



New Face of z/OS Communications Server: V2R1 Configuration Assistant

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Agenda

- What is the Configuration Assistant and how can it help you (quick introduction)
- Configuration Assistant on Windows no longer provided as a download as of z/OS V2R1
- Configuration Assistant redesigned in V2R1 to improve performance, user experience, and integration with other z/OSMF plug-ins



Overview of the Configuration Assistant



- Tool to simplify configuration of z/OS Communications Server policybased networking technologies
 - IP Security IP Filter rules and VPN tunnels
 - Along with configuration for NSS and DMD daemons
 - Application Transport TLS (AT-TLS)
 - Intrusion Detection Services (IDS)
 - Policy-based Routing (PBR)
 - Quality of Service (QoS)

• Specifically, how does it help?

- Provides a GUI with wizards, helps, and tutorials that guide users through the configuration of policy rules
- Generates correct policy configuration (free from syntax errors)
- Provides health checks for configuration inconsistencies
- Supports the import of existing configuration files (intended for startup)
- Also helps with setup of the policy-based networking environmentex: Policy Agent, Syslogd, TRMD, etc..- defining SAF resources..
- Has been provided as a Microsoft Window's tool (download), "as-is", and with z/OS V1R11 provided with z/OSMF



Windows Version of the Configuration Assistant No Longer Provided as of z/OS V2R1



Statement of Direction

z/OS V1R13 is planned to be the final release for which the IBM Configuration Assistant too. that runs on Microsoft Windows will be provided by IBM. This tool is currently available as an as-is, nonwarranted web download. Customers who currently use the Window's-based IBM Configuration Asistant for z/OS Communications Server tool should migrate to the z/OS Management Facility (z/OSMF) Configuration Assistant. The IBM Configuration Assistant for z/OS Communications Server that runs within z/OSMF is part of a supported IBM product and contains all functions supported with the Windows tool.

- Have issued the above statement of direction for no longer providing the Microsoft Window's version of the Configuration Assistant for a few years now.
- Configuration Assistance has been available with z/OSMF since z/OS V1R11
- As of z/OS V2R1, <u>users must migrate</u> to the Configuration Assistant that is a plug-in to z/OSMF.



SHARE Technology - Cannetians - Results

Recommended for Moving to z/OSMF

范 V1R13 Configuration A	ssistant - Backing Store (Read-Write) = C:\IBM\zCSConfigAssist\V1R13\files\saveData
File Edit Perspective Hel	p
Main Perspecti	ive
Navigation tree	Wekcome to the Configuration Assistant Getting started Tutbrials Technology overviews Frequently Asked Questions Moving to 2/OSME What's new in V1R13 • IPSec - Reusable rules, local addresses as names, and local IKE identities as names • IPSec - Discovery of local addresses • New Intrusion Detection Services (IDS) protection • Multiple release support Read more Do not show this welcome panel again



Early Integration of the Configuration Assistant with z/OSMF: Why?



Configuration Assistant has been available with z/OSMF since it was first introduced in the z/OS V1R11 timeframe.

- Configuration Assistant was a Window's application built with a UI toolkit (AUIML) that allowed for rendering the UI using SWING (desktop) <u>or</u> HTML (web). Set AUIML property to generate the desired rendering format.
- Because of this feature, was fairly easy to integrate with z/OSMF

Benefits to Configuration Assistant running on z/OSMF?

- Configuration Assistant provides significant value to z/OSMF: Proven tool that customers have been using
- Satisfies requirements from many customers to provide the Configuration Assistant as a web-based application
- Provides the ability to have centralized product access for multiple users and manage a single, controlled product rather than downloading and managing several copies across workstations
- Runs on the platform it's configuring and allows for centrally managing configuration backing stores
 - Runs on the platform it is configuring; therefore, configuration files can be saved locally (may not require FTP)



Benefits to Configuration Assistant on z/OSMF...continued..



