

GROWING ENTERPRISE PERFORMANCE

**Enterprise Job Scheduling and  
Software Change Management**

# **ESP Business Agent for SAP R/3**

Cybermation Education Unit #: SC101





# Agenda

- SAP Overview
- Agent Installation and Configuration
- Scheduling Workload
- Advanced Scheduling Concepts and Functions



# What is SAP R/3

- SAP R/3 is a suite of business management software applications that help manage many basic and advanced business practices.
- SAP R/3 applies a modular approach to deploying business management applications so that businesses can custom configure their business application software to fit their functional needs.
- SAP R/3 is a true Client/Server Application which utilizes application servers to process data that needs to move through business processes.

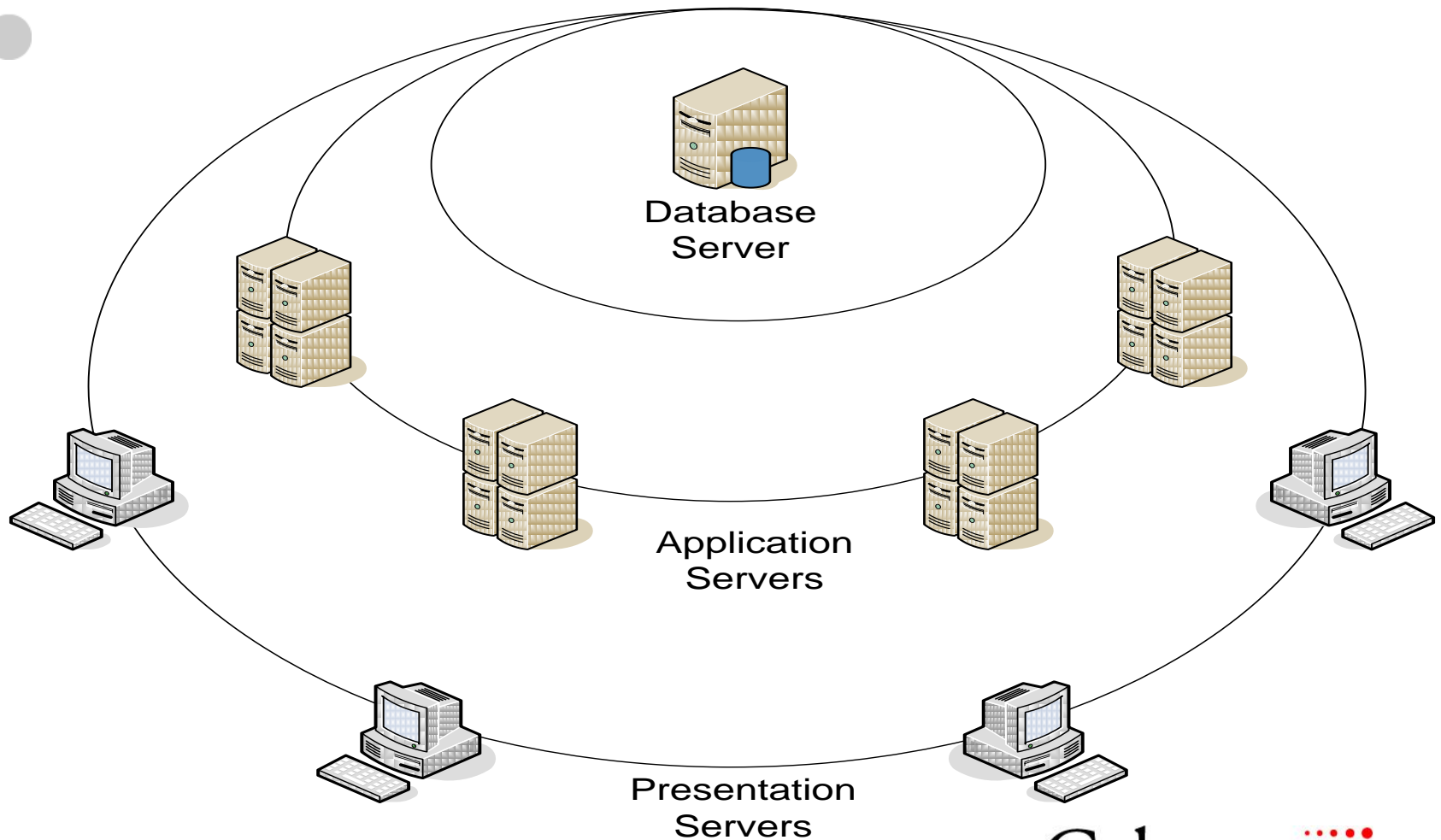


# SAP R/3 Architecture

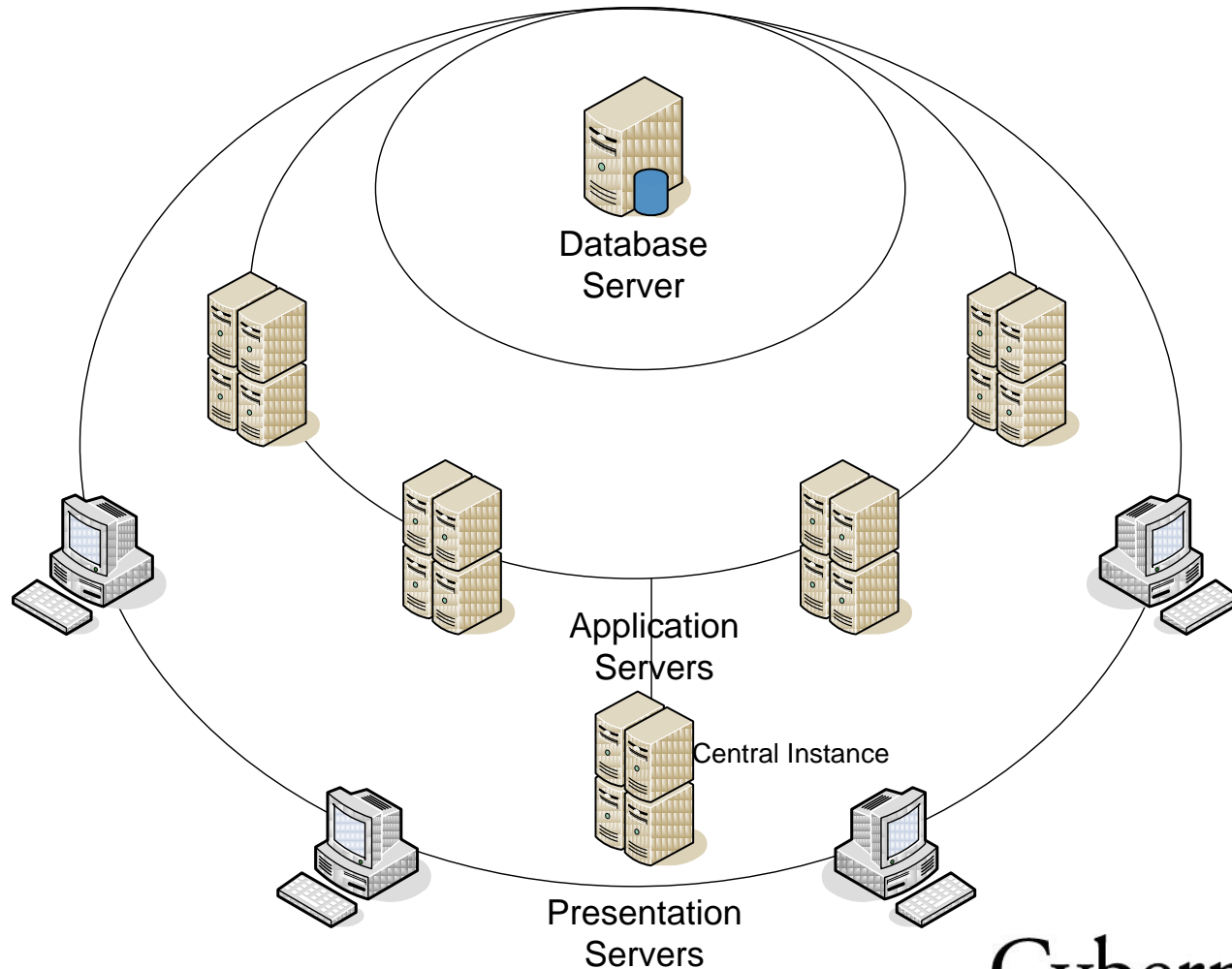


- The SAP R/3 Product Suite Follows a 3-Tier Hierarchy
  - The User Interface Layer
  - The Business Logic Layer
  - The Database Layer
- Each Handles a Single Set of Functions to Bring Usable Data to the End-User

