



IBM Tivoli System Automation for z/OS V3.5

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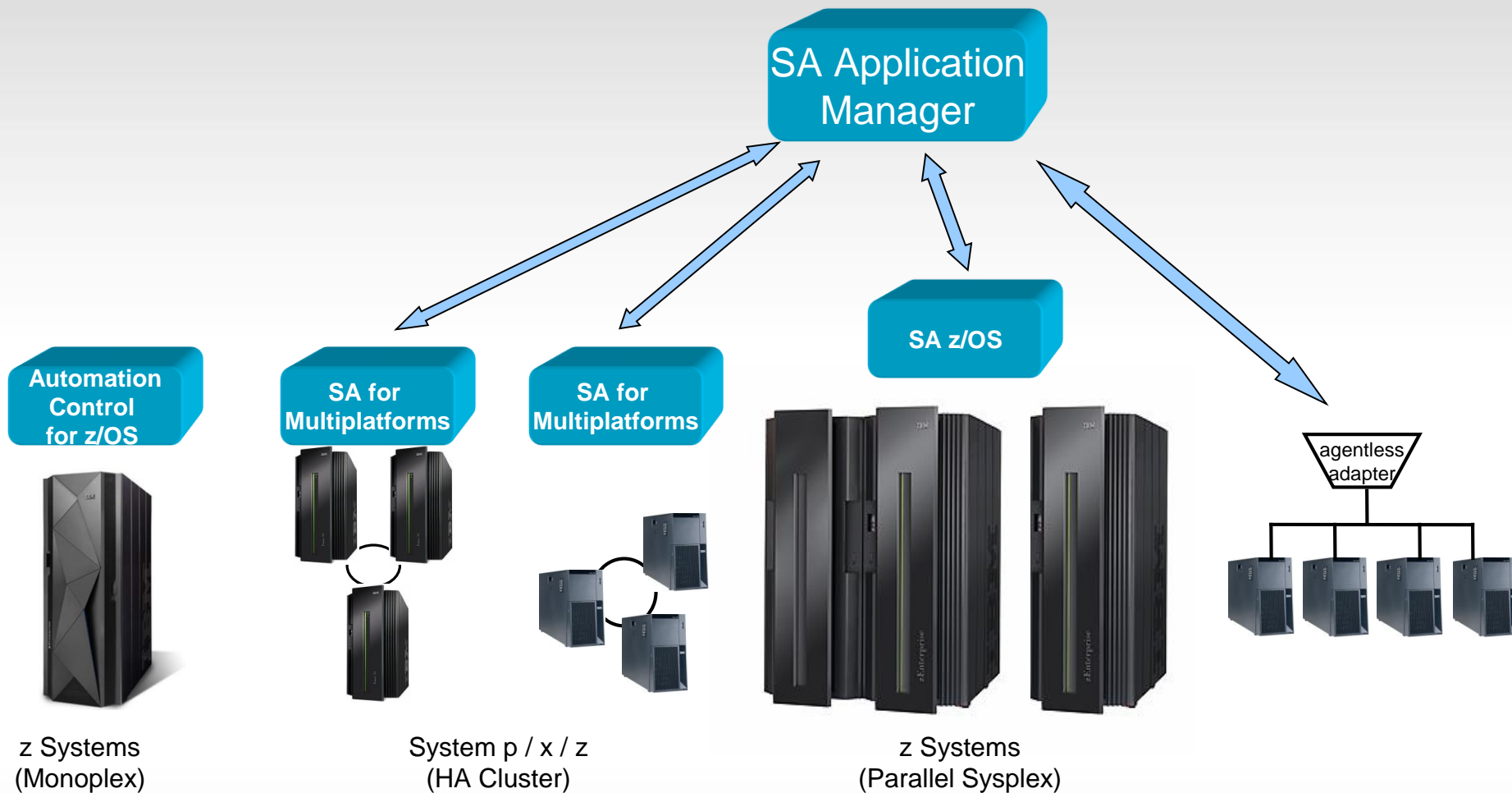
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The IBM System Automation Family





What is SA z/OS?