- Configuration Assistant becomes more important and strategic for enhancing
 - Improves chances that IBM will continue to support new functions in Configuration Assistant to simplify z/OS network configuration
- z/OSMF provides official IBM product support and delivery- Windows version has been "as-is" and "best-effort" for support
- Allows for easier integration with other z/OSMF plug-ins and applications in the future
 - Cross-product linking to provide value



What is Required to Use the Configuration Assistant on z/OSMF



- Recognize that migrating from Windows to z/OSMF is not trivial
 - z/OSMF must be installed and configured (setup) by an administrator
 - Requires maintaining another z/OS product
- As z/OSMF grows, the benefits will out-weigh the start-up pains
- Configuration Assistant has no prerequisite software
- Once z/OSMF is installed, users can begin using the Configuration Assistant
 - Don't forget to migrate your backing stores!



What does z/OSMF really provide?



- z/OSMF is a free, fully supported <u>IBM product</u> that provides a web-based GUT that is a portal specifically for accessing z/OS systems management functions
 - Geared toward simplification of traditional z/OS tasks
 - z/OS V2R1 is based upon the new light-weight, WebSphere Liberty runtime (improved installation, setup, and footprint)
 - Much better than pre V2R1
- z/OSMF provides a common framework for plug-ins (like the Config Assistant)
 - A common launch point which is panel with a navigator where applications like the CA can plug-in and be invoked
 - Provides a set of registration services for the applications that want to plug-in
 - Each plug-in registers as a "task" which defines its invocation link (html or jsp) from the browser side. This link appears in the z/OSMF navigator.
 - Provides a user login with authentication (z/OS user Id)
 - SAF controls for controlling access to plug-ins (tasks)
 - Provides services for "logging" on the "server" side for problem determination.



What does z/OSMF really provide? cont..



in Boston

- Defines common "client-side" (browser) resources and functions to allow for common look and feel across plug-ins and reuse
 - Common panel widgets (UI elements) for common look and feel, ex: tables (common column filtering), breadcrumbs, etc
 - Common panel message manager for displaying messages. Plug-ins can define their own messages.
 - On the "brower/client" side, there are services for logging from javascript that send the log messages back to the server
 - z/OSMF continues to align with IBM-wide UI strategies. IBM focusing on open toolkits for UI development, such as dojo.
- Provides rules for translation. Japanese is currently supported.
- Defines browser products and levels supported. Plug-ins must comply.
 - Internet Explorer (IE8), IE9, and FireFox
- Key is that z/OSMF and WebSphere provide the ability for the plug-ins to create modern, service-oriented architectures when developing their functions!

Pre-V2R1 Configuration Assistant did not Integrate well



- AUIML UI framework does not perform well (server-side performance)
 - Forces application logic to be tightly bound to UI presentation layer logic (counter to modern web application design)
- Not based upon the z/OSMF framework; therefore, presented a different look, feel, and behavior than other z/OSMF plug-ins
 - Use of z/OSMF common UI widgets intended to provide consistency across plug-ins