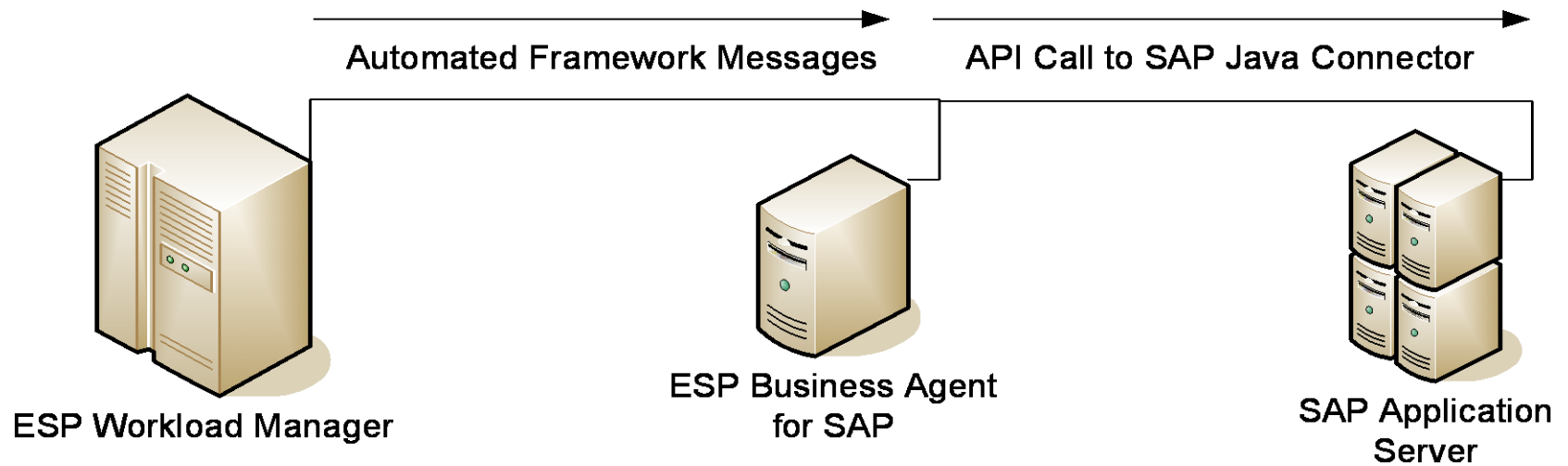
# SAP R/3 Architecture



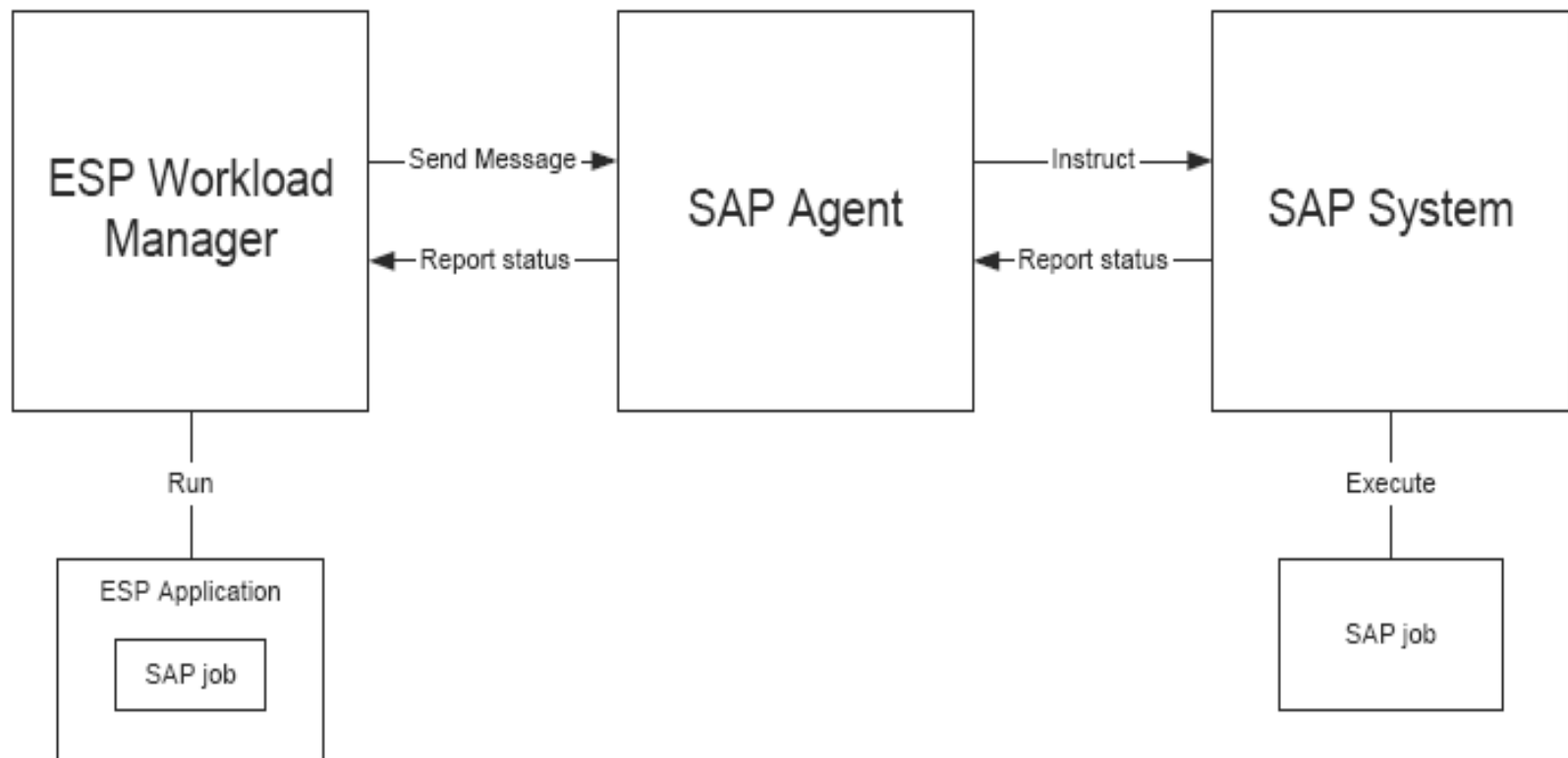
# SAP R/3 Architecture



# Where Do We Play?



# Where Do We Play?







# Where Do We Play?

- The ESP Business Agent for SAP Works Directly With the Application Server to Execute Jobs, Record Job Execution Information, Retrieve SAP Job Definitions, and SAP Job Log Information.
- The ESP Business Agent for SAP Also Provides Access to Other Functions, Called SAP Tools, To Work With Ad-Hoc Jobs and Other Messages That are Part of the SAP Application Server
- A Single ESP Business Agent for SAP Can Manage Workload for More Than One SAP Application Server





# Available Functions of the Agent

- The SAP Agent provides an interface between ESP Workload Manager or ESP Espresso and the SAP system. The SAP Agent performs the following functions:
  - Runs SAP R/3 workload
    - SAP Jobs
    - SAP Job Copy
    - Business Warehouse InfoPackages
    - Business Warehouse Process Chain
    - Batch Input Session
    - Data Archiving
    - Process Monitor
    - Event Monitor



# Available Functions of the Agent

- The SAP Agent provides an interface between ESP Workload Manager or ESP Espresso and the SAP system. The SAP Agent performs the following functions:
  - Manages SAP programs (ABAPs)
    - Executes SAP programs
    - Monitors the status of SAP programs
    - Cancels the execution of SAP programs
  - Manages SAP jobs
    - Determines job success or failure based on user-defined text strings
    - Deletes SAP jobs
    - Lists SAP jobs, ABAPs, variants, job count, and printers
    - Lists and sets SAP job classes



# Available Functions of the Agent

- The SAP Agent provides an interface between ESP Workload Manager or ESP Espresso and the SAP system. The SAP Agent performs the following functions:
  - Manages SAP spool files
    - Retrieves job spool
    - Delivers spool files to designated email recipients, SAPoffice recipients, and SAPoffice distribution list recipients

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# **ESP Business Agent for SAP**

Installation & Configuration





# System Requirements

- SAP Requirements:
  - SAP 4.5 or higher installed.
  - XBP 0.1, 1.0, 2.0, 6.10
- UNIX Operating System Requirements:
  - AIX RS/6000 with 256 Mb of RAM and AIX V5.1 and up
  - HP-UX HP-9000 with 256 Mb of RAM and HP-UX 11 and up
  - Solaris SunSPARC, 256 Mb of RAM and Solaris 2.7 and up
  - Linux Pentium P3 500 with 128 Mb of RAM and Redhat Linux 7.1 and up or a compatible kernel level of other Linux



# System Requirements

- Windows Operating System Requirements:
  - The Agent machine must be at a minimum an Intel Pentium P3 with 128 Megabytes (MB) of RAM and approximately 40 MB of disk space. The Agent installation program checks for available space before running the installation.
  - You can use any of the following versions of Microsoft Windows.
    - Windows 2000 Service Pack 3 or higher
    - Windows 2003
    - Windows XP Professional



# System Requirements

- Disk Space Requirements:
  - UNIX:
    - For the Agent and JRE, 55 Megabytes (MB)
    - For the Agent only, 13 MB
    - During installation, the installation program usually requires temporary space that is up to three times the installed space.
  - Windows:
    - For the Agent and JRE, 55 Megabytes (MB)





# Installation Notes

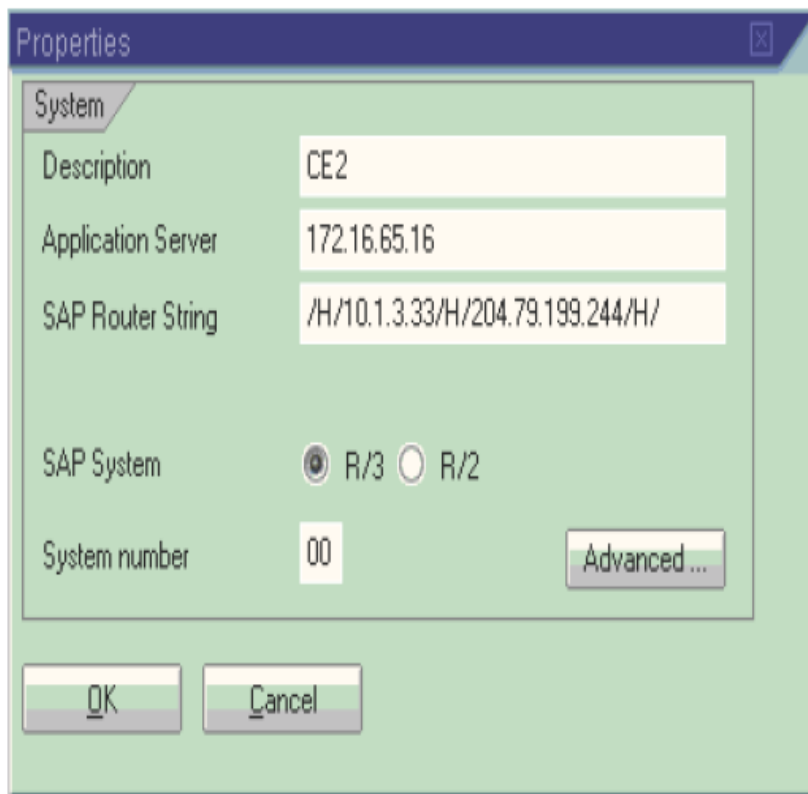
- For UNIX:
  - The installer can be run in either X Windows or at the command line.
  - The installer must have at least 3 times the Disk Space requirement available in temporary storage (/temp).
  - If temporary storage can is not available or cannot be expanded to accommodate the installer, there is an environment variable that can be set to reroute the installer to another file system to use for temporary storage. The variable is IATMPDIR and should be set and exported in the shell with the appropriate file system for the installer to use as temporary storage.



# Installation Notes

- For SAP:
  - You will need to know the following:
    - The SAP System ID
    - The SAP Router String
    - The SAP System Number
    - The SAP Group Name (If using SAP Load Balancing)
  - This information is obtained either from the SAP Administrator or from the initial SAPGUI login dialog.

# Installation Notes



The screenshot shows the 'Properties' dialog box for an SAP system, specifically the 'System' tab. The fields are as follows:

Field	Value
Description	CE2
Application Server	172.16.65.16
SAP Router String	/H/10.1.3.33/H/204.79.199.244/H/
SAP System	<input checked="" type="radio"/> R/3 <input type="radio"/> R/2
System number	00

Buttons at the bottom: OK, Cancel, and an 'Advanced ...' button.

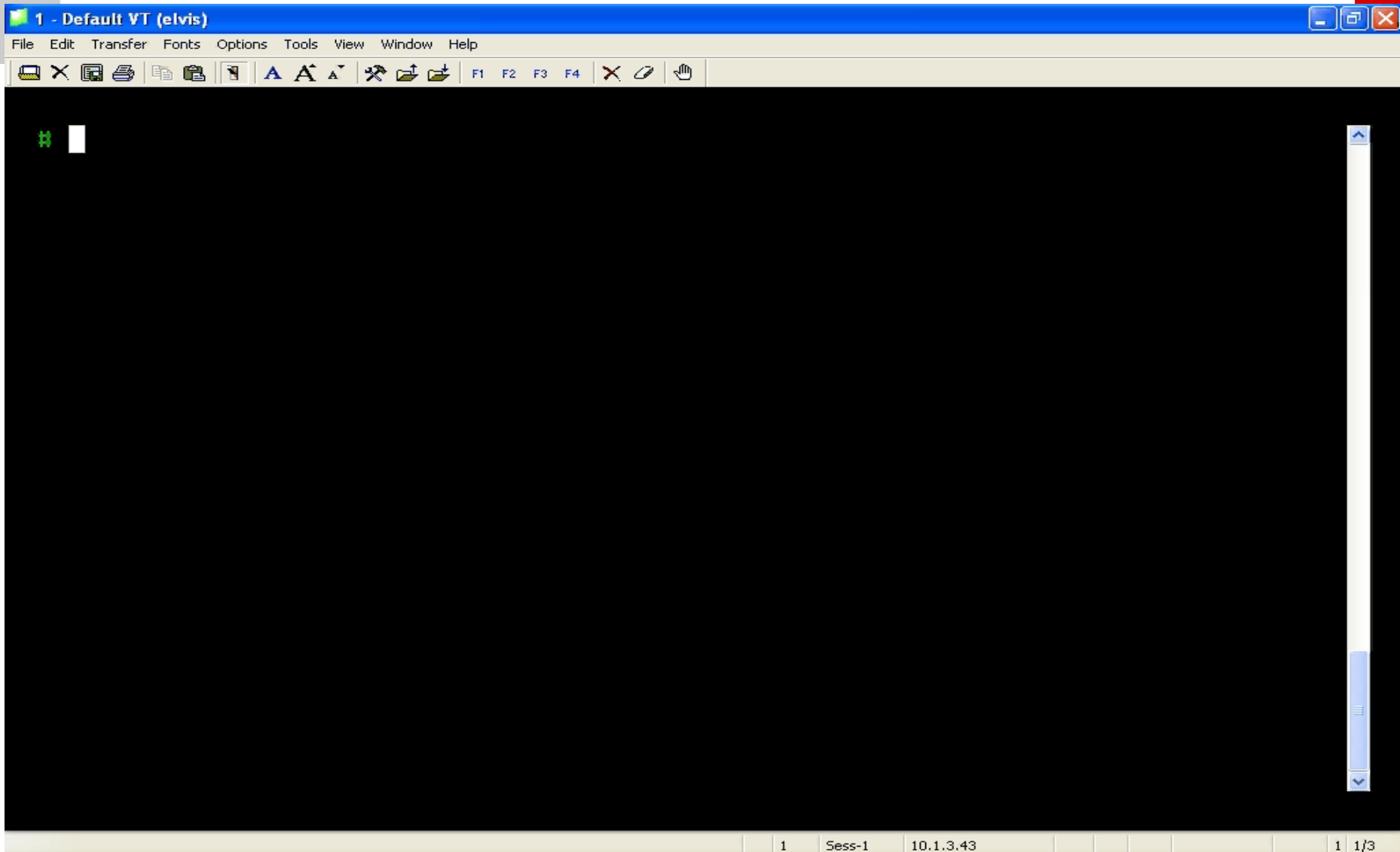
- For SAP:
  - Destination: CE2 (This is the SAP system ID)
  - Host:  
/H/10.1.3.33/H/204.79.199.244/H/172.16.65.16
  - System Number: 00
- If no value appears in SAP Router String, use only the value indicated for Application Server (for example, 172.16.65.16).



