



#GlobalAzure  
#GlobalAzureMilano

# Automating Azure Governance with Azure Policies

Alessandro Melchiori  
CODICEPLASTICO

Once upon a time, before cloud....

- bread
- Tomatoes
- Cucumber
- Berries
- Watermelon
- Milk
- Cheese
- oil
- Parsley
- Fennel
- Mineral water
- Potatoes
- wheat
- Melon
- Meat
- Bacon





A VM, please





In the cloud era...

Tea

Breakfast

Breakfast

PRICES DROPPED

PRICES DROPPED  
Was \$4.29  
\$3.50

Bushells  
LABEL

LOW PRICE ALWAYS  
\$11


LOW PRICE ALWAYS  
\$4

PRICES DROPPED  
Was \$1.60  
\$1.60

Muesli

LOW PRICE ALWAYS  
\$14



A shopping cart is overflowing with a wide variety of groceries, including fresh fruits like apples, oranges, and grapes, vegetables like broccoli and leafy greens, breads, and packaged goods. The cart is positioned in a well-lit supermarket aisle with shelves of products on either side. A black speech bubble with white text is overlaid on the top right of the image.

...it's easy to organize...a chaos infrastructure



A close-up photograph of a person's hands on the handlebars of a bicycle. The person is wearing a white, long-sleeved shirt with a subtle pattern. The bicycle has silver handlebars and white grips with a decorative brown pattern. A woven basket is attached to the front of the bicycle, filled with fresh produce. The basket contains a whole avocado, a head of green leafy lettuce, a bunch of green herbs (possibly basil), a bunch of green leafy vegetables (possibly parsley or cilantro), and a red bell pepper. The basket is decorated with a teal lace-like fabric at the bottom. The background is a blurred green lawn, suggesting an outdoor setting. A dark grey banner with white text is overlaid on the upper left portion of the image.