- Industry leading z/OS automation solution
- Availability and resiliency solution to ensure critical systems are up and running
- For larger clients with **Parallel Sysplex** requiring High Availability and Disaster Recovery
- Policy based. Automates starts, stops, maintenance, restarts

What is the value of SA z/OS?

- Automate routine tasks and reduce manual time and effort
- Maximize availability of critical systems and applications
- Avoid outages and improve resiliency
- Increase performance and operational efficiency



System Automation for z/OS V3.5 simplifies z Systems operations



Today's IT Challenges:

- Considerable manual effort, resulting in confusion and errors
- Fast changing business requirements needing application changes
- Availability outage until problems solved manually by operations
- Challenging business requirement for 100% availability



IBM Tivoli System Automation for z/OS 3.5 provides

- **Increased efficiency** - Intuitive Configuration Assistance dramatically improves Time To Value with a 80% decrease of base installation and configuration
- **Reduced risk of application downtime** - Proactively improved system availability and performance through policy-based management of looping address spaces
- **Increased visibility and improved application availability** - Improved performance management with coordinated application pacing allowing for optimal CPU balance.
- **Improved user productivity** - Modern application management through consistent policy customization support for multiple users to work in parallel. Enabling multiple users allows for much better flexibility and reduced time for change management.



How to improve configuration and setup before SA z/OS 3.5

Read the Installation manual ...

... decide which of the many installation steps apply to your z/OS environment

Perform those steps by....

... adapting all the identified sample files and ...

... filling in your environmental data at multiple places spread across the sample files

And do all this ... in a consistent way!

Manual configuration steps

- Often error prone
- Cumbersome
- Time consuming
- ...



Chapter 7. Install

Overview of Installation Tasks
 Step 1: SMP/E Installation
 Step 2: Allocate System Catalog
 Step 2A: Data Sets for NetView
 Step 2B: Data Sets for J/O C
 Step 2C: Data Sets for Automation
 Step 2D: Data Sets for Autom (Primary Automation Manag
 Step 3: Allocate Data Sets for th
 Step 4: Customize VS1/PARMLIB
 Step 4A: Update IE2APPLzr
 Step 4B: Update SC3IB2zr
 Step 4C: Update MPP1STzr
 Step 4D: Update LPA1S1zr
 Step 4E: Update LKMS1STzr
 Step 4F: Update BEPSN1zr
 Step 4G: Update BESSN1zr
 Step 4H: Update SMP PFM1zr
 Step 5: Customize VS1/PROCLIB Members
 Step 5A: NetView Startup Procedures
 Step 5B: Startup Procedures Required for System Operators Only
 Step 5C: J/O Operators Startup Procedures
 Step 6: Customize NetView

Installing SA z/OS on Host Systems

| | | | |
|--|-----|---|-----|
| Enabling Alert Notification via User-Defined Alert Handler | 102 | INACTOPCF | 121 |
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This chapter describes the tasks required to install SA z/OS components on the SA z/OS host systems. This chapter includes information on installing SA z/OS on both focal point and target systems. The target system installation does not require some of the steps used for the focal point installation. Any installation step that does not apply to the target systems is indicated. Many of the installation steps have corresponding planning activities and explanations in chapters 2 through 6 of this book. Chapter 8 describes installation on workstations.

In this chapter, the single installation steps are marked as either being required for all or certain SA z/OS components or as being optional. Optional denotes steps that may or may not need to be performed based on your environment, your system management procedures, and your use of the SA z/OS product. For each of these steps you need to decide whether it is required for your installation.

Each optional step explains why it is optional and describes the circumstances when you will need to perform it.