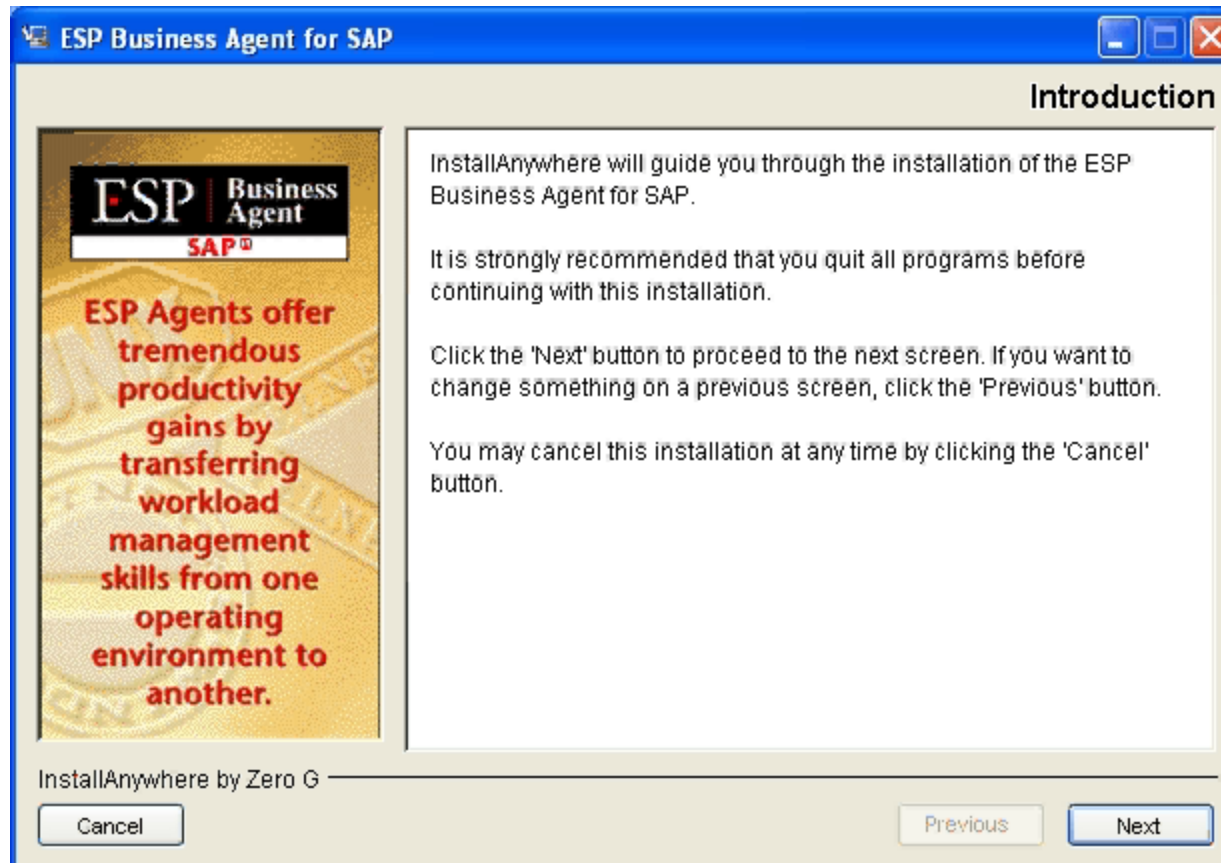
# Installation Notes

- For All Agents:
  - In order to use drag and drop job creation in the Workload Editor you must enable the FTP plug-in on the agent side. This will enable the transfer large sized job definition data to be transferred to the SAP filter window in the Workload Editor.
  - The agent will also allow you to run regular UNIX and NT work such as UNIX scripts, Windows Scripts, UNIX Commands, and Windows Commands.
  - The agent will also allow the use of the FTP and Monitoring workload objects as well.

# UNIX Console Installation



# Windows Installation





# Installation Workshop #1

- Install the ESP Business Agent for SAP on SUN Solaris
  - Logon to the Elvis machine
    - User ID: demo
    - Password: omed1
  - Install you agent in the education directory
    - /export/home/education
    - Create a subdirectory in the above using your initials
      - cd /export/home/education
      - mkdir *your initials* (e.g DAL)
  - Your Port Range Will Be Assigned by the Instructor
  - The installation is stored in the STABLE\_AGENTS\_INSTALL directory
    - /export/home/demo/STABLE\_AGENTS\_INSTALL/SUN\_SAP\_R5SP3\_INST ALL



# Installation Workshop #2

- Install the ESP Business Agent for SAP on Windows
  - Install your agent on your laptop
  - Your Port Range Will Be Assigned by the Instructor
  - Download the Windows Installer from the Support Website
    - <http://support.cybermation.com>





# Mainframe Configuration

- After installing the Agent the AGENTDEF PDS Member Needs to Be Edited
- The ESP Business Agent for SAP Looks Like Any Other Windows or UNIX Agent
- There Are No Special Changes to The Formats for the Agent Definition Entries.
- If ESP Workload Manager is Up You Will Also Have to Issue the LOADAGDF Command in Page Mode to Have the Agent Definition Table Reloaded Dynamically
  - oper loadagdf



# Mainframe Configuration

- Entries for the AGENTDEF PDS Member:

- For the ESP Business Agent for SAP on UNIX

AGENT ELVIS\_SAP\_R5SP3 ADDRESS(elvis) PORT(11000) UNIX ASCII TCPIP +  
PREFIXING ENCRYPT(X'3132333435363738')

- For the ESP Business Agent for SAP on Windows

AGENT DLEIGH\_SAPR5 ADDRESS(10.99.1.16) PORT(7550) NT ASCII TCPIP +  
PREFIXING ENCRYPT(X'3132333435363738')

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# **ESP Business Agent for SAP R/3**

Basic Scheduling Concepts





# Workload Object Types

- There are 8 Workload Objects that are Available:
  - SAP – Runs Most Common Single ABAPs
  - SAP Copy Job - Copies an existing SAP job
  - Business Warehouse InfoPackage - Transfers data from any data source into an SAP Business Warehouse system
  - Business Warehouse Process Chain - Executes a sequence of processes in the background of the SAP system
  - Batch Input Session - Imports large amounts of data from external systems to the SAP system
  - Data Archiving - Puts information into storage units as described in an SAP Archiving Object



# Workload Object Types

- There are 8 Workload Objects that are Available:
  - Process Monitor - Monitors for a specific SAP process status
  - Event Monitor - Monitors and triggers SAP events



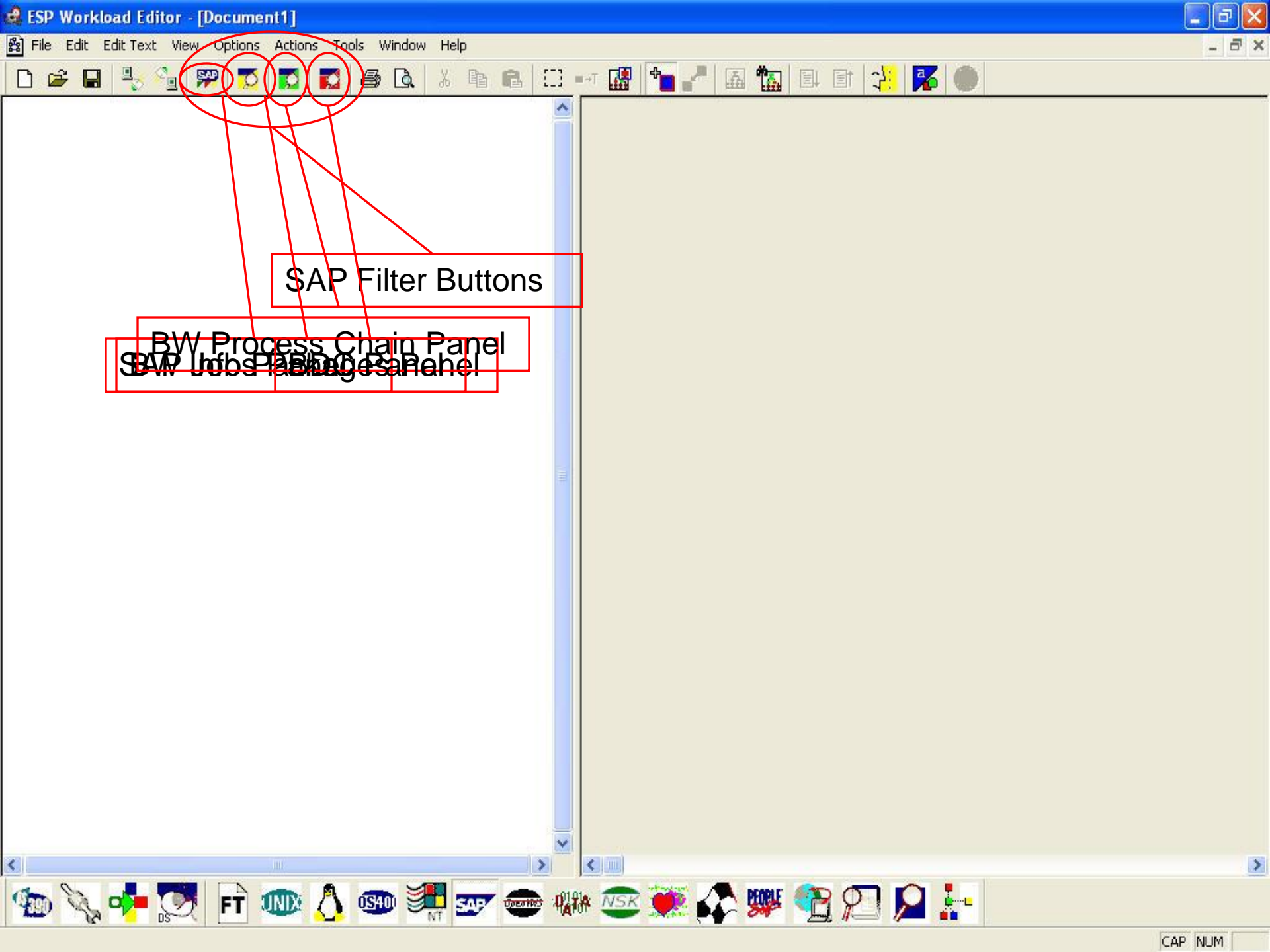
# Creating SAP Objects Using the Workload Editor

- The Workload Editor Has the Ability to Reuse SAP Jobs That are Currently Defined and Stored In the SAP Application Server
- The Workload Editor Provides a Tool To Make Reusing Existing SAP Jobs Easy
- Before adding jobs to the workspace, you generate a list of defined jobs. Because the SAP system can contain thousands of jobs, ESP Workstation supports filters. You use filters to generate a list of jobs that meet your criteria. For example, you can create a filter that retrieves jobs whose names begin with PROD, created by a specific user.