Using the "AUIML framework", the Config Assistant did not look nor perform well

Costly to maintain this old technology



Configuration Assistant becomes a Modern Web Application



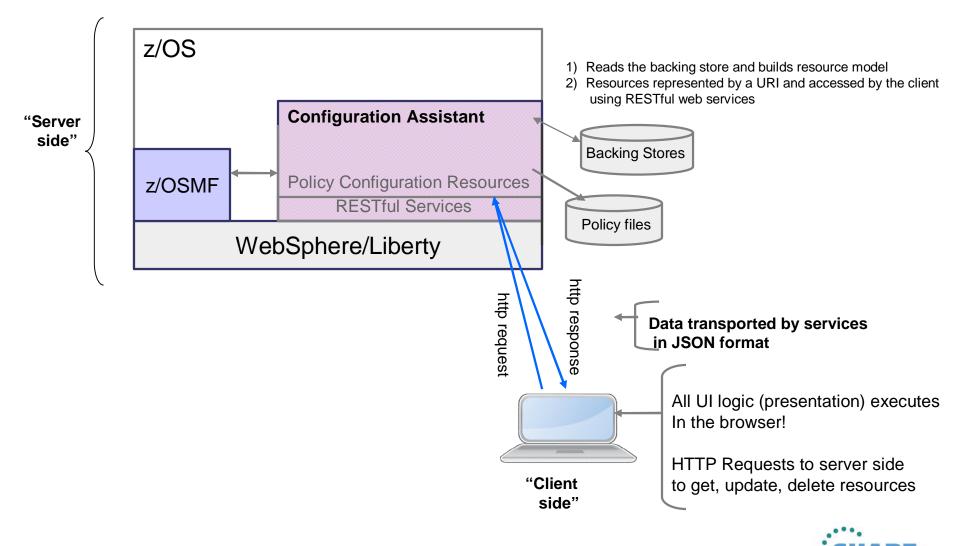
- Redesigned the Configuration Assistant to better integrate with z/OSMF and other plug-ins
 - Removed old UI infrastructure (AUIML)
- New architectural model based upon "AJAX" (Asynchronous JavaScript and XML) design model which provides the following (3 tier model)
 - 1. The client side UI is based upon html, javascript, dojo, css, and z/OS common widgets
 - Allows for improved performance since much of the logic now executes in the browser
 - 2. The browser (client side in javascript) communicates asynchronously with the server side Config Assist application using the http protocol and accesses the server side resources through RESTful web services (uses http verbs,ex: GET, POST, DELETE to manage)
 - 3. On the server side, the Config Assistant defines and manages resources (ex: rules, traffic descriptors, security levels) which are defined with a URI for accessing as described in Step 2. Also provides the persistent data store (backing store).
 - Data exchanged using a JSON format instead of XML (lighter than XML).



View of New Architecture



in Boston





Much Improved Performance



- Significantly Improved Performance vs V1R13 Config Assistant
- Tests conducted : IP Sec Filter Rule creation over 5 minute interval with EC12, 1 CPU, 2GB memory. Results:
 - Rules Created: 16 with V2R1, 6 with V1R13 (2.6x)
 - CPU Estimates (avg/rule): V2R1 8x better than V1R13 (i.e. uses less CPU)
 - Avg Response Time per Rule: V2R1 is approximately 2.5x better
- Some improvements due to overall improvements in z/OS V2R1, but most improvements due to the new "AJAX" design model.
- The new WAS Liberty also provides a much lighter-weight runtime and significant improvement to installation



Summary of the Redesigned Configuration Assistant



- Better integration with z/OSMF and improved look and feel
- Much better performance and modern web design
- Provides foundation for expansion aligned with IBM and platform strategies



V2R1 Configuration Assistant for z/OS Communications Server



- The Configuration Assistant has been redesigned, but all existing configuration backing stores for supported releases can be used without change!
 - Supported releases are V2R1, V1R13, and V1R12
- <u>All</u> panels are new; however, the same functions are provided
 - Significant change in the look and feel
 - No loss of function in terms of generating policy configuration for technologies
- A few areas where change is noticeable
 - One example is the Application Setup Tasks
 - No longer have a "Main" perspective
 - Navigation tree for systems and reusable objects
- New function is provided
 - Enhanced backing store management
- Since the tool has significantly been reconstructed, and although it has been welltested, it is recommended that users save a copy of their existing configuration backing stores!

Repeat! Good Place to Start if Migrating from Windows for the First Time!



IBM z/OS Management Facility Welcome kim
 Welcome Welcome X Configuration Configuration Configuration Assistant Cinks Configuration Assistant Cinks Configuration Assistant Cinks Configuration Assistant Cinks Support for 2/OS System Z Redbooks WSC Flashes & Techdoos Z/OS Basics Information Center Z/OS Hater Library Z/OS MIF Administration Z/OS MIF Settings Refresh



Comparing Pre V2R1 and V2R1 Configuration Assistant

A quick overview of some key differences



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	×						DMD			
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	AT-TLS					Navigation tree	IDS			
ystems Traffic I	Des DMD IDS	Security Levels	Address Group	s Requirement Maps	Reusable Rules		NSS	Select	the technology you	u want to configure and click Config
Actions 🔻	IPSec					└- ⁽ <u>⊇z/OS Images</u> └- ⁽)Image - MV	QoS		Select Action	
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V2R1



