



Advanced PowerShell

Automate it all

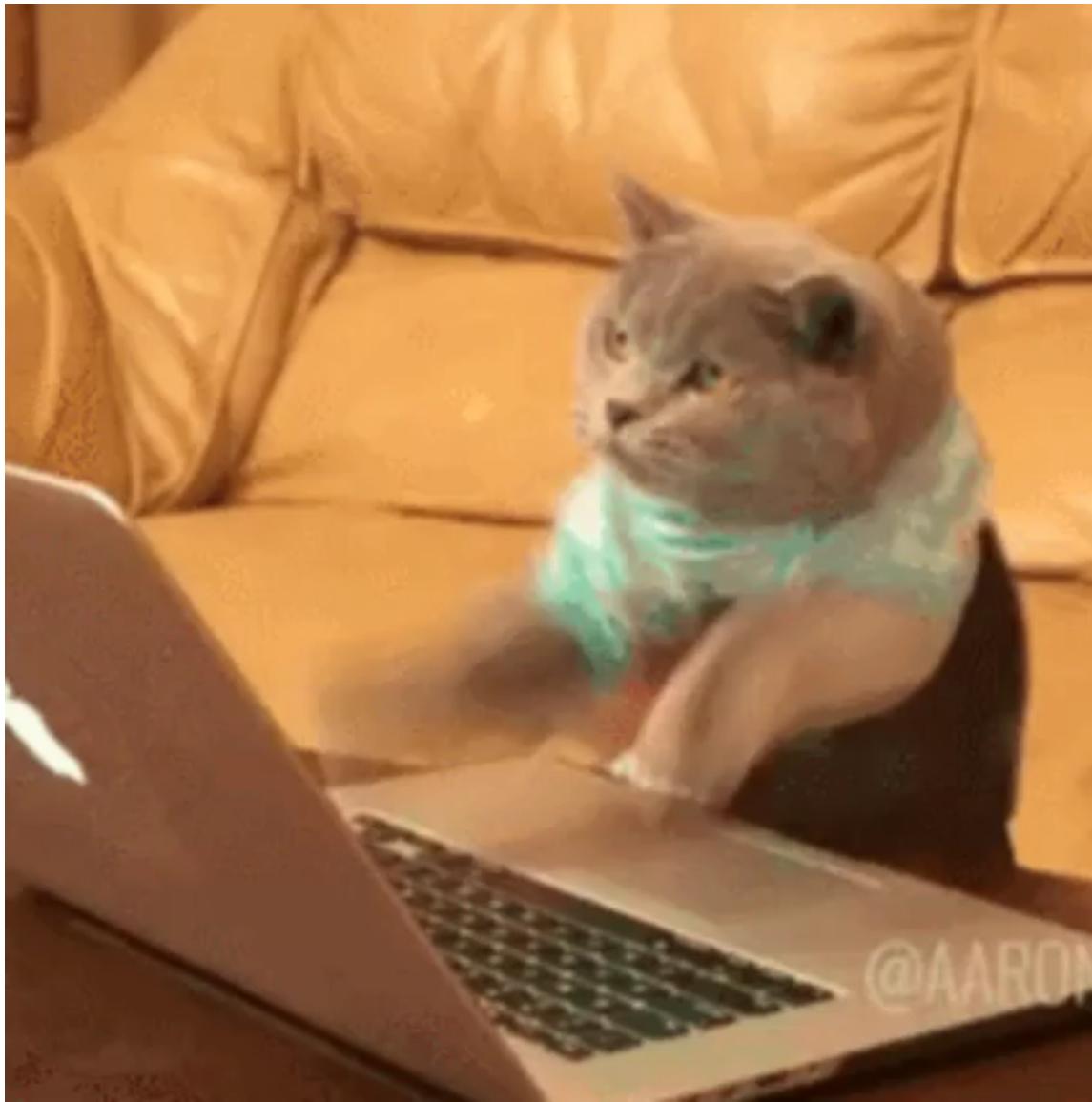
When to Automate?