SA z/OS 3.5 provides simplified automation configuration through an intelligent Configuration Assistant



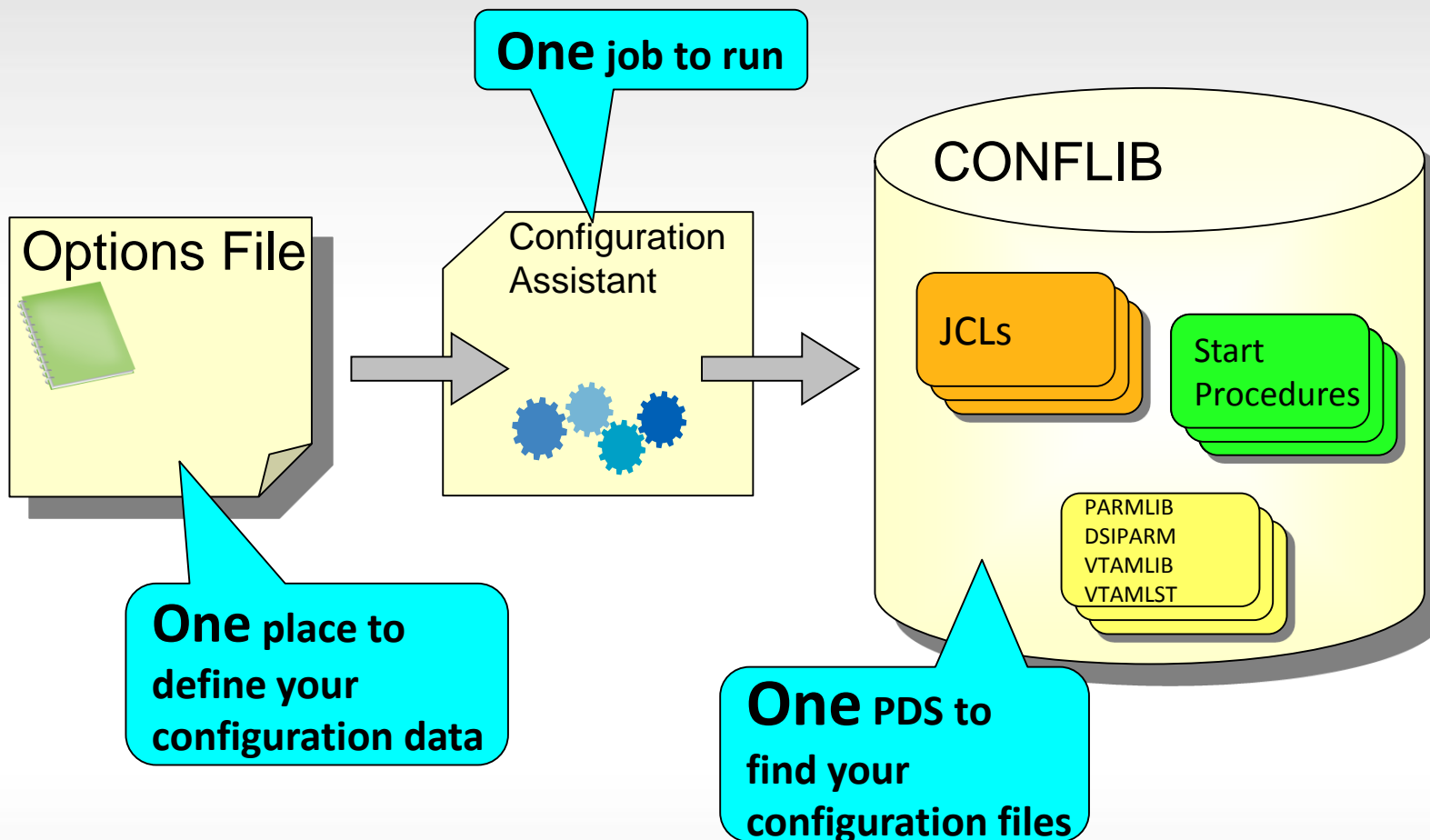
- **Significantly improved Time to Configuration with a 80% decrease in time of System Automation base installation and configuration**
- Simple configuration to get base automation components running
 - Automation manger
 - Automation agent
 - Subsystem interface
- Use of **configuration assistant** that automates majority of configuration process
- Keep number of configuration variables down at the necessary minimum
- Benefit from lab **experience** using “standard” option set (stylesheet)
- Post install/**configuration verification** to ensure all necessary steps (in particular steps that have to be done by other persona) have been completed



Configuration Assistant – How does it work?