SHARE in Boston

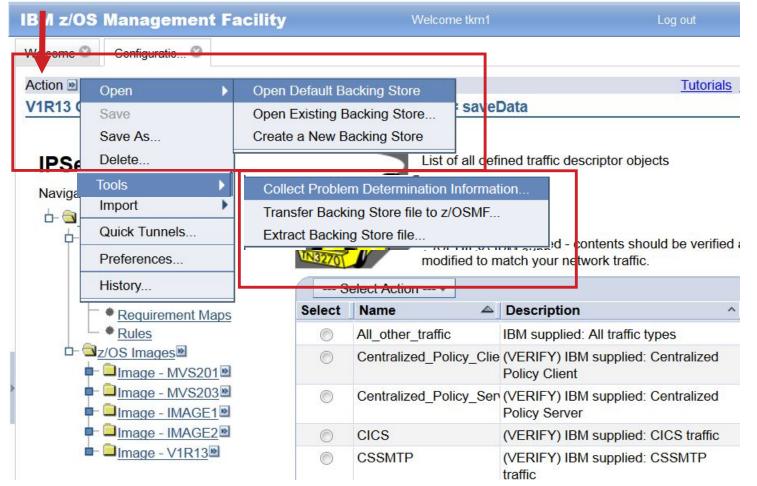
Select a perspective	e: IPSec 👻			Tools	Main Persper	IDS			erver technologies
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							Work wit	th settings for z	z/OS images
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TCPCS	Stack	Complete	V2R1	Imported from Policy Data	Pulse
					• ③ Image - MVS201 ◎ • ▲ Stack - TCPCS ◎ • ● Stack - TCPCS ◎ • ▲ Stack - TCPCS ◎ • ● ▲ Image - MVS203 ◎ • ▲ TCPCS ◎ • ● ▲ Image - IMAGE1 ◎ • ▲ Main Perspective • ● Image - V1R13 ◎ • ▲ Main Perspective



Pre V2R1 Backing Store Management







V2R1 Improved Backing Store Management

Sel	ect a p	erspective:	IPSec 🔻				Tools
Sys	tems	Traffic Des	criptors	Security Levels	Address Groups	Requirement Maps	Manage Backing Stores R History
Ac	tions	•					Preferences
	Name	•	Туре		Status	Release	Log level
0		IAGE1	Image		Complete	V1R12	
0		STACK1	Stack		Incomplete	V1R12	



V2R1 Manage Backing Stores Details



Act	tions 🔻		ng Store – CADemo Statu Use	the "Refresh" button to up
	Name Filter	Status Filter	Time Last Updated Filter	
۲	CADemo	Current	2013-01-24 15:50:52	
0	CADemoAKT	Available	2013-01-24 15:50:52	
0	CATestIPSec	Available	2013-07-25 08:26:27	
0	DianeBS_ATTLS_FF	Available	2013-01-24 15:50:53	
0	DianeBS_ATTLS_IE8	Available	2013-04-01 12:52:18	
0	DianeBS_ATTLS_IE9	Available	2013-01-24 15:50:54	
0	DianeBS_DMD_FF	Available	2013-01-24 15:50:54	
0	DianeBS_DMD_IE8	Available	2013-01-24 15:50:54	
)	DianeBS_DMD_IE9	Available	2013-01-24 15:50:55	
)	DianeBS_IPSEC_LAN_FF	Available	2013-01-24 15:50:56	
)	DianeBS_IPSEC_LAN_IE8	Available	2013-01-24 15:50:58	
)	DianeBS_IPSEC_LAN_IE9	Available	2013-01-24 15:50:58	
0	DianeBS_testswing	Available	2013-01-24 15:50:59	
2	DianeBS testswing2	Available	2013-01-24 15:50:59	

