

SAP GRC

Access Control 5.3

Post-Installation Slide Deck

→ Risk Analysis And Remediation

Post-Installation Activities - Risk Analysis and Remediation -



1. Upload UME Roles and Create AC Administer User
2. Check Background Job Daemon
3. Check Analysis Engine Daemon Manager
4. Create JCO Connectors
5. Create and Check System Connectors
6. Create Logical Systems and Assign System Connectors
7. Upload Error Messages File
8. Set / Check Default & Performance Parameters
9. Set / Check Miscellaneous Values
10. Set Up User Master Source
11. Upload Static Text
12. Upload SU24 Authorization Data
13. Upload SAP GRC Rule Files
14. Generate Rules for Logical Systems
15. Run Full Synchronization and Full Batch Risk Analysis Jobs
16. Upload Initial System Data into CUP (Optional)

1 – Upload UME Roles For AC5.3 (1/3)

→ Overview of XML Files



➤ With the installation files come the following 3 xml files that contain UME roles:

➤ Risk Analysis and Remediation - cc_ume_roles.txt

- VIRSA_CC_ADMINISTRATOR
- VIRSA_CC_REPORT
- VIRSA_CC_SECURITY_ADMIN
- VIRSA_CC_BUSINESS_OWNER



Package

➤ Compliant User Provisioning - ae_ume_roles.txt

- AEADMIN
- AESecurity
- AEApprover



Package

➤ Enterprise Role Management - re_ume_roles.txt

- READMIN
- REBusinessUser
- RERoleDesigner
- RESecurity
- RESuperUser
- REConfigurator



Package

➤ These xml files must be uploaded into UME AC5.3 server.

1 – Upload UME Roles For AC5.3 (2/3)

→ How to Upload XML Files With UME Roles



- Logon to UME and click on „Import“

Identity Management - Microsoft Internet Explorer provided by SAP IT

Welcome Rambo, Frank

Identity Management | **Import** | Configuration | Consistency Check

Batch Import of User/Group/Role Data

Overwrite Existing Data

C:\bc_ume_roles.txt



Identity Management - Microsoft Internet Explorer

Welcome Ali Admin

Identity Management | **Import** | Configuration | Consistency Check

Batch Import Protocol

All (4)

Status	Display Name
Created	
Created	
Created	
Created	

1 – Upload UME Roles For AC5.3 (3/3)

→ Create AC Administrator User



- You'll need all three administrator roles to become an „AC Administrator“

The screenshot displays the SAP Identity Management user creation interface. The top navigation bar includes 'Welcome Ali Admin', 'Identity Management', 'Import', 'Configuration', and 'Consistency Check'. The search criteria are set to 'User' with 'LDAP' as the data source and 'ac_admin' as the search term. The search results table is empty, with a message 'Enter a search parameter and choose Go.' Below the search section, there are buttons for 'Select All', 'Deselect All', 'Create User', 'Copy to New User', 'Delete', 'Unlock', 'Lock', 'Generate New Password', and 'Export'. The 'Details' section is active, showing tabs for 'General Information', 'Account Information', 'Contact Information', 'Additional Information', 'Assigned Roles', and 'Assigned Groups'. The 'Assigned Roles' tab is selected, showing a table of available roles and a table of assigned roles. The assigned roles table has three rows highlighted with an orange border: 'AEADMIN', 'READMIN', and 'VIRSA_CC_ADMINISTRATOR'. The 'Available Roles' table lists various roles, including 'VIRSA_CC_SECURITY_ADMIN', 'VIRSA_CC_ADMINISTRATOR', and several 'SAP_JAVA_NWADMIN' roles.

Name	Description	Data Source
VIRSA_CC_SECURITY_ADMIN	Virsa Compliance Calibrator Ad...	UME Database
VIRSA_CC_ADMINISTRATOR	Virsa Compliance Calibrator Ad...	UME Database
SAP_JAVA_NWADMIN_LOC...	Local NetWeaver Administrator,...	UME Database
SAP_JAVA_NWADMIN_LOC...	Local NetWeaver Administrator	UME Database
SAP_JAVA_NWADMIN_CEN...	Central NetWeaver Administrato...	UME Database

Name	Description	Data Source
AEADMIN	AE Admin Role	UME Database
READMIN	RE Admin,	UME Database
VIRSA_CC_ADMINISTRATOR	Virsa Compliance Calibrator Ad...	UME Database

2 – Check Background Job Daemon



- Call the URL `http://<server>:<port>/sap/CCBgStatus.jsp` - it should come up with status „running“

Background Daemon

Background Daemon deatils	
Daemon Iteration Interval (min)	1
Active	Running !!!
Update Daemon details	
Daemon Iteration Interval (min)	<input type="text" value="1"/>
Active	<input type="button" value="Start"/> <input type="button" value="Stop"/> <input type="button" value="Update"/>
Background Daemon execution deatils	
Background Main Thread Initiated at Thu Apr 03 15:32:58 CEST 2008 and Active Status is:true	

3 – Check Analysis Engine Daemon Manager (1/2)



- Call the URL `http://<server>:<port>/sap/CCADStatus.jsp` - it should come up with status „running“
- By default you should see 3 bg job threads and 5 web services threads per server node. This means you would see per server node one table as shown below
- It is possible that the daemon on server0 manages threads on server1 and vice versa. Unless there is activity, there should all show up as idle.

