Continuing the z/OS Simplification Work

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Framing the big picture

Simplify the mainframe and harvest AI to boost efficiency and accelerate innovation for our customers

BOOST EFFICIENCY

How might we reduce the new-to-Z learning curve and improve the overall platform user experience?

WHY

- Reduce talent attrition
- Improve cross-department and cross-platform resource flexibility
- Increase productivity for all users

ACCELERATE INNOVATION

How might we leverage industry standards, tools and languages to increase customer speed to market?

WHY

- Improve mainframe speed to market on new technologies
- Improve predictability, operations and performance
- Realize the full benefits of the hybrid cloud

Simplifying configuration

APPLICATION

Application source code

Application middleware configuration

Deb Early Tenure App Dev

Angie App Architect

Rohan DevX Engineer

OS & SOFTWARE

Middleware subsystems

z/OS

Zach Sr z/OS Sys Prog

Chris Jr z/OS Sys Prog

David DBA

SYSTEM

Firmware

Hardware

Greg Infra Architect

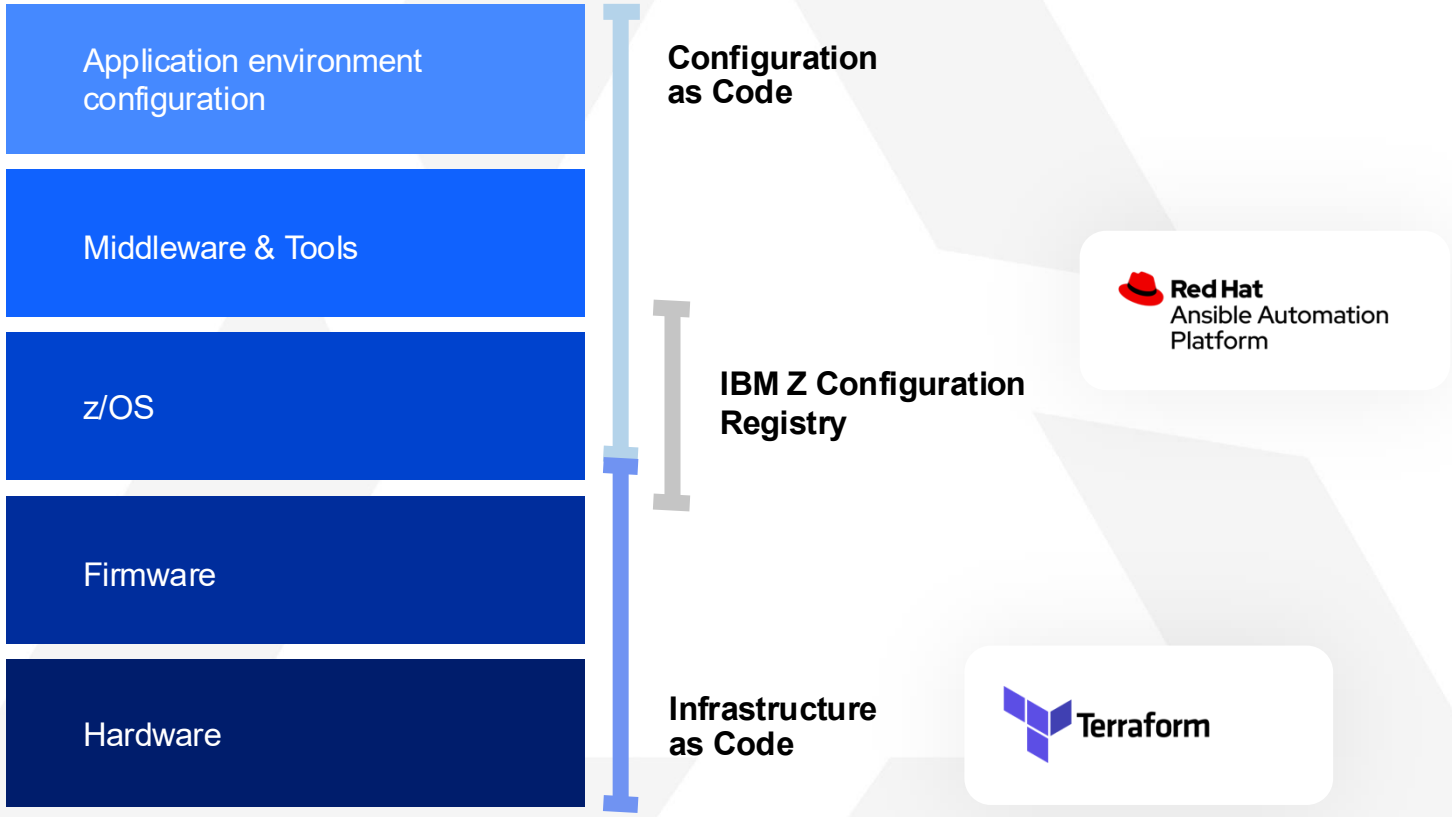
Luis IT operator

Addressing configuration complexity was ranked the highest priority by clients because of the current complexity across the stack and its impact on getting a system set up, the overall learning curve and in complicating problem determination and resolution.

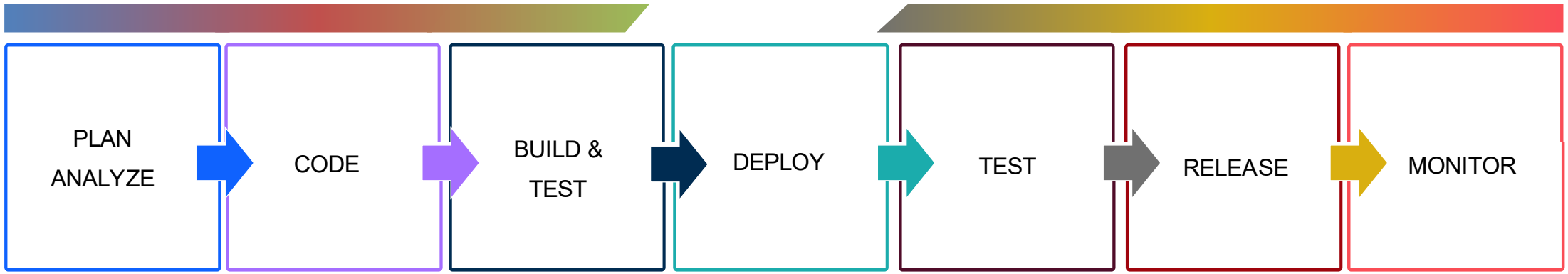
> "It's scary to admit but I don't really know how my system is configured."

> "It can't just be Parmlib. It has to be the full stack."

Configuration automation and simplification across the entire platform stack