Refresh Last refresh: Jul 30, 2013 2:18:36 PM local time (Jul 30, 2013 6:18:36 PM GMT)



Complete your sessions evaluation online at SHARE.org/BostonEval

Close

V2R1 Backing Store Management Actions



Welcome X Configuratio... X

Configuration Assistant (Home) > Tools > Manage Backing Stores

V2R1 Current Backing Store = xyz

Open		Status	Time Last Updated	
Delete		 Filter	Filter	
Import	_IE8	Available	2013-01-24 15:51:15	
Extract	_I <mark>E</mark> 9	Available	2013-01-24 15:51:15	
New	re	Available	2013-01-24 15:51:15	
Save As		Available	2013-01-24 15:51:16	
Transfer	_	Available	2013-05-02 15:41:14	
Modify Filters Hide Filter Row		Available	2013-01-24 15:51:16	
Clear Filters		Available	2013-01-24 15:51:16	
Modify Sort		Available	2013-01-24 15:51:16	
Clear Sorts		Available	2013-01-24 15:51:17	
R8Store		Available	2013-01-24 15:51:17	
R9Store		Available	2013-01-24 15:51:17	
o rft		Available	2013-01-24 15:51:18	
saveData		Available	2013-04-23 22:41:47	
TEST		Available	2013-01-24 15:51:18	

Total: 71, Selected: 1

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Pre-V2R1 Message Popups for Errors

_ocal port	Remote port
All ports	All ports
Single port	Single port:
*Port: 100	*Port: 100
Port range	Port range:
*Lower port: 100 *Upper port:	101 *Lower port 100 *Upper port 101
All ephemeral ports	All ephemeral ports
Indicate the TCP connect direction	Error:
Either Inbound only Outbound only Permit / Deny only settings	This traffic type and traffic details are already in this traffic descriptor.
	ОК
Only applicable when mapped to IPSec Perro	nt or Deny security levels, otherwise ignored.





V2R1 Messages are Inline (part of panel)

Messages 🔞 1 🕼 0 🔢 0						
CAMSGE: This traffic type and traffic details	are already in this traffic descriptor.					
Details Advanced						
Local port	Remote port					
 All ports Single port * Port: 100 	 All ports Single port * Port: 100 					
Port range * Lower port: * Upper port: 100 101	<pre>Port range * Lower port: * Upper port: 100 101</pre>					
Ephemeral ports	O Ephemeral ports					



Application Setup Tasks now Integrated with z/OSMF Workflow Plug-in



- Removed Application Setup Tasks from the Configuration Assistant plug-in and moved to the Workflow plug-in
- Application Setup Tasks are associated with each Configuration Assistant technology at the Image level
 - Help with setup of the Policy-based networking environment: Step by step instructions for SAF profile and configuration file setup, etc.., for the policy agent and other required daemons (syslogd, TRMD, IKE, etc)
 - Targeted toward new policy users or new technologies
 - In many cases, tasks are repeated for each Image (repetitive)
- Workflow provides a common place for setup tasks that can be tailored for each system where needed.
 - Upon entering the workflow task, users must "create" a new workflow
 - Create the Configuration Assistant workflows
- Workflows consist of a set of steps which are like instructions. Once the workflow is created, the workflow engine drives the user through the workflow steps using a wizard (best viewed with a quick demo).



Application Setup Tasks Refresher

PSec Perspec	tive						D
Vavigation tree	🛱 Application Setup Tasks for Imag	e IMAGE1				X	
	Steps: - Follow the instructions on the pa - As you finish each task, change	etails. anel.		GE1.			
🖻 🌗 Image - IMAGE1	Task name	Last completi	on date	Status	Comment		
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• Studen Striten	Policy Agent - RACF Directives	2012-09-18 2		Complete	•		
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	ipsec Command - RACF Directives			Incomplete	•		C
	Syslogd - RACF Directives			Incomplete	•		a configuration summary.
	TRMD - RACF Directives			Incomplete	•		
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IBM Con	ifidential	_	Attach coi	mment: k task as complete	e		OK Help ?
Complete vour ses	cions evaluation online at SHARF	org/Bostor	Eval				SHARE in Boston

Help for using the Workflow



Workflows × Configuratio... ×

Welcome to V2R1 Configuration Assistant for z/OS Communications Server

Use this task to create and manage configuration for z/OS Communications Server policy-based networking functions.

