services

Monitor performance improvements and provide data analytics

Before Migration

Visibility to SAP and all dependent components

Establish business process benchmarks, KPIs, and metrics

Map entire SAP services from end to end

After Migration

Compare before and after migration KPIs

Enhanced security posture and reduce vulnerabilities

Provide continual 360-degree view to SAP business services

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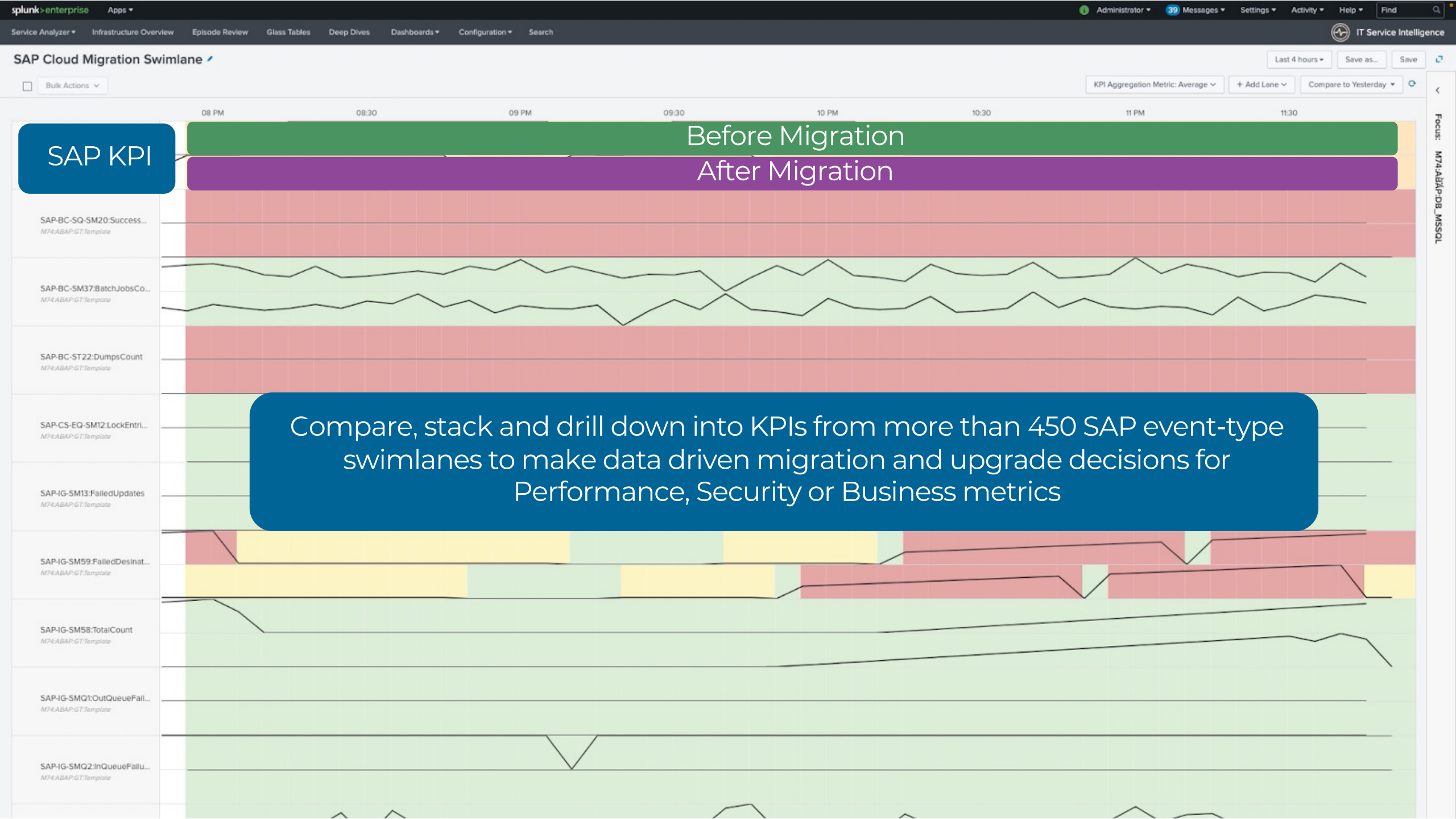
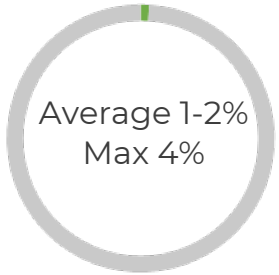
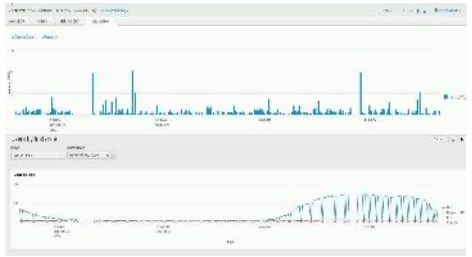

