

INTEGRATIONSMÖGLICHKEITEN DES SAS® ENVIRONMENT MANAGER IN DAS UNTERNEHMENSWEITE MONITORING

MARKUS TRUNK, SAS® SYSTEMARCHITEKTUR



AGENDA

INTEGRATIONSMÖGLICHKEITEN DES SAS® ENVIRONMENT MANAGER

1

EV Komponenten, Features und Architektur

2

Data Mart & Report Center

3

Integrationsmöglichkeiten mit 3rd Party
Monitoring Tools

4

Live Demo

KOMPONENTEN, FEATURES UND ARCHITEKTUR



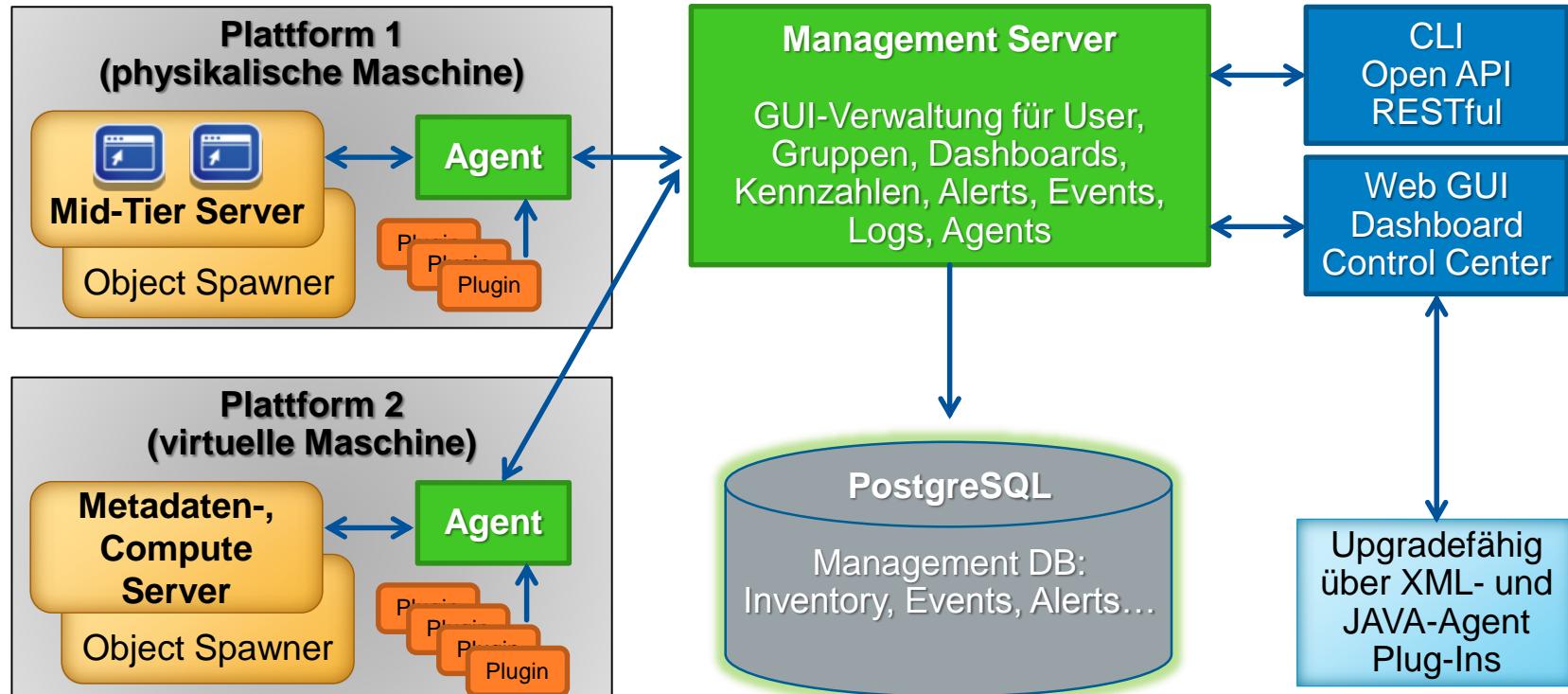
KOMPONENTEN

- Der SAS® Environment Manager ist eine webbasierte Monitoring- und Administrationsapplikation für SAS® Umgebungen auf Basis von VMware Hyperic HQ Application Performance Manager.
- Mit dem SAS® Environment Manager lassen sich SAS® Plattformen proaktiv überwachen, administrieren und verwalten, inklusive der SAS® Web Applikation Server und des SAS® Foundation Server.
- Komponenten:
 - SAS® Environment Manager Agenten und Plugins auf jedem Server innerhalb der SAS® Plattform.
 - Zentraler Server für Verwaltung und Deployment der EV Plugins.
 - Zentraler Speicher für die operativen Daten (PostgreSQL Datenbank).
 - Berichte und Grafiken zur Charakterisierung der Ressourcenverwendung über die gesamte SAS® Umgebung.

