



Big Lots: Journey to SAP Solution Manager 7.2 and Beyond

Sai Rolla, SAP Manager, Kellton Tech, Inc.

Manish Garg, Director SAP CoE, Big Lots Stores, Inc.

ASUG83157

About the Speakers

Sai Rolla

- SAP Manager,
Kellton Tech, Inc.
- Business Enterprise Solutions practice with key focus on Netweaver, HANA, UX and Cloud
- Follow best practices

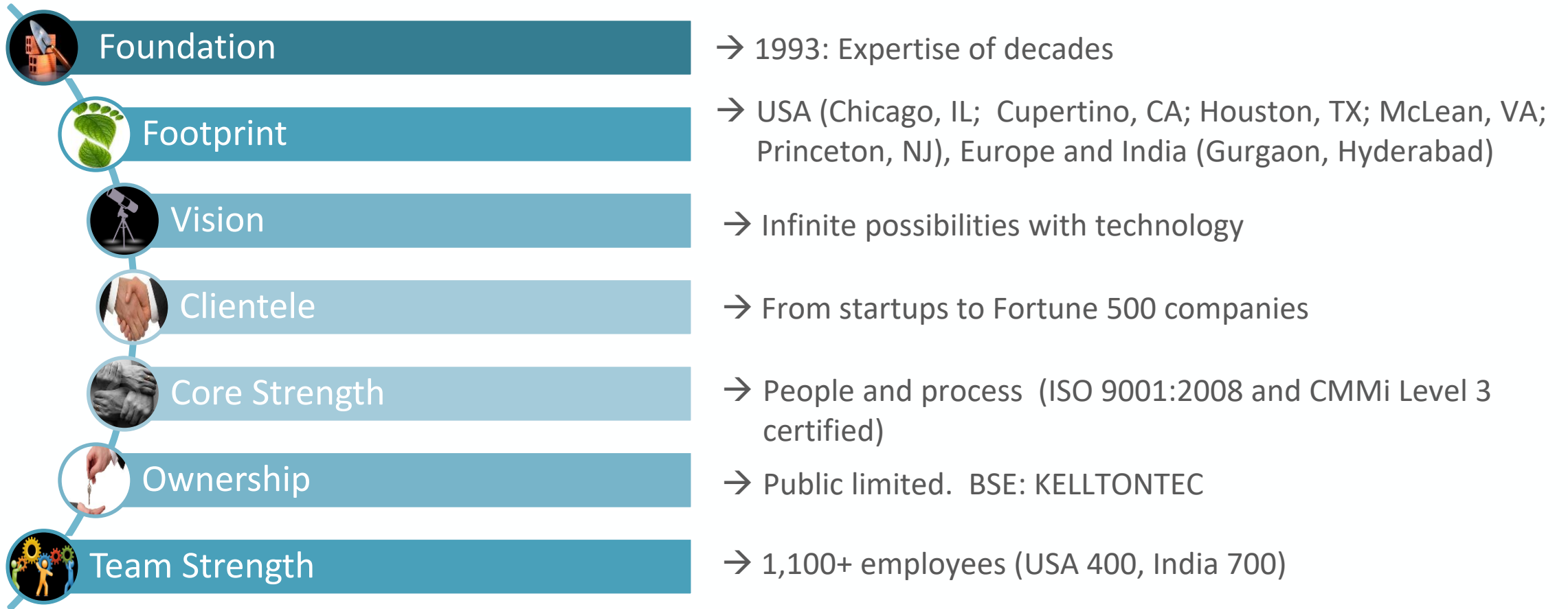
Manish Garg

- Director SAPCoE,
Big Lots Stores, Inc.
- ASUG Retail SIG
- Successfully running SAPCoE over a decade

Big Lots Stores, Inc.

- Headquarters in Columbus, Ohio
- More than 50 years in business
- 1400+ stores in 47 states
- Over 35,000 associates
- Running SAP for more than a decade

About Kellton Tech, Inc.



Key Outcomes/Objectives

1. Discuss journey to Solution Manager 7.2
2. Effective centralized landscape management
3. Leverage Solution Manager to improve IT performance
4. SAP Support Backbone update

Agenda

- Solution Manager 7.x
- Approach
- Journey
- Life with Solution Manager 7.2
- Q&A

Solution Manager 7.1

- Maintenance optimizer
- Technical Monitoring
- Alerting and reporting
- Scenarios not used –
 - *Solution Documentation*
 - *Test Suite*
 - *Change Request Management*
 - *Quality Gate Management*
 - *Business Process Operations*



Challenges with 7.1

- System based alerting
- Hundreds of false alerts
- Managed object specific configuration
- 100+ systems
- Dashboard data not available