splunk>enterprise
Apps
Administrator
39 Messages
Settings
Activity
Help
Find
Service Analyzer
Infrastructure Overview
Episode Review
Glass Tables
Deep Dives
Dashboards
Configuration
Search
IT Service Intelligence
SAP Cloud Migration Swimlane
Last 4 hours
Save as...
Save
Bulk Actions
KPI Aggregation Metric: Average
+ Add Lane
Compare to Yesterday
08 PM
08:30
09 PM
09:30
10 PM
10:30
11 PM
11:30
SAP KPI
Before Migration
After Migration
SAP-BC-SQ-SM20:Success...
SAP-BC-SM37:BatchJobsCo...
SAP-BC-ST22:DumpsCount
SAP-CS-EQ-SM12:LockEntri...
SAP-IG-SM13:FailedUpdates
SAP-IG-SM59:FailedDesinat...
SAP-IG-SM58:TotalCount
SAP-IG-SMQ1:OutQueueFail...
SAP-IG-SMQ2:InQueueFailu...
Compare, stack and drill down into KPIs from more than 450 SAP event-type swimlanes to make data driven migration and upgrade decisions for Performance, Security or Business metrics
Focus: M74:ABAP-DB_MSSQL

Performance Impact on SAP

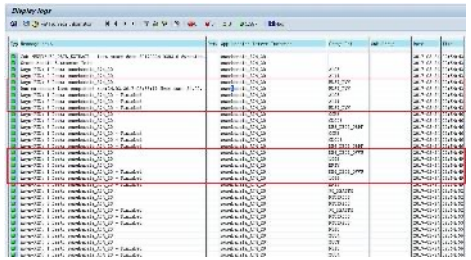
Average performance impact on SAP systems as seen in our customer‘s installations:

CPU Impact



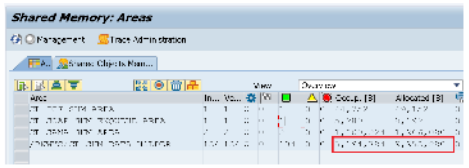


Processing Time for Extractors



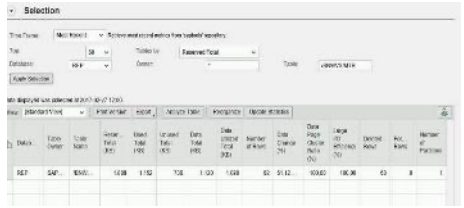
Memory Utilisation

- Storage for PowerConnect configuration and temporary space - typically < 100 MB
- Memory used by the SAP work process (DIA/BTC) is on average 100 MB



Disk Utilisation

- Database space is only consumed to temporarily hold data in a table before it is sent to Splunk. Once sent the data is deleted.
- This averages < 1GB provided Splunk is contactable (example below < 2MB)



Network I/O

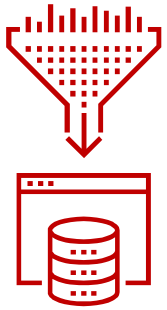
- On a large systems the volume of data is typically
  < 10GB per day
- For a 1Gbps connection this volume above represent a 0.02% load.
- Customers typically have 10Gbps connections.