Configuration-as-code and application environment configuration



Everything as Code

- Infrastructure and configuration are defined in standardized formats such as YAML, JSON, or HCL (e.g., Terraform and Ansible).
- This is stored in Git or other SCMs.
- Enables traceability, auditability, and reproducibility of environments.

Automation and CI/CD Integration

- Changes trigger automated pipelines (e.g., Jenkins, GitHub Actions).
- Supports automated testing, linting, and validation before deployment.
- Accelerates delivery cycles and reduces human error.

Immutable Infrastructure

- Systems are reprovisioned rather than modified in place.
- Reduces configuration drift and improves reliability.
- Promotes consistency and simplifies rollback strategies.

Environment Parity

- Dev, test, and prod environments are identical by design.
- Promotes consistency and reduces “it works on my machine” issues.
- Improves collaboration and confidence in deployments.

z/OS configuration simplification strategies

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1. Programmatic checkers

Increase the availability and use of programmatic checkers to help find configuration items, determine the optimal configuration, and report any deprecated options in an installation configuration.

2. Standardized formats

Allow for unified location for simple management of configuration settings, across the ecosystem, using a standardize format (e.g. YAML, JSON).

3. Optimized default values

Identify a comprehensive list of default options for optimal configuration and remove any unnecessary custom values to simplify the configuration process.