Solution Manager 7.2 - Motivation

Manage systems with enhanced template based MAI

Powerful Technical Monitoring capabilities

Improved UX - UI5 based

SAP's unified UX strategy

Dashboard factory

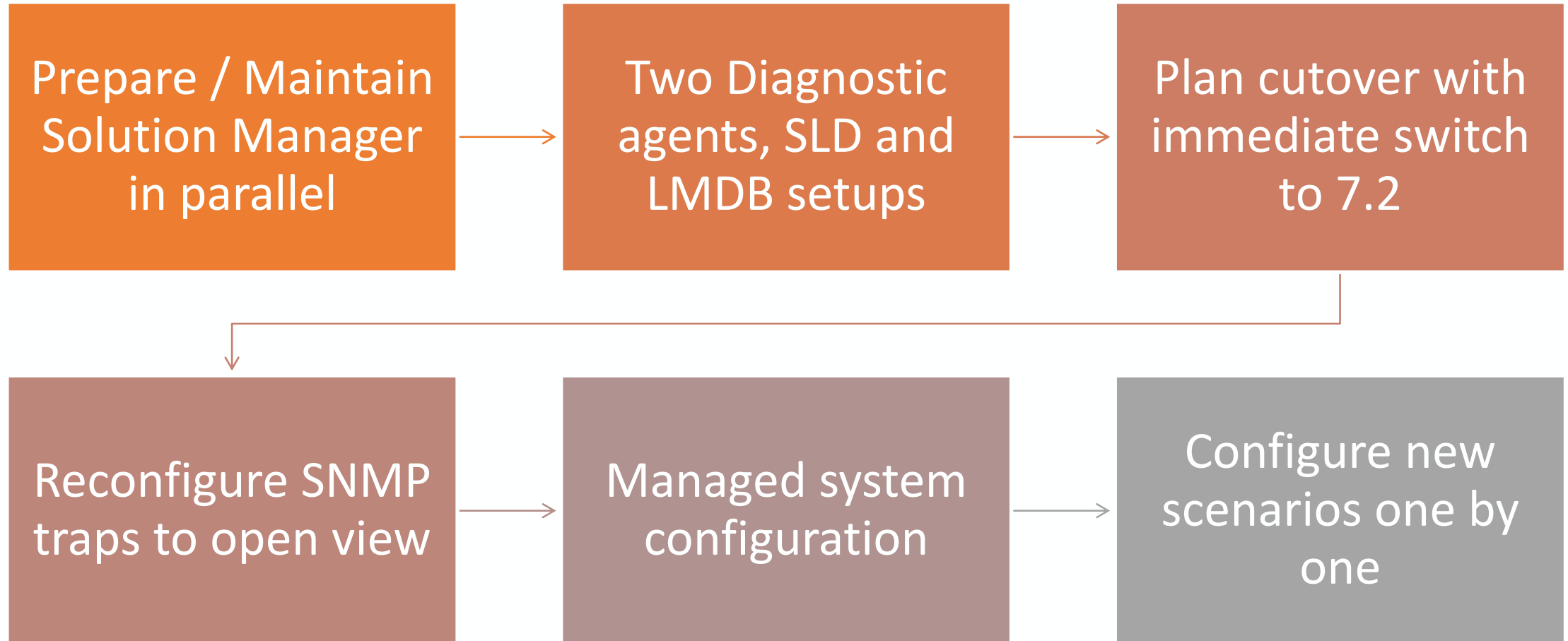
Journey

Important considerations

- Solman 7.1 no longer supported after 2017
- Content migration required?
- Dual stack split / installation
- Parallel maintenance
 - Upgrade vs New Installation



Approach



Solution Manager 7.2



TECHNICAL
MONITORING



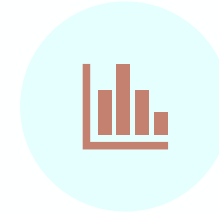
ROOT CAUSE
ANALYSIS



DATA VOLUME
MANAGEMENT



GUIDED
PROCEDURES



DATA CONSISTENCY
MANAGEMENT



SECURITY



USAGE PROCEDURE
LOGGING

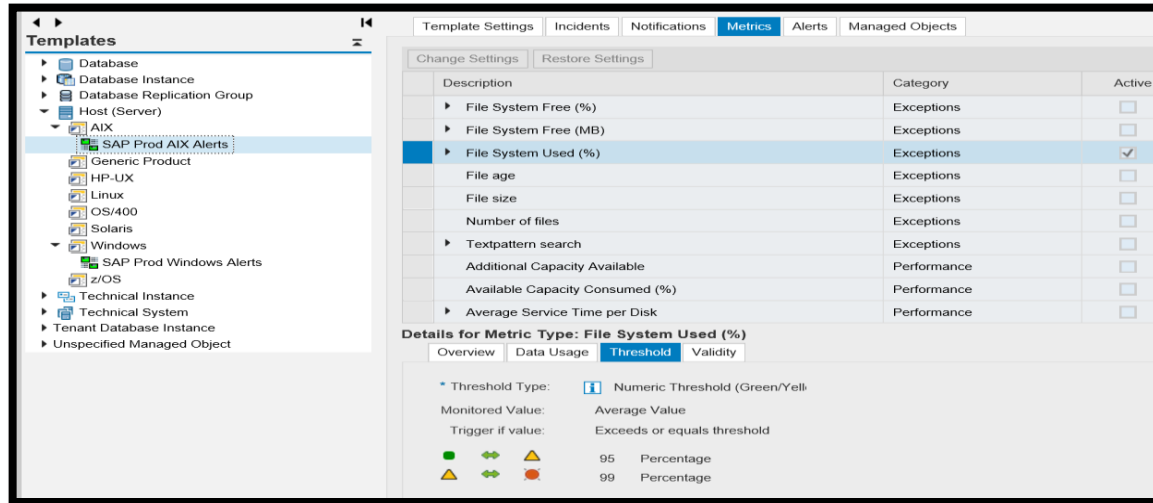


NWDI



CTS+

Technical Monitoring



The screenshot shows the 'Metrics' tab in the SAP Monitoring console. On the left, a tree view shows the hierarchy: Templates > Host (Server) > AIX > SAP Prod AIX Alerts. The main area displays a table of metrics for the selected template. The 'File System Used (%)' metric is selected and highlighted in blue. Below the table, the 'Details for Metric Type: File System Used (%)' are shown, including the threshold type (Numeric Threshold), monitored value (Average Value), and trigger condition (Exceeds or equals threshold). A legend indicates that a green double arrow represents a value between 95% and 99%, and a red double arrow represents a value above 99%.

Description	Category	Active
File System Free (%)	Exceptions	<input type="checkbox"/>
File System Free (MB)	Exceptions	<input type="checkbox"/>
File System Used (%)	Exceptions	<input checked="" type="checkbox"/>
File age	Exceptions	<input type="checkbox"/>
File size	Exceptions	<input type="checkbox"/>
Number of files	Exceptions	<input type="checkbox"/>
Textpattern search	Exceptions	<input type="checkbox"/>
Additional Capacity Available	Performance	<input type="checkbox"/>
Available Capacity Consumed (%)	Performance	<input type="checkbox"/>
Average Service Time per Disk	Performance	<input type="checkbox"/>

Details for Metric Type: File System Used (%)

Threshold Type: Numeric Threshold (Green/Yell)