Analysis Engine Daemon Manager

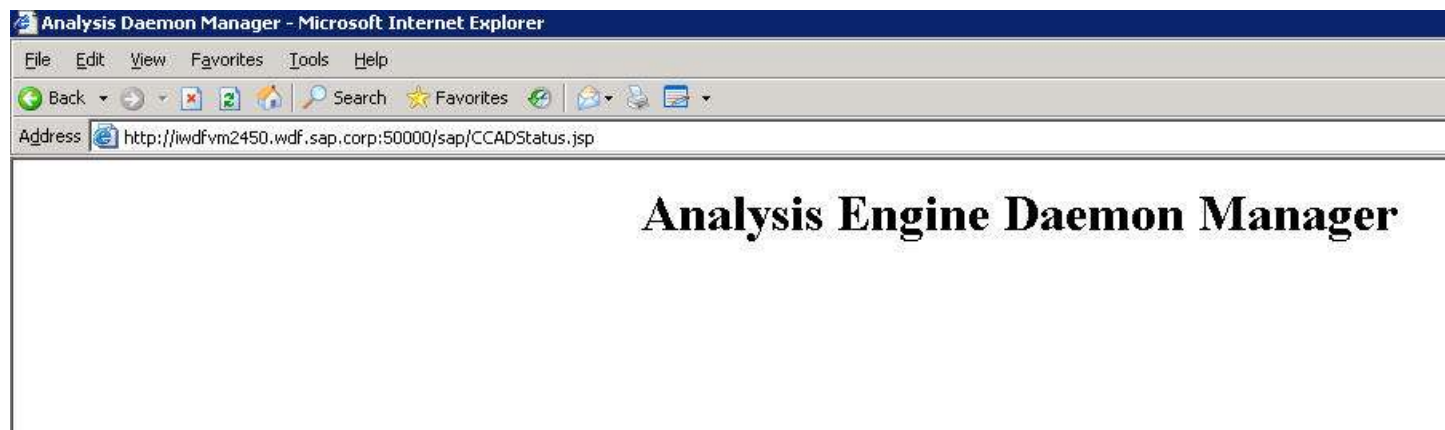
Daemon ID: D:\usr\sap\IDM\JC00\j2ee\cluster\server0\				
Thread ID	Status	Since	Running On	
Background Job Workers				
0	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
1	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
2	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
Web Services Workers				
3	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
4	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
5	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
6	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	
7	IDLE	03.04.08 17:16	D:\usr\sap\IDM\JC00\j2ee\cluster\server0\	

3 – Check Analysis Engine Daemon Manager (2/2)

→ Troubleshooting: Analysis E. Daemon Manager



- If the Analysis Daemon Manager Webpage is empty as shown below you need to insert the following data records directly into the J2EE database:
 - INSERT INTO virsa_cc_config
VALUES (105, 0, 'http', 'J2EE Engine Protocol')
 - INSERT INTO virsa_cc_config
VALUES (106, 0, '50000', 'J2EE Engine Port')
 - INSERT INTO virsa_cc_config
VALUES (107, 0, 'http://localhost:50000/webdynpro/dispatcher/sap.com/grc~ccappcomp/BgJobStart',
'BgJobStart URL')
 - Note: If the port is other than 50000 then please supply the correct port number. For example “50400”. Note: Localhost can be changed to the server name or IP address.



4 – Create JCO Connectors (1/5)

→ Connecting to Target Systems



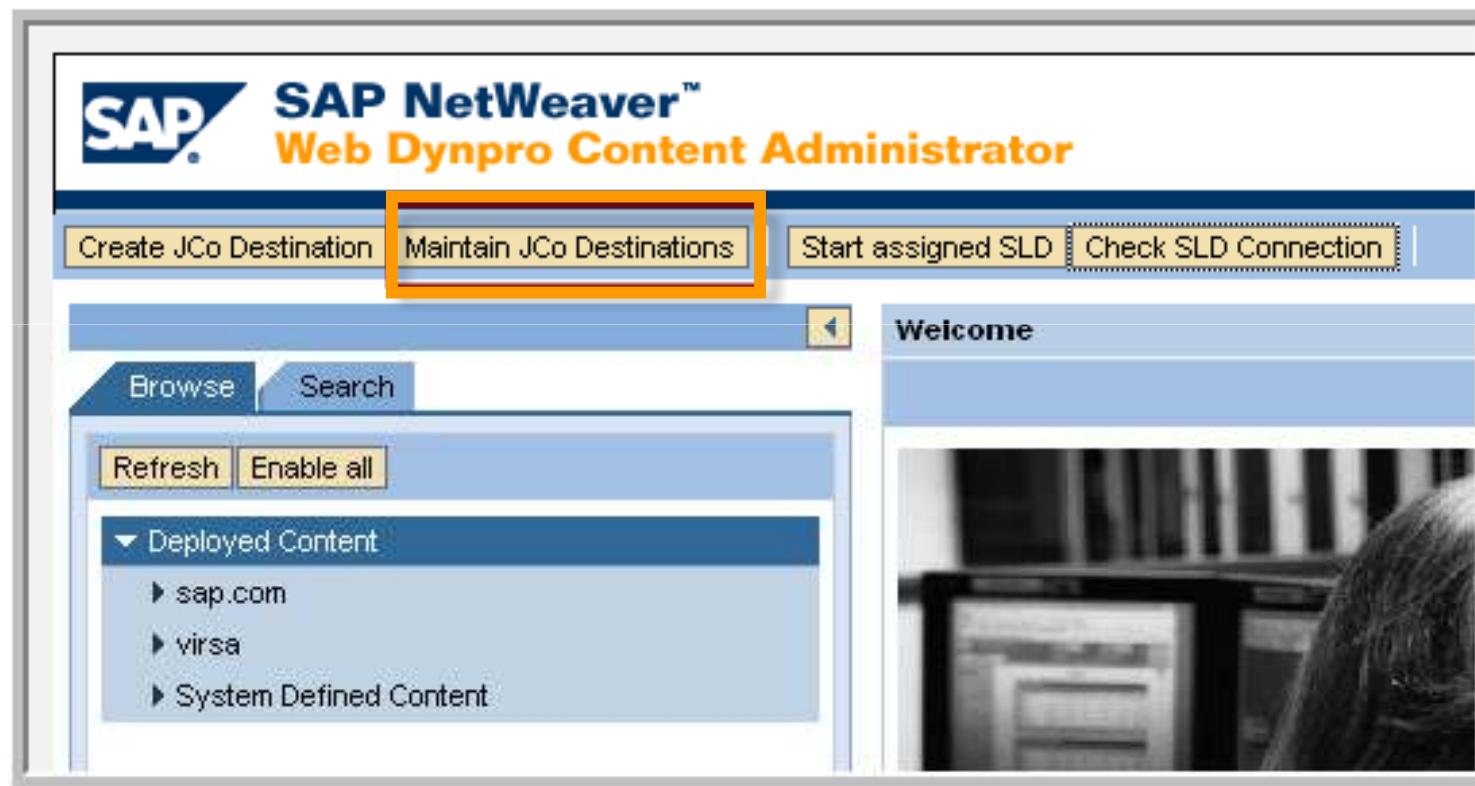
- In order for target systems to connect to RAR, each Real Time Agent (RTA) must:
 - Have an entry in the operating system services file of the NetWeaver server
 - Server must be restarted before new client entries are registered
 - Be defined as a Technical Landscape in the System Landscape Directory (SLD)
 - Each SAP target backend system must have a logon group defined
 - Have a RFC user (type communication) defined. For the required roles, please check the Security Guide:
 - This account information is used for configuring the Java connections
 - For each SAP target backend system a JCO connection must be defined in the Access Control Web AS following the procedure in section 6.1.1 and 6.1.2 in the Installation Guide.