FEATURES

- Vorkonfigurierte Sammlung an KPIs.
- Visualisierung von Server- und Applikationskennzahlen wie z.B. Verfügbarkeit, Auslastung, Performance, Memory, CPU, Disk, etc.
- Automatische Erkennung der Mid-Tier Server und Anwendungen.
- Überwachung von Leistung, Konfiguration und Sicherheitsänderungen.
- Erweiterung des Alerting- und Eskalations-Workflows.
- Administrative Aufgaben wie Server-Neustart oder Mid-Tier Konfiguration.

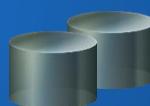
ARCHITEKTUR



DATA MART & REPORT CENTER



Reports + Analysis Tools



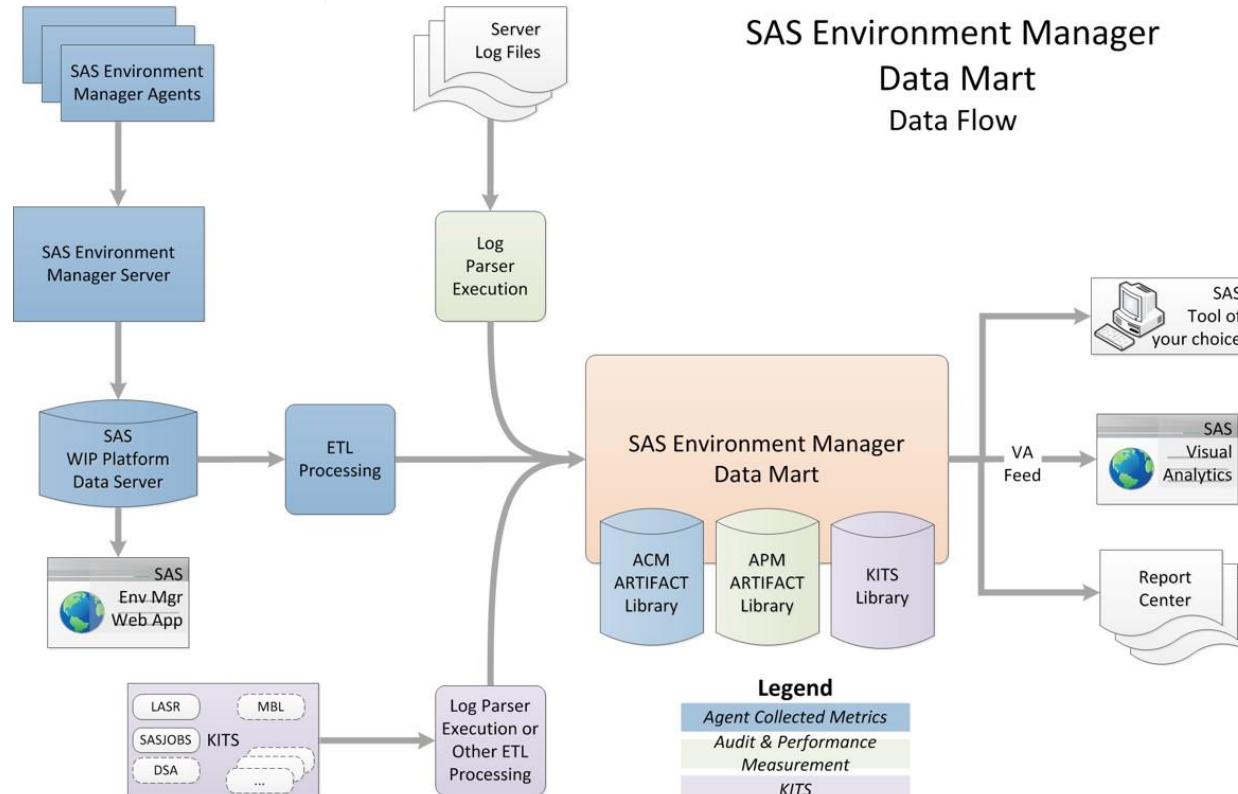
9.4 M2 (14W32)

**SAS® Environment
Data Mart**



SAS® ENVIRONMENT MANAGER

SAS® ENVIRONMENT MANAGER DATA MART (AB SAS® 9.4 M2)



Stored Processes

- Stored Processes
- Products
 - SAS Environment Manager
 - Custom
 - Dynamic Reports
 - Kits
 - LASR
 - Chart Overall LASR Table Accesses
 - LASR Table Usage
 - Table Accesses by User by Date
 - User Access & Action Profile
 - User Activity (24 Hour Profile)
 - User Activity By Hour Subgrouped by Username
 - SASJobs
 - Nightly Reports
 - System