...IN YOU WORK ON MAKING A ROUTINE ...
BEFORE YOU'RE SPENDING MORE TIME THAN YOU
(ACROSS FIVE YEARS)

		HOW OFTEN YOU DO THE TASK					
		50/DAY	5/DAY	DAILY	WEEKLY	MONTHLY	YEAR
1 SECOND	1 DAY	2 HOURS	30 MINUTES	4 MINUTES	1 MINUTE	5 SECOND	
5 SECONDS	5 DAYS	12 HOURS	2 HOURS	21 MINUTES	5 MINUTES	25 SECOND	
30 SECONDS	4 WEEKS	3 DAYS	12 HOURS	2 HOURS	30 MINUTES	2 MINUTE	
1 MINUTE	8 WEEKS	6 DAYS	1 DAY	4 HOURS	1 HOUR	5 MINUTE	
5 MINUTES	9 MONTHS	4 WEEKS	6 DAYS	21 HOURS	5 HOURS	25 MINUTE	
30 MINUTES	6 MONTHS	5 WEEKS	5 DAYS	1 DAY	2 HOURS	1 HOUR	
1 HOUR	10 MONTHS	2 MONTHS	10 DAYS	2 DAYS	5 HOURS	1 HOUR	
5 HOURS			2 MONTHS	2 WEEKS	1 MONTH	5 HOURS	
DAY						8 WEEKS	

Automate it!

		HOW OFTEN YOU DO THE TASK					
		50/DAY	5/DAY	DAILY	WEEKLY	MONTHLY	YEARLY
HOW MUCH TIME YOU SHAVE OFF	1 SECOND	1 DAY	2 HOURS	30 MINUTES	4 MINUTES	1 MINUTE	5 SECONDS
	5 SECONDS	5 DAYS	12 HOURS	2 HOURS	21 MINUTES	5 MINUTES	25 SECONDS
	30 SECONDS	4 WEEKS	3 DAYS	12 HOURS	2 HOURS	30 MINUTES	2 MINUTES
	1 MINUTE	8 WEEKS	6 DAYS	1 DAY	4 HOURS	1 HOUR	5 MINUTES
	5 MINUTES	9 MONTHS	4 WEEKS	6 DAYS	21 HOURS	5 HOURS	25 MINUTES
	30 MINUTES		6 MONTHS	5 WEEKS	5 DAYS	1 DAY	2 HOURS
	1 HOUR		10 MONTHS	2 MONTHS	10 DAYS	2 DAYS	5 HOURS
	6 HOURS			2 MONTHS		2 WEEKS	1 DAY
	1 DAY					8 WEEKS	5 DAYS



There is a limit to our speed



THOSE WHO DON'T
AUTOMATE ARE DOOMED
TO REPEAT THEMSELVES

PowerShell

Connector of the Hybrid Cloud

From **ANY** client

Manage **ANY** server

Running in **ANY** cloud*

*Or on-premises using **ANY** hypervisor

And **ANY** storage



**THOSE WHO DON'T
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The screenshot shows the homepage of the Rubrik build website. The header features a navigation bar with links for "SDKs", "TOOLING INTEGRATIONS", "USE CASES", and "API DOCUMENTATION". The main title "Build the Future of Cloud Data Management" is prominently displayed. Below the title, there are three main sections: "Software Development Kits", "Tooling Integrations", and "Use Cases".

- Software Development Kits**: Includes links for Go, PowerShell, and Python.
- Tooling Integrations**: Includes links for Ansible, VMware vRealize, and Terraform.
- Use Cases**: Includes links for Backup Validation with PowerShell, Monitor Rubrik with Splunk, and Provision and Protect with vRealize.