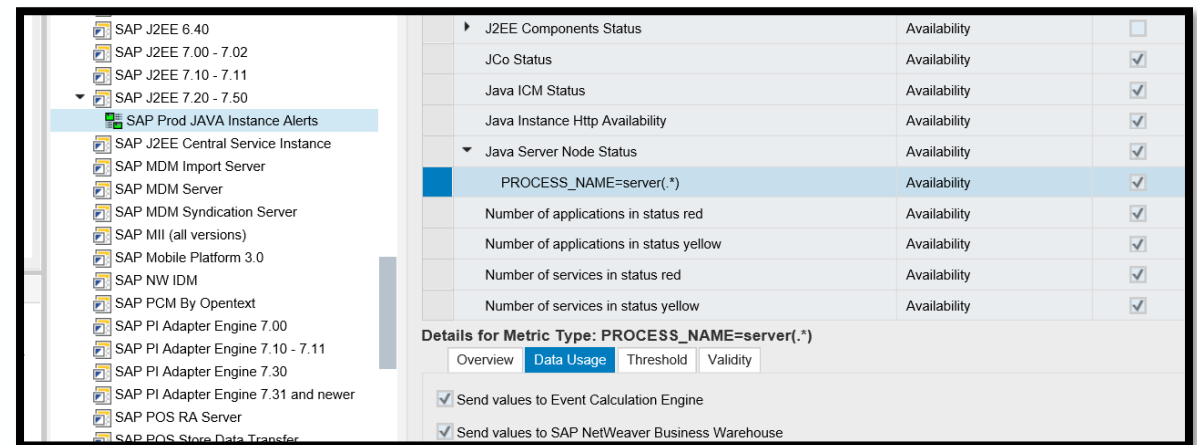
Monitored Value: Average Value

Trigger if value: Exceeds or equals threshold

Legend:

- Green double arrow: 95 Percentage
- Red double arrow: 99 Percentage

One template = several managed systems
Easy to fine tune



The screenshot shows the 'Metrics' tab in the SAP Monitoring console. On the left, a tree view shows the hierarchy: Templates > Technical Instance > SAP J2EE 7.20 - 7.50 > SAP Prod JAVA Instance Alerts. The main area displays a table of metrics for the selected template. The 'PROCESS_NAME=server(*)' metric is selected and highlighted in blue. Below the table, the 'Details for Metric Type: PROCESS_NAME=server(*)' are shown, including the threshold type (Availability), monitored value (Average Value), and trigger condition (Exceeds or equals threshold). A legend indicates that a green double arrow represents a value between 95% and 99%, and a red double arrow represents a value above 99%.

Description	Category	Active
J2EE Components Status	Availability	<input type="checkbox"/>
JCo Status	Availability	<input checked="" type="checkbox"/>
Java ICM Status	Availability	<input checked="" type="checkbox"/>
Java Instance Http Availability	Availability	<input checked="" type="checkbox"/>
Java Server Node Status	Availability	<input checked="" type="checkbox"/>
PROCESS_NAME=server(*)	Availability	<input checked="" type="checkbox"/>
Number of applications in status red	Availability	<input checked="" type="checkbox"/>
Number of applications in status yellow	Availability	<input checked="" type="checkbox"/>
Number of services in status red	Availability	<input checked="" type="checkbox"/>
Number of services in status yellow	Availability	<input checked="" type="checkbox"/>

Details for Metric Type: PROCESS_NAME=server(*)

Threshold Type: Availability

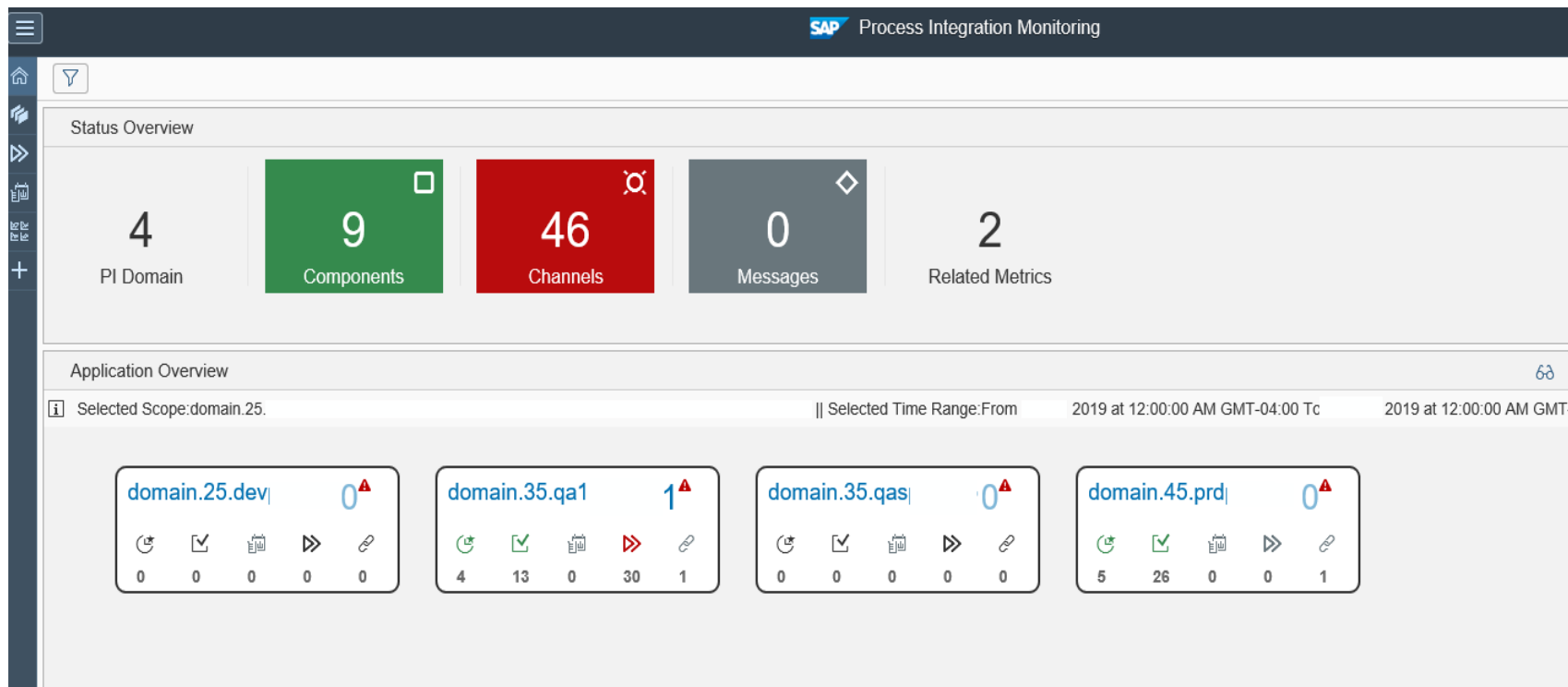
Monitored Value: Average Value

Trigger if value: Exceeds or equals threshold

Legend:

- Green double arrow: 95 Percentage
- Red double arrow: 99 Percentage

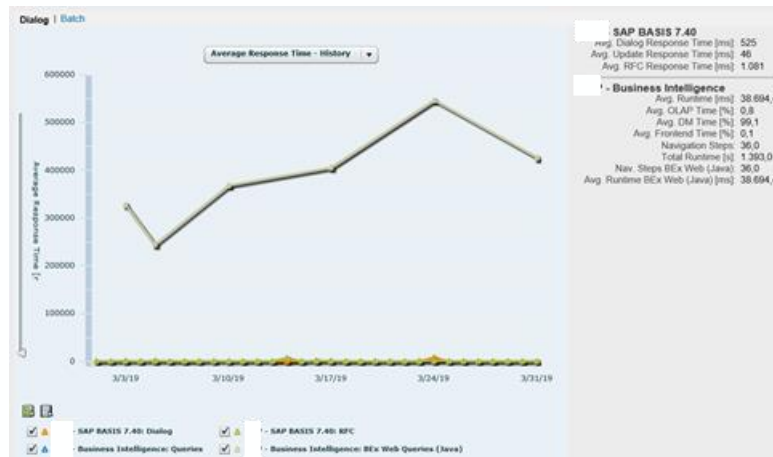
Process Integration Monitoring



- Adapter engine
- Mapping runtime
- PI channel status

Root cause analysis

Workload analysis



Change reporting

Store Content

Search: * History filter [ON] History Searched [OFF] Incl. Deleted Deleted

History	NOTE	VERSION	TEXT	PRSTATUS	PRSTATUS
1	0001284239	0021	RSCRM: Overcoming the 1 million row limit in RSCRM	Completely implemented	E

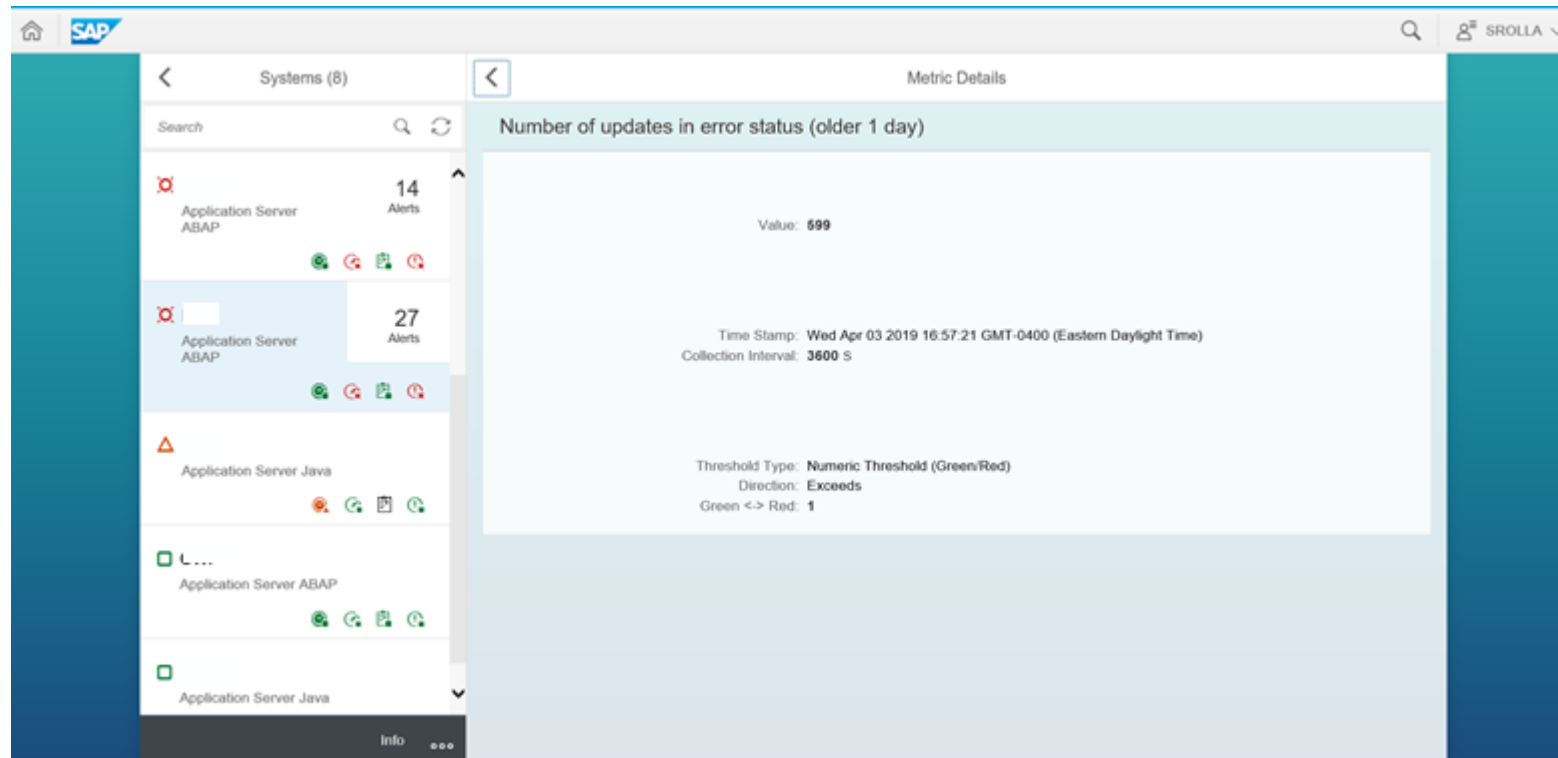
Element History

Date	Mod. Type	NOTE	VERSION	TEXT	PRSTATUS	PRSTATUS
2018/09/24 14:07:52		0001284239	0021	RSCRM: Overcoming the 1 million row limit in RSCRM	Completely implemented	E