Stored Processes

- Stored Processes
- Products
 - SAS Environment Manager
 - Custom
 - Dynamic Reports
 - Kits
 - Nightly Reports
 - ACM Reports
 - APM Reports
 - Artifact Activity by Work Shift
 - Artifact Consumption Statistics (time)
 - Data Usage
 - Directory Usage
 - OLAP Cube By User
 - Proc Usage
 - Server Elapsed vs CPU
 - Server Usage By User
 - stp Avg Response Time
 - stp Runtime Duration Breakdown
 - Top OLAP Cube Usage
 - Top Procedure Usage
 - Top Stored Process Usage
 - User Usage
 - Workspace Hourly Usage
 - Workspace Memory (Top 10)
 - Workspace Users by Session (Top 10)
 - Audit Reports (Log Forensic)
 - EMI SAS Job ETL Reports
 - Event and Availability Reports
 - Sample Gallery
 - System



INTEGRATIONSMÖGLICHKEITEN MIT 3RD PARTY MONITORING TOOLS



1. EVENT EXPORTER (AB SAS® 9.4 M2)

Alle EV Events werden in eine lokale „Export Datei“ geschrieben. 3rd Party Monitoring Tools können dieses File dann auswerten und je nach Eintrag weitere Aktionen auslösen.

Konfiguration Event Exporter (Platform Service):

The screenshot shows the SAS Environment Manager interface with the following details:

- Header:** Recent Alerts (There have been no alerts in the last 2 hours), Welcome, HQ Administrator, Sign Out, Help.
- Breadcrumbs:** Dashboard > Resources > Analyze > Administration > Manage.
- Page Title:** EMI Framework Event Exporter - Gertest047
- Message:** Please verify that this resource has been enabled for monitoring by following the [directions below](#).
- Section: Configuration Properties**
 - Shared:** This resource does not have any shared Configuration Properties.
- Section: Monitoring**
 - exporter.enable:** Enable Event Exporter
 - username:** sasadm@saspw
 - exporter.filename:** Events File Name: C:\EVIEML_Event_Exporter\Events_Gerte
 - password:** [REDACTED]
- Buttons:** Ok, Reset, Cancel.
- SAS Event Exporter:** The SAS Event Exporter allows SAS Environment Manager event activity to be exported in a simple flat file format for integration with 3rd party monitoring frameworks.
- Text:** To configure, enter the following:
 - exporter.enable - Enables/disables automatic execution of the ETL process
 - exporter.filename - Fully-qualified path to the elf master driver script
 - username - Name of SAS Environment Manager User used to query events. Note: This user must be assigned to the Super User Role
 - password - Password of SAS Environment Manager User used to query events

Eintrag im Log-File (Beispiel):

2015-05-12T14:05:02+0200|NONE|GERTEST047
SASApp - OLAP Server|sasadm@saspw|Stop

2015-05-12T16:26:00+0200|ALERT|GERTEST047
|CPU High|Occurred

2015-05-12T18:05:00+0200|ALERT| GERTEST047
tc Runtime SASServer1_1| Webapp CPU Time in
Garbage Collection >30%|Occurred

2. LOG-EINTRAG VIA (BATCH)SKRIPT

Individuelle Skripte können direkt mit einem EV Alert verknüpft werden. Das Script schreibt dann z.B. einen entsprechenden Eintrag in eine Log-Datei. Externe Monitoring Tools können dieses File dann auswerten und je nach Eintrag weitere Aktionen auslösen.

Beispiel: Definition eines OLAP Alerts mit Script-Aufruf

Condition Set

If Condition: Availability < 100.0%

Enable Action(s): Once every 1 times conditions are met within a time period of 20 minutes.

[Edit](#)

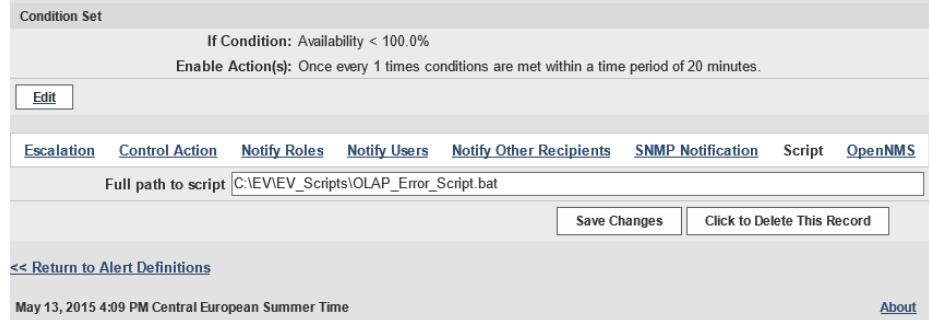
[Escalation](#) [Control Action](#) [Notify Roles](#) [Notify Users](#) [Notify Other Recipients](#) [SNMP Notification](#) [Script](#) [OpenNMS](#)

Full path to script

[Save Changes](#) [Click to Delete This Record](#)

[<< Return to Alert Definitions](#)

May 13, 2015 4:09 PM Central European Summer Time [About](#)



Eintrag in der Log-Datei:

Tue 05/12/2015 14:08:16.35

Fehler001- OLAP Server Error

INTEGRATIONSMÖGLICHKEITEN

3. SIMPLE NETWORK MANAGEMENT PROTOCOL (SNMP)

SNMP Traps können direkt mit einem EV Alert verknüpft werden. 3rd Party Monitoring- oder System Management Tools können die Traps dann auswerten und je nach Inhalt weitere Aktionen auslösen.