Session Agenda



Intro to
PowerShell



Advanced
Functions



Security



Performance



Remoting



Intro to PowerShell



PowerShell



Released in 2006,
development since
2001



PowerShell

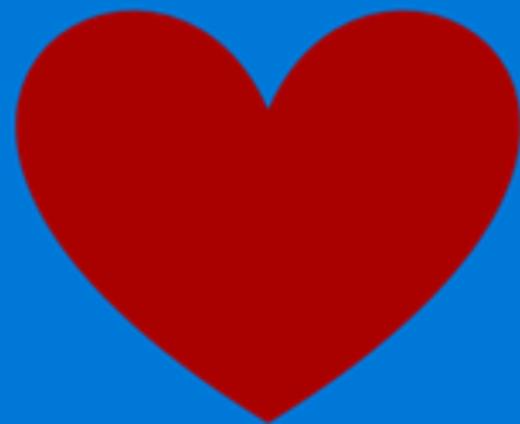


Open sourced since
2016



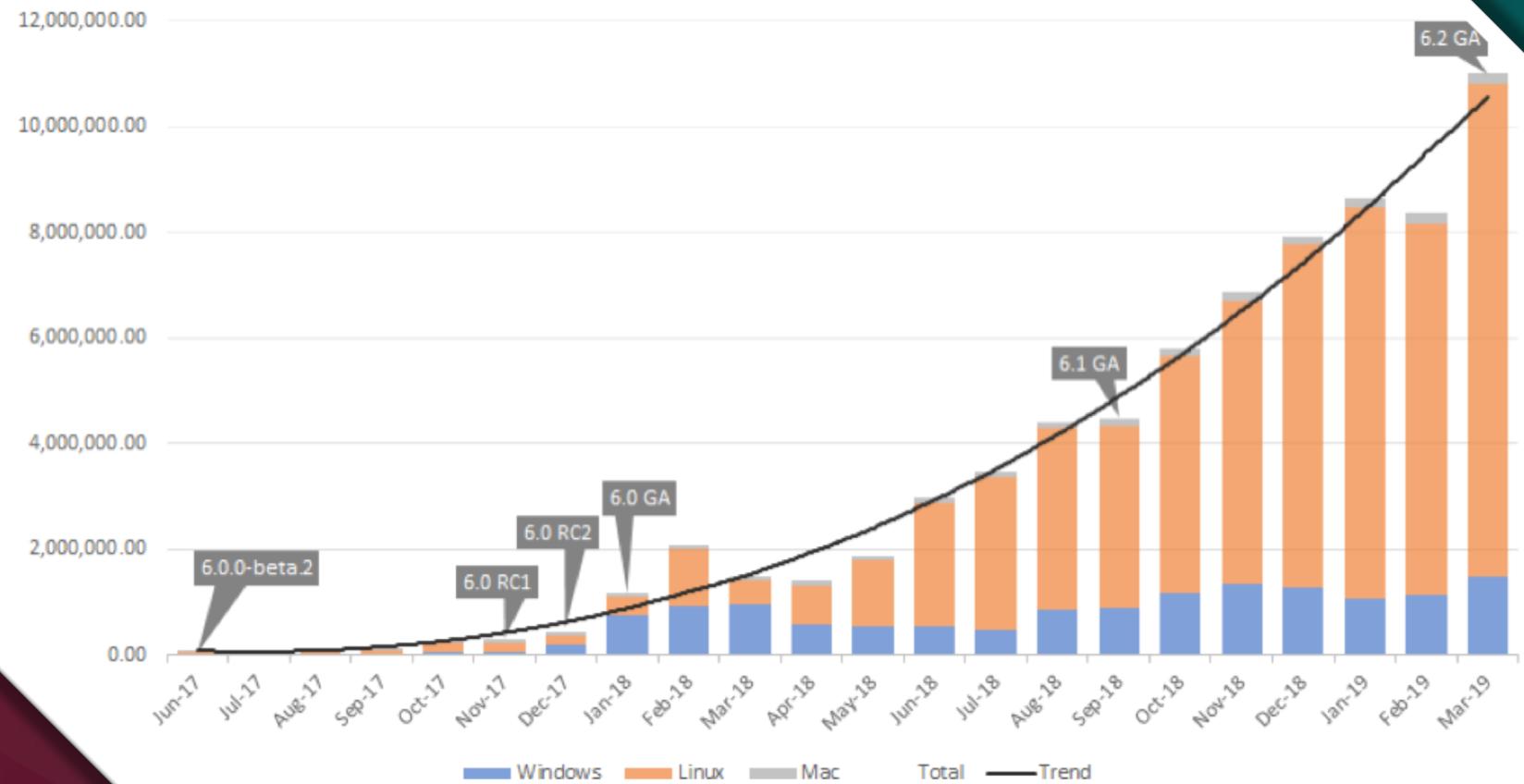