4 – Create JCO Connectors (2/5)

→ Check Java Connectors



- In the WebDynpro Content Administrator click on *Maintain JCo Destinations*.



4 – Create JCO Connectors (3/5)

→ Check Java Connectors



- Refer to the Installation Guide to ensure that proper JCo Destinations have been created for each SAP target system and the associated SAP client. Click *Preview* to view JCo details, for example, SAP client, SAP system, and SAP Message Server.

The screenshot shows a table titled "JCo Destination Details" with a header bar containing "Define Source" (set to "All") and a "Create" button. The table lists five destinations with columns for Name, Status, and several action buttons (Create, Preview, Edit, Test, Ping, Remove). The "Preview" button for the second row, "TEST_BRUCE_MODEL", is highlighted with an orange box. The status icons are red with a white 'X' for the first three rows and green for the last two. A footer bar shows "1 of 48" and navigation icons.

Name	Status	Create	Preview	Edit	Test	Ping	Remove
TEST_BRUCE_METADATA		Create	Preview	Edit	Test	Ping	Remove
TEST_BRUCE_MODEL		Create	Preview	Edit	Test	Ping	Remove
VIRSAHR_01_METADATA		Create	Preview	Edit	Test	Ping	Remove
VIRSAHR_01_MODEL		Create	Preview	Edit	Test	Ping	Remove
VIRSAHR_02_METADATA		Create	Preview	Edit	Test	Ping	Remove

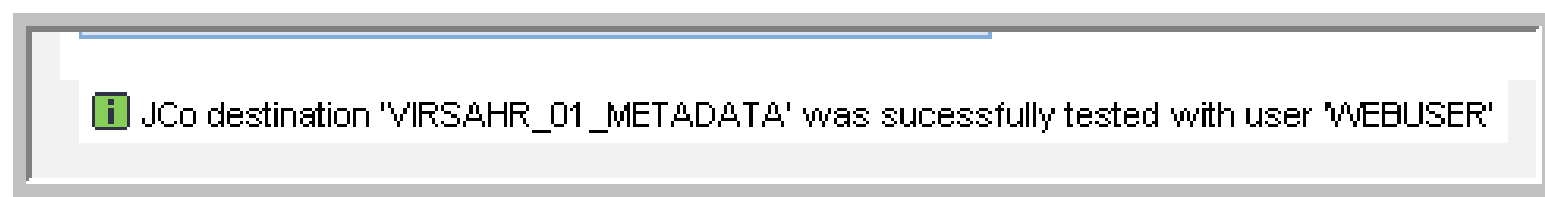
4 – Create JCo Connectors (4/5) → Check Java Connectors



- Test each Java Connector by clicking *Test*.

Name	Status	Create	Preview	Edit	Test	Ping	Remove
TEST_BRUCE_METADATA	❌	Create	Preview	Edit	Test	Ping	Remove
TEST_BRUCE_MODEL	❌	Create	Preview	Edit	Test	Ping	Remove
VIRSAHR_01_METADATA	✅	Create	Preview	Edit	Test	Ping	Remove
VIRSAHR_01_MODEL	✅	Create	Preview	Edit	Test	Ping	Remove
VIRSAHR_02_METADATA	❌	Create	Preview	Edit	Test	Ping	Remove

- If the test is successful, the following message displays at the bottom left corner of the screen:



4 – Create JCo Connectors (5/5)

→ Check JCo Pool Configuration



- Make sure correct JCo Pool Parameters are set for all JCos (SAP Note 1121978)

The screenshot displays the SAP NetWeaver Web Dynpro Content Administrator interface. The top navigation bar includes buttons for 'Create JCo Destination', 'Maintain JCo Destinations', 'Start assigned SLD', and 'Check SLD Connection'. The main content area is divided into two sections: 'JCo Destination Details' and 'Edit the JCo Destination 'VIRSAXSR3_01_METADATA''.

JCo Destination Details

Name	Status	Create	Preview	Edit	Test	Ping	Remove
VIRSAR3_03_METADATA	Red circle with X	Create	Preview	Edit	Test	Ping	Remove
VIRSAR3_03_MODEL	Red circle with X	Create	Preview	Edit	Test	Ping	Remove
VIRSAXSR3_01_METADATA	Green square	Create	Preview	Edit	Test	Ping	Remove
VIRSAXSR3_01_MODEL	Green square	Create	Preview	Edit	Test	Ping	Remove
VIRSAXSR3_02_METADATA	Red circle with X	Create	Preview	Edit	Test	Ping	Remove

Edit the JCo Destination 'VIRSAXSR3_01_METADATA'

Progress bar: 1 (General Data) | 2 (Message Server) | 3 (Security) | 4 (Summary)

Define the name and the maximal pool size of the JCo connection.
Optionally you can create the new JCo destination as a copy of an existing one.
Please make sure that the new JCo destination name is not an extension of an existing one (like "Test" and "Test1")

Destination Name

Name:
Client:
 Copy it from an existing JCo destination

JCo Pool Configuration

Maximal Pool Size:
Maximum Connections:
Connection Timeout (msec.):
Maximum Waiting Time (msec.):

Navigation: Previous | Next | Finish | Cancel

5 – Create & Check System Connectors (1/2)



- For Java Connector a System Connector must be defined in RAR → Configuration → Connectors

The screenshot shows the SAP GRC Access Control web interface. The main header includes the SAP logo, the text 'SAP GRC Access Control Risk Analysis and Remediation', and a user welcome message 'Welcome Rambo, Frank'. There are navigation tabs for 'Informer', 'Rule Architect', 'Mitigation', 'Alert Monitor', 'Configuration', 'Debugger', and 'Analysis Daemon'. The 'Configuration' tab is active, and the left sidebar shows a tree view with 'Connectors' expanded to 'Search'. The main content area is titled 'Change Connector' and contains the following fields:

System:	AR1
System Name:	AR1
System Type:	SAP
Connection Type:	Adaptive RFC
JCO Destination:	grc-rig-03_AR1_001
SAP Gateway:	sapgw00
Report Name:	
Outbound Connection:	<input type="checkbox"/>
Unicode System:	<input checked="" type="checkbox"/>

A 'Save' button is located at the bottom left of the form area.

