



**Piotr Rogala**

Automatyzacja po wdrożeniu środowiska?



**Azure  
Summit 2023**

All about cloud technologies **ONLINE**



**30.03.2023**

**Godz. 15:00**

 Future Processing

lingaro

Millennium  
bank



PROMISE  
GRUPA APN PROMISE

Demant

Trek2Summit

mscloud

Etteplan

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# Automatyzacja po wdrożeniu środowiska?



@RogalaPiotr



justcloud



Nordcloud

an IBM Company

# Piotr Rogala

Working in  **Nordcloud**  
an IBM Company

Engineering Practice Lead

Blog  justcloud 

MVP Azure 

Group leader  Microsoft Azure  
User Group Poland



@RogalaPiotr



[linkedin.com/in/rogalapiotr](https://www.linkedin.com/in/rogalapiotr)

# Questions?



JustCloud.pl

O mnie

Blog

Meetup's

Kontakt



## Kontakt

Jeśli chcesz się ze mną skontaktować to możesz to zrobić za pomocą tego formularza lub poprzez [LinkedIn](#), do zobaczenia!

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# Agenda

1. **Project** - Clicked in the portal
2. **Automation** - possibility to automation
3. **Example** - basic project
4. **DevOps** - creation process for clicked project
5. **Summary**





# Project

Clicked in the portal

# Project from portal

1. Project launched from the portal
2. No documentation
3. Customer wants devops
4. Customer wants to manage from code

Why?