Current version 6.2.0

Microsoft





PowerShell Startups





The Next Release of PowerShell – PowerShell 7

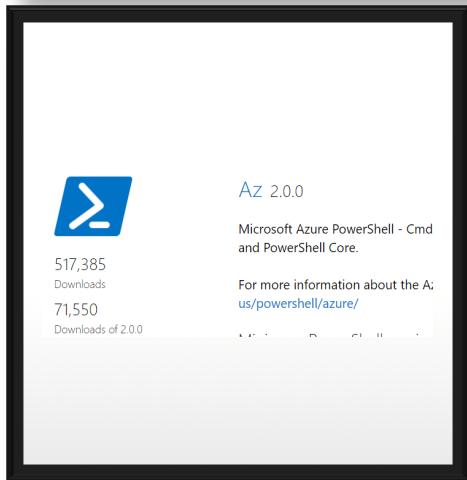
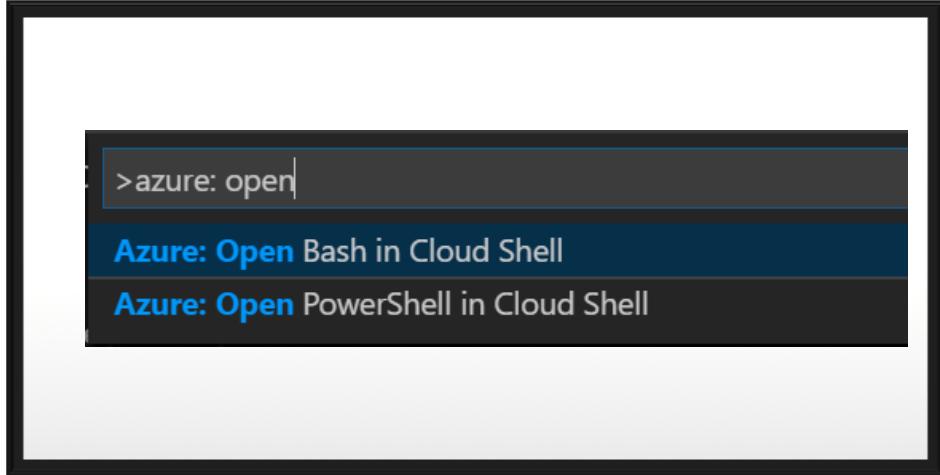


Steve

April 5th, 2019



“Development on the ISE has stopped, all future development efforts will be for VSCode”