5 – Create & Check System Connectors (2/2)



- Check, if the connector really works
- As a simple test search for Backend users in <http://<server>:<port>/webdynpro/dispatcher/sap.com/grc~ccappcomp/CCDebugger>
- This test works also for the portal connector!

The screenshot shows the CCDebugger interface with the following elements:

- Debugger title bar: Welcome Rambo, Frank
- Search input: AR1
- Obj. type: User
- Obj. ID: is*
- Buttons: Get Actions, Get Permissions, Search Obj, Get Obj Roles, Get Users For Obj, Get Users For Mgr
- Log File: ccappcomp.0.log
- Buttons: View Server Log, Clear Text Area, Clear All Memory Cache, View File/Dir, Memory Usage
- SQL or File/Dir: (empty)
- Buttons: Limit to 1000 Rows, Execute Query, Clear Output Table
- Result from searchUser:
SAP*
SAPCPIC
SKUMAR
SMITHJ
SOLMANSM1000
SOLTMVSM1000
Elapsed time: 23ms

An orange arrow points from the 'Search Obj' button to the result list.

6 – Create Logical Systems and Assign System Connectors



- Create now for each type of backend (like ERP, BW, APO etc) a logical system.
- Assign all system connectors sharing the same rule set
- This allows for sharing the same rule set across various systems (DEV, QA or ERP1, ERP2)
- Also refer to slides 27 & 28 (activity no. 13 & 14)

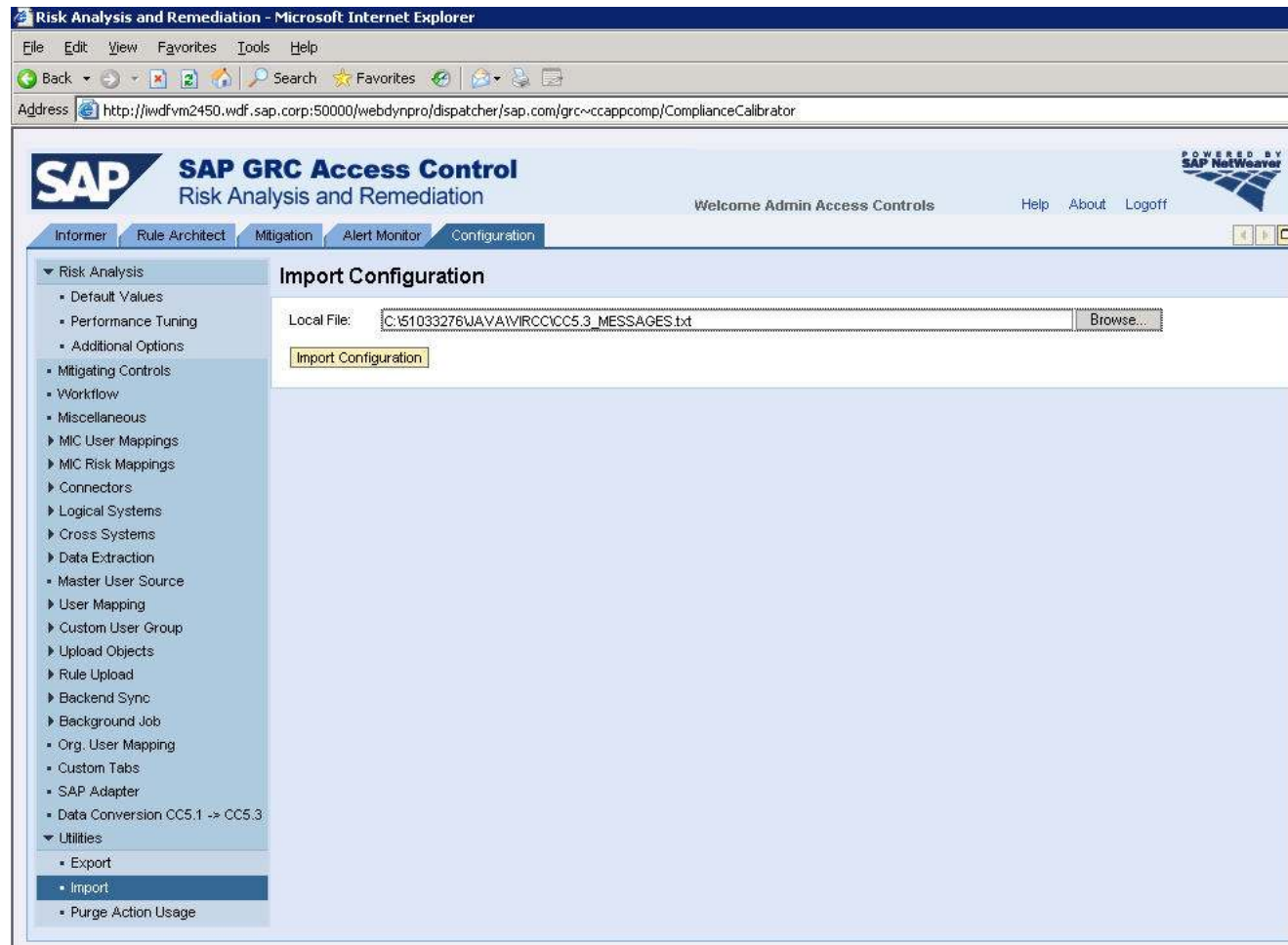
The screenshot displays the SAP GRC Access Control interface. The top navigation bar includes the SAP logo, the text 'SAP GRC Access Control Risk Analysis and Remediation', and the user 'Welcome Admin Access Controls'. The main menu on the left lists various options, with 'Logical Systems' expanded to show 'Search' selected. The central panel is titled 'Change Logical System' and contains the following fields and elements:

- Logical System:** A text input field containing 'ERP'.
- Description:** A text input field containing 'ERP Backend'.
- System *:** A dropdown menu with 'ECC6.0-DCX(DCX)' selected.
- Table:** A table with one row containing the selected system name.
- Row 1 of 1:** A pagination indicator.
- Save:** A button at the bottom left of the main panel.