# Reusing SAP Jobs

- Please note that you are using the existing SAP Job in SM36 as a template if you are reusing SAP Jobs. This means that the control of the job definition is being given over to Workload Manager and changes made to the jobs in SM36 after the Job has been moved into Workload Manager will not be recognized.
- This means that from now on all changes to an SAP Job under Workload Managers control must be made in the Workload Editor not in SAP SM36.



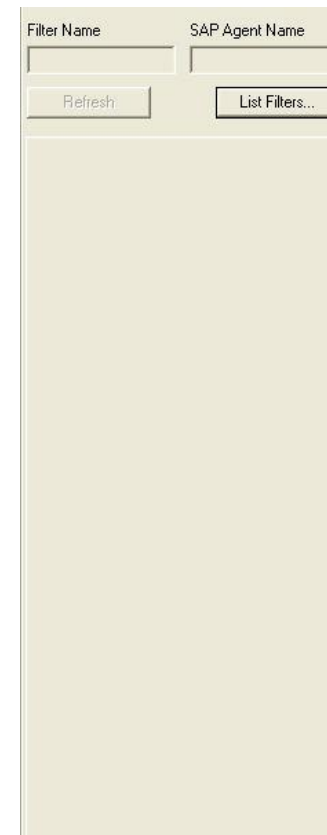
SAP Filter Buttons

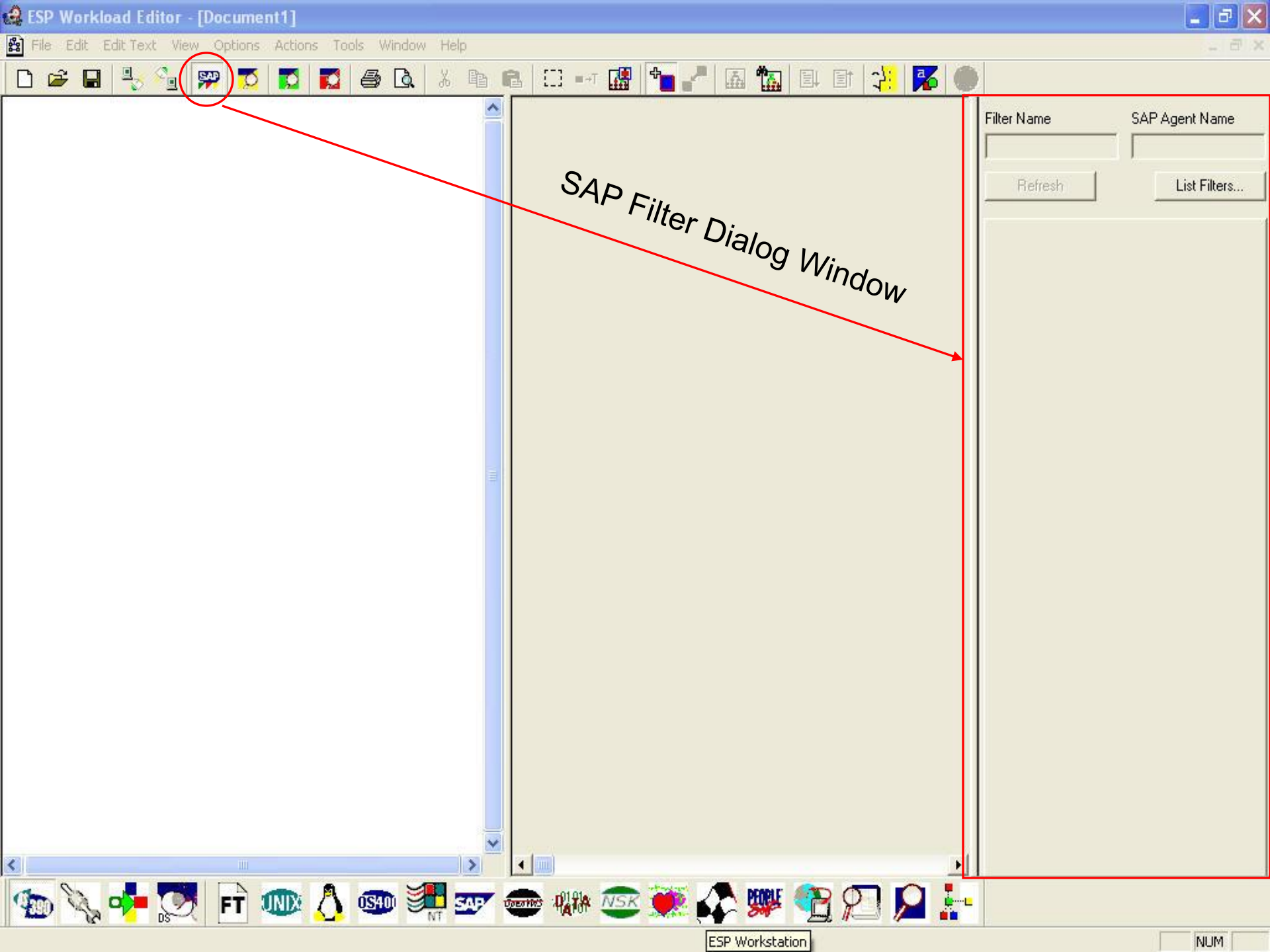
BW Process Chain Panel  
SAP Jobs Planning Panel



# Reusing SAP Jobs

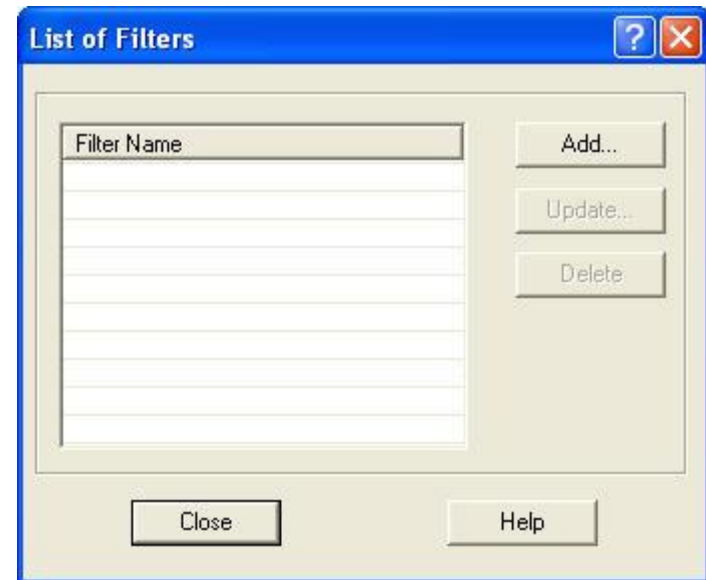
- SAP Job Lists Can Be Generated for Standard SAP Workload, Business Warehouse InfoPackages, Business Warehouse Process Chains, And BDC Jobs
- Each button on the Workload Editor generates a Base Filter Window That Looks Exactly Like This
- To Add a Filter You Click On the List Filters Button.

A screenshot of the SAP Base Filter window. It features a light beige background. At the top, there are two input fields: 'Filter Name' on the left and 'SAP Agent Name' on the right. Below these fields are two buttons: 'Refresh' on the left and 'List Filters...' on the right. The main body of the window is a large, empty rectangular area.



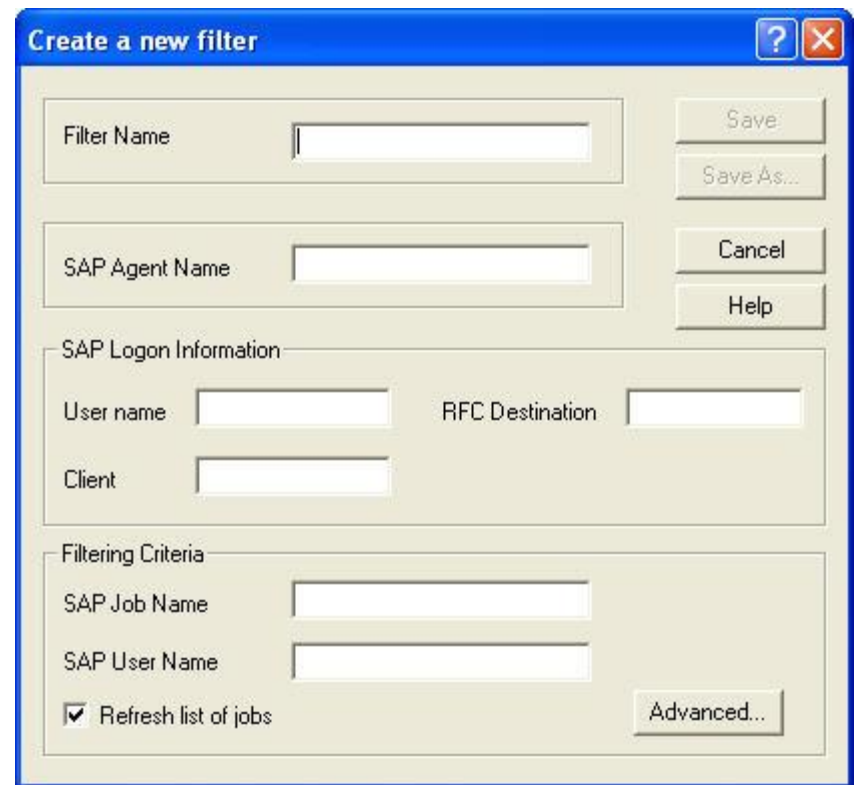
# Reusing SAP Jobs

- The List Filter Button Creates A Dialog That Allows You to Create, Update, & Delete Specific Filter Lists of SAP Jobs
- The List Filter Dialog Will Have Different Filter Names Listed Base on Which List Button You Have Pressed in the Workload Editor.
- The List Filter Dialog Looks Like This.



# Reusing SAP Jobs

- Creating a Filter Starts By Clicking on The Add Button in the List Filter Dialog.
- You Will Then Be Able to Enter List Criteria.
- In the Filter Name You Need to Provide the Filter a Name.
- In the SAP Agent Name You Need to Provide the Name of the SAP Agent You Want to Service Your List Request.