- Deadlines
- Lack of knowledge
- Not my problem



# What options do we have?

1. Redeploy?
2. Build scripts for existing environment?
3. Reverse engineering?

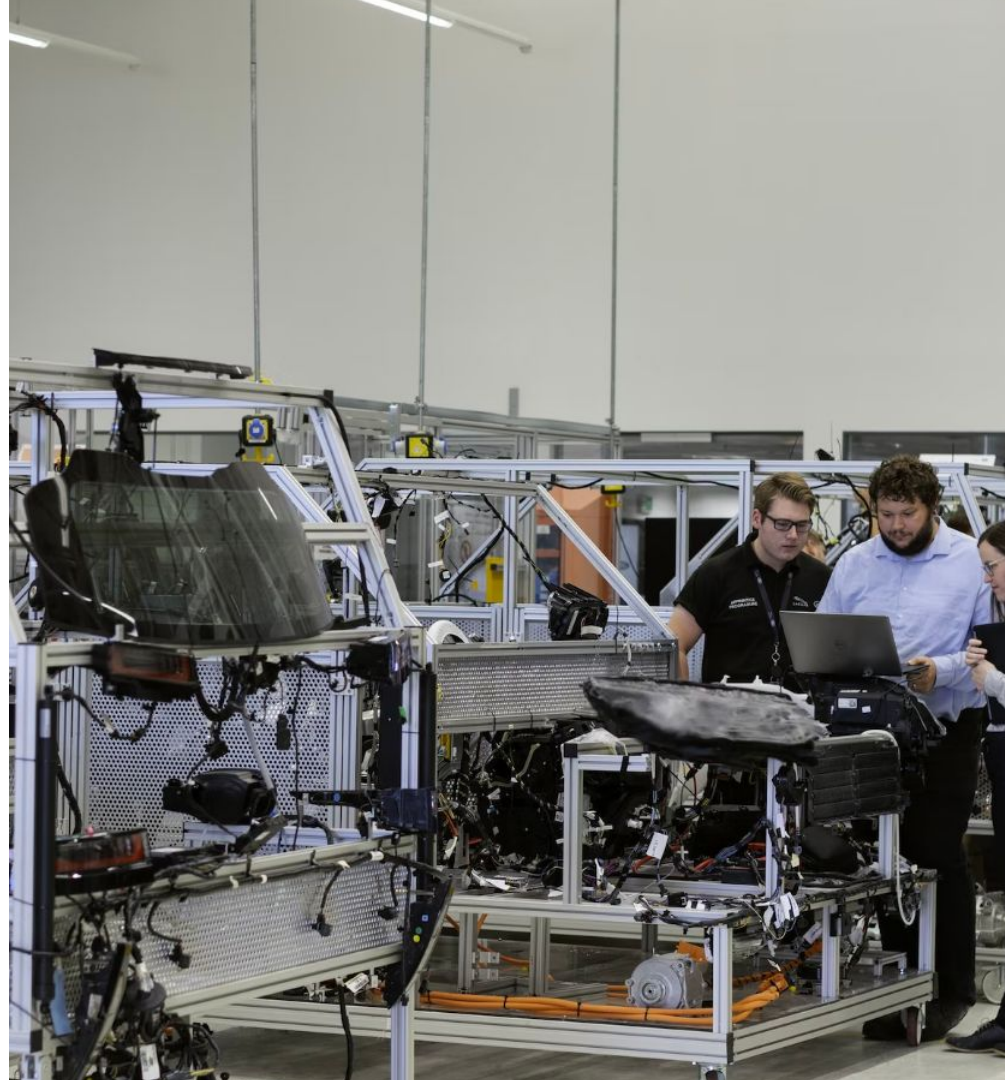
In comment please add your proposal 😊





# Automation

possibility to automation



# Automation

## Time-consuming

1. Redeploy + migration
2. Build scripts for existing environment - always many questions...

## Non-time-consuming

1. Reverse engineering



# Export Templates - feature from Azure Portal





Download



Add to library



Deploy



Visualize template

Overview

Activity log

Access control (IAM)

Tags

Diagnose and solve problems

## Settings

Inbound security rules

Outbound security rules

Network interfaces

Subnets

Properties

Locks

## Monitoring

Alerts

Diagnostic settings

Logs

NSG flow logs

## Automation

Tasks (preview)

Export template

## Help

Effective security rules

Support + Troubleshooting

To export related resources, select the resources from the Resource Group view then select the "Export template" option from the tool bar.

☒ Include parameters 

Template

Parameters

Scripts

```
>> 1 {
2   "$schema": "https://schema.management.azure.com/schemas/2019-04-01/deploymentTemplate.json#",
3   "contentVersion": "1.0.0.0",
4   "parameters": {
5     "networkSecurityGroups_ado1_nsg_name": {
6       "defaultValue": "ado1-nsg",
7       "type": "String"
8     }
9   },
10  "variables": {},
11  "resources": [
12    {
13      "type": "Microsoft.Network/networkSecurityGroups",
14      "apiVersion": "2022-07-01",
15      "name": "[parameters('networkSecurityGroups_ado1_nsg_name')]",
16      "location": "westeurope",
17      "dependsOn": [
18        "[resourceId('Microsoft.Network/networkSecurityGroups/securityRules', parameters
19        ('networkSecurityGroups_ado1_nsg_name'), 'SSH-Home')]"
20      ],
21      "tags": {
22        "Project": "ado1",
23        "Contact": "AzureSummit2023"
24      },
25      "properties": {
26        "securityRules": [
27          {
28            "name": "SSH-Home",
29            "id": "[resourceId('Microsoft.Network/networkSecurityGroups/securityRules', parameters
30            ('networkSecurityGroups_ado1_nsg_name'), 'SSH-Home')]",
31            "type": "Microsoft.Network/networkSecurityGroups/securityRules",
32            "properties": {
33              "description": "SSH",
34              "protocol": "*",
35              "sourcePortRange": "*",
36              "destinationPortRange": "22",
37              "sourceAddressPrefix": "192.168.1.1",
```

 Overview

 Activity log

 Access control (IAM)

 Tags

 Resource visualizer

 Events

## Settings

 Deployments


 Security

 Policies


 Properties

 Locks

## Cost Management

 Cost analysis

 Cost alerts (preview)

 Budgets

 Advisor recommendations

## Monitoring

 Create  Manage view  Delete resource group  Refresh  Export to CSV  Open query |  Assign tags

### ^ Essentials

Subscription ([move](#))  
[AZG-AzurePolandGarage-Sandbox](#)

Subscription ID

Deployments  
[1 Succeeded](#)

Location  
West Europe


Tags ([edit](#))


Contact : AzureSummit2023

### Resources


### Recommendations


Filter for any field...