7 – Upload Error Messages



- With the installation files you will find the file CC5.3_MESSAGES.txt
- Upload this file into RAR as shown in the screenshot



8 – Set / Check Default & Performance Parameters



- Set Default Values according to your requirements
- Set Performance values according to Note 1121978 - Recommended settings to improve performance risk analysis

The screenshot shows the SAP GRC Access Control Risk Analysis and Remediation configuration interface. The page title is "Risk Analysis - Performance Tuning". The left sidebar contains a navigation menu with the following items: Risk Analysis (expanded), Default Values, Performance Tuning (selected), Additional Options, Mitigating Controls, Workflow, Miscellaneous, MIC User Mappings, MIC Risk Mappings, Connectors, Logical Systems (expanded), Create, Search, and Generate Rule. The main content area displays four configuration parameters, each with a description and a text input field:

Parameter Name	Description	Value
Batch Size for User Synchronization	This option is for limiting the number of users per batch; the default value is 1000 users	1000
Number of Web Service Worker Threads	This parameter specifies the number of server threads for Web service calls; the default value is 5; to turn off, set to 0	5
Number of Background Job Worker Threads	This is to specify the number of server threads for background jobs; default value is 3; to turn off, set to 0	3
RFC Timeout for Web Services / Background Job Worker Threads (Minutes)	This sets the timeout period when a connection is left idle; default value is 30 minutes	1441

9 – Set / Check Miscellaneous Values (1/2)



- The following new reports can have long runtimes:
 - User Authorization Count
 - Role Authorization Count
 - List Expired and Expiring Roles for Users

- For that reason These jobs run on ABAP side and produce a spool file. An icon is displayed on the front-end for the jobs that complete. (If you run jobs on all systems and it finishes on one system before another the icon will display for the finished system first)

- The report directory on the SAP Enterprise Resource Planning (ERP) application servers. This is the temporary storage location for spool files generated by these background jobs.

- The same directory name is used for all SAP backend systems.

- The location, user name, and password for FTP of security reports generated by backend SAP ERP systems.

9 – Set / Check Miscellaneous Values (2/2)



SAP **SAP GRC Access Control**
Risk Analysis and Remediation

Welcome Harleen Kaur Help About Logout

POWERED BY SAP NetWeaver

Informer Rule Architect Mitigation Alert Monitor **Configuration** Debug

- ▼ Risk Analysis
 - Default Values
 - Performance Tuning
 - Additional Options
 - Mitigating Controls
 - Workflow
 - Miscellaneous**
 - ▶ MIC User Mappings
 - ▶ MIC Risk Mappings
 - ▶ Connectors
 - ▶ Logical Systems
 - ▶ Cross Systems
 - ▶ Data Extraction
 - Master User Source
 - ▶ User Mapping
 - ▶ Custom User Group
 - ▶ Upload Objects
 - ▶ Rule Upload
 - ▶ Backend Sync
 - ▶ Background Job
 - Org. User Mapping
 - Custom Tabs
 - SAP Adapter
- ▼ Utilities
 - Export
 - Import
 - Purge Action Usage

Miscellaneous

This parameter specifies whether violations are reported in the management report at Risk or Permission level. The default value is Permission.

Default Logger Param SAP Logger

This parameter specifies the default value of Logger being used. The default value is SAP Logger

R3 Application Server Location DIR_HOME

R3 Application Server Location should be provided here.

FTP Site Location 10.66.19.132/ftp_

FTP Site Location should be provided here

FTP Site Username ftp_grc

FTP Site username should be provided here

FTP Site Password

FTP Site Password should be provided here

Save Cancel

10 – Check User Master Source



- Check if a user master source is defined in RAR.

The screenshot displays the SAP GRC Access Control web interface. The header includes the SAP logo, the text 'SAP GRC Access Control Risk Analysis and Remediation', a user greeting 'Welcome Rambo, Frank', and navigation links for 'Help', 'About', and 'Logoff'. Below the header is a navigation bar with tabs for 'Informer', 'Rule Architect', 'Mitigation', 'Alert Monitor', 'Configuration', 'Debugger', and 'Analysis Daemon'. The 'Configuration' tab is active, and a left-hand navigation menu is visible with 'Master User Source' selected. The main content area is titled 'Define Master User Source' and contains a 'Select System' dropdown menu with 'AR1' selected and a 'Save' button.

11 – Upload Static Text (1/3)

→ Download Static Text from Each Backend



- For each backend: Download Static Text
- Use report /VIRSA/ZCC_DOWNLOAD_DESC

The image shows two overlapping SAP ABAP dialog boxes. The top-left box is titled "ABAP: Program Execution" and shows the program name "/VIRSA/ZCC_DOWNLOAD_DESC" in the "Program" field. The bottom-right box is titled "Texts Download for CC." and contains the following details:

- Selection Parameters:**
 - Language: EN
 - Local File: (Selected)
 - Application Server File:
 - File path: C:\Temp\static_text.txt
- List of Auth Objects to be Included For Text Extraction:**
 - Auth Objects
 - Auth Tcodes
 - Auth Fields
 - Auth Field Values
 - Org Level Variables

An orange arrow points from the program name in the first dialog to the "Texts Download for CC." dialog, indicating the flow of the process.

11 – Upload Static Text (2/3)

→ Static Text File Content



➤ Contents of Static Text File

Transaction descriptions (ACT) from TSTCT

ACT	SU03	EN	Maintain Authorizations
ACT	SU05	EN	Maintain Internet Users
ACT	SU1	EN	Maintain Own User Address
ACT	SU10	EN	User Mass Maintenance
ACT	SU12	EN	Mass Changes to User Master Records

Field Descriptions (FLD) from DD03T

FLD	ACTIVITY	EN	Activity: document distribution
FLD	ACTVT	EN	Activity
FLD	ACTVT_RT	EN	IHC: Action Entering Set of Rules
FLD	ACT_EBPP	EN	Key for the Processing Function (Bi

Organizational Level descriptions from USORG / USVAR

ORG	BUKRS	EN	Company code
ORG	BUNIT	EN	Consolidation unit
ORG	BWKEY	EN	Valuation area
ORG	CEERKRS	EN	Operating concern

Object descriptions (PRM) from TBOJT

PRM	V_VBKA_VKO	EN	Sales Activities: Authoriz. For order
PRM	V_VBRK_FKA	EN	Billing: Authorization for Billing
PRM	V_VBRK_VKO	EN	Billing: Authorization for Sales
PRM	V_VBSK_GRA	EN	Deliveries: Authorization for Delivery
PRM	V_VBSK_STO	EN	Billing: Authorization for cancellation

Field Values descriptions (VAL)

VAL	ACTVT/01	EN	Create or generate
VAL	ACTVT/02	EN	Change
VAL	ACTVT/03	EN	Display

Data is downloaded in the language designated during sign on. To download multiple languages for upload to CC, log off, log on in another language, and run the download text program again. Repeat for each language.