Data	Measure
10	GB/day
426	MB / hour
121	KB / Sec
970	Kb/s (< 1 Mbps) ~ 0.0925% of a 1Gbps network connection

How Does PowerConnect Work?

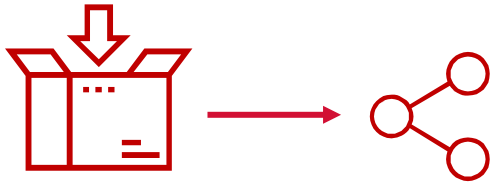
1.

Collect Data



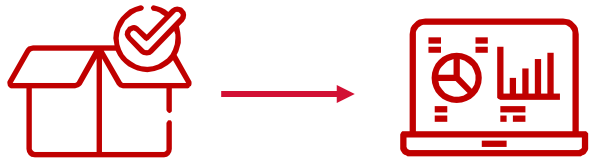
2.

Upload Data



3.

View/Process Data



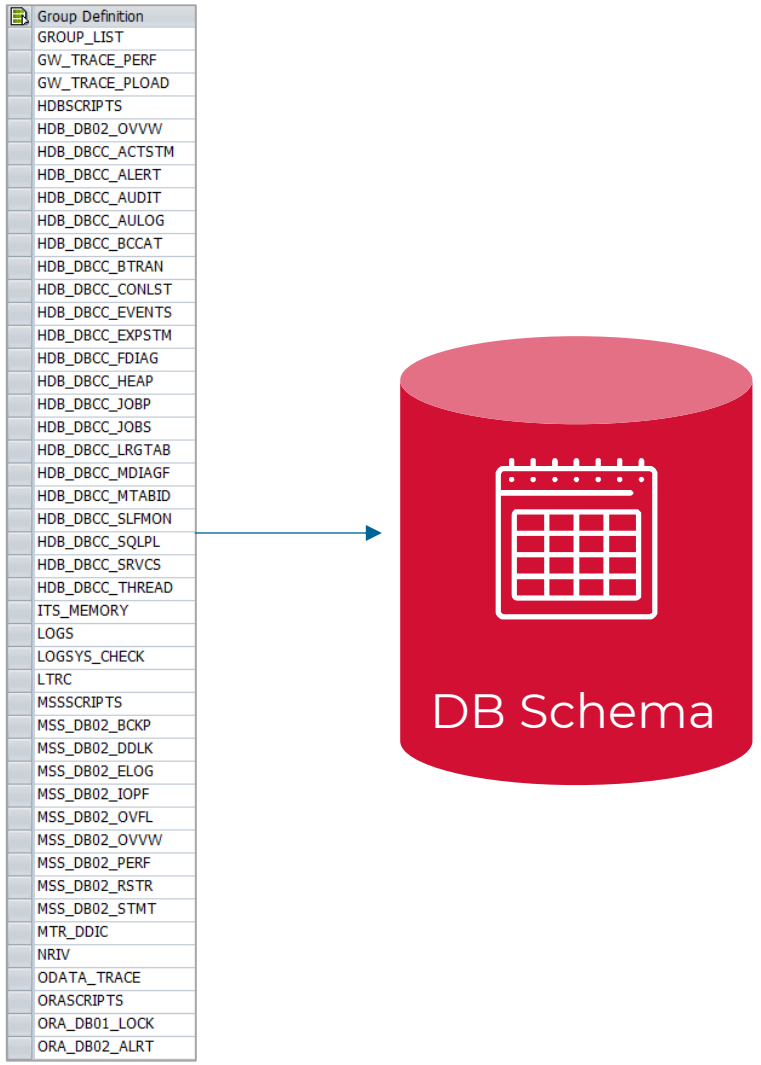
splunk>

Collect & Extract Data

SAP data is extracted by an SAP Add-On and stored inside a temporary table within the SAP database schema.