Central system monitoring

Centrally monitor all systems

Helps Offshore team inspect and proactively respond



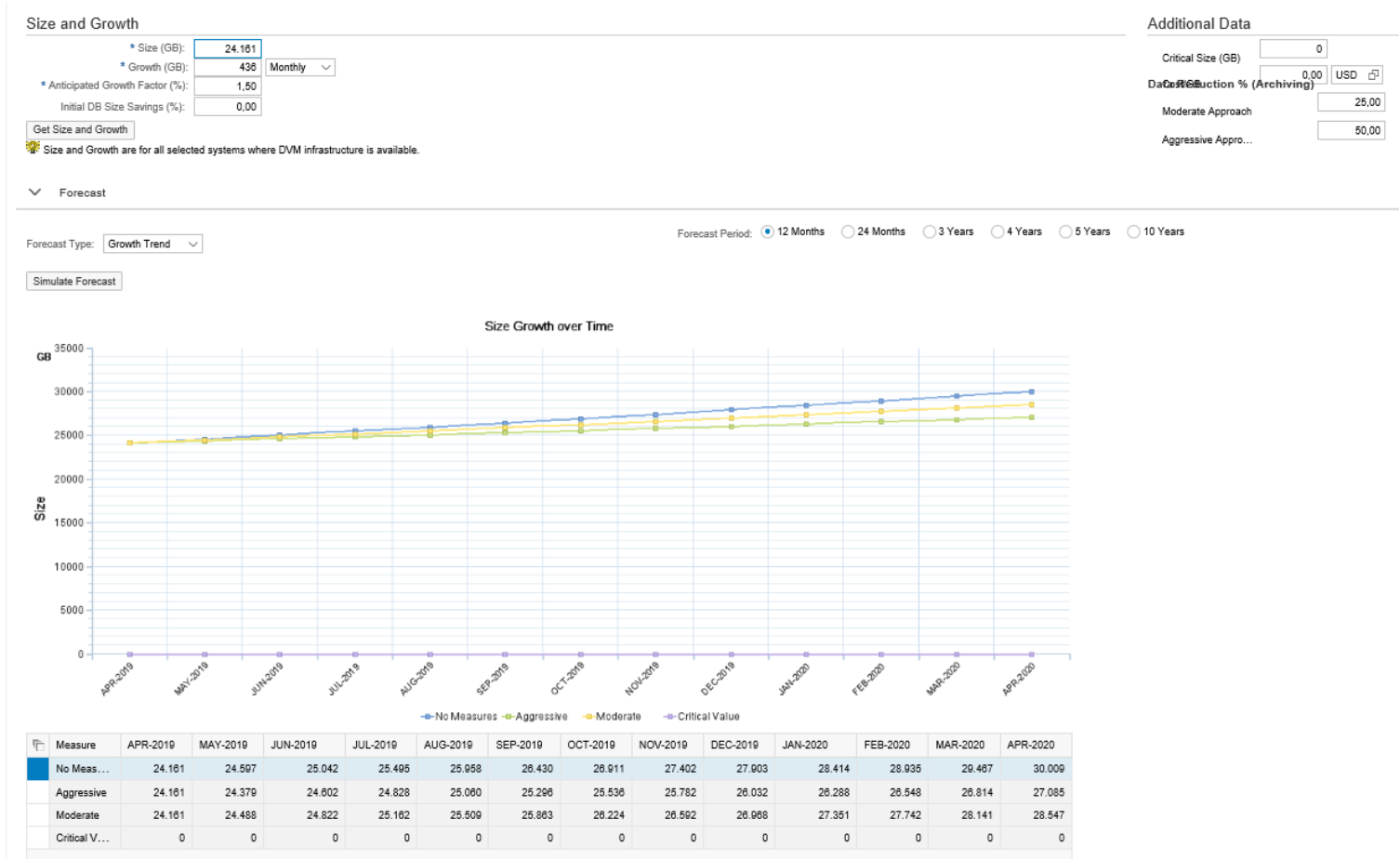
The screenshot displays the SAP Central System Monitoring interface. On the left, a list of systems is shown under the heading "Systems (8)". The systems listed include:

- Application Server ABAP with 14 Alerts (indicated by a red square icon)
- Application Server ABAP with 27 Alerts (indicated by a red square icon)
- Application Server Java with 1 Alert (indicated by a yellow triangle icon)
- Application Server ABAP (indicated by a green square icon)
- Application Server Java (indicated by a green square icon)