We need some rules



We need some ~~rules~~ policies

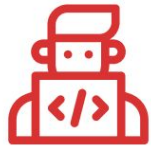




# Path to Policy Adoption







**USERS**

?	
TYPE	Web
LOCATION	Germany
SKU	Premium





**USERS**



TYPE	Web
LOCATION	Germany
SKU	Premium



1 REQUEST ✓

2 PERMISSION







**USERS**



TYPE	Web
LOCATION	Germany
SKU	Premium



1 REQUEST ✓

2 PERMISSION ✓





USERS



TYPE	Web
LOCATION	Germany
SKU	Premium



TYPE	Web
LOCATION	Germany
SKU	Premium

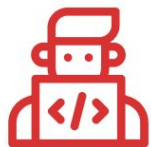


1 REQUEST ✓

2 PERMISSION ✓







**USERS**



TYPE

Web

LOCATION

Germany

SKU

Premium



1

REQUEST

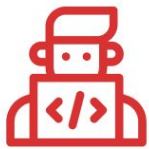
2

PERMISSION

3

POLICY





**USERS**



TYPE	Web
LOCATION	Germany
SKU	Premium

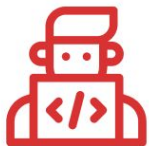
1 REQUEST ✓

2 PERMISSION

3 POLICY







**USERS**



TYPE	Web
LOCATION	Germany
SKU	Premium

1 REQUEST ✓

2 PERMISSION ✓

3 POLICY





USERS

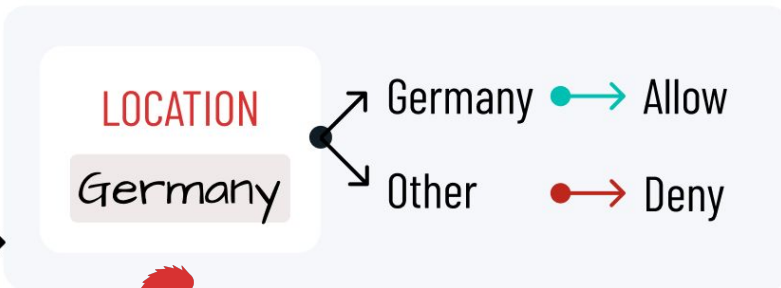


TYPE	Web
LOCATION	Germany
SKU	Premium

1 REQUEST ✓

2 PERMISSION ✓

3 POLICY



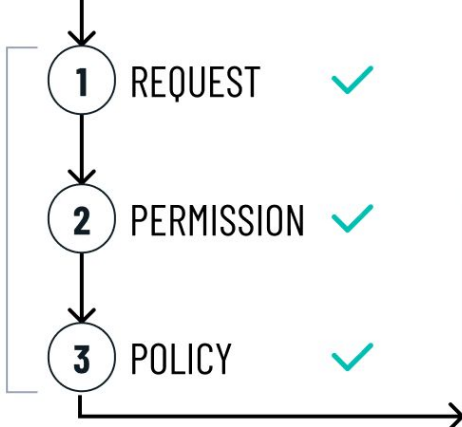




USERS

?	
TYPE	Web
LOCATION	Germany
SKU	Premium

?	
TYPE	Web
LOCATION	Germany
SKU	Premium





USERS

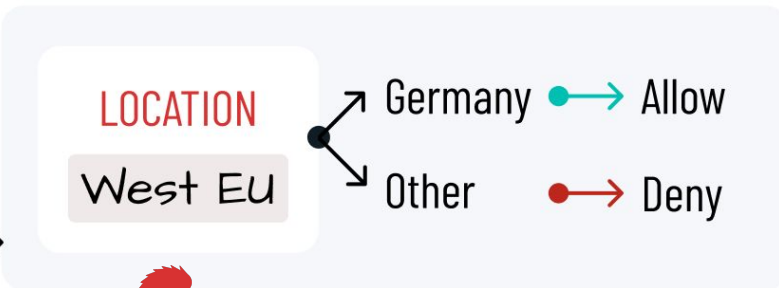


TYPE	Web
LOCATION	West EU
SKU	Premium

1 REQUEST ✓

2 PERMISSION ✓

3 POLICY





USERS

?	
TYPE	Web
LOCATION	West EU
SKU	Premium

- 1 REQUEST ✓
- 2 PERMISSION ✓
- 3 POLICY ✗



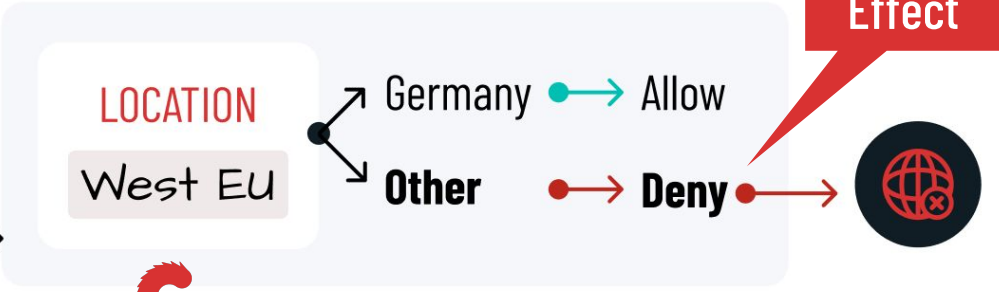




USERS

Request Attributes	
TYPE	Web
LOCATION	West EU
SKU	Premium

- 1 REQUEST ✓
- 2 PERMISSION ✓
- 3 POLICY ✗





# Policy Definition



# Policy definition **building blocks**



**Properties**





# Policy definition **building blocks**



**Properties**



**Location**



# Policy definition **building blocks**



**Properties**



**Location**



**Parameters**



# Policy definition **building blocks**



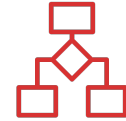
**Properties**



**Location**



**Parameters**



**Rules**





# Policy definition **building blocks**



**Properties**



**Location**



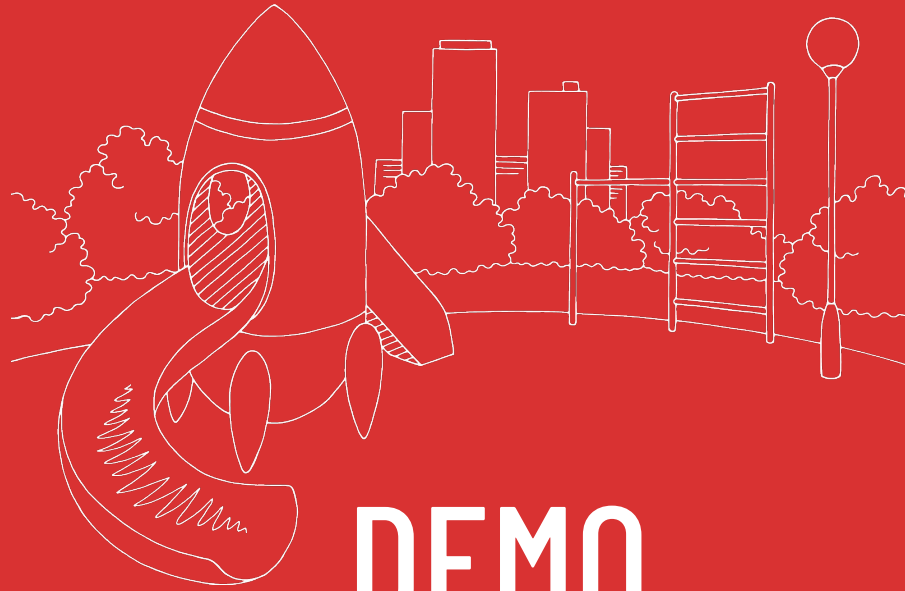