Data is provided by:

- Transactions
- Tables
- Function Modules
- iDoc
- DBMS

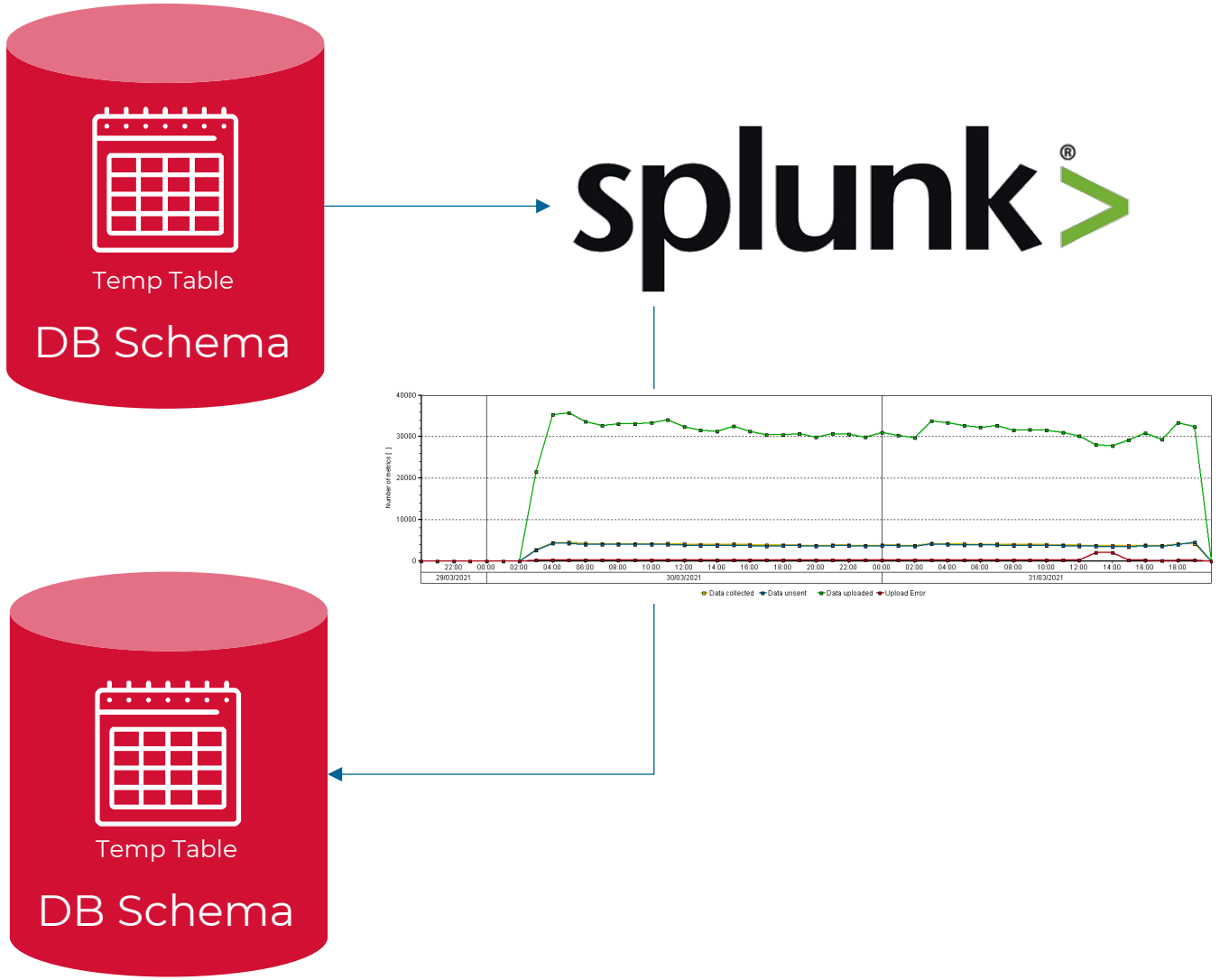


Extractors

Upload Data

Data residing in the temp table is transferred to Splunk using an HTTP Event Collector