Type equals all 


Location equals all 

 Add filter

Showing 1 to 7 of 7 records. ☐ Show hidden types 

No grouping 



☐ Name 


Type 

Location 

☐  ado1-nic

Network Interface

West Europe

☐  ado1-nsg


Network security group

West Europe

☐  ado1-pip

Public IP address

West Europe

☐  ado1-vm


Virtual machine

West Europe

☐  ado1-vm-datadisk1


Disk

West Europe

☐  ado1-vm-disk

Disk

West Europe

☐  ado1-vnet

Virtual network

West Europe





# Example & DevOps

basic project

# Example

1. Deployment VM in Azure
2. Export templates from Portal via PS
  - a. Convert to biceps
3. Export templates from VSC
4. Compare
5. Test deployment



[+ Create](#) [Manage view](#)  [Delete resource group](#) [Refresh](#) [Export to CSV](#) [Open query](#) | [Assign tags](#)


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[1 Succeeded](#)


Location  
West Europe

Tags ([edit](#))


Contact : AzureSummit2023


### Resources Recommendations

Type equals **all** 








Location equals **all** 

 Add filter

Showing 1 to 7 of 7 records. ☐ Show hidden types 

No grouping 



<input type="checkbox"/> Name 	Type 	Location 
<input type="checkbox"/>  <a href="#">ado1-nic</a>	Network Interface	West Europe
<input type="checkbox"/>  <a href="#">ado1-nsg</a>	Network security group	West Europe
<input type="checkbox"/>  <a href="#">ado1-pip</a>	Public IP address	West Europe
<input type="checkbox"/>  <a href="#">ado1-vm</a>	Virtual machine	West Europe
<input type="checkbox"/>  <a href="#">ado1-vm-datadisk1</a>	Disk	West Europe
<input type="checkbox"/>  <a href="#">ado1-vm-disk</a>	Disk	West Europe
<input type="checkbox"/>  <a href="#">ado1-vnet</a>	Virtual network	West Europe

WARNING: Decompilation is a best-effort process, as there is no guaranteed mapping from ARM JSON to Bicep. You may need to fix warnings and errors in the generated bicep file(s), or decompilation may fail entirely if an accurate conversion is not possible. If you would like to report any issues or inaccurate conversions, please see <https://github.com/Azure/bicep/issues>.

/Users/piotr/Documents/Git/AzureSummit2023/export-by-powershell/nsg.bicep(3,55) : Warning BCP081: Resource type "Microsoft.Network/networkSecurityGroups@2022-07-01" does not have types available.

/Users/piotr/Documents/Git/AzureSummit2023/export-by-powershell/nsg.bicep(5,13) : Warning no-hardcoded-location: A resource location should not use a hard-coded string or variable value. Please use a parameter value, an expression, or the string 'global'. Found: 'westeurope' [<https://aka.ms/bicep/linter/no-hardcoded-location>]

/Users/piotr/Documents/Git/AzureSummit2023/export-by-powershell/nsg.bicep(14,13) : Error BCP080: The expression is involved in a cycle ("networkSecurityGroups\_ado1\_nsg\_name\_SSH\_Home" -> "networkSecurityGroups\_ado1\_nsg\_name\_resource").

/Users/piotr/Documents/Git/AzureSummit2023/export-by-powershell/nsg.bicep(36,55) : Warning BCP081: Resource type "Microsoft.Network/networkSecurityGroups/securityRules@2022-07-01" does not have types available.

/Users/piotr/Documents/Git/AzureSummit2023/export-by-powershell/nsg.bicep(54,5) : Error BCP080: The expression is involved in a cycle ("networkSecurityGroups\_ado1\_nsg\_name\_resource" -> "networkSecurityGroups\_ado1\_nsg\_name\_SSH\_Home").


Manually run by  Piotr Rogala

Repository and version

 pilot-app

 main  9f4c88c2


Time started and elapsed


 Today at 22:56

 16m 10s


Related

 0 work items

 1 published


 1 approval needs your review before this run can continue to Production - Deployment

**Stages** Jobs

 **Build - Artifacts**

1 job completed

14s

 1 artifact

 **Verification - templates**

1 job completed

7m 13s

 **Production - Deploy...**

**Waiting**

 0/1 checks passed



# Summary

- Possible to do...
- In organization - large scale of resources deployed and a simple process to implement better practices
- OFC - This is not the best solution
- Always start with the code



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Q&A