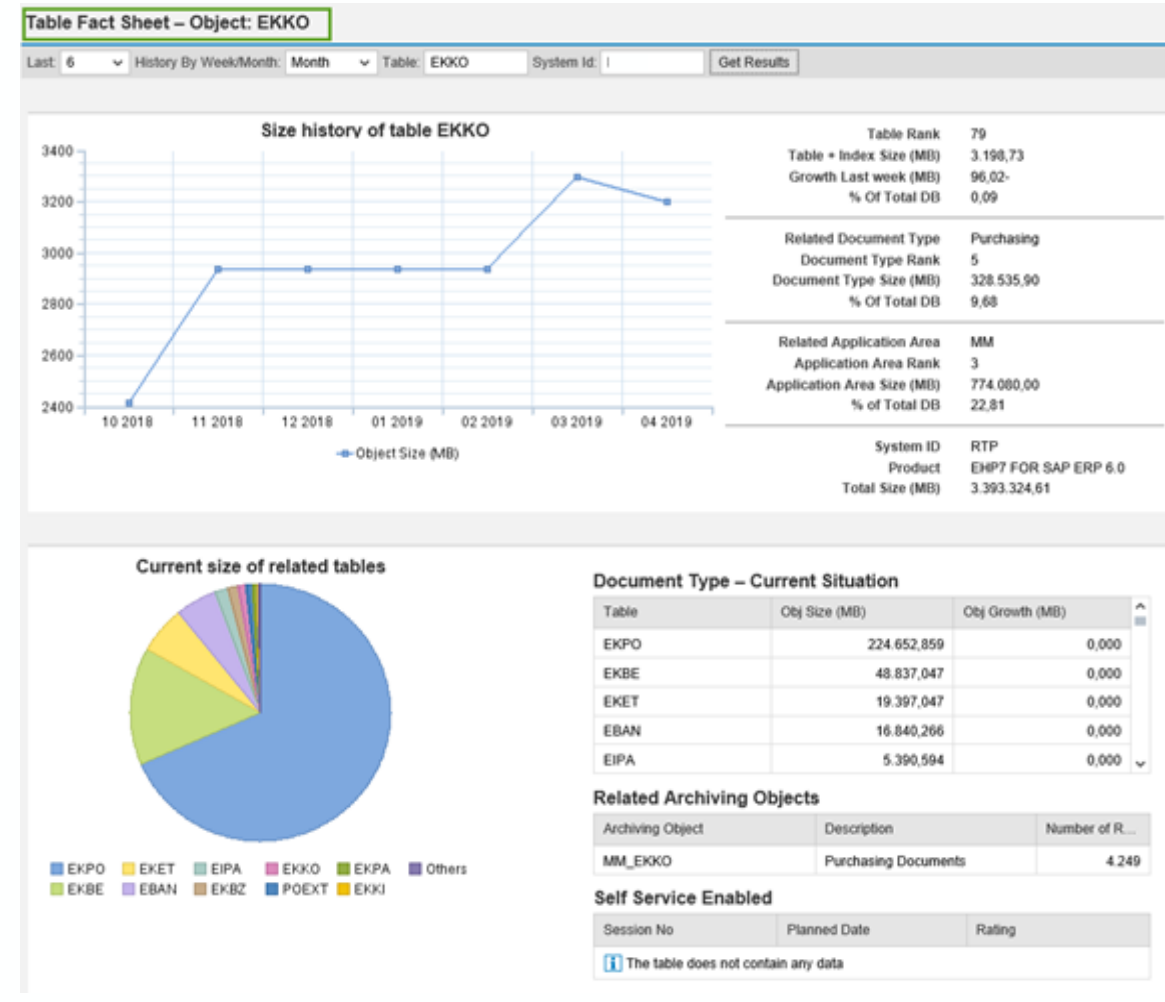
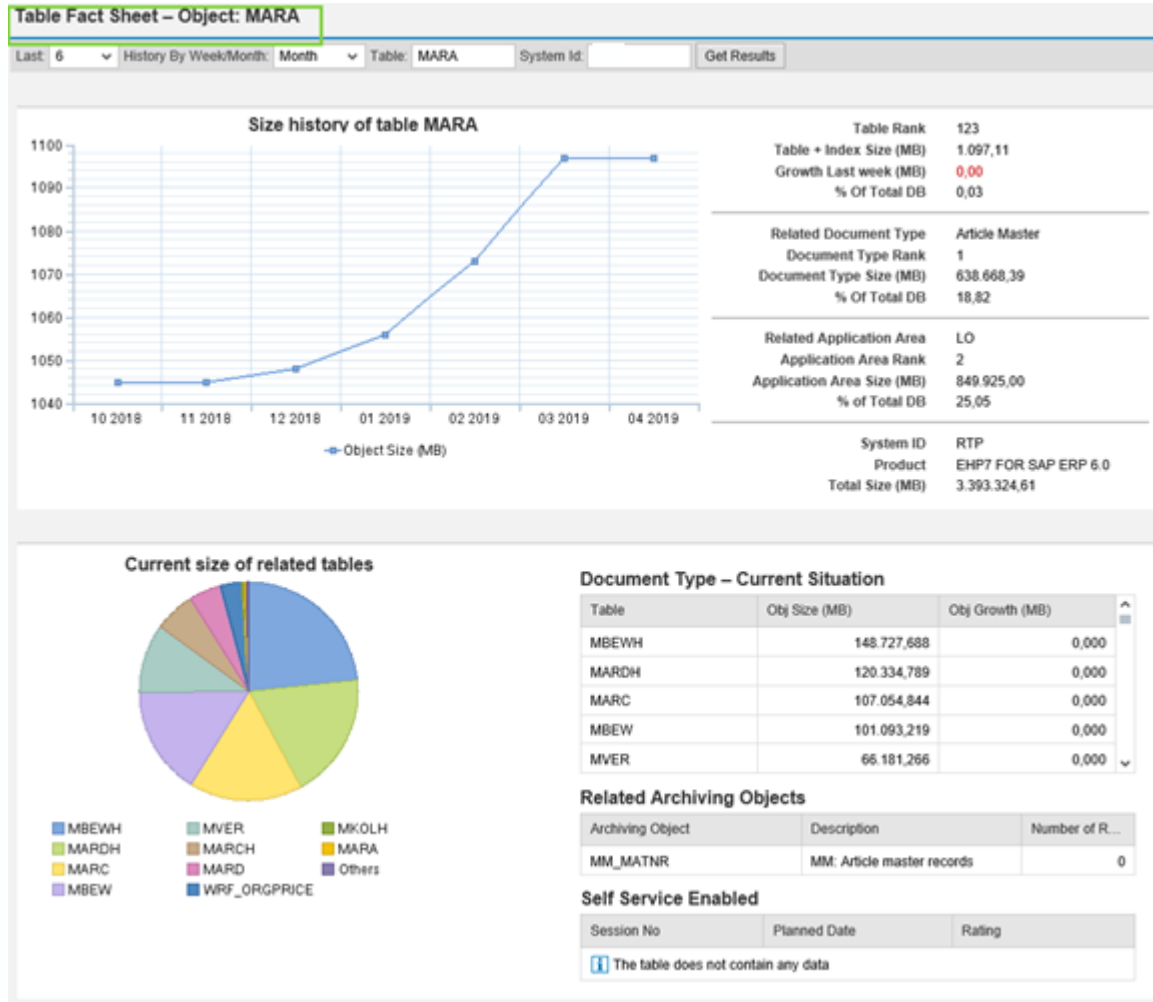
The right pane shows the "Metric Details" for the "Number of updates in error status (older 1 day)". The current value is 599. The time stamp is "Wed Apr 03 2019 16:57:21 GMT-0400 (Eastern Daylight Time)" and the collection interval is 3600 S. The threshold type is "Numeric Threshold (Green/Red)" with a direction of "Exceeds". The threshold is set to 1, with "Green <-> Red: 1".