Beispiel: Definition einer SNMP Trap Konfiguration

Condition Set	
<p>If Condition: Cpu Usage > 90.0%</p> <p>Enable Action(s): Once every 1 times conditions are met within a time period of 20 minutes.</p> <p>Edit</p>	
<p>Escalation Control Action Notify Roles Notify Users Notify Other Recipients SNMP Notification Script OpenNMS</p>	
<p>(ex: xxx.xxx.xxx.xxx/port)</p> <p>IP Address: <input type="text" value="172.29.0.254/162"/></p> <hr/> <p>Variable Bindings</p> <p>(ex: 1.2.3.4)</p> <p>OID: <input type="text" value="1.3.6.1.2.1.11.0.6"/></p> <p>Value: {snmp_trap.gsp}</p>	
<p>SET REMOVE</p> <p>Add Another Variable Binding</p>	

SNMP Trap Receiver

Result Table				
Trap Receiver x				
Operations Tools				
Description	Source	Time	Severity	
coldStart	172.29.0.254	2015-05-20 09:16:43		
coldStart	172.29.0.254	2015-05-20 09:14:42		
Source:	172.29.0.254	Timestamp:	0 milisecond	SNMP Version:
Enterprise:	.1.3.6.1.2.1.11.0.6			1
Specific:	0			
Generic:	coldStart			
Variable Bindings:				
Name:	.1.3.6.1.2.1.11.0.6			
Value:	[OctetString] CPU High:CPU High GERTEST047 ger.sas.com Cpu Usage (99.9%)			
Description:	coldStart			

SAS® ENVIRONMENT MANAGER

LIVE DEMO







SAS® ENVIRONMENT MANAGER

SCREENSHOTS





Select a Dashboard ▼

Availability Summary Overall

Resource Type	Availability
SAS Metadata Server 9.4	● 1
SAS OLAP Server 9.4	● 1
SAS Object Spawner 9.4	● 1

Updated:11:01 AM

Availability Summary Middle-Tier Components

Resource Type	Availability
ActiveMQ 5.7	● 1
Apache Tomcat 6.0	● 1
PostgreSQL 9.x	● 1
SpringSource tc Runtime 7.0	● 1
vFabric Web Server 5.2	● 1

Updated:11:01 AM

Availability Summary Spawnable SAS Servers

Resource Type	Availability
SAS Object Spawner 9.4 SAS Logical Pooled Workspace Server	● 1
SAS Object Spawner 9.4 SAS Logical Stored Process Server	● 1
SAS Object Spawner 9.4 SAS Logical Workspace Server	● 1

Updated:11:01 AM

Metric Viewer WebApp Login Response Time

	Response Time
BI Dashboard	1ms
SAS Login	1ms
Stored Process	1ms
Web Report Studio	1ms

Updated:11:01 AM

Metric Viewer SASWork Disk Space

SAS Home Directory 9.4 SAS Directory	Use Percent
ptnode20.ptest.sas.com SAS Home Directory 9.4 SAS work directory	7.0%

Updated:11:01 AM

Recent Alerts

Date / Time	Alert Name	Resource Name	Fixed	Ack
03/30/2013 05:50 AM	Server Launch	ptnode20.ptest.sas.com Obj...	No	
03/30/2013 03:32 AM	TCP/IP Support Routine Failure	ptnode20.ptest.sas.com Obj...	No	
03/30/2013 12:50 AM	Server Launch	ptnode20.ptest.sas.com Obj...	No	
03/29/2013 09:55 PM	Connection	ptnode20.ptest.sas.com SAS...	No	
03/29/2013 06:10 PM	Server Launch	ptnode20.ptest.sas.com Obj...	No	

[Fixed](#) [Acknowledged](#)

Updated:11:01 AM

Browse Resources - Internet Explorer provided by SAS Institute

http://gertest063.ger.sas.com:7080/ResourceHub.d07org.apache.catalina.filters.CSRF_NONCE=6F236F43343F535924CF3E14AB25143A#

Favorites SAS® Web Application Server... SAS® Web Server SAS® EV local SAS® EV Cary

S SAS® Browse Resources

SAS® Environment Manager Recent Alerts: (There have been no alerts in the last 2 hours.) vWelcome, HQ Sign Out Help

Dashboard Resources Analyze Administration Manage

Platforms > AI Browse

Currently Down Tools Menu

Search: Recently Viewed Platform Types All Groups Unavailable Owned by HQ Match: Any All Show Chart View

Platforms (2) | Servers (15) | Services (0) | Compatible Groups/Clusters (1) | Mixed Groups (0) | Applications (0)

Platform	Platform Type	Description	Availability
gertest063.ger.SAS.com	Win32	Microsoft Windows 2008	Green
SAS 9.4 Application Server Tier	SAS Application Server Tier		Green

Group Delete Enable All Alerts Disable All Alerts Total: 2 Items Per Page: 15

Done Local intranet | Protected Mode: Off 100% DE 3:38 PM

Start Server Manager C:\Users\EVAdmin\Desktop\ Browse Resources - I... SAS Management Consol...