**Parameters**



**Rules**

- IF CONDITIONS
- THEN EFFECT





**DEMO**





# Azure Policy vs. RBAC



RBAC focuses on **user** actions





A hand is shown holding a stack of orange cards with a white question mark on them. The hand is positioned over a board game, which is a Monopoly-style board with green and brown squares. A silver penguin piece is standing on one of the squares. To the left of the board, there are two white dice. The background is blurred, showing a wooden table and some papers.

Azure Policy focuses on **resource** properties

# Best Practices



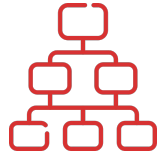
Start with an **Audit**  
or `AuditIfNotExist`  
Effect



# Best Practices



Start with an **Audit**  
or `AuditIfNotExist`  
Effect



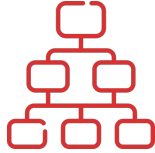
Consider  
Organizational  
**Hierarchies**



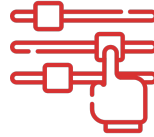
# Best Practices



Start with an **Audit**  
or AuditIfNotExist  
Effect



Consider  
Organizational  
**Hierarchies**



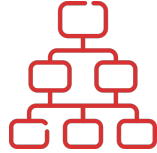
Use  
**Parameters**



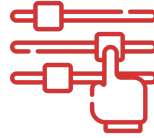
# Best Practices



Start with an **Audit**  
or AuditIfNotExist  
Effect



Consider  
Organizational  
**Hierarchies**



Use  
**Parameters**



Create and Assign  
**Initiative**  
**Definitions**

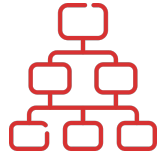




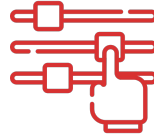
# Best Practices



Start with an **Audit**  
or AuditIfNotExist  
Effect



Consider  
Organizational  
**Hierarchies**



Use  
**Parameters**



Create and Assign  
**Initiative**  
**Definitions**



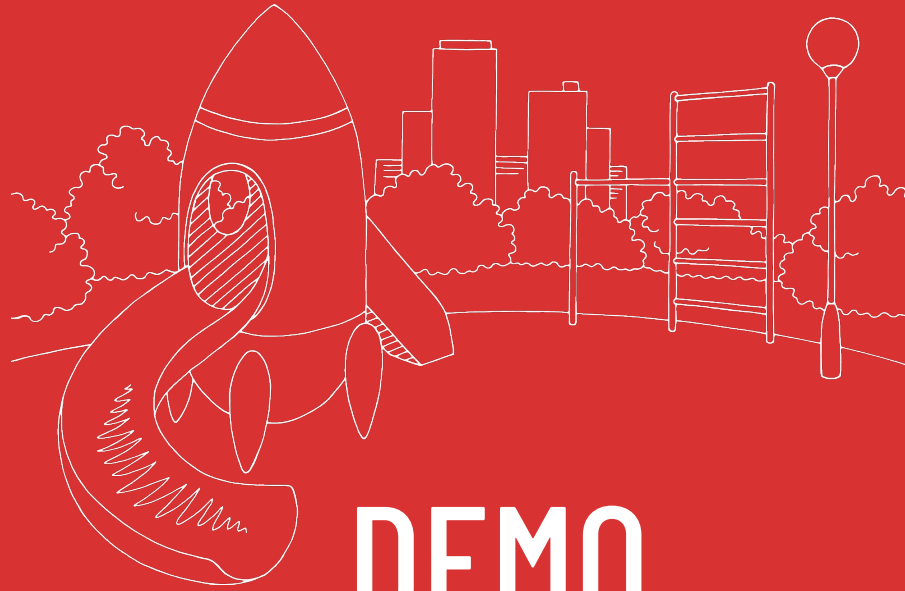
Manage Azure  
Policy resources  
**as code**





# Design Azure Policy as Code Workflows





**DEMO**



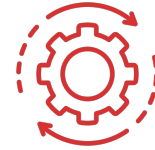
# Vantaggi



Enforce **Rules**  
and **Compliance**



Applying Policies  
at **Scale**



Perform  
**Remediation**





#GlobalAzure  
#GlobalAzureMilano

# GRAZIE!!!

Le slide saranno disponibili sulla pagina  
Global Azure 2024 del sito di Azure Meetup Milano