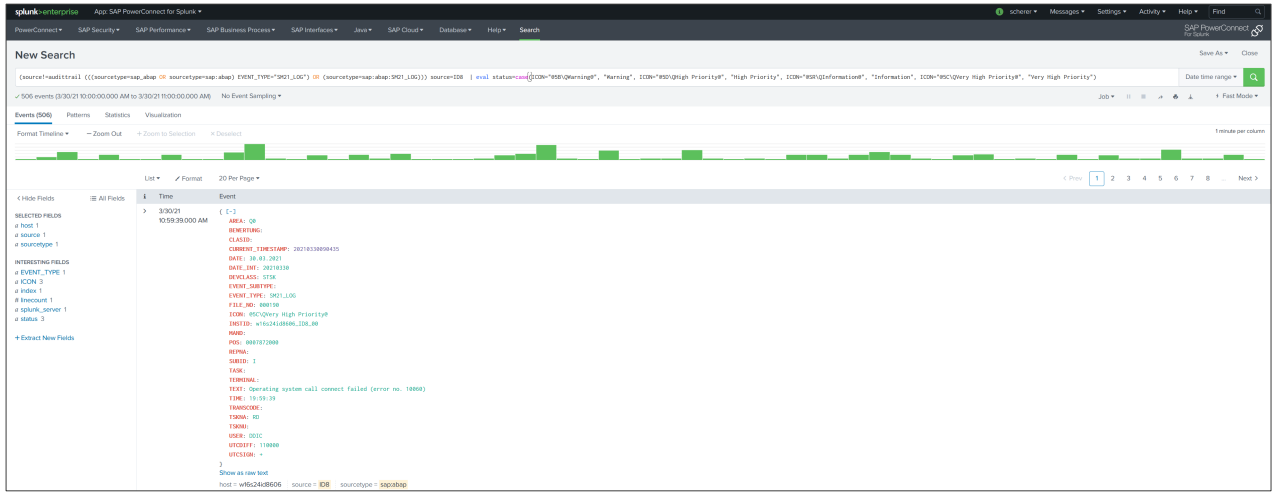
After transfer is confirmed, data sets are deleted.