Select a Dashboard

Alert Center

Report Center

Search Resources

Environment

Snapshot

Event Center

Operations Center

No saved charts to display; to add charts to dashboard press "Save Chart to Dashboard" in the Tools Menu of metric chart view.

Recently Added

No resources to display

Availability Summary

Resource Type

No resources to display. Please click the icon above to add resources to portfolio.



Auto-Discovery

No resources to display

Favorite Resources

Resource Name

No resources to display, please click the  icon above to add resources to portlet.

Recent Alerts

Date / Time ▾

BYED

ACKNOWLEDGE



Dashboard Resources Analyze Administration Manage

Manage

Authentication/Authorization

Users: [List Users](#)
[New User...](#)Roles: [List Roles](#)
[New Role...](#)

Server Settings

Settings: [Server Settings](#) - Change settings for email, announcements, data compression, database maintenance and authentication services
[Monitoring Defaults](#) - Define monitoring and alerting policies for the entire environment
[Escalation Schemes Configuration](#) - Define global escalation schemes that can be applied to individual alerts
[Plugin Manager](#) - Manage Hyperic product plugins running in your environment.

Plugins

[Network and Host Dependency Manager](#)
[Groovy Console](#)
[HQ Health](#)
[HQ Web Services Api](#)
[tc Server Command-line Interface](#)

Licenses Usage Status (Current Number Of Platforms / Total Platform Limit)

Platform usage: 2 / 17000



Dashboard Resources Analyze Administration Manage

Browse > gertest063.ger.SAS.com

[Return to gertest063.ger.SAS.com](#)

Description: Microsoft Windows 2008

Secondary DNS : 172.29.11.171

Vendor Version : 2008

CPU Speed : 8 @ 3192 MHz (2x4)

Architecture : x64

Owner: HQ Administrator ([sasadm@saspw](#)) - [Change...](#)

Default Gateway : 172.29.0.1

IP Address : 172.29.7.47

OS Version : 6.1

Vendor : Microsoft

Primary DNS : 172.29.0.14

RAM : 32768 MB

[Map](#) [Tools Menu](#)

Monitor Inventory Alert Views

Metric Display Range: [Previous Page](#) Last 8 Days OK [Show Last 8 Hours](#) | [Advanced Settings](#) Platform Services Health

Avail

[Indicators](#) [Metric Data](#) CPU[Indicator Charts](#)| [Show Last 8 Hours](#)View: [Update Default](#) FileServer Mount NetworkServer Interface Deployed Servers Health

Avail

 gertest063 ActiveMQ 5.7 Cpu Usage

(Win32)

LOW: 4.0% AVG: 6.6% PEAK: 23.6%

 gertest063 HQ Agent 5.0.0 gertest063 Hyperic - Apache Tomcat 6.0 gertest063 PostgreSQL 9.x localhost:9432 gertest063 SAS Config Level

Directory 9.4

Selected Resources above & click button to view metrics

[View Metrics](#) Problem Metrics

No metrics to display

 Free Memory

(Win32)

LOW: 16.4 GB AVG: 21.1 GB PEAK: 23.9 GB

 Percent Free Memory

(Win32)

LOW: 56.4% AVG: 68.8% PEAK: 75.9%



Browse > gertest063.ger.SAS.com SASMeta - Metadata Server

Return to gertest063.ger.SAS.com SASMeta - Metadata Server

Description: SAS [Config-Lev1] SASMeta - Me...

Owner: HQ Administrator ([sasadm@saspw](#)) - Change...

Component Name : SASMeta - Metadata Server

CPU Count : 8

Metadata Resource ID : A501BXR3.AZ000001

Full Version : 9.04.01M0P06192013

Unique IOM ID : 5681af30-c016-47e4-8aa9-5a175a...

SAS Context : SASMeta

Logical Component Name : SASMeta - Logical Metadata Ser...

Version : 9.4

 Map Tools Menu

Monitor Inventory Alert Control Views

Metric Display Range: [Previous Page](#)Last Days

OK

[Show Last 8 Hours](#) | [Advanced Settings](#)Metrics Refresh: [1 min](#) | [2 min](#) | [5 min](#) | OFF

Services

[Indicators](#) [Metric Data](#)

No health data is available for this resource.