11 – Upload Static Text (3/3)

→ Upload Static Text File into RAR



- For each backend system: Upload static text to RAR.

The screenshot displays the SAP GRC Access Control interface. The top navigation bar includes the SAP logo, the text 'SAP GRC Access Control Risk Analysis and Remediation', the user name 'Welcome Frank Bannert', and links for 'Help', 'About', and 'Logoff'. Below the navigation bar are tabs for 'Informer', 'Rule Architect', 'Mitigation', 'Alert Monitor', and 'Configuration'. The left sidebar contains a tree view with categories like 'Risk Analysis', 'Mitigating Controls', 'MIC User Mappings', 'Upload Objects', and 'Text Objects'. The main content area is titled 'Text Objects Upload' and contains the following fields and buttons:

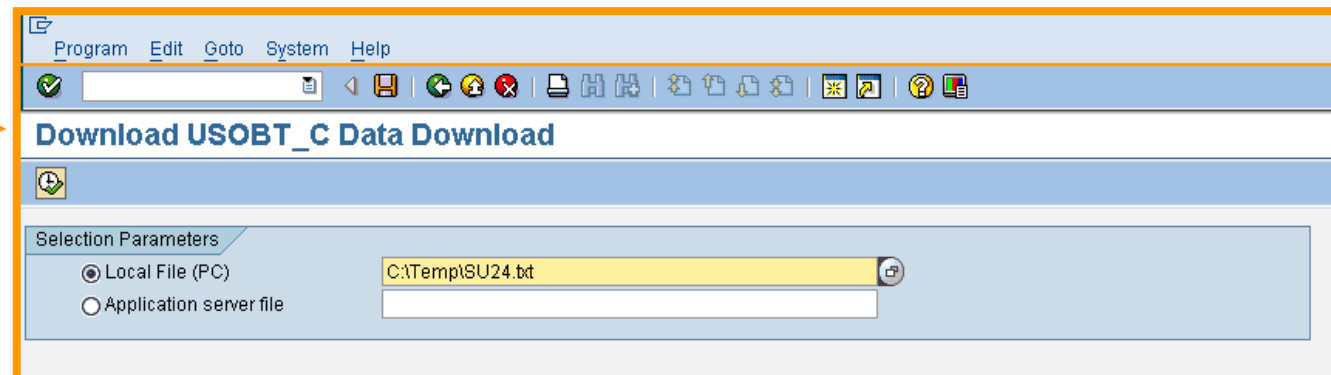
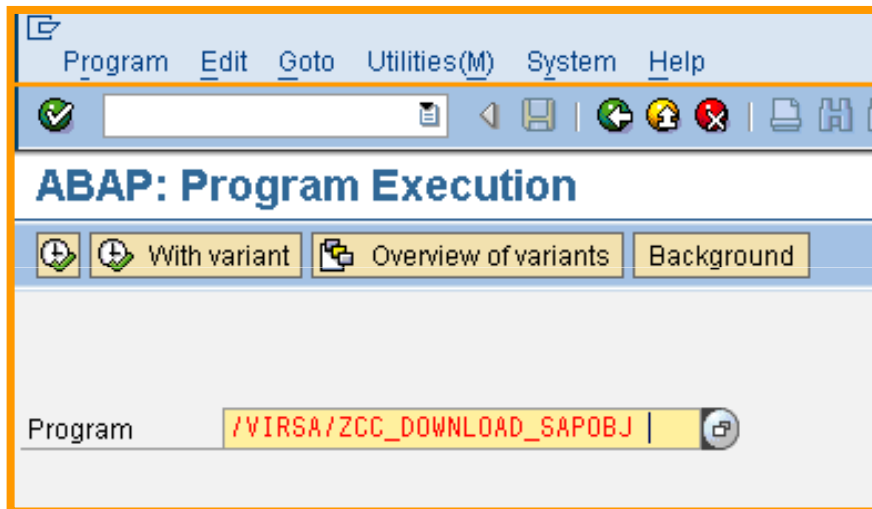
- System:** A dropdown menu with 'AR1 ECC6' selected.
- Local File:** A text input field with a 'Browse...' button to its right.
- Server File:** A text input field.
- At the bottom of the form are three buttons: 'Foreground', 'Background', and 'Cancel'.

12 – Upload SU24 Authorization Data (1/3)

→ Download SU24 Data from each Backend



- Download SU24 data from SAP
- Use report /VIRSA/ZCC_DOWNLOAD_SAPOBJ



12 – Upload SU24 Authorization Data (2/3)

→ SU24 Data Example



- Contents of Authorization Objects Text File

Check / Maintain objects, fields, and default values from USOBT_C

ME21N	M_BEST_BSA	ACTVT	09
ME21N	M_BEST_BSA	ACTVT	08
ME21N	M_BEST_BSA	ACTVT	03
ME21N	M_BEST_BSA	ACTVT	02
ME21N	M_BEST_BSA	ACTVT	01
ME21N	M_BEST_EKG	BSART	
ME21N	M_BEST_EKG	ACTVT	01
ME21N	M_BEST_EKG	ACTVT	02
ME21N	M_BEST_EKG	ACTVT	03
ME21N	M_BEST_EKG	ACTVT	08
ME21N	M_BEST_EKG	ACTVT	09
ME21N	M_BEST_EKG	EKGRP	\$EKGRP

MLV6	V_KONH_VKS	ACTVT	01
MLV6	V_KONH_VKS	KSCHL	
MM01	C_AENR_BGR	ACTVT	22
MM01	C_AENR_BGR	BEGRU	
MM01	C_AENR_ERW	ACTVT	22
MM01	C_AENR_ERW	AEFUN	
MM01	C_AENR_ERW	AENST	
MM01	C_AENR_ERW	BEGRU	
MM01	C_AENR_ERW	RLKEY	
MM01	C_AENR_RV1	ACTVT	01
MM01	C_DRAD_OBJ	ACTVT	01
MM01	C_DRAD_OBJ	ACTVT	02
MM01	C_DRAD_OBJ	ACTVT	06
MM01	C_DRAD_OBJ	DOKAR	
MM01	C_DRAD_OBJ	DOKOB	
MM01	C_DRAD_OBJ	STATUS	