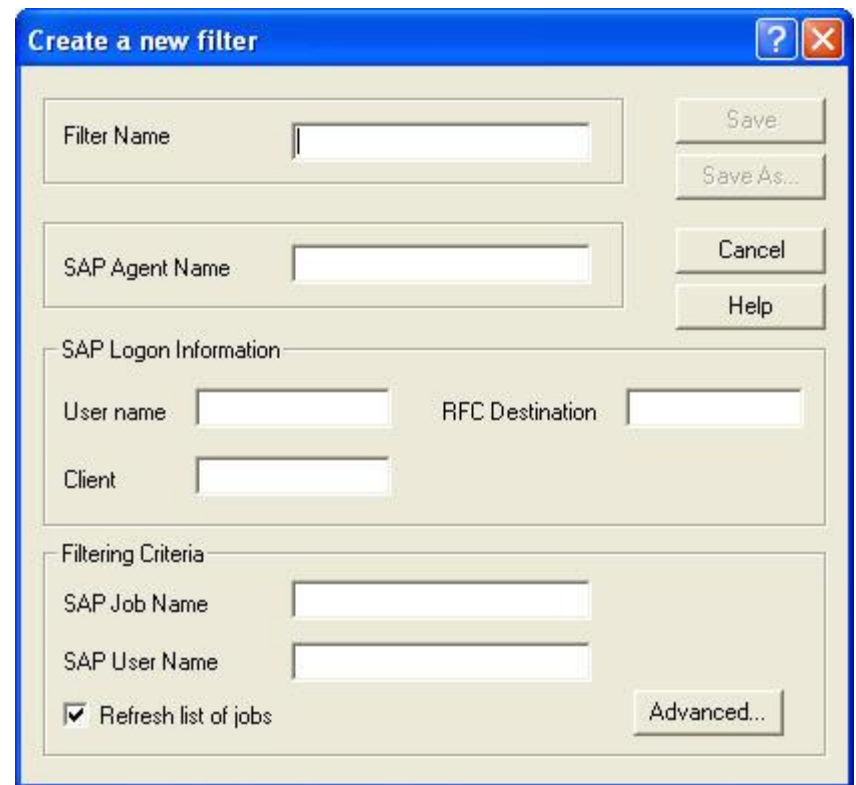
The screenshot shows a dialog box titled "Create a new filter" with a blue title bar and standard window controls. The dialog is divided into several sections:

- Filter Name:** A text input field with a cursor.
- SAP Agent Name:** A text input field.
- SAP Logon Information:** A section containing:
  - User name:** A text input field.
  - Client:** A text input field.
  - RFC Destination:** A text input field.
- Filtering Criteria:** A section containing:
  - SAP Job Name:** A text input field.
  - SAP User Name:** A text input field.
  - ☒ Refresh list of jobs

On the right side of the dialog, there are buttons for "Save", "Save As...", "Cancel", and "Help". At the bottom right, there is an "Advanced..." button.

# Reusing SAP Jobs

- In the SAP Logon Information You Can Override The SAP User Name, SAP Client Number, & The RFC Destination Name. (Normally the Agent Has a Set of Defaults that Were Set Up at Agent Installation for These Fields)

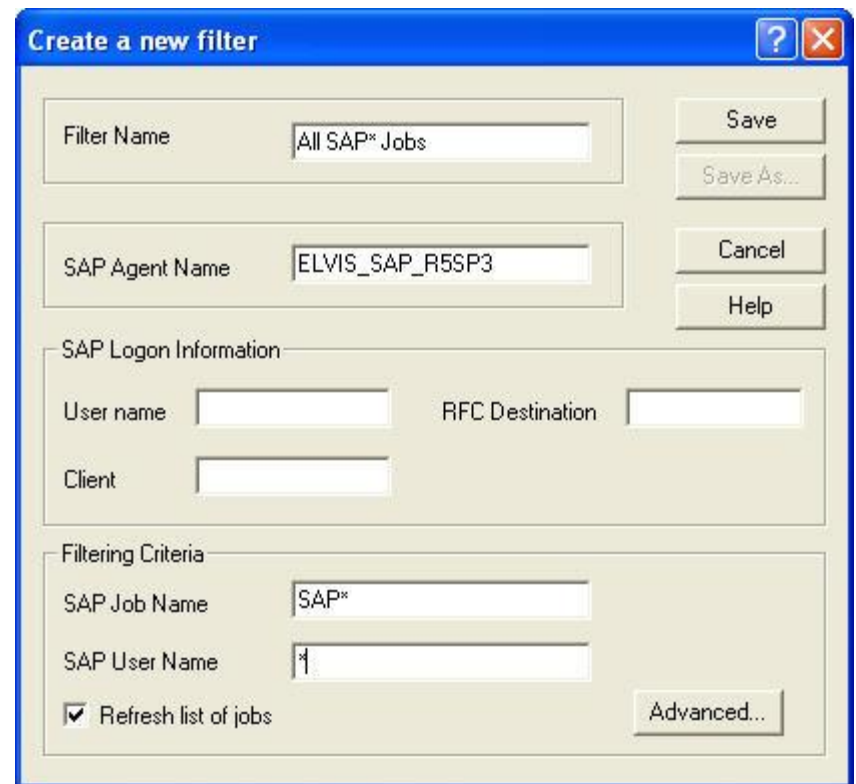


The screenshot shows a Windows-style dialog box titled "Create a new filter". It contains several input fields and buttons. The "Filter Name" field is at the top. Below it is the "SAP Agent Name" field. The "SAP Logon Information" section contains "User name", "Client", and "RFC Destination" fields. The "Filtering Criteria" section contains "SAP Job Name" and "SAP User Name" fields. There is a checkbox labeled "Refresh list of jobs" which is checked. Buttons for "Save", "Save As...", "Cancel", "Help", and "Advanced..." are on the right side.

Field	Value
Filter Name	
SAP Agent Name	
SAP Logon Information - User name	
SAP Logon Information - Client	
SAP Logon Information - RFC Destination	
Filtering Criteria - SAP Job Name	
Filtering Criteria - SAP User Name	
Refresh list of jobs	<input checked="" type="checkbox"/>

# Reusing SAP Jobs

- In the SAP Logon Information You Can Override The SAP User Name, SAP Client Number, & The RFC Destination Name. (Normally the Agent Has a Set of Defaults that Were Set Up at Agent Installation for These Fields)



The screenshot shows a Windows-style dialog box titled "Create a new filter". It contains several input fields and buttons. The "Filter Name" field is set to "All SAP\* Jobs". The "SAP Agent Name" field is set to "ELVIS\_SAP\_R5SP3". The "SAP Logon Information" section has fields for "User name", "RFC Destination", and "Client", all of which are currently empty. The "Filtering Criteria" section has fields for "SAP Job Name" (set to "SAP\*") and "SAP User Name" (set to "1"). There is a checkbox labeled "Refresh list of jobs" which is checked. Buttons for "Save", "Save As...", "Cancel", "Help", and "Advanced..." are visible on the right side of the dialog.

# Reusing SAP Jobs

- You can also add other options to the filter criteria by using the advanced button on the initial Create Filter dialog box. This gives you access to selecting jobs not only by SAP jobname and SAP user, but by other job characteristics that are attached to the job in SAP.

Advanced Filter Criteria	
Job Count	<input type="text"/>
Job Group	<input type="text"/>
From Date	<input type="text" value="2/ 4/2005"/>
From Time	<input type="text" value="3:13:53 PM"/>
To Date	<input type="text" value="2/ 4/2005"/>
To Time	<input type="text" value="3:13:53 PM"/>
No Date	<input type="text"/>
With Predecessors	<input type="text"/>
Event ID	<input type="text"/>
Event Param	<input type="text"/>
Scheduled	<input type="text"/>
Released	<input type="text"/>
Ready	<input type="text"/>
Running	<input type="text"/>
Finished	<input type="text"/>
Aborted	<input type="text"/>

OK Cancel Help

# Reusing SAP Jobs

- You can select by the following:
  - SAP Job Count
  - SAP Job Group
  - Date Range
  - SAP Event ID
  - SAP Event Parameter
  - SAP Job Status
    - Scheduled
    - Released
    - Ready
    - Running

Advanced Filter Criteria

Job Count	<input type="text"/>	Event ID	<input type="text"/>
Job Group	<input type="text"/>	Event Param	<input type="text"/>
From Date	<input type="text" value="2/ 4/2005"/>	Scheduled	<input type="text"/>
From Time	<input type="text" value="3:13:53 PM"/>	Released	<input type="text" value="No"/>
To Date	<input type="text" value="2/ 4/2005"/>	Ready	<input type="text"/>
To Time	<input type="text" value="3:13:53 PM"/>	Running	<input type="text"/>
No Date	<input type="text"/>	Finished	<input type="text"/>
With Predecessors	<input type="text"/>	Aborted	<input type="text"/>

OK Cancel Help



# Reusing SAP Jobs

- You can select by the following:
  - SAP Job Count
  - SAP Job Group
  - Date Range
  - SAP Event ID
  - SAP Event Parameter
  - SAP Job Status
    - Finished
    - Aborted
    - With SAP Predecessors

Advanced Filter Criteria

Job Count	<input type="text"/>	Event ID	<input type="text"/>
Job Group	<input type="text"/>	Event Param	<input type="text"/>
From Date	<input type="text" value="2/ 4/2005"/>	Scheduled	<input type="text"/>
From Time	<input type="text" value="3:13:53 PM"/>	Released	<input type="text" value="No"/>
To Date	<input type="text" value="2/ 4/2005"/>	Ready	<input type="text" value="Yes"/>
To Time	<input type="text" value="3:13:53 PM"/>	Running	<input type="text"/>
No Date	<input type="text"/>	Finished	<input type="text"/>
With Predecessors	<input type="text"/>	Aborted	<input type="text"/>

OK Cancel Help

# Reusing SAP Jobs

- SAP Job Count, Job Group, Event ID, and Event Param are data fields
- The From Date and From Time are data selectable fields
- All of the other fields are Yes or No answer fields. If left blank they default to No

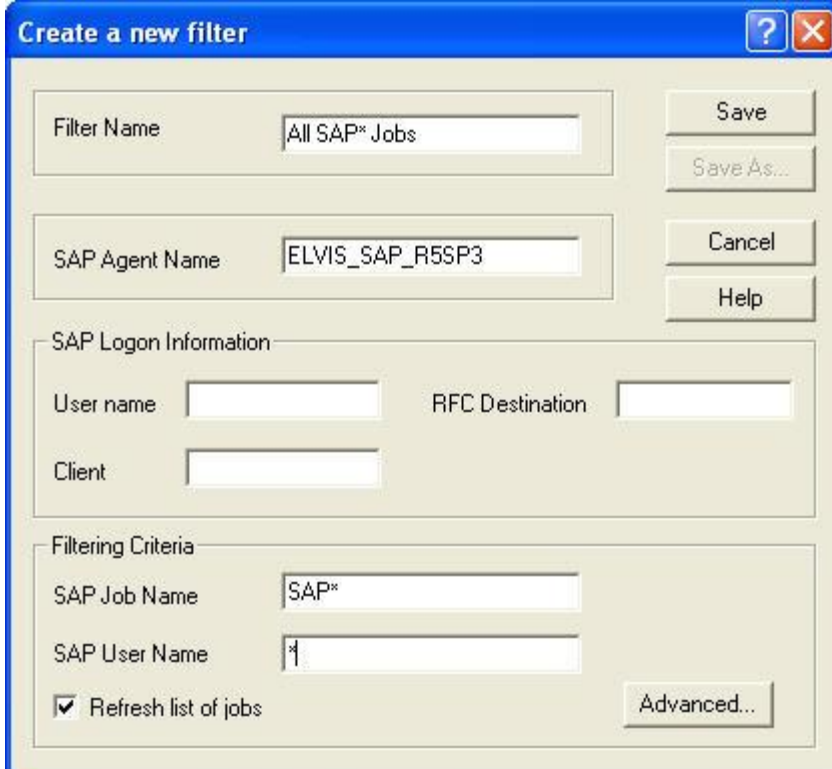
Advanced Filter Criteria

Job Count	<input type="text"/>	Event ID	<input type="text"/>
Job Group	<input type="text"/>	Event Param	<input type="text"/>
From Date	<input type="text" value="2/ 4/2005"/>	Scheduled	<input type="text"/>
From Time	<input type="text" value="3:13:53 PM"/>	Released	<input type="text" value="No"/>
To Date	<input type="text" value="2/ 4/2005"/>	Ready	<input type="text"/>
To Time	<input type="text" value="3:13:53 PM"/>	Running	<input type="text"/>
No Date	<input type="text"/>	Finished	<input type="text"/>
With Predecessors	<input type="text"/>	Aborted	<input type="text"/>

OK Cancel Help

# Reusing SAP Jobs

- Once the Filter Criteria is filled in completely and saved using the save button, the Filter will then be saved to your Workload Editor and will be available to select jobs with.