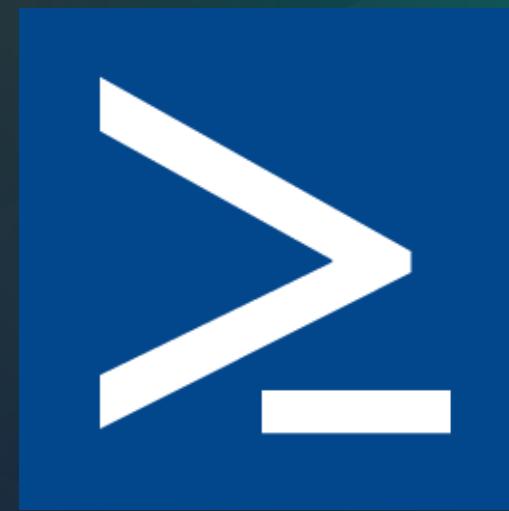




Security



PowerShell and Malware





PowerShell and Malware



AUTOMATE ATTACKS



AVAILABLE BY DEFAULT
ON MODERN OS



ACCESS TO .NET



CROSS-PLATFORM



CAN EXECUTE C#



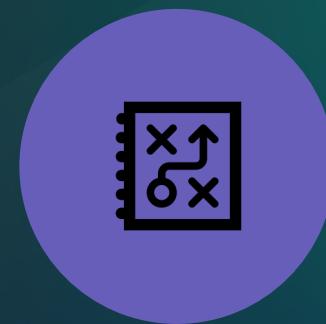
PowerShell Logging



TRANSCRIPTION
LOGGING



MODULE LOGGING



SCRIPTBLOCK
LOGGING



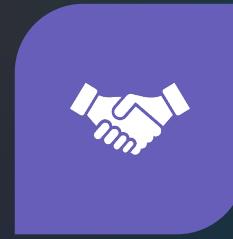
Configure PowerShell Logging



CMDLETS



DSC



GPO



REGISTRY
SETTING

DEMO



Configure PowerShell Logging



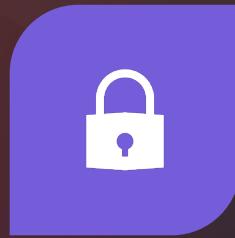
Remoting



PowerShell Remoting



WINRM OR SSH



SECURE
ENDPOINTS



CROSS-
PLATFORM



CONFIGURABLE



Just Enough Administration



SECURE
POWERSHELL



REDUCE ADMINS



USES POWERSHELL
LOGGING

Example of JEA