Select a backing store for configuration:

saveData 💌

Learn more about Configuration Assistant:

Open

What's New	See what is new in this release.
Getting Started	First time users can learn about Configuration Assistant.
Migrating to z/OSMF	Migrate backing stores from Windows to z/OSMF.
Application Setup Tasks	Workflows to guide the setup of required applications.
Tutorials	Link to tutorials.
FAQs	Link to Frequently Asked Questions.







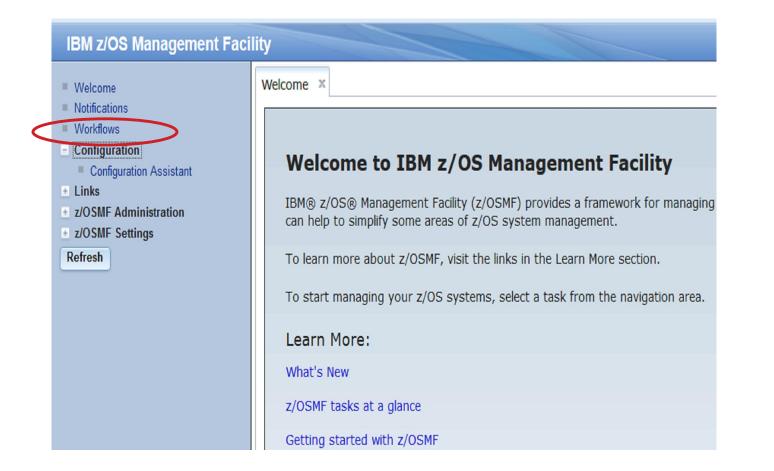
From Tutorial: Finding the List of Workflows

Type or select a workflow definition file to use for creating a new workflow. For a z/OS data set, specify a fully qualified name, with no quotes. * Workflow definition file: /usr/lpp/zosmf/V2R1/workflow/plugins/izuca/ezb_pagent_setup_wizard.xml	All Configuration Assistant Workflows are this directory.
< Back Next > Finish Cancel Help	

- ezb_pagent_setup_wizard.xml This workflow provides the setups for setting up the Policy Agent (Pagent). Pagent is required for all of the policy-based networking technologies: IPSec, AT-TLS, IDS, PBR, and QoS. Pagent uses syslod for logging.
- ezb_dmd_setup_wizard.xml This workflow provides the steps for setting up the Defense Manager Daemon (DMD). DMD also uses TRMD and Syslogd for logging.
- ezb_ike_setup_wizard.xml This workflow provides the steps for setting up to run the IKE daemon (iked). The IKE daemon uses syslogd for logging.
- ezb_nss_setup_wizard.xml This workflow provides the steps for setting up the Network Security Services (NSS) daemon. The NSS daemon uses syslogd for logging.
- ezb_trmd_setup_wizard.xml This workflow provides the steps for setting up the Traffic Regulation Management Daemon (TRMD). This is used with IPSec, DMD, and IDS techologies for logging. It works in conjuction with Syslogd to provide logging.
- ezb_syslogd_setup_wizard.xml This workflow provides the steps for setting up Syslogd.
- ezb_tcpip_profile_sample_wizard.xml This workflow provides a sample Tcp/Ip profile which contains common statements required to enable AT-TLS and IP Security, and additionally includes port reservation statements for running daemons.