The screenshot shows a 'Create a new filter' dialog box with the following fields and options:

- Filter Name:** All SAP\* Jobs
- SAP Agent Name:** ELVIS\_SAP\_R5SP3
- SAP Logon Information:**
  - User name:** (empty field)
  - Client:** (empty field)
  - RFC Destination:** (empty field)
- Filtering Criteria:**
  - SAP Job Name:** SAP\*
  - SAP User Name:** 1
  - ☒ Refresh list of jobs

Buttons on the right side: Save, Save As..., Cancel, Help, and an Advanced... button at the bottom right.

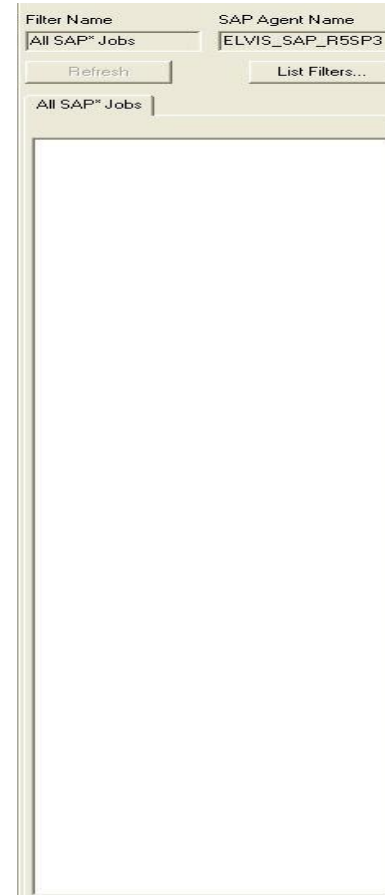
# Reusing SAP Jobs

- You will return to the List of Filters dialog box to continue adding filters as needed.
- To exit the List of Filters dialog you need to click the Close button and you will be returned to the Workload Editor.

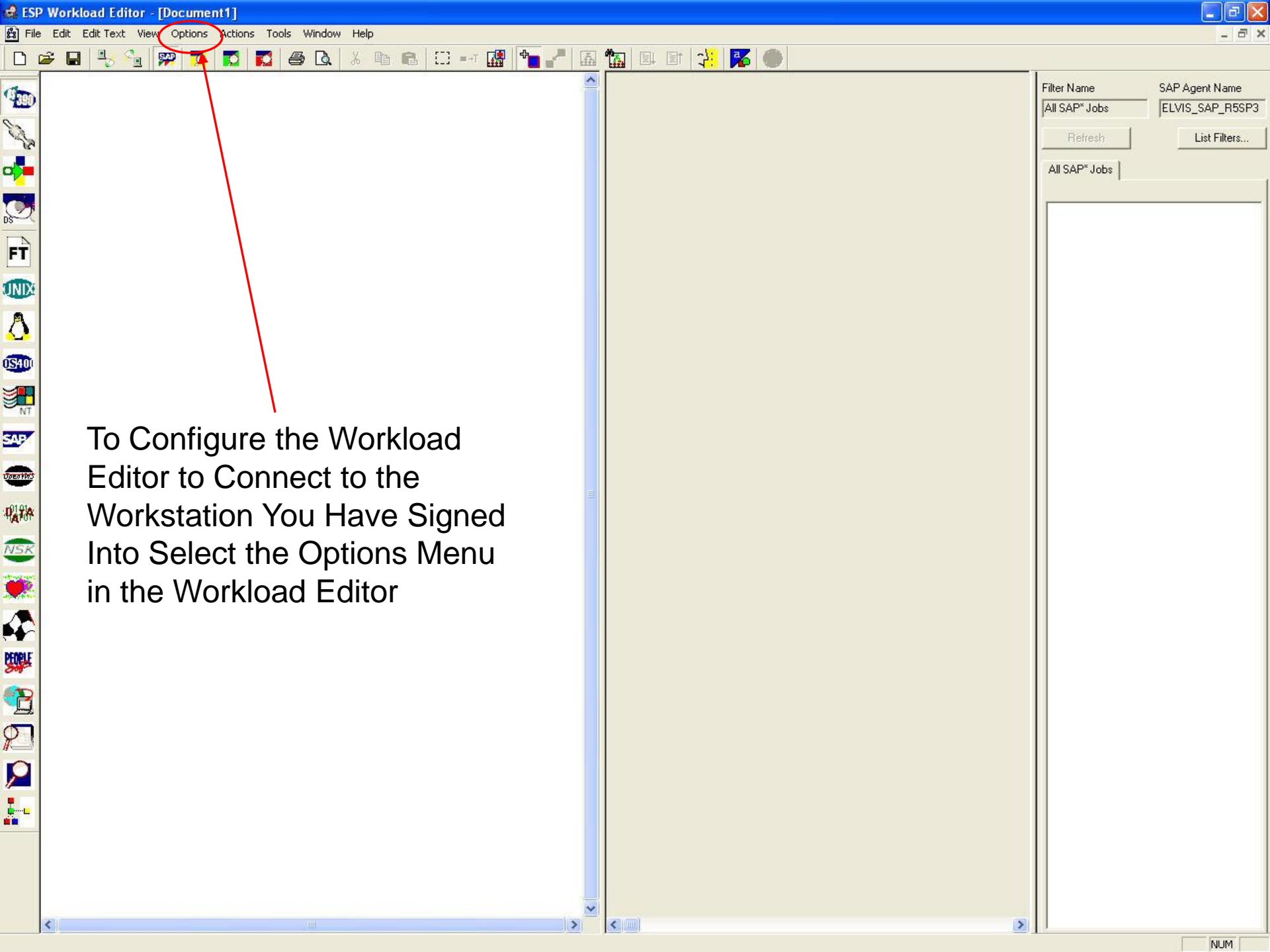


# Reusing SAP Jobs

- Your Filter will then appear as a tab in the SAP Filter window.
- If there is no data in the window you need to configure your Workload Editor to work with the Workstation Server on the Mainframe that you are signed in with.



The screenshot shows a web-based interface for SAP filters. At the top, there are two input fields: 'Filter Name' containing 'All SAP\* Jobs' and 'SAP Agent Name' containing 'ELVIS\_SAP\_R5SP3'. Below these fields are two buttons: 'Refresh' and 'List Filters...'. A tab labeled 'All SAP\* Jobs' is selected, and the main area below it is a large, empty rectangular frame, indicating no data is currently displayed.



To Configure the Workload Editor to Connect to the Workstation You Have Signed Into Select the Options Menu in the Workload Editor

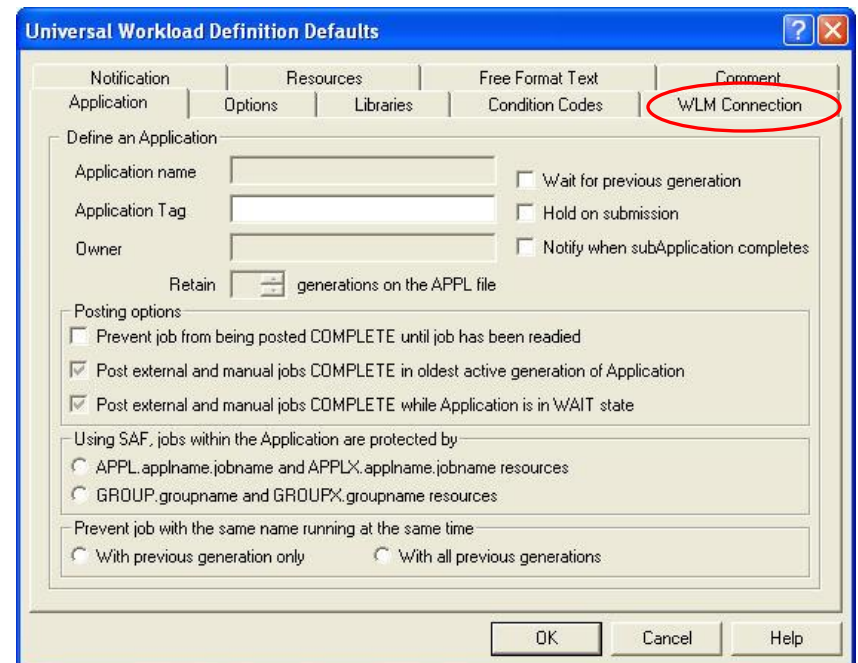
# Reusing SAP Jobs

- Select the Global Defaults options.
- Then Select Workload Definition
- You will then get the Universal Workload Definition Defaults dialog.



# Reusing SAP Jobs

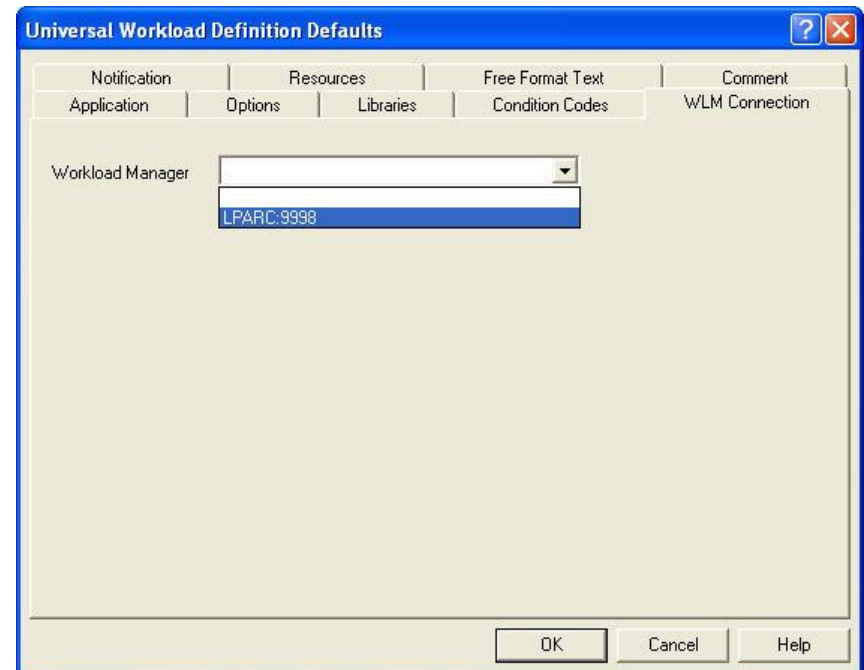
- This dialog sets up options for creation of applications that will be used when an initial creation of an Application occurs.
- You will select the WLM Connection tab to set the Workload Editor to communicate with a specific Workstation Server