Data Volume Management

- Data Volume forecast
- Based on multi-level measurement
- Gain insights and plan archiving



DVM Fact sheets



Current size of related tables



- MBEWH
- MARDH
- MARC
- MBEW
- MVER
- MARCH
- MARD
- WRF_ORGRPRICE
- MKOLH
- MARA
- Others

Document Type – Current Situation

Table	Obj Size (MB)	Obj Growth (MB)
MBEWH	148.727,688	0,000
MARDH	120.334,789	0,000
MARC	107.054,844	0,000
MBEW	101.093,219	0,000
MVER	66.181,266	0,000

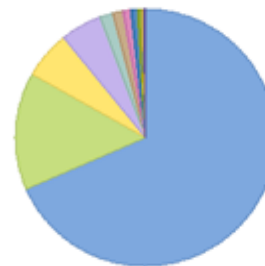
Related Archiving Objects

Archiving Object	Description	Number of R...
MM_MATNR	MM: Article master records	0

Self Service Enabled

Session No	Planned Date	Rating
The table does not contain any data		

Current size of related tables



- EKPO
- EKET
- EIPA
- EKBE
- EBAN
- EKBE
- EKKO
- EKPA
- POEXT
- EKKI
- Others

Document Type – Current Situation

Table	Obj Size (MB)	Obj Growth (MB)
EKPO	224.652,859	0,000
EKBE	48.837,047	0,000
EKET	19.397,047	0,000
EBAN	16.840,266	0,000
EIPA	5.390,594	0,000

Related Archiving Objects

Archiving Object	Description	Number of R...
MM_EKKO	Purchasing Documents	4.249

Self Service Enabled

Session No	Planned Date	Rating
The table does not contain any data		

Security Note recommendations

System

<input type="checkbox"/> Technical System	IT Admin Role	Priority	Security Notes	Hot News	Performance Notes	Legal Change Notes	Favorite
<input type="checkbox"/> ~ABAP	Production System	Undefined	367	277	640	347	☆
<input type="checkbox"/> ~JAVA	Production System	Undefined	209	225	200	253	☆
<input type="checkbox"/> ~JAVA	Test System	Undefined	257	244	222	253	☆
<input type="checkbox"/> ~JAVA	Production System	Undefined	236	244	220	253	☆
<input type="checkbox"/> ~ABAP	Production System	Undefined	437	311	1139	10822	☆
<input type="checkbox"/> ABAP	Production System	Undefined	338	276	494	326	☆
<input type="checkbox"/> ~JAVA	Production System	Undefined	215	228	205	253	☆
<input type="checkbox"/> ~ABAP	Production System	Undefined	247	250	250	276	☆



SAP Note Overview

Technical System:

Release Date:

Note Type:

Status:

SAP Notes

Application Component:

Priority:

Category:

Security Category:

Correction Types:

Kernel:

Release-Independent:

System with SAP Notes

<input type="checkbox"/> Technical System	Note Number	Short text	Release Date	Application Component	Priority	Category	Security Category	Status	Correction Types	Attributes
<input type="checkbox"/> ~ABAP	2476937	Potential Denial of Service vulnerability in SAP Standalone Enqueue Server	10/9/2017	BC-CST-EQ	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		Kernel,Dependent
<input type="checkbox"/> ~ABAP	2389181	Denial of service (DOS) in SAP NetWeaver Instance Agent Service	6/12/2017	BC-CST-ST S	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		Kernel,Dependent
<input type="checkbox"/> ~ABAP	2421287	Security vulnerabilities in SAPLPD	4/10/2017	BC-CCM-P RN	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		Kernel,Dependent
<input type="checkbox"/> ~ABAP	2358972	Denial of service (DOS) in Message Server	11/7/2016	BC-CST-MS	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		Kernel,Dependent
<input type="checkbox"/> ~ABAP	2313835	Denial of service (DOS) in SAP Internet Communication Manager	8/8/2016	BC-CST-IC	2 - Correction with high priority	A - Program error	P - Patch Day Notes	New		Kernel,Dependent

Monthly security notes review

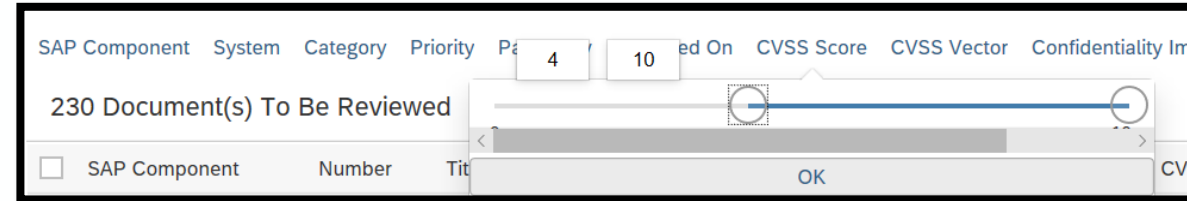
All SAP Security Notes

To Be Reviewed Confirmed Not Relevant

SAP Component System Category Priority Patch Day Released On CVSS Score CVSS Vector Confidentiality Impact (C) Integrity Impact (I) Availability Impact (A)

230 Document(s) To Be Reviewed

<input type="checkbox"/>	SAP Component	Number	Title	CVSS Score	CVSS Vector	Category	Priority
<input type="checkbox"/>	IS-B-BCA-MD	2662687	[CVE-2018-2484] Missing Authorization check in SAP Enterprise Financial Services	4.3	CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:U/C:L/I:N/A:N	Program error	Correction with medium priority
<input type="checkbox"/>	XX-CSC-IN-MM	2250863	Missing authorization check in CIN Journal Voucher	3.7	CVSS:3.0/AV:N/AC:H/PR:L/UI:N/S:U/C:L/I:N/A:N	Program error	Correction with low priority
<input type="checkbox"/>	FI-CA	2524203	Switchable authorization checks for RFC in SAP ERP Contract Accounts Receivable and Payable	4.3	CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:U/C:L/I:N/A:N	Program error	Correction with medium priority
<input type="checkbox"/>	BC-XS-RT	2764283	[CVE-2019-0277] XML External Entity vulnerability in SAP HANA extended application services, advanced	8.6	CVSS:3.0/AV:N/AC:L/PR:H/UI:N/S:C/C:H/I:N/A:H	Program error	Correction with high priority