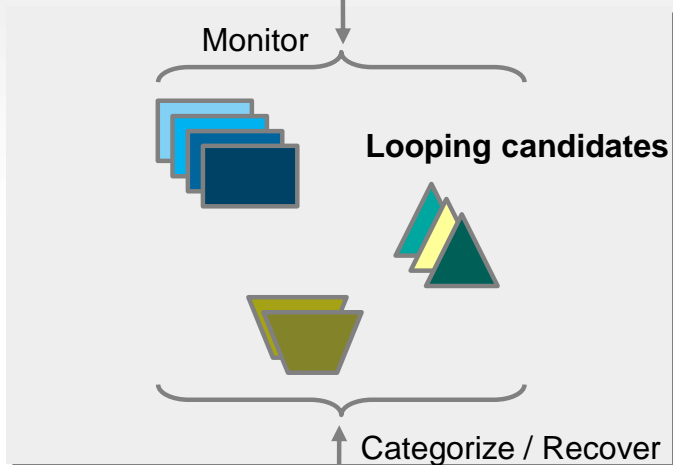
ONLY 3 STEPS TO DEFINE YOUR CONFIGURATION



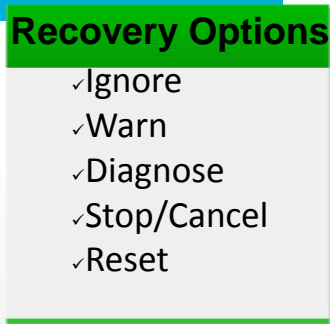
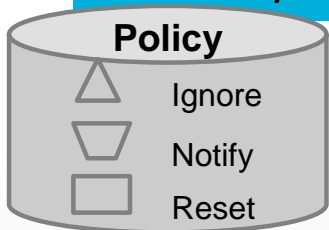


Improved System Performance with Automation/Monitoring integration

OMEGAMON XE for z/OS



System Automation



Situation

- The overall z/OS system utilization and also the utilization of individual started tasks / jobs is understood for normal and peak hours

Problem

- Detect when started tasks / jobs show abnormally high CPU utilization
- Some jobs causing CPU to loop and are hard to detect
- Prevent that these types of work can dominate the system

Solution

- OMEGAMON XE for z/OS data is analyzed by System Automation for high CPU utilization
- System Automation can categorize different types of work and allows to define various recovery actions through policy – not programming!