[Show All Metrics](#)

Host Platform

Avail

gertest063.ger.SAS.com



Show Metrics of Categories

 Availability Utilization Throughput Performance

Show Metrics with Value Types

 Dynamic Trends Up Trends Down Static Availability

Alerts

OOB

LOW

AVG

PEAK

LAST

Collection Interval

[00:05:00](#) Availability

0

0

-

100%

-

[00:05:00](#) Process End (Last Time)

0

0

-

-

[09/05/2013 01:50 PM](#) [00:20:00](#) Process Start Time

0

0

-

-

[08/30/2013 04:36 PM](#) [00:20:00](#) **Performance** Process Page Faults per Minute

0

0

0.4

10.7

549.3

1.5

[00:05:00](#) Process Threads

0

0

36.0

37.1

38.2

38.0

[00:05:00](#) Process Virtual Memory Size

0

0

250.52 MB

273.55 MB

290.23 MB

290.17 MB

[00:05:00](#) **Utilization** Counter: Journal Data Written per Minute

0

0

0 B

11 B

749 B

35 B

[00:10:00](#) Counter: Journal Space Available

0

0

4,096.0 PB

4,096.0 PB

4,096.0 PB

4,096.0 PB

[00:10:00](#) Counter: Journal Transactions Processed per Minute

0

0

0.00

0.01

0.86

0.08

[00:10:00](#) Counter: Journal Transactions Written per Minute

0

0

0.000000000

0.000000000

0.000000000

0.000000000

[00:10:00](#) Current Clients

0

0

59

99

107

101

[00:10:00](#) Current Memory Usage

0

0

87.45 MB

123.52 MB

138.02 MB

137.96 MB

[00:10:00](#) Current Thread Count

0

0

18

22

26

26

[00:10:00](#) Health

0

0

100%

100%

100%

100%

[01:00:00](#) Highest Memory Usage

0

0

105 MB

127 MB

139 MB

139 MB

[00:10:00](#) Highest Thread Count

0

0

18

22

26

26

[00:10:00](#) Process Cpu System Time

0

0

00:00:03.5

00:02:36.8

00:05:56.5

00:05:55.2

[00:05:00](#)

sasva SAS Home Directory 9.4: SASWork Capacity: Alert Definition

[<< Return to Alert Definitions](#)

Alert Properties

Name: SASWork Capacity

Priority: !! - Medium

Description:

Active: Yes

Date Created: 04/09/2014 05:30 AM

Date Modified: 04/09/2014 06:36 AM

[Edit](#)

Condition Set

If Condition: Use Percent > 55.0%

Enable Action(s): Once every 1 times conditions are met within a time period of 1 hours.

[Edit](#)[Escalation](#) [Control Action](#) [Notify Roles](#) [Notify Users](#) [Notify Other Recipients](#) [Script](#) [OpenNMS](#)

Escalation Scheme: MailTo MAK

Note: To create a new escalation scheme for this alert definition, please go to the [Escalation Schemes Configuration](#) section.

If the alert is acknowledged: Escalation continued without pausing

If the alert state has changed: Previously notified users are notified of the change

Escalation Scheme Actions: Action 1 details

Notify Other Recipients via Email: germak@ger.sas.com

Wait time before escalating: 0 minutes

[<< Return to Alert Definitions](#)



sasva.demo.sas.com: CPU Usage: Alert Definition

[<< Return to Alert Definitions](#)

Alert Properties

Name: CPU Usage

Priority: !! - Medium

Description:

Active: Yes

Date Created: 04/09/2014 05:32 AM

Date Modified: 04/09/2014 05:35 AM

[Edit](#)

Condition Set

If Condition: Cpu Usage > 80.0%

Enable Action(s): Once every 1 times conditions are met within a time period of 1 hours.

[Edit](#)[Escalation](#) [Control Action](#) [Notify Roles](#) [Notify Users](#) [Notify Other Recipients](#) [Script](#) [OpenNMS](#)Escalation Scheme: Note: To create a new escalation scheme for this alert definition, please go to the [Escalation Schemes Configuration](#) section.

If the alert is acknowledged: Escalation continued without pausing

If the alert state has changed: Previously notified users are notified of the change

Escalation Scheme Actions: [Action 1 details](#)

Notify Other Recipients via Email: germak@ger.sas.com

Alert via eMail

-----Original Message-----

From: noreply@mailhost.fyi.sas.com [mailto:noreply@mailhost.fyi.sas.com]
Sent: Wednesday, August 06, 2014 1:26 PM
To: Markus Trunk
Subject: [HQ] !! - CPU Usage sasva.demo.sas.com

sasva.demo.sas.com has generated the following alert:
CPU Usage sasva.demo.sas.com Cpu Usage (99.7%)

ALERT DETAIL

- Resource Name: sasva.demo.sas.com
- Alert Name: CPU Usage
- Alert Date / Time: August 6, 2014 7:26:00 AM EDT
- Triggering Condition(s):
If Cpu Usage > 80.0% (actual value = 99.7%)
- Alert Severity: !! - Medium

Last Indicator Metrics Collected:

- [August 6, 2014 7:26:00 AM EDT] Availability = 100.0%
 - [August 6, 2014 7:26:00 AM EDT] Cpu Usage = 99.7%
 - [August 6, 2014 7:25:00 AM EDT] Free Memory = 20.8 GB
 - [August 6, 2014 7:25:00 AM EDT] Swap Used = 19.1 GB
-

For additional detail about this resource, go to <http://sasva.demo.sas.com:7080/ResourceCurrentHealth.do?eid=1:10003>