12 – Upload SU24 Authorization Data (3/3)

→ Upload SU24 Data for each Backend



- Upload SU24 data file into RAR for each backend system

The screenshot displays the SAP GRC Access Control interface. The top navigation bar includes the SAP logo, the text 'SAP GRC Access Control Risk Analysis and Remediation', a user greeting 'Welcome Frank Bannert', and links for 'Help', 'About', and 'Logoff'. Below the navigation bar, there are tabs for 'Informer', 'Rule Architect', 'Mitigation', 'Alert Monitor', and 'Configuration'. The left sidebar contains a tree view of the application's structure, with 'Upload Objects' expanded to show 'Permissions'. The main content area is titled 'Auth Objects Upload' and contains the following fields and controls:

- System:** A dropdown menu with 'AR1 ECC6' selected.
- Local File:** A text input field with a 'Browse...' button to its right.
- Server File:** A text input field.
- Buttons:** Three buttons labeled 'Foreground', 'Background', and 'Cancel' are positioned below the input fields.

13 – Upload SAP GRC Rule Files (1/2)



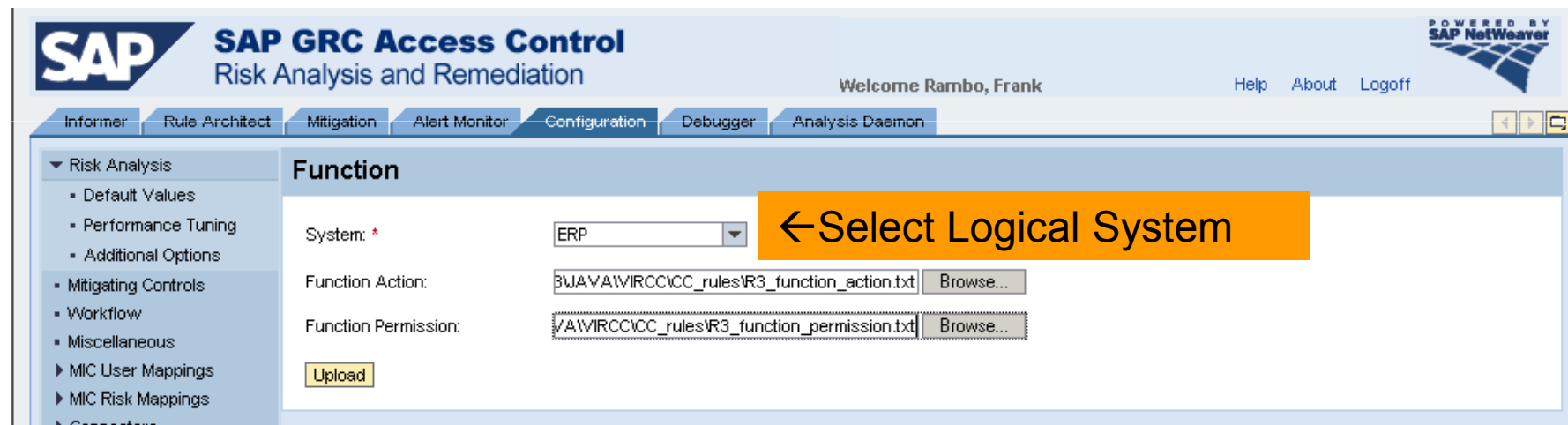
- The files are delivered with the software.
- Start with *Business Process* and file *ALL_Business_Processes.txt*
- Continue with *Function* and files *ALL_Functions.txt* and *ALL_Functions_BP.txt*

The screenshot displays the SAP GRC Access Control web interface. The header includes the SAP logo, the text "SAP GRC Access Control Risk Analysis and Remediation", and a "POWERED BY SAP NetWeaver" logo. A navigation bar contains tabs for "Informer", "Rule Architect", "Mitigation", "Alert Monitor", "Configuration", "Debugger", and "Analysis Daemon". The "Configuration" tab is active. On the left, a tree view shows the "Rule Upload" section expanded to "Business Process". The main content area, titled "Business Process", features a "File Location:" label, a text input field containing the path "WIRCCICC_rules\ALL_Business_Processes.txt", a "Browse..." button, and an "Upload" button.

13 – Upload SAP GRC Rule Files (2/2)



- We recommend use of **logical systems**.
- If you use logical systems, upload **Function Authorization** selecting your **logical system** in the system dropdown list
- Upload the files *XX_function_action.txt* and *XX_function_permission.txt*



The screenshot shows the SAP GRC Access Control Configuration page. The page title is "SAP GRC Access Control Risk Analysis and Remediation". The user is logged in as "Welcome Rambo, Frank". The page has a navigation bar with tabs: Informer, Rule Architect, Mitigation, Alert Monitor, Configuration (selected), Debugger, and Analysis Daemon. The left sidebar shows a tree view with "Risk Analysis" expanded, containing sub-items like Default Values, Performance Tuning, Additional Options, Mitigating Controls, Workflow, Miscellaneous, MIC User Mappings, MIC Risk Mappings, and Connectors. The main content area is titled "Function" and contains the following fields:

- System: * (dropdown menu showing "ERP")
- Function Action: (text input field containing "B\A\VA\WIRCC\CC_rules\R3_function_action.txt" and a "Browse..." button)
- Function Permission: (text input field containing "A\WIRCC\CC_rules\R3_function_permission.txt" and a "Browse..." button)
- Upload (button)

An orange callout box with a left-pointing arrow and the text "Select Logical System" is positioned over the System dropdown menu.

