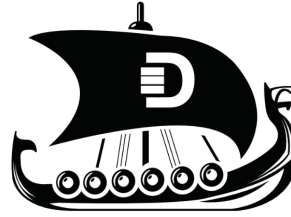


PRAGUE POWER CONFERENCE 2023

# **Power Up Your Power BI: Unlock the Magic of Automation with PowerShell and become a data wizard!**

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WHAT IS

# **PowerShell**

PowerShell is a task automation and configuration management program from Microsoft, consisting of a command-line shell and the associated scripting language.

It is particularly useful for automating repetitive tasks or managing complex systems.

WHAT IS

## **Power BI**

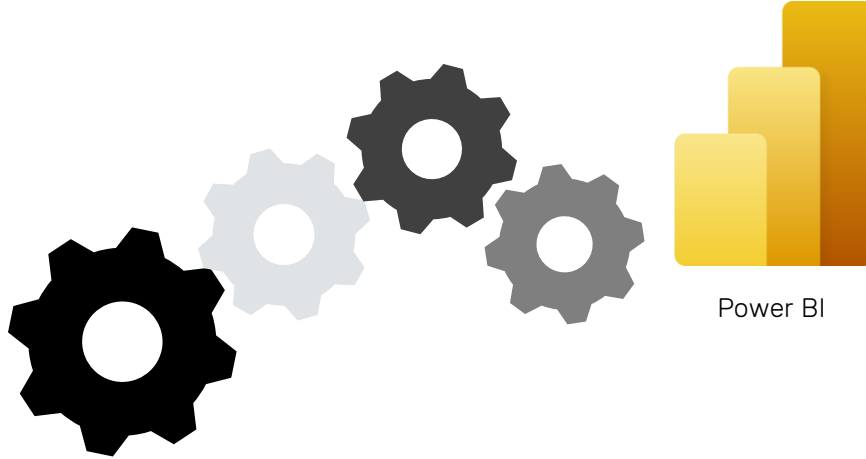
Power BI is a popular data visualization and business intelligence tool that can be used to create interactive reports, dashboards, and visualizations.

WHY

# PowerShell + Power BI



PowerShell



Power BI



WHAT IS

## **Power BI cmdlet**

Small, specialized commands that are already defined in the Power BI module/package for PowerShell, which we have to install in PowerShell.

Typically structured as verb-noun pairs, such as "Get-Item" or "New-Item".



HOW

## Key cmdlets

`Get-PowerBIWorkspace` #Get a list of all the workspaces

`New-PowerBIWorkspace -name` #Create a new workspace

`Get-PowerBIReport` #Get a list of all the reports

`New-PowerBIReport -path -name -workspace` #Upload a report

`Get-PowerBIDataset` #Get a list of all the datasets

`Add-PowerBIWorkspaceUser` #Adds users to a workspace

And [more](#).



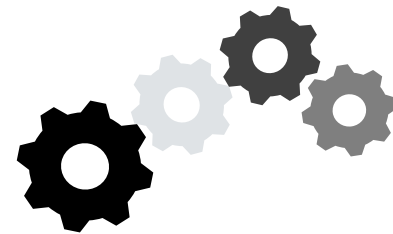
WHAT IS

## **Power BI REST API**

The Power BI API is a REST-based API that allows you to access and manipulate data in Power BI.

It is designed to be used with any programming language that can make HTTP requests, including PowerShell.





HOW

## Power BI REST API

```
Invoke-PowerBIRestMethod -Method GET -Url  
("datasets/"+dataset.id+"/parameters")  
#Get a list of the parameters of a dataset in workspace
```

```
Invoke-PowerBIRestMethod -Method POST -Url  
("groups/"+workspace.id+"/datasets/"+dataset.id+"/  
refreshes")  
#Trigger a refresh of a specific dataset in workspace
```

And more.

DEEP STUFF

## Advanced topics: if statement

```
if (Get-PowerBIWorkspace -name "Demo") {  
    Write-Host "Workspace already exists"  
}  
else {  
    New-PowerBIWorkspace -Name "Demo"  
}
```

DEEP STUFF

## Advanced topics: foreach loop

```
foreach ($company in $CompanyList) {  
    New-PowerBIWorkspace -Name $company  
}
```

DEEP STUFF

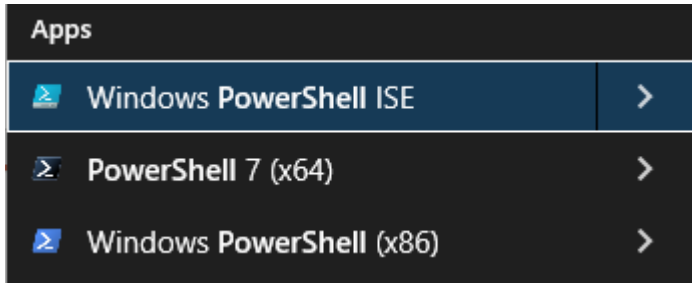
## Advanced topics: pipe

Get-PowerBIWorkspace | where-object name  
-like "Demo\*"

WHERE

## The environment

- PowerShell ISE



- Visual Studio Code – with GitHub Copilot

# LET'S HEAD OVER TO THE Demo

```
#Let's get cracking!
#Connect to the PowerBI service
#Login to PowerBI
Login-PowerBI

#Get a List of all the workspaces
Get-PowerBIWorkspace
$workspaces = Get-PowerBIWorkspace
$workspaces

#Make a workspace with the name of the company
$tempcompany = "Demo New Stars of Data"
New-PowerBIWorkspace -Name $tempcompany
#Verify that the workspace was created
Get-PowerBIWorkspace -name $tempcompany
#Put that in a variable
$checkworkspace=Get-PowerBIWorkspace -name $tempcompany
#Check the name and id of the workspace
$checkworkspace.name
$checkworkspace.id
#Notice the workspace id, it's the same as in Power BI Service

#Great, but what if you want to check if the workspace already exists before creating it?
#You can use the if statement and the Get-PowerBIWorkspace command to check if the workspace already exists
#If the workspace already exists, the workspace will not be created
#If the workspace doesn't exist, the workspace will be created
if (!(Get-PowerBIWorkspace -name $tempcompany)) {
    | New-PowerBIWorkspace -Name $tempcompany
}
else {
    | Write-Host "Workspace already exists"
}
```



Install-Module Fabtools

Find out [more](#).

FINALLY

## Last tips and conclusion

Tips:

- When in doubt, **automate**
- **Keep it simple** and easy to follow
- Use the PBI module and **cmdlets**
- **Test your code** before setting it in production
- **Use source control** to manage your code and version history
- Use the resources around you. **Collaborate** with others.





# Partners

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# Thank you!

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