4. Fewer new configuration settings

Restrict new configuration options to only what is absolutely needed based on proven and measurable data.

5. Removed & consolidated parameters

Apply the same rules in #4 to existing configuration settings, so they can be reduced and simplified.

6. AI and automation

Leverage AI to assist in optimizing configuration settings using proven recommendations grounded in IBM subject-matter expert knowledge and established best practices.

Collecting data to inform simplification

IBM Z Configuration Collection Program is a data-driven initiative to **identify configuration settings where z/OS Configuration Simplification strategies can be applied**. The program collects configuration data directly from participating clients to inform decisions based on actual usage patterns, i.e., removal, consolidation, internalization, optimization for smarter defaults.

Round 1 data collection in 1H 2025:

- Focused on collecting z/OS parmlib, IODF, Db2, IMS
- Analysis of anonymized config data in process
- Round 2 collection to start in Q2 2026

Join the program and send questions for more information to zos@ibm.com.

Poll question 1

Which areas of z/OS configuration and functions do you believe are most ready for deprecation or simplification in your environment?

System management programming interface strategy

The intent of this strategy is to bring consistency and industry alignment to system interactions previously managed through fragmented interfaces. It also indicates to customers which are the programming interfaces to use for z/OS systems management.

GROW: Primary interface recommended.

STABILIZE: Interfaces which IBM will maintain and continue to support but no net new functions in these areas.

DEPRECATE: This is a non-strategic interfaces, so we will start moving away from them.

Example items in progress:	
GROW	Standardizing Experiences & Technologies – align with industry standards
GROW	C APIs 64-bit XPLINK – to leverage all modern programming languages
GROW	z/OS Unix Shell Commands
GROW	Python Modules
STABILIZE	REXX/CLIST
STABILIZE	ISPF – new functions will be in z/OSMF, python/C APIs, and other modern interfaces.
DEPRECATE	The need to use HLASM *by the system programmer*
DEPRECATE	Screen Scraping, and using output of TSO commands as programming interfaces
DEPRECATE	The need to submit JCL that are utility tasks (allocate a data set, update the catalog, …) Use a command prompt or automation instead. There will be no need to pass down generational JCL.

Statements regarding IBM future direction and intent are subject to change or withdrawal and represent goals and objectives only.

Poll question 2

IBM Z is also moving towards API-first strategy to enable more automation and leverage AI capabilities where possible.

How do you feel about an API-first direction for z/OS system management?

Next-generation z/OS experience

Vision

A z/OS experience built for early tenure Z professionals aligned with industry standards to accelerate the understanding of and proficiency using the Z platform.

Enable businesses to accelerate adoption of Z technologies critical to market competitiveness

Principles

AI-powered assistants and agents provide contextual guidance and best-practice recommendations to help users work faster and more confidently.

Designed with and for early tenure Z professionals, valuable for all. Meet Chris where she is at.

Prescriptive, with sensible defaults and best practices

Adaptable, evolving with skills and modern industry standards

z/OS simplification work covered today

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What We're Doing

Infrastructure-as-code (IaC) and configuration-as-code (CaC) are integral approaches for simplifying the mainframe

IBM is simplifying configuration across the stack and is using the Z Configuration Collection Program to make data-informed decisions

Standardized APIs for system management is critical

IBM is reimagining the next generation of z/OS experience

Client impact across the simplification work

What we're doing

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How it impacts clients

More predictable, automated operations through reduced manual variability and Infrastructure-/Configuration-as-Code practices.

Lower configuration burden by removing outdated or redundant options and aligning systems to best practices.

Consistent, industry-standard system interactions powered by standardized APIs and modern tooling.

A more intuitive, lower-cognitive-load experience that shortens time-to-proficiency for new-to-Z professionals, supported by AI-fusion and agentic assistance.

Simplification is not a series of isolated enhancements.

Join our simplification journey!

- Participate in the Z Configuration Collection Program. Send questions for more information to zos@ibm.com.
- Watch/read the replay of **The 'Next-Generation z/OS Experience' Overview** session from Monday, Feb 23rd.

Thank you!

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