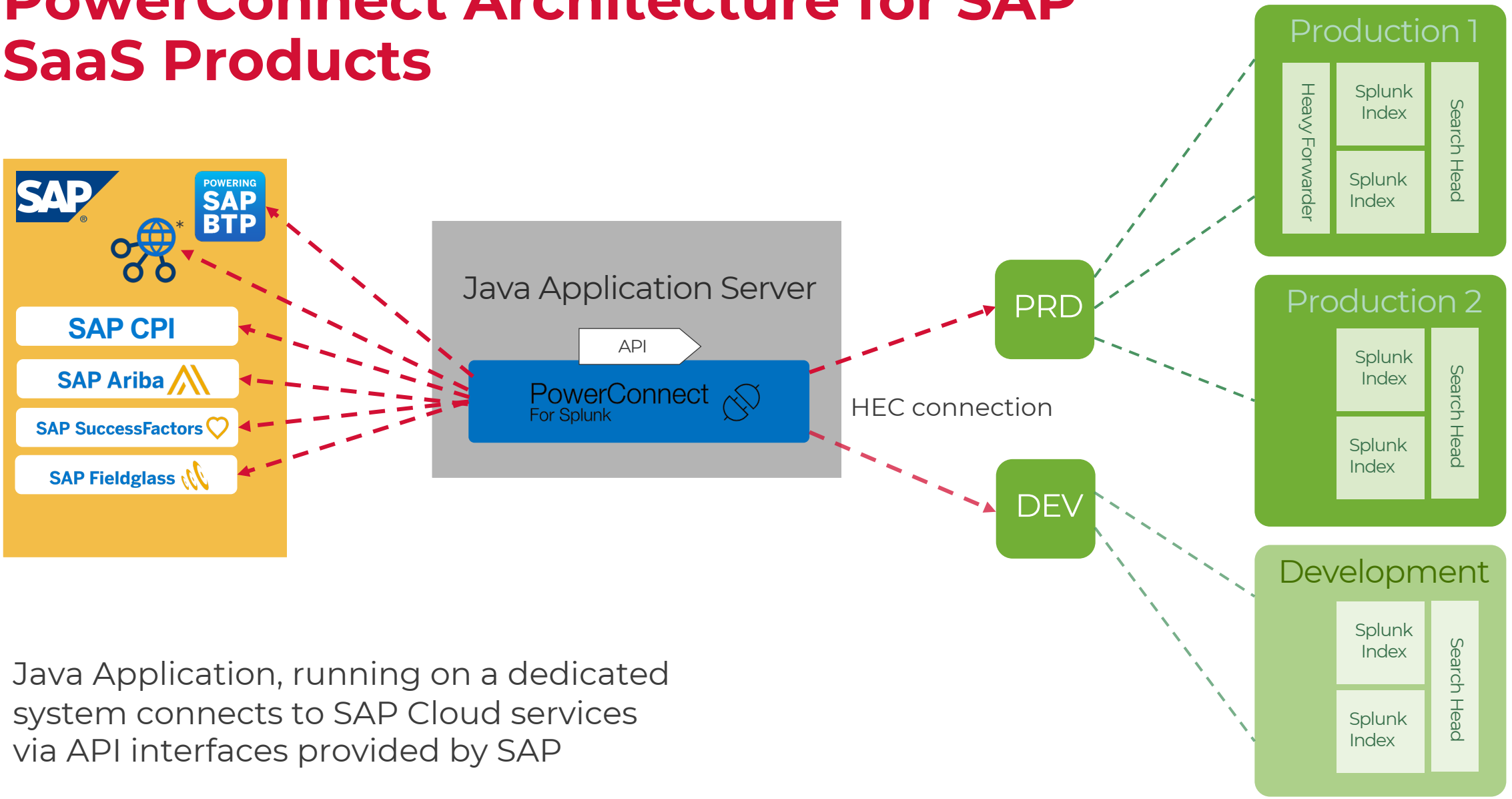
View/Process Data

Hundreds of pre-defined dashboards allow immediate insight on a single glance

SAP data can be used to enrich existing data and create custom dashboards that support your business



PowerConnect Architecture for SAP SaaS Products



Java Application, running on a dedicated system connects to SAP Cloud services via API interfaces provided by SAP

Extend Solution Manager with PowerConnect + Splunk

Category	Solution Manager	PowerConnect + Splunk
Data Fidelity	**Lower**: Rapid loss of detail; SAP purges or aggregates telemetry data	**Higher**: PowerConnect© can retain the highest level of detail and history of telemetry data
Correlation	**Not possible**: Limited to SAP ecosystem data only	**Possible:** With SAP data available in Splunk new insights can be gathered by correlating SAP data with shared infrastructure and all other sources
Integrations	**Custom integrations** with service management tools take time	**Out-of-the-box integrations** to ServiceNow and 100's of Splunk integrations
Dashboards	Dashboards available after **significant configuration**	**Out-of-the-box 100+** dashboards built on flexible Splunk platform offering endless possibilities
Alert Fatigue	**Alert noise** impedes teams' ability to resolve high priority issues	**Advanced Event Correlation** including noise reduction and automation
Monitoring	**Manual**: Operators doing **24/7 manual monitoring**	**Automated monitoring & alerting**
Implementation Timeline	**Months:** 3-6 for medium complexity, 6+ for more complex implementations.	**Days**: Ingest data into Splunk in under two days and start getting insights using purpose-build dashboards. New functionality or changes to existing functionality is implemented in minutes

For a personalized demo or trial:

https://www.powerconnect.io/contact-us/

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THANK YOU!
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