Keep control over your resources

Technical Governance in Azure

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Agenda

What is Governance

Methods & tools

Zoom into Tags, Templates and Policies

Cost Management by Cloudyn

Q&A

What is governance?

"Governance ensures that policies and strategy are actually implemented, and that required processes are correctly followed. Governance includes defining roles and responsibilities, measuring and reporting, and taking actions to resolve any issues identified."

ITIL Service Strategy

IT Governance Definition

…and what is Azure Governance?

Methods, tools and best practices to

- Organize and structure resources
- Standardize and define resources
- Ensure transparency of resources
- Control access
- Control costs
- Enforce policies

…and what is Azure Governance?

Examples:

- Accounts and departments in the EA portal
- Azure AD accounts/RBAC
- Naming conventions/policies
- Subscription management
- Resource groups
- Resource tags
- Resource templates
- Resource policies

Resource Tags

What are Tags?

Name:Value pairs

Describe, structure, document resources

Can be applied to resources and resource groups

Limitations

Max. tags per resource/resource group: 15

Max. length tag name: 512 chars

Max. length tag value: 256 chars

No inheritance

Example

```
{
  "tags": {
    "department": "IT",
    "owner": "username",
    "costCenter": "12345"
  }
}
```

Demo

ARM Templates

What is JSON?

Java Script Object Notation

Origin: Web application development

Easy to learn, easy to read

Condensed

JSON vs XML

JSON

```
{
    "id": 1,
    "name": "A green door",
    "price": 12.50,
    "tags": ["home", "green"]
}
```

XML

```
<object>
    <id>1</id>
    <name>A green door</name>
    <price>12.50</price>
    <tags>
        <tag>home</tag>
        <tag>green</tag>
    </tags>
</object>
```

Structure

```
{
  "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
  "contentVersion": "1.0.0.0",
  "parameters": {
  },
  "variables": {
  },
  "resources": [
  ],
  "outputs": {
  }
}
```

Input Parameters like T-Shirt size, password etc.

Calculated values like storage account name etc.

Resources like VMs, web apps, SQL databases etc.

Return values, output in deployment
or in parent templates

Basic example

```
{
    "$schema": "https://schema.management.azure.com/schemas/2015-01-01/deploymentTemplate.json#",
    "contentVersion": "1.0.0.0",
    "parameters": {
        "EmptyStorageType": {
            "type": "string",
            "defaultValue": "Standard_LRS",
            "allowedValues": [
                "Standard_LRS"            ]
    }
    "variables": {
        "EmptyStorageName": "[concat('EmptyStorage', uniqueString(resourceGroup().id))]"
    },
    ...
```

Basic example

```
...
    "resources": [
        {
            "name": "[variables('EmptyStorageName')]",
            "type": "Microsoft.Storage/storageAccounts",
            "location": "[resourceGroup().location]",
            "apiVersion": "2015-06-15",
            "dependsOn": [ ],
...
```

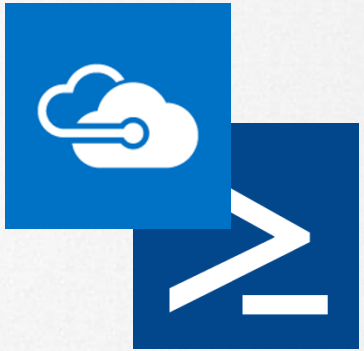
Basic example

```
...
            "tags": {
                "displayName": "EmptyStorage"
            },
            "properties": {
                "accountType": "[parameters('EmptyStorageType')]"
            }
        }
    ],
    "outputs": {
    }
}
```

And now?

How do we get the template into the cloud?

Azure Portal
PowerShell
Azure CLI
Visual Studio
…



Demo

Resource Policies

Policies

Establish and define
Conventions
Frameworks
Cost control

Enforce limitations i.e. for test- and dev environments

RBAC vs. Policies

RBAC focuses on
User activities within a defined scope

- Role model

Policies focus on
Ressource attributes during deployment

- Define general standards

Structure

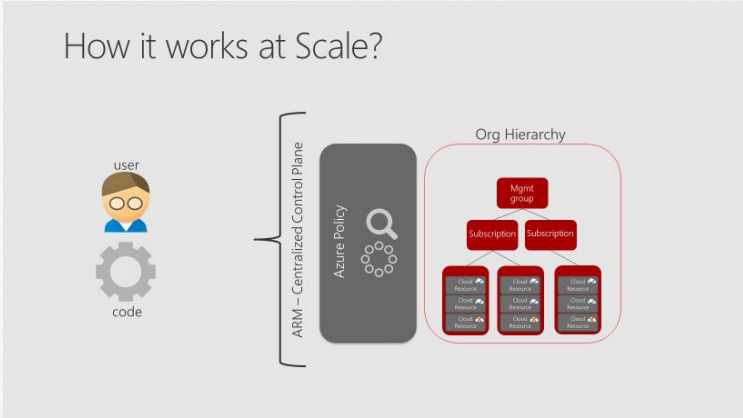
Parameters
Display name
Description
Policy Rule
Logical evaluation
Effect

```
  "parameters": {
    "notAllowedLocations": {
      "type": "array",
      "metadata": {
        "description": "The list of locations that are not allowed when deploying resources",
        "strongType": "location",
        "displayName": "Not allowed locations"
      }
    }

  "displayName": "Not allowed locations",
  "description": "This policy enables you to block locations that your organization can specify when deploying resources.",

    "if": {
      "field": "location",
      "in": "[parameters('notAllowedLocations')]"
    },
    "then": {
      "effect": "deny"
```

Ignite news

NEW

- Bundling assignments into initiatives
- Assign initiative to multiple subscriptions
- Audit policies

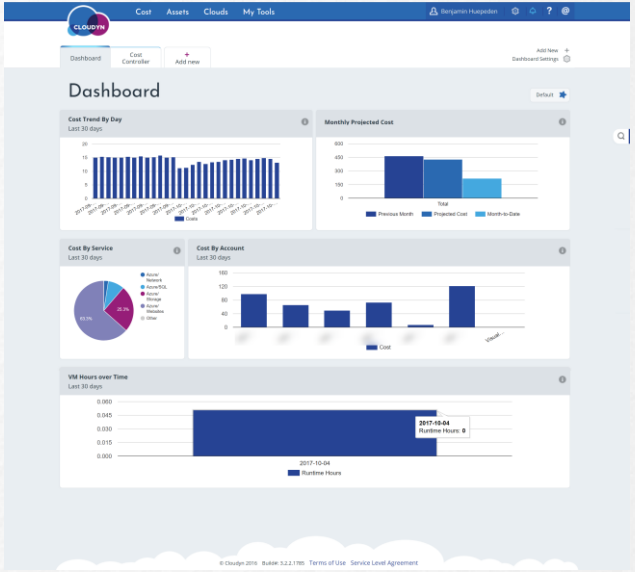


Demo

Cost Management by Cloudyn

Cloudyn

- Various Azure Subscription Types
  - Enterprise Agreement
  - CSP
  - Pay-per-use
- Multi Cloud
  - Azure
  - AWS
  - Google



Demo

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