

AWS  
re:Invent

WIN321-R

# Improving Windows Instance Start Times

**Alex Moore**

AWS Specialized Solutions Architect – Microsoft Workloads  
Amazon Web Services

# Agenda

Why custom AMIs may boot slower?

Best Practices

AWS Systems Manager Automation

EC2 Image Builder

Fast Snapshot Restore

Demo

# Why custom Windows AMIs boot slower?

- AWS AMIs go through an internal process to pre-warm Windows and complete sysprep prior to EC2 instance first boot.
- The sysprep specialize phase can add 5-10 minute delay to Windows Server boot times.
- Custom AMIs create new EBS volumes that are not initialized.
- Custom services or application may be delaying or interfering with AWS launch agents ( EC2-config or EC2-launch scripts).

# Best Practice

- Start from the latest AWS AMI
- Ensure Windows Server is fully patched, including drivers and agents, with a recent clean boot.
- Use AWS launch agents to sysprep and shutdown.
- Use separate EBS volumes for the OS versus your data.
- Use Instance Store for Temp files if possible.
- Initialize the EBS volume using DD or FIO.

# AWS Systems Manager Automation

# AWS Systems Manager Automation

- Simplifies common maintenance and deployment tasks of Amazon EC2 instances and other AWS resources.
- Custom or pre-defined workflows.
- Workflows are automation steps in a JSON-based Document
- Support for Run Command, Lambda functions.
- Notifications via Amazon CloudWatch Events
- Monitor progress in real time

# EC2 Image Builder



# EC2 Image Builder

- **EC2 Image Builder is a managed service that makes it easier and faster to build and secure Operating System (OS) images for use on AWS and on-premises.**
- Improves productivity and reduces the operational cost of building compliant & up-to-date images:
- Improves service uptime by reducing errors in images
- Raises the security bar of deployments
- Centralized policy enforcement:

# Fast Snapshot Restore

# Fast Snapshot Restore (FSR)

- FSR speeds up the movement of block data from EBS snapshots to EBS volumes and reduces the time needed to restore data from backup by an order of magnitude.
- Volumes created from an accelerated snapshot are immediately fully-performant.
- Once enabled, data can be restored from an FSR snapshot to multiple volumes concurrently in a matter of seconds.

# Demo

# Questions?

# Thank you!

**Alex Moore**

lexmoor@amazon.com



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