Azure Stack: an extension of Azure



Integrate and manage

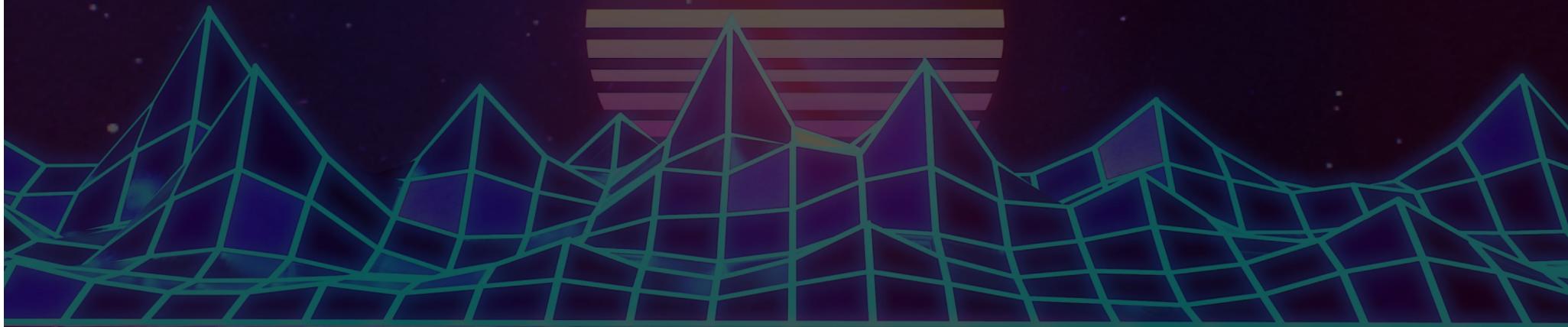


Meet every regulatory requirement



Cloud application model on-premises

DemO



Create a JEA Configuration



Advanced Functions



Write clear code

USE THE
SNIPPETS

CHECK THE
SUGGESTIONS IN
VSCODE



Advanced Functions

COMMON PARAMETERS

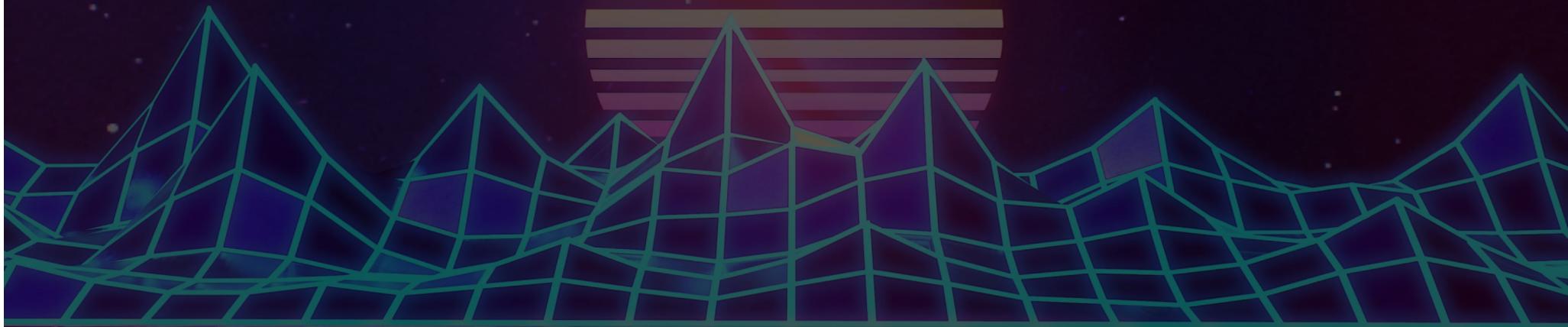
CMDLETBINDING

ERROR HANDLING

PARAM-BLOCK

PARAMETER SETS

DEMO



Build Advanced Functions



Performance



Max Speed



Performance Considerations

EXECUTION SPEED

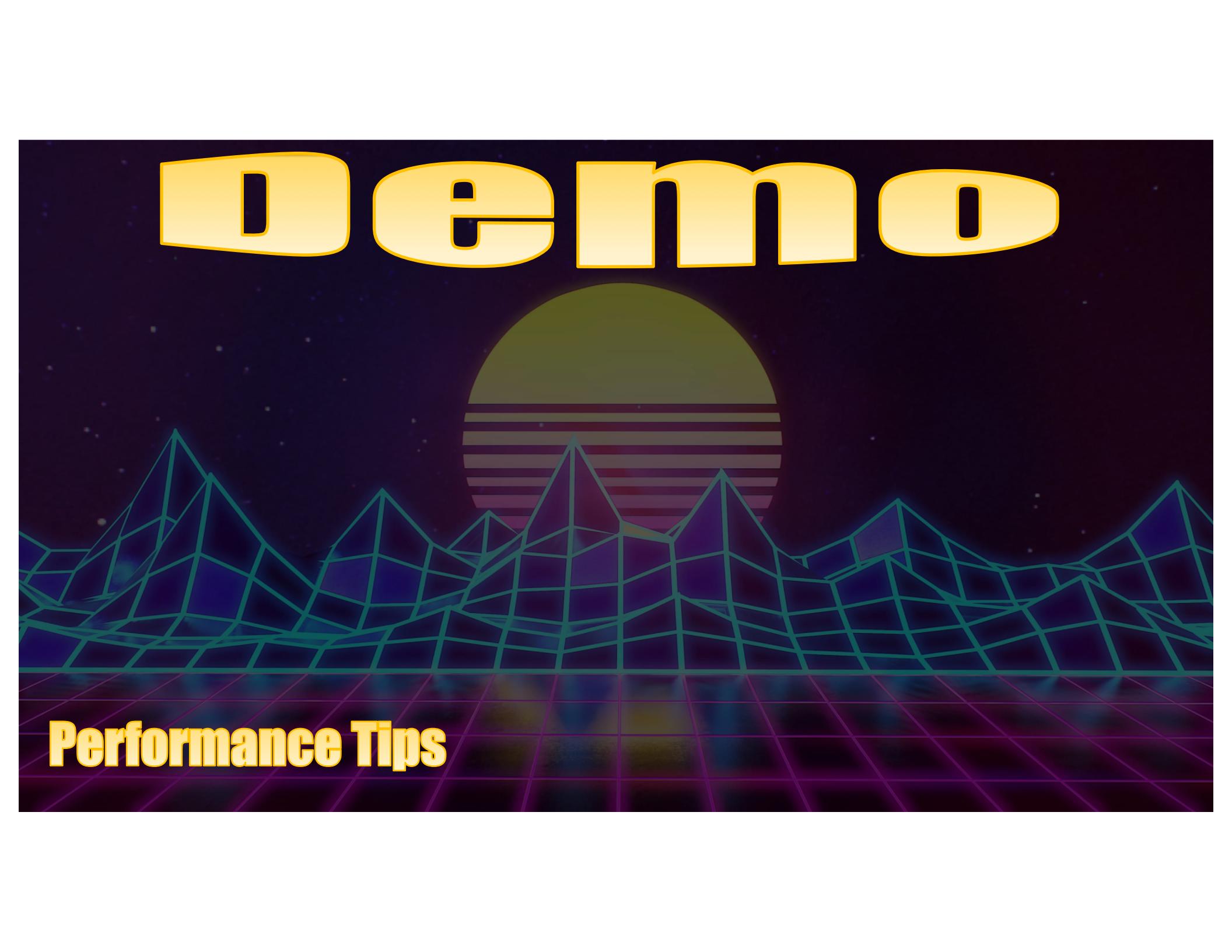
AMOUNT OF CODE

COMPLEXITY OF CODE

CPU LOAD

MEMORY LOAD

Dem^o



Performance Tips



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Questions?