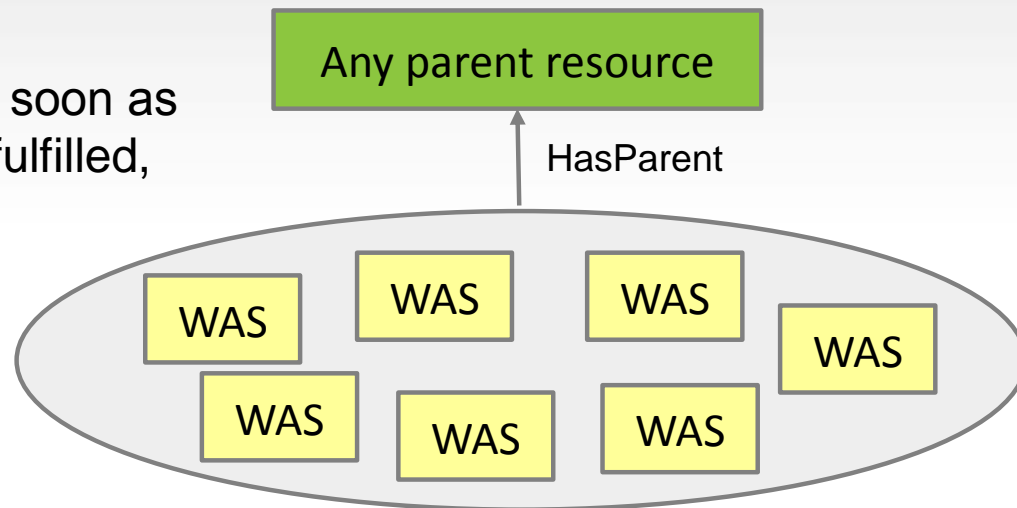


Application Pacing



System Automation manages dependencies between resources

“Start all WAS resources as soon as the start dependencies are fulfilled, for example, all parents are available”

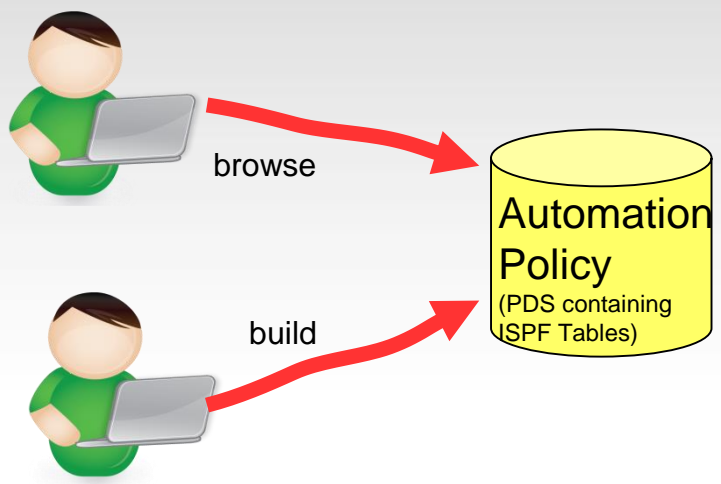


The Problem: Many resources started at once, could be heavy workload dominating the CPU and prevent other work from running.

The Solution: SA z/OS 3.5 provides application pacing feature to ensure controlled start and stop of resources to avoid CPU consumption peak and performance impact.



Multiple User Support for Policy Configuration



```

MENU  HELP
-----
Option ==>      Entry Type Selection      Policy in BROWSE mode
-----
Enter number or entry type or use "BR <entry type>" for browse

 1 ENT      Enterprise                      30 TMR      Timers
 2 GRP      Groups                        32 TPA      Tape Attendance
 3 SBG      SubGroups                      33 MVC      MVS Components
 4 SYS      Systems                       34 MDF      MVSCOMP Defaults
 5 APG      ApplicationGroups             35 SDF      System Defaults
 6 APL      Applications                  36 ADF      Application Defaults
 7 EVT      Events                        37 AOP      Automation Operators
 8 SVP      Service Periods              38 NFY      Notify Operators
 9 TRG      Triggers                      39 NTW      Networks
10 PRO      Processors                    40 XDF      Sysplex Defaults
11 MTR      Monitor Resources             41 RES      Resident CLISTs
12 ENS      zEnterprise Ensembles         42 SCR      Status Display
13 PAC      Pacing Gates

20 PRD      Product Automation           99 UET      User E-T Pairs
21 MSG      Messages

```

With SA z/OS 3.4: Automation policies either can be edited or built.

With SA z/OS 3.5: Multiple users can browse and edit policies concurrently.

Users can work in ISPF split screen mode and the policy can be browsed while a configuration built process runs in parallel. Enabling multiple users allows for much better flexibility and reduced time for change management.



System Automation for z/OS

Wiki:

<https://www.ibm.com/developerworks/community/wikis/home?lang=en%23!/wiki/Tivoli%20System%20Automation/page/SA%20zOS>

Homepage:

<http://www-01.ibm.com/software/tivoli/products/system-automation-zos/index.html>

Forum:

<http://groups.yahoo.com/group/SAUSERS/>

Service Management Community:

<https://www.ibm.com/developerworks/servicemanagement/z/index.html>