For additional detail about this alert, go to <http://sasva.demo.sas.com:7080/alerts/Alerts.do?mode=viewAlert&eid=1:10003&a=10103>

JOB MONITORING PROZESS MONITORING

Prozess und Job View:

- Process Orchestration Jobs
- Data Management Server Jobs
- Data Integration Studio Batch Jobs

The screenshot shows two windows side-by-side. The top window is the 'Monitoring Center' showing a grid of jobs with columns for Job Name, Job Type, Platform, Status, % Complete, Start Time, End Time, Run Time, 20 Run Mean, Trend, and User ID. The bottom window is a detailed view for job '06_Create_Kunden' with tabs for Steps, Job History, Job Trend, Status Messages, and Log. It displays the job path, deployment date, version, status (Completed), start and end times, run time, trend (blue line graph), distribution (Insufficient data), and a table of steps with columns for Step, Instance, Status, Start Time, End Time, Run Time, 20 Run Mean, Trend, Rows Processed, and CPU Time.

Step	Instance	Status	Start Time	End Time	Run Time	20 Run Mean	Trend	Rows Processed	CPU Time
File Reader		Completed	2/20/14 7:29:52 AM	2/20/14 7:30:01 AM	9.172s	8.601s	→	0	8.674s
Apply Lookup Standardization		Completed	2/20/14 7:30:01 AM	2/20/14 7:30:01 AM	517ms	490ms	→	22780	499ms
Create Table		Completed	2/20/14 7:30:01 AM	2/20/14 7:30:19 AM	17.522s	13.635s	→	22780	9.36s
Create Table		Completed	2/20/14 7:30:19 AM	2/20/14 7:30:19 AM	16ms	12ms	→	22780	31ms
DataFlux Data Service		Completed	2/20/14 7:30:19 AM	2/20/14 7:30:34 AM	15.268s	12.019s	→	0	1.919s
Create Table		Completed	2/20/14 7:30:34 AM	2/20/14 7:31:55 AM	00:01:20.379	00:01:09.068	→	22780	28.065s

JOB MONITORING

MONITORING RUNTIME PERFORMANCE

Dashboard Resources Analyze Administration Manage

Monitoring Center

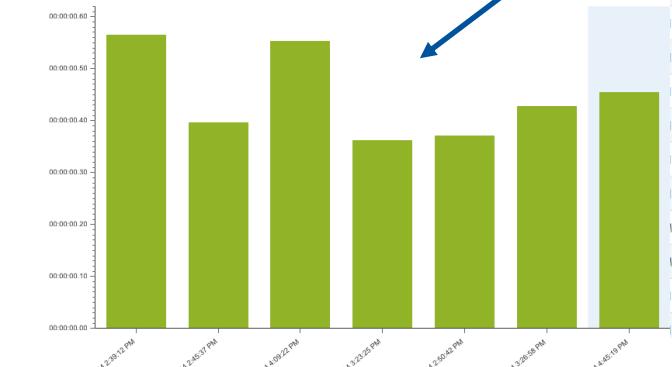
Last 120 Days [Edit Range](#) Job Name: (all job types) (all platforms) (all states) User ID: ✓

Job Name	Job Type	Platform	Status	% Complete	Start Time	End Time	Run Time	▲	20 Run Mean	Trend	User ID
PO_JF_GBL_SAMP	DM Process Job	gertro-2.ger.SAS.com	Completed	100	6/3/14 1:12:38 PM	6/3/14 1:12:52 PM	13,92s			SAS DM Administrator	
Execute Rule.dif	DM Process Job	gertro-2.ger.SAS.com	Completed	100	6/3/14 10:20:03 AM	6/3/14 10:20:07 AM	3,667s			SAS DM Administrator	
Use Rule.ddf	DM Data Job	gertro-2.ger.SAS.com	Completed	100	6/3/14 10:19:23 AM	6/3/14 10:19:24 AM	545ms			SAS DM Administrator	
Test SAS Data.ddf	DM Data Job	gertro-2.ger.SAS.com	Completed	100	6/3/14 10:16:04 AM	6/3/14 10:16:05 AM	436ms			SAS DM Administrator	
Use Rule.ddf	DM Data Job	gertro-2.ger.SAS.com	Error	100	6/3/14 9:51:16 AM	6/3/14 9:51:16 AM	441ms			SAS DM Administrator	
PO_J_GBL_SAMP_009	DI Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:19 PM	5/28/14 4:45:19 PM	454ms		434ms	→	