- Continue with **Rule Set** and upload file *ALL_Ruleset.txt*
- Continue with **Risk** and upload files *R3_risks.txt*, *R3_risks_desc.txt* and *R3_Risk_Ruleset.txt*

14 – Generate Rule Set with Logical Systems



- If you use logical systems use **RAR → Configuration → Logical Systems → Generate Rule**. Do not use Configuration → Rule Upload → Generate Rule. The latter is only used, if you upload Function Authorization directly against system connectors
- When Rule Generation is completed, the screen below is displayed

SAP GRC Access Control
Risk Analysis and Remediation

Welcome Rambo, Frank | Help | About | Logoff

Inform | Rule Architect | Mitigation | Alert Monitor | **Configuration** | Debugger | Analysis Daemon

Generate Rules

Risk Description	Conflicting Function	Level	Status
B001: Basis Development & System Administration	BS02 - Basis Development & BS11 - System Administration	Medium	Enable
B002: Basis Development & Configuration	BS02 - Basis Development & BS06 - Configuration	High	Enable
B003: Basis Development & Client Administration	BS02 - Basis Development & BS05 - Client Administration	Medium	Enable
B004: Basis Development & Transport Administration	BS02 - Basis Development & BS12 - Transport Administration	High	Enable
B005: Basis Utilities & System Administration	BS04 - Basis Utilities & BS11 - System Administration	Medium	Enable
B006: Basis Utilities & Configuration	BS04 - Basis Utilities & BS06 - Configuration	High	Enable
B007: Basis Utilities & Client Administration	BS04 - Basis Utilities & BS05 - Client Administration	Medium	Enable
B008: Basis Utilities & Transport Administration	BS04 - Basis Utilities & BS12 - Transport Administration	High	Enable
B009: Basis Table Maintenance & System Administration	BS03 - Basis Table Maintenance &	High	Enable

Foreground | Background

15 – Run Background Jobs: User/Role Sync, Batch Risk Analysis and Management Report



- Schedule 2 subsequent Background Jobs for the following (refer for details to SAP Note 1034117 and [SAP GRC Access Control: Background Jobs for RAR](#)):
 - Perform user/role/profile full synchronization
 - Perform user/role/profile full analysis & management reports

Background Job No.1

SAP GRC Access Control
Risk Analysis and Remediation

Welcome Rambo, Frank

Informers | Rule Architect | Mitigation | Alert Monitor | Configuration | Debugger | Analysis Daemon

User/Role/Profile Synchronization and Batch Risk Analysis

User/Role/Profile Synchronization

Sync Mode: Full Sync

User Synchronization Systems: *

Role Synchronization Systems: *

Profile Synchronization Systems: *

Batch Risk Analysis

Batch Mode: Incremental

Rule Set: GLOBAL

Report Type: Action Level Analysis Permission Lev

User Analysis

Role Analysis

Profile Analysis

Critical Action and Role/Profile Analysis

Management Report

Management Reports

Schedule Reset

Background Job No.2

SAP GRC Access Control
Risk Analysis and Remediation

Welcome Rambo, Frank

Informers | Rule Architect | Mitigation | Alert Monitor | Configuration | Debugger | Analysis Daemon

User/Role/Profile Synchronization and Batch Risk Analysis

User/Role/Profile Synchronization

Sync Mode: Incremental

User Synchronization Systems: *

Role Synchronization Systems: *

Profile Synchronization Systems: *

Batch Risk Analysis

Batch Mode: Full Sync

Rule Set: GLOBAL

Report Type: Action Level Analysis Permission Lev

User Analysis

Role Analysis

Profile Analysis

Critical Action and Role/Profile Analysis

Management Report

Management Reports

Schedule Reset

15 – Check Status of Background Jobs



➤ RAR → Configuration → Background Job → Search

NOTE: If you use MaxDB update optimizer statistics as per note 927882 to be able to perform background jobs

The screenshot shows the 'Search Background Jobs' form in the SAP GRC Access Control Configuration menu. The form includes fields for Job ID, Name, Task (dropdown), Job Type (dropdown), Last Run Date (range), and Scheduled By. A 'Search' button is highlighted with an orange box, and an arrow points from it to the results page below.

The screenshot shows the 'Search Background Jobs Result' page. The Job Scheduler Status is 'Running'. The table below lists the search results:

Job ID	Task	Name	Job Type	Last Run	Next Start	User	State	Result	Status
4	Risk Analysis - Batch	mgmnt report	Immediate	2008-04-24 09:29:26	2008-04-24 09:26:24	ac_admin	Complete		
3	Risk Analysis - Batch	full analysis user/role for AR1	Immediate	2008-04-24 01:24:12	2008-04-23 18:34:41	ac_admin	Complete		
2	Risk Analysis - Batch	first full synch user/role	Immediate	2008-04-23 18:22:50	2008-04-23 18:22:22	ac_admin	Complete		
1	Rule Generation	generate ruleset for log. sys	Immediate	2008-04-23 18:13:57	2008-04-23 17:55:29	ac_admin	Complete		

15 – Result: Management Report with Pie and Bar Charts



- If the charts appear broken with no data, check your IGS settings!

SAP GRC Access Control
Risk Analysis and Remediation

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Welcome Admin Access Controls Help About Logoff

informer Rule Architect Mitigation Alert Monitor Configuration Debugger

Management View - Risk Violations Summary as of 24-Apr-2008

Risk Violations

Month/Year: 04/2008
 System: All
 Analysis Type: User
 User Group: All
 Violation Count by: Permission

Go

Number of Users Analyzed: 34
 Total Number of Violations: 545,459

Severity	Count
Low	233181
Medium	308443
High	33835
Critical	0

Risk Violations by Process

Process	Count	Percentage
Basis	176,228	32%
Finance	80,977	15%
HR and Payroll	32,994	6%
Materials Management	40,781	7%
Procure to Pay	135,166	25%
Order to Cash	79,313	15%

16 – Upload Initial System Data into CUP (opt.)

→ SAP Note 1157209



- Required only if you want to use the workflow approval process for Risk, Mitigation and Mitigation assignment. Download from SAP Note 1157209 the file AE_init_append_data_CC.xml and Upload it with **Append** option into **CUP** → Configuration → Initial System Data

The screenshot shows the SAP GRC Access Control interface. The main window is titled 'Initialize DB' and contains an 'Import Data' section. The 'File Name' field is set to 'append_data_CCVAE_init_append_data_CC.xml'. The 'Append' radio button is selected, and the 'Import' button is visible. Below the 'Import Data' section is an 'Export Data' table with the following columns: Name, Description, and a checkbox. The table contains the following rows:

<input type="checkbox"/>	Name	Description
<input type="checkbox"/>	Initial Data	Initial Data
<input type="checkbox"/>	Connector	Connector
<input type="checkbox"/>	Roles	Roles
<input type="checkbox"/>	Workflow Configuration	Workflow Configuration
<input type="checkbox"/>	User Defaults	User Defaults
<input type="checkbox"/>	Hr Triggers	Hr Triggers

The 'Export' button is also visible at the bottom of the 'Export Data' section.

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