z/OSMF Workflow Plug-In







Create the workflows



ork	kflows 🗙								
10	orkflows	1. Use the "Cre	ate Workflow"	in the Ac	tions menu				
m	plifies tasks through quided ste	p-based workflows, an	d provides administ	rative funct	ions for assignir	ıg workflow res	ponsibilities and tracking	g progress.	
V	Actions 🔻								
	Workflow Name Filter	Description Filter		Version Filter	Vendor Filter	Owner Filter	System Filter		Percent Complete
	z/OS Communications Server: Setup to run Traffic Regulation Management Daemon (TRMD) -	z/OS Communications Traffic Regulation Mana (TRMD)		1.0	IBM	user1	XESDEV.MVS160 (MV	/S160_001)	0%
	Workflow_0	(TIXIND)	Create Workflow	eate Workflow					
	z/OS Communications Server: Setup for Syslogd - Workflow_0	z/OS Communications Syslogd	Type or select a	Type or select a workflow definition file to use for creating a new workflow.				_001)	0%
	Setting up to run IP Defensive Filters with Defense Manager Daemon (DMD) - Workflow 0	Setting up to run IP De Defense Manager Dae		For a z/OS data set, specify a fully qualified name, with no quotes.					0%
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	z/OS Communications Server: IP Security with IKE - Workflow_0	z/OS Communications with IKE	< Back Next	> Finish	Cancel	lelp			11%
	z/OS Communications Server: Install Sample Profiles for TCP/IP Components - Workflow_0	z/OS Communications Profiles for TCP/IP Con		1.0	IBM	user1	XESDEV.MVS160 (MV	/S160)	0%
	z/OS Communications Server: Setup to run Policy Agent - Workflow 0	z/OS Communications Policy Agent	Server: Setup to run	1.0	IBM	user1	XESDEV.MVS160 (MV	/S160)	0%

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Configuration Assistant-Provided Workflows



Workflows

Simplifies tasks through guided step-based workflows, and provides administra

Workflow Name	Description Filter	۱ F
z/OS Communications Server: Setup to run Traffic Regulation Management Daemon (TRMD) - Workflow_0	z/OS Communications Server: Setup to run Traffic Regulation Management Daemon (TRMD)	
z/OS Communications Server: Setup for Syslogd - Workflow_0	z/OS Communications Server: Setup for Syslogd	2
Setting up to run IP Defensive Filters with Defense Manager Daemon (DMD) - Workflow_0	Setting up to run IP Defensive Filters with Defense Manager Daemon (DMD)	3
Set up to run Network Security Services (NSS) - Workflow_0	Set up to run Network Security Services (NSS)	1
z/OS Communications Server: IP Security with IKE - Workflow_0	z/OS Communications Server: IP Security with IKE	
z/OS Communications Server: Install Sample Profiles for TCP/IP Components - Workflow_0	z/OS Communications Server: Install Sample Profiles for TCP/IP Components	1
z/OS Communications Server: Setup to run Policy Agent - Workflow_0	z/OS Communications Server: Setup to run Policy Agent	1





Thank You





esults

URL	Content
http://www.twitter.com/IBM_Commserver	IBM Communications Server on
http://www.facebook.com/IBMCommserver	IBM Communications Server on
http://www.youtube.com/user/zOSCommServer	IBM Communications Server on
http://www.ibm.com/systems/z/	IBM System z in general
http://www.ibm.com/systems/z/hardware/networking/	IBM Mainframe System z networking
http://www.ibm.com/software/network/commserver/	IBM Software Communications Server products
http://www.ibm.com/software/network/commserver/zos/	IBM z/OS Communications Server
http://www.ibm.com/software/network/commserver/z_lin/	IBM Communications Server for Linux on System z
http://www.ibm.com/software/network/ccl/	IBM Communication Controller for Linux on System z
http://www.ibm.com/software/network/commserver/library/	IBM Communications Server library
http://www.redbooks.ibm.com	ITSO Redbooks
http://www.ibm.com/software/network/commserver/zos/support/	IBM z/OS Communications Server technical Support – including TechNotes from service
http://www.ibm.com/support/techdocs/atsmastr.nsf/Web/TechDocs	Technical support documentation from Washington Systems Center (techdocs, flashes, presentations, white papers, etc.)
http://www.ibm.com/systems/z/os/zos/bkserv/	IBM z/OS Internet library – PDF files of all z/OS manuals including Communications Server