Steps Job History Job Trend Status Messages Log

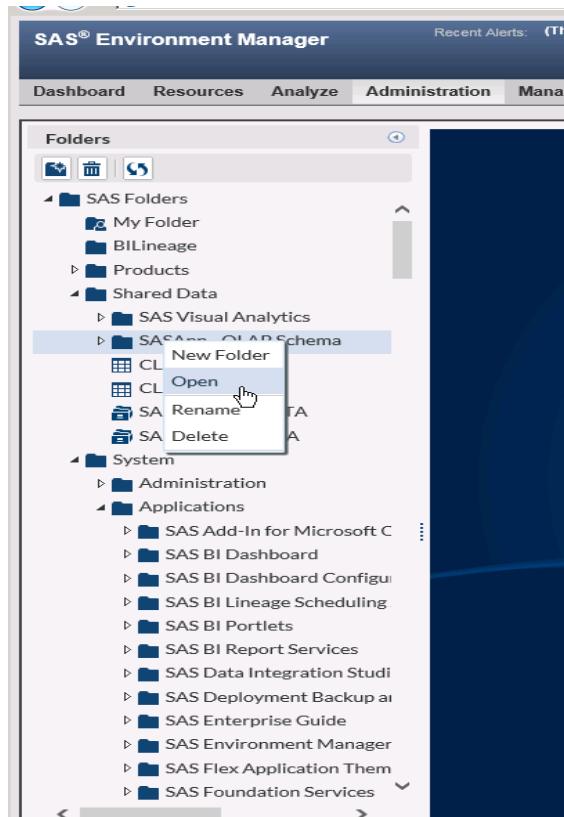
Last 120 Days [Edit Range](#)

Run time



Run time	Job	Platform	Status	% Complete	Start Time	End Time	Run Time	▲	20 Run Mean	Trend	User ID
00:00:00.60	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:18 PM	5/28/14 4:45:19 PM	285ms		272ms	→	
00:00:00.55	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:18 PM	5/28/14 4:45:18 PM	124ms		109ms	→	
00:00:00.50	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:13 PM	5/28/14 4:45:13 PM	108ms		94ms	↗	
00:00:00.45	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:09 PM	5/28/14 4:45:09 PM	94ms		101ms	→	
00:00:00.40	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:08 PM	5/28/14 4:45:08 PM	86ms		87ms	→	
00:00:00.35	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:45:04 PM	5/28/14 4:45:04 PM	86ms		75ms	↗	
00:00:00.30	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:44:55 PM	5/28/14 4:44:55 PM	74ms		73ms	↗	
00:00:00.25	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:44:49 PM	5/28/14 4:44:49 PM	96ms		104ms	→	
00:00:00.20	M Data Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:41:55 PM	5/28/14 4:41:55 PM	433ms		429ms	→	sasdemo
00:00:00.15	DM Process Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 4:41:48 PM	5/28/14 4:41:57 PM	9,32s	⚠	10,771s	→	sasdemo
00:00:00.10	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 3:26:58 PM	5/28/14 3:26:59 PM	427ms		435ms	→	
00:00:00.05	Job	gertro-2.ger.SAS.com	Completed	100	5/28/14 3:26:58 PM	5/28/14 3:26:58 PM	280ms		272ms	→	

Administration Tab



SAS® ENVIRONMENT MANAGER

Administration Tab

The screenshot shows the SAS Environment Manager interface with the Administration tab selected. On the left, a tree view of 'Folders' shows various categories like Channels, Subscribers, Security, Servers, Services, Types, and User Folders. A context menu is open over the 'Object Spawner - sasbi' folder under the Servers category, with options including 'New Folder', 'Open', 'Rename', 'Delete', and 'SAS Distribution Services Schedule'. The main panel displays the 'Object Spawner - sasbi' object details. It includes tabs for General and Authorization, and sub-tabs for Basic, Apply ACTs, and Summary. Under 'Basic', there's a table titled 'Effective permissions:' with columns for Identity, ReadMetadata, WriteMetadata, and Administer. The table lists four identities: PUBLIC, SAS Administrators, SAS System Services, and SASUSERS. PUBLIC has red crossed-out icons in all columns. SAS Administrators and SAS System Services have green checkmarks in all columns. SASUSERS has a green checkmark in ReadMetadata and WriteMetadata, and a red crossed-out icon in Administer.

Identity	ReadMetadata	WriteMetadata	Administer
PUBLIC	✗	✗	✗
SAS Administrators	✓	✓	✓
SAS System Services	✓	✓	✗
SASUSERS	✓	✓	✗

Administration Tab

The screenshot shows the SAS Environment Manager interface with the 'Administration' tab selected. On the left, a navigation tree displays various system components like System, Applications, Publishing, Secured Libraries, Security, Access Control Templates, Authentication Domains, Roles, User Groups, Users, and Servers. The 'Access Control Templates' node is currently expanded, showing items such as Default ACT, Portal ACT, Private User Folder A, SAS Administrator Se, Authentication Domains, Roles, User Groups, Users, and Servers. A context menu is open over the 'Access Control Templates' node, listing options: New Folder, New Access Control Template, Open, Rename, and Delete. The main panel on the right is titled 'Object Spawner - sasbi' and contains tabs for General, Authorization, Basic, Apply ACTs, and Summary. It displays a message stating 'No explicit controls.' and 'No directly applied access control templates.' A note at the bottom of the panel says 'This page is read-only.'

VIELEN DANK FÜR IHRE AUFMERKSAMKEIT!