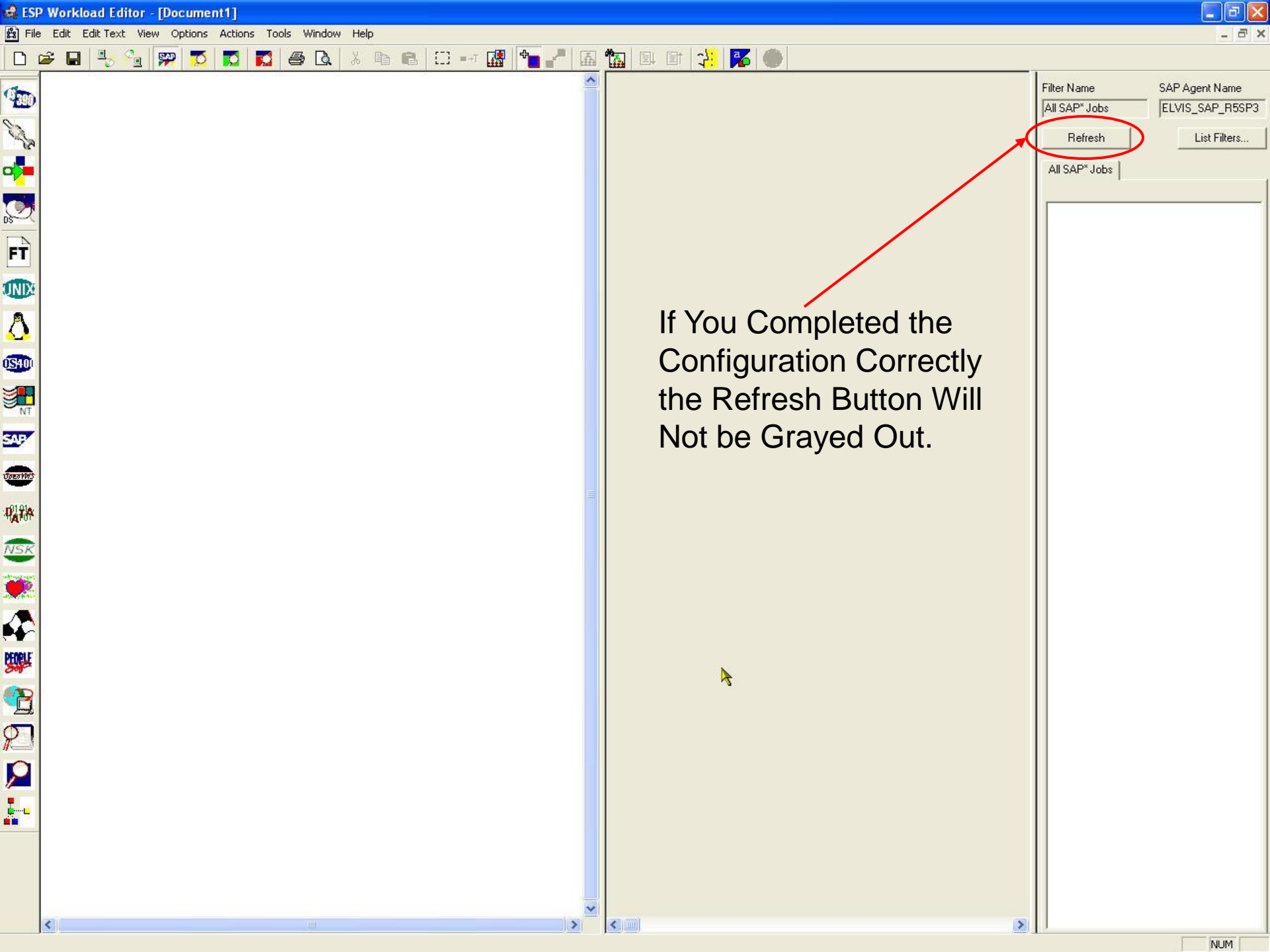




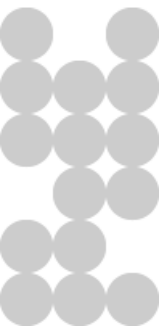
# Reusing SAP Jobs

- There will be a Pull Down Menu that will list all of the available Workstation Servers that you can connect to.
- In most cases there will only be one entry.
- Highlight the entry by single clicking on the entry and then click the OK button.
- The refresh button in the SAP Filter box in the Workload Editor Should Now Be Active.





If You Completed the Configuration Correctly the Refresh Button Will Not be Grayed Out.



# Reusing SAP Jobs



- The ESP Business Agent for SAP is responsible for returning data to the filter window that complies with the filter criteria.
- Depending on Your Filter Criteria, the amount of data returned can be large.
- In the case that the amount of data is very large, the agent will use FTP to transmit the data to the Workstation Server. You will be prompted for a userid and password to complete the FTP process

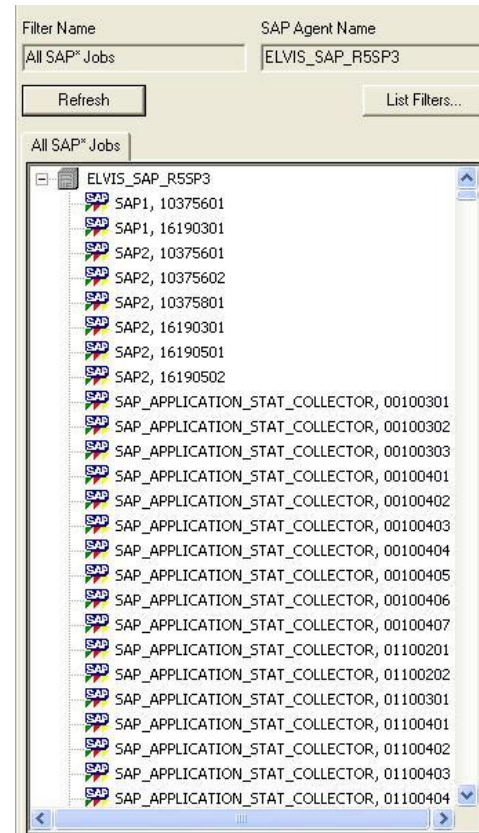
# Reusing SAP Jobs

- If the data being returned to the filter window is too large for the Workstation Server to handle, you will see this prompt window.
- When the agent was installed a userid and password were assigned to have this FTP process enabled. You will enter that userid and password to complete the transfer of your filter data.



# Reusing SAP Jobs

- Once the refresh process completes your filter window will have SAP job data populated in it.
- You will see the SAP Job Name and the SAP Run Number.
- You have the ability to use these entries as templates for SAP job creation in the Workload Editor.

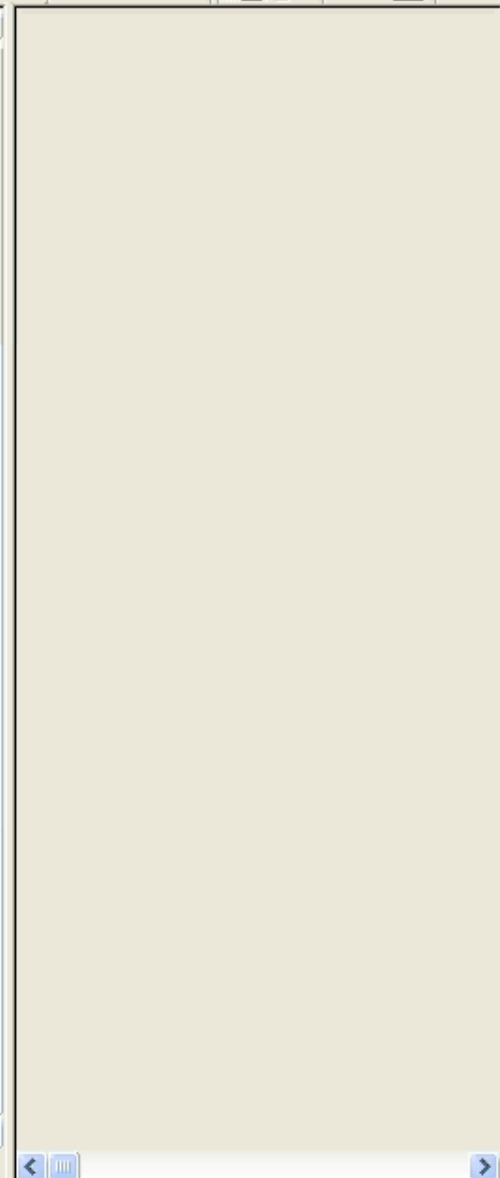




# Reusing SAP Jobs



- To use the SAP Job information that is in the filter window, all you have to do is left click on the job to select it.
- Then left click on the job again holding the left mouse button down and dragging the SAP Job in to the graphic editing box on the left hand side of the Workload Editor.
- The Workload Editor will then retrieve the SAP Job definition information from SAP and dynamically build the appropriate SAP Job object in the Workload Editor.



Filter Name

SAP Agent Name

All SAP\* Jobs

ELVIS\_SAP\_R5SP3

Refresh

List Filters...

All SAP\* Jobs

- ELVIS\_SAP\_R5SP3
  - SAP1, 10375601
  - SAP1, 16190301
  - SAP2, 10375601
  - SAP2, 10375602
  - SAP2, 10375801
  - SAP2, 16190301
  - SAP2, 16190501
  - SAP2, 16190502
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100301
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100302
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100303
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100401
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100402
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100403
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100404
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100405
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100406
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 00100407
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100201
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100202
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100301
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100401
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100402
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100403
  - SAP\_APPLICATION\_STAT\_COLLECTOR, 01100404





# Reusing SAP Jobs

- The Job Name given to the SAP Job that has been dragged into the Graphic Editor will always be SAP and a number (e.g. SAP1) and will be incremented by one for every subsequent drag and drop done.
- To change the Job Name you will need to edit the Job Details for the job in the Graphic Editor



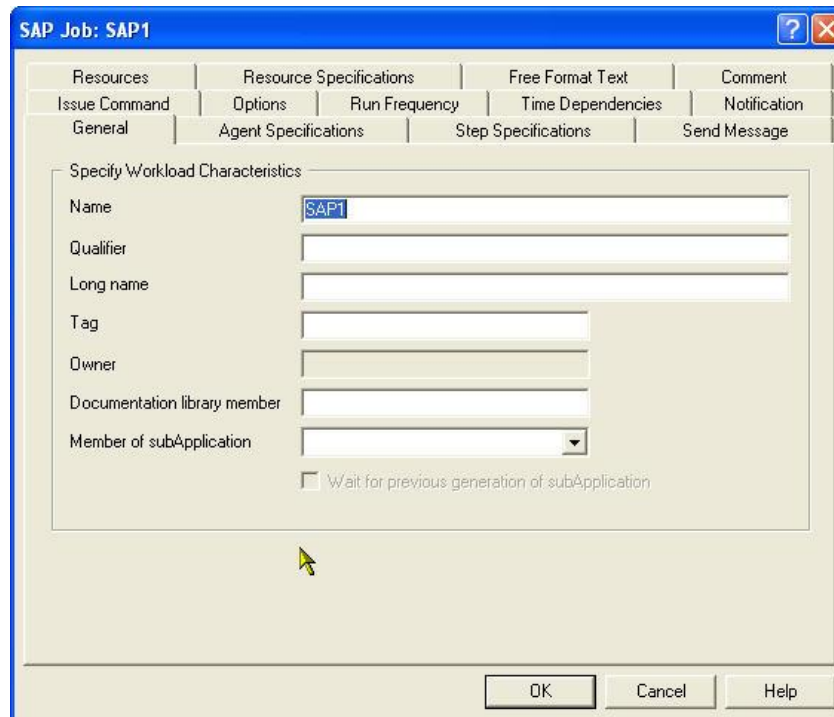
# SAP Jobs Details

- To change the Job Details of the SAP Job, all you have to do is right click on the SAP Job icon.
- You will see a menu like this and you will left click on the Job Details selection.
- This will bring you to the Job Details Dialog where you can edit and change the job definition information



# SAP Jobs Details

- The SAP Job Workload Object is not very much different from the other Workload Objects that you have seen earlier in this class.
- The SAP Job Workload Object has some of the same tabs as other Workload Objects.
- We will concentrate on the tabs that are unique to SAP.



The screenshot shows a dialog box titled "SAP Job: SAP1". It has a tabbed interface with the following tabs: Resources, Resource Specifications, Free Format Text, Comment, Issue Command, Options, Run Frequency, Time Dependencies, Notification, General, Agent Specifications, Step Specifications, and Send Message. The "General" tab is currently selected. Inside the dialog, there is a section titled "Specify Workload Characteristics" which contains the following fields:

- Name: SAP1
- Qualifier: (empty)
- Long name: (empty)
- Tag: (empty)
- Owner: (empty)
- Documentation library member: (empty)
- Member of subApplication: (empty)

Below these fields is a checkbox labeled "Wait for previous generation of subApplication" which is currently unchecked. At the bottom right of the dialog are three buttons: OK, Cancel, and Help.

# SAP Jobs Details

- The major changes to the SAP Workload Object are the Agent Specifications and Step Specifications tabs.
- Both of these tabs describe to the agent what SAP job to run and the SAP characteristics needed for the job to run.