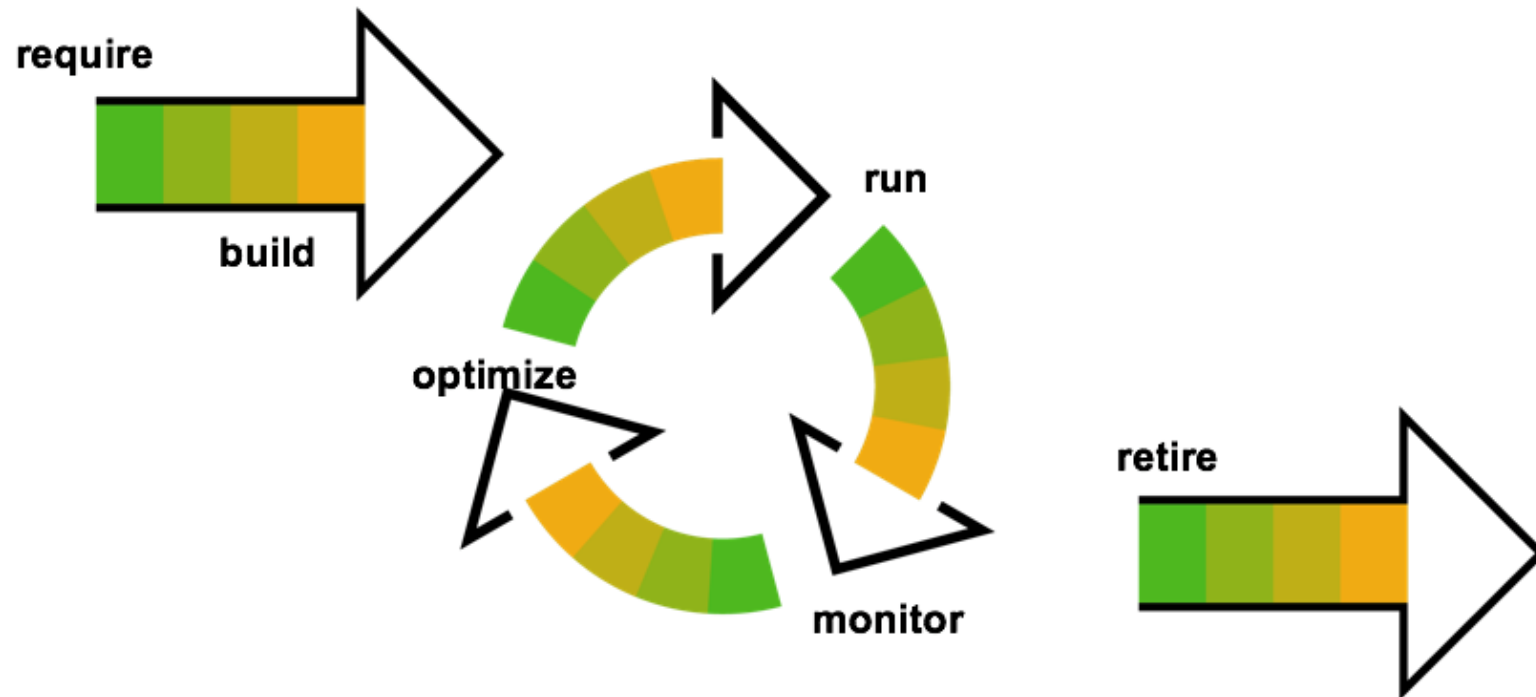
SAP Component System Category Priority Patch Day Released On CVSS Score CVSS Vector Confidentiality Impact (C) Integrity Impact (I) Availability Impact (A)

69 Document(s) To Be Reviewed

<input type="checkbox"/>	SAP Component	Number	Title	CVSS Score	CVSS Vector	Category	Priority
<input type="checkbox"/>	IS-B-BCA-MD	2662687	[CVE-2018-2484] Missing Authorization check in SAP Enterprise Financial Services	4.3	CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:U/C:L/I:N/A:N	Program error	Correction with medium priority
<input type="checkbox"/>	FI-CA	2524203	Switchable authorization checks for RFC in SAP ERP Contract Accounts Receivable and Payable	4.3	CVSS:3.0/AV:N/AC:L/PR:L/UI:N/S:U/C:L/I:N/A:N	Program error	Correction with medium priority
<input type="checkbox"/>	BC-XS-RT	2764283	[CVE-2019-0277] XML External Entity vulnerability in SAP HANA extended application services, advanced	8.6	CVSS:3.0/AV:N/AC:L/PR:H/UI:N/S:C/C:H/I:N/A:H	Program error	Correction with high priority
<input type="checkbox"/>	BC-CCM-SLD-REG	2729710	[CVE-2019-0265] XML External Entity (XXE) vulnerability in SLD Registration of ABAP Platform	6.0	CVSS:3.0/AV:L/AC:L/PR:H/UI:N/S:U/C:H/I:N/A:H	Program error	Correction with medium priority

Usage Procedure logging

from requirement to retirement



Manage your whole custom code lifecycle efficiently

SAP Support Backbone update

- **Landscape Management**
- **Maintenance Planner**
- System Recommendations
- License Management
- Scope and Effort Analyzer
- **IT Service Management**
- SAP Engagement and Service Delivery
- **SAP EarlyWatch Alert from SAP Solution Manager to SAP**
- Service Content Update

Upgrade before January 1st 2020
- Focused Run 2.0
- Solution Manager 7.2 SPS07

SAP Support Backbone update (ctd.)

- Big Lots Solution Manager landscape was first installed on FP0 -SPS03
- For SAP Support update from FP0 to FP3 – SPS08 performed
- Enhanced note assistant v1.2
- Technical user
- Auto configuration using task lists

New SNOTE

- SAP Notes will be digitally signed
- No SAPOSS RFC connectivity for 740 and above
- Only HTTPS
- Download service via Solution Manager
- S-User to be maintained

Key points

- Install if content migration not required
- Do not skip manual steps
- Explore
- Perform phased scenario configuration
- Act now on SAP support update

Useful links

- SAP Backbone Support update

https://support.sap.com/content/dam/support/en_us/library/ssp/alm/sap-solution-manager/sap-support-backbone-update/Backbone-Update_One-Slider.pdf

- Technical user request for SAP backbone support

<https://apps.support.sap.com/technical-user/index.html>

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Presentation Materials

Access the slides from 2019 ASUG Annual Conference here:

<http://info.asug.com/2019-ac-slides>

Q&A

For questions after this session, contact us at sai.rolla@kelltontech.com

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