The screenshot shows the 'SAP Job: SAP1' dialog box with the 'Agent Specifications' tab selected. The dialog has a blue title bar and a standard Windows-style interface. It contains several sections for configuring the SAP job agent.

Resources	Resource Specifications	Free Format Text	Comment
Issue Command	Options	Run Frequency	Time Dependencies
General	Agent Specifications	Step Specifications	Notification
			Send Message

Agent name:

SAP Logon Information:

User name	<input type="text"/>	RFC Destination	<input type="text"/>
Client	<input type="text"/>	Language	<input type="text"/>

Specify SAP Job Environment:

Job name	<input type="text" value="SAP_TEST@"/>	Job Class	<input type="text" value="A"/>
Target SAP system	<input type="text"/>	<input type="button" value="Refresh..."/>	
Success Message	<input type="text"/>	<input type="radio"/> Release immediately	
Failure Message	<input type="text"/>	<input checked="" type="radio"/> Release as soon as possible	
<input checked="" type="checkbox"/> Monitor Children		<input type="radio"/> Do not release	
<input checked="" type="checkbox"/> Web Posting		<input type="button" value="Spool List Recipients"/>	

Buttons:

# SAP Jobs Details

The SAP Logon Information Box Allows You to Override the SAP Login Information Stored at the Agent

**SAP Job: SAP1**

Resources | Resource Specifications | Free Format Text | Comment  
Issue Command | Options | Run Frequency | Time Dependencies | Notification  
General | Agent Specifications | Step Specifications | Send Message

Agent name: **ELVIS\_SAP\_R5SP3**

**SAP Logon Information**

User name:  RFC Destination:   
Client:  Language:

**Specify SAP Job Environment**

Job name: **SAP\_TEST@** Job Class: **A**  
Target SAP system:  Refresh...  
Success Message:  ☐ Release immediately  
Failure Message:  ☒ Release as soon as possible  
☒ Monitor Children ☐ Do not release  
☒ Web Posting

OK Cancel Help

The SAP Job Environment Box Allows You to Setup the Specific Environment that the SAP Job Needs to run in.

# SAP Jobs Details

This Used to Direct the SAP Application Server that the Agent is Connected to What SAP System The Job Should Run On.

This is the Job Name that SAP Will Use Internally When Executing the Job in SM38

This is the Job Class that SAP Will Assign to the Job When Running The Job in SM38

The screenshot shows the 'Specify SAP Job Environment' dialog box. It contains the following fields and controls:

- Job name:** A text field containing 'SAP\_TEST@'.
- Target SAP system:** A dropdown menu.
- Success Message:** A text field.
- Failure Message:** A text field.
- Job Class:** A dropdown menu showing 'A'.
- Release options:** Three radio buttons: 'Release immediately', 'Release as soon as possible' (selected), and 'Do not release'.
- Spool List Recipients:** A button.
- Monitor Children:** A checked checkbox.
- Web Posting:** A checked checkbox.

Red arrows point from the surrounding text boxes to these specific fields and controls.

This Used to Instruct SAP to Look for A Specific Message From the Job to Indicate the Success or Failure of the Job

This is Used to Instruct SAP How to Release the Job Into SM38 When the Job is Submitted to SAP

This Controls Who to Send the SAP Job Log Information

# SAP Jobs Details

This Indicates to SAP  
What Type of  
Recipient the Spool  
Document is Going to

This Indicates to SAP  
If the Recipient is to  
be Sent To, CC's, or  
Blind CC'd

**Spool List Recipient Options**

☒ Save outgoing document to my SAPoffice outbox

Select Recipient Type and Specify Recipient Options

Recipient Type: Email

Recipients: To

Recipients dropdown options: Email, SAPoffice Distribution List, SAPoffice User

☒ Express, ☒ BCC, ☒ CC, ☒ To

☒ No Printing, ☒ No Forwarding

List of Recipients

Type	Recipient	Copy	Blind Co...	Exp

Buttons: Add, Refresh..., Update, Delete, OK, Cancel, Help

This is Where You  
Enter Either the E-Mail  
Address of the  
Recipient, SAPoffice  
Distribution List Name,  
or The SAPoffice User  
Name

# SAP Jobs Details

The screenshot shows the 'SAP Job: SAP1' dialog box. It has a blue title bar and a tabbed interface. The 'Specify ABAP to Run' tab is active. It contains fields for 'Name' (RSPARAM), 'Variant to pass', 'Step user name', and 'Language' (E). There are buttons for 'View ABAPs...', 'View Variants...', 'Additional Attributes', 'Add', 'Update', 'Delete', 'Move Up', and 'Move Down'. At the bottom are 'OK', 'Cancel', and 'Help' buttons. A table titled 'List of SAP steps' is also present.

ABAP name	Variant	Step user	Language
RSPARAM			E

This is the ABAP Name to Run

This is the Variant Name to Pass to the ABAP Program

This is a List of All of the ABAP Programs That This Object is Going to Have SAP Run as Part of This Job

These Buttons Bring Up Selection Lists of ABAP Programs and Variants by Name

This Allows You to Run the ABAP Program Under a Specific SAP Userid

This Button Allows You the Ability to Add Additional Attributes to the Job Including Step Attributes, Print Parameters, & Archive Parameters

# SAP Jobs Details

- If you press the View ABAP's button you will see the dialog to the right.
- It will initially be empty. In the ABAP Name Filter you can enter any ABAP Name or ABAP Name high level qualifier. Then by pressing the Refresh button the list will be refreshed with ABAP Names that fit the filter criteria.
- To select an ABAP to run, left click any of the lines in the List of ABAP's and then press the OK button and that ABAP Name will then appear in the Name field in the Specify ABAP to Run section of the SAP Job Detail dialog.

The screenshot shows the 'List of ABAPs' dialog box. The 'Agent Name' field is populated with 'ELVIS\_SAP\_R5SP3'. The 'RFC Destination' field is empty. The 'ABAP Name Filter' field is empty with a cursor. The 'Refresh' button is visible. The 'List of ABAPs' list box contains the following entries: '\$P000000P0004', '\$P000000TERMI', '\$P000001', '\$P000002', '\$P000003', and '\$P000004'. The 'OK', 'Cancel', and 'Help' buttons are at the bottom.



# SAP Jobs Details

- If you press the View Variants button you will see the dialog to the right.
- It will initially be empty. This dialog will list out all the possible variants that apply to the ABAP listed in the Name field of the Specify ABAP to Run section of the SAP Job Detail dialog
- To select a variant to use, click the refresh button and the list will be refreshed with a list of the applicable variants. To select a variant, left click any of the lines in the List of Variants and then press the OK button and that Variant Name will then appear in the Variant to pass field in the Specify ABAP to Run section of the SAP Job Detail dialog.

The screenshot shows a SAP dialog box titled "List of Variants for ABAP [RSPARAM]". It features two input fields at the top: "Agent Name" (containing "ELVIS SAP\_R5SP3") and "RFC Destination". Below these is a section titled "List of Variants" which contains a table with one row labeled "TEST". To the right of this table are three buttons: "Refresh", "Add / Modify...", and "Delete". At the bottom of the dialog are three buttons: "OK", "Cancel", and "Help".

# SAP Jobs Details

- If you press the Additional Attributes button you will see the dialog to the right.
- This dialog allows you to specify the Step Attributes, Print Parameters, and Archive Parameters for this SAP Job
- Step Attributes allow you to specify what e-mail addresses to send the spool list to, any Success or Failure messages that SAP need to find to ensure the success or failure of the SAP Job Step

The screenshot shows the 'Additional Attributes' dialog box. It has a title bar with a close button. Below the title bar are three tabs: 'Step Attributes', 'Print Parameters', and 'Archive Parameters'. The 'Step Attributes' tab is selected. Inside this tab, there is a section titled 'Email addresses to send spool list results' which contains two empty text input fields and two buttons labeled 'Add' and 'Delete'. Below this section is another section titled 'Specify Status Messages' which contains two labels, 'Success Message' and 'Failure Message', each followed by an empty text input field. At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Help'.

# SAP Jobs Details

- If you press the Additional Attributes button you will see the dialog to the right.
- This dialog allows you to specify the Step Attributes, Print Parameters, and Archive Parameters for this SAP Job
- Print Parameters allow you to set up all of the information needed to have the report output created and printed to a specific device. This will include number of copies, spool priorities, specific output types, SAPoffice recipients, and other information. This is available for each ABAP step that the SAP Job Workload Object is going to execute.

The screenshot shows the 'Additional Attributes' dialog box with the 'Print Parameters' tab selected. The dialog is divided into several sections:

- Printing Parameters:** Includes 'Output Device' (a dropdown menu with a 'Refresh...' button), 'Authorization' (a dropdown menu), and 'Number of copies' (a numeric input field).
- Specify Output Format:** Includes 'Number of lines' and 'Number of columns' (both numeric input fields) and 'Format' (a text input field).
- Spool Control:** Includes checkboxes for 'Print immediately', 'Delete after printing', and 'New Spool Request'. It also has 'Print priority' (a numeric input field) and 'Spool retention period' (a numeric input field followed by 'days').
- Print SAP Cover Sheet:** A dropdown menu.
- Print Selection Cover Sheet:** A checkbox.
- Print OperSys Cover Sheet:** A dropdown menu.
- Print Footer:** A checkbox.
- Recipient Information:** Includes 'Recipient' (a dropdown menu with a 'Refresh' button), 'Department' (a text input field), 'Spool Name' (a text input field), and 'Title' (a text input field).
- Data set and Request type:** Includes 'Data set' (a text input field) and 'Request type' (a dropdown menu).

At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.

# SAP Jobs Details

- If you press the Additional Attributes button you will see the dialog to the right.
- This dialog allows you to specify the Step Attributes, Print Parameters, and Archive Parameters for this SAP Job
- Archive Parameters allow you to set up all of the information needed to have the job output archived to a specific printer and archive facility. The Archiving Parameters become active when the archive facility check box is checked. You can then specify the appropriate data for the job output to be archived. This is available at each ABAP Step that the SAP Job Workload Object is going to execute.

The screenshot shows the 'Additional Attributes' dialog box with the 'Archive Parameters' tab selected. The dialog is divided into several sections:

- Archiving Parameters:** Includes 'Object type' and 'Document type' dropdown menus, and an 'Information' text field.
- Advanced Parameters:** A large section containing fields for 'Target Storage System', 'Document class', 'RPC Host', 'RPC Service/RFC Destination', 'Connection Component Name', 'Client', 'Report Name', 'Standard Archive Path', 'Storage Connection Protocol', and 'Version Number'.
- Archiving Mode:** A section on the right with two checkboxes: 'Printer device' (checked) and 'Archive facility' (unchecked).
- Format:** Fields for 'Date', 'User', and 'Printer' are located to the right of the Advanced Parameters section.

At the bottom of the dialog are 'OK', 'Cancel', and 'Help' buttons.



# SAP Job Summary

- You Have the Ability to Schedule Single or Multiple ABAP Steps in SAP.
- You Have the Ability to Reuse SAP Jobs by Using Them as Templates and Dragging and Dropping Them into an Application in the Workload Editor.
- You Have the Ability to Extract from SAP Lists of Jobs Already Defined in SM36 for Reuse Utilizing the SAP List Feature of the Workload Editor.
- You Have the Ability to Completely Control What ABAP's to Run, What Variants to Pass, Specific Messages that Indicate the Success or Failure of a SAP Job, & Print and Archive Parameters.
- All of the Other Functions of the SAP Job Workload Object Conform to the Standards of All Other Workload Objects.



GROWING ENTERPRISE PERFORMANCE

**Enterprise Job Scheduling and  
Software Change Management**

# **ESP Business Agent for SAP R/3**

Cybermation Education Unit #: SC101

