2023 INTERNET2 TECHNOLOGY exchange

Streamlining Azure Policy Exemptions with Azure Functions

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The situation

- Many languages
- Many DevOps Projects within an ORG
- Many ORGs

The Project

- Provide a shared mechanism for creating Azure Policy exemptions.

Project Toolbox

- Azure DevOps
- Azure Resources
- Programming Languages
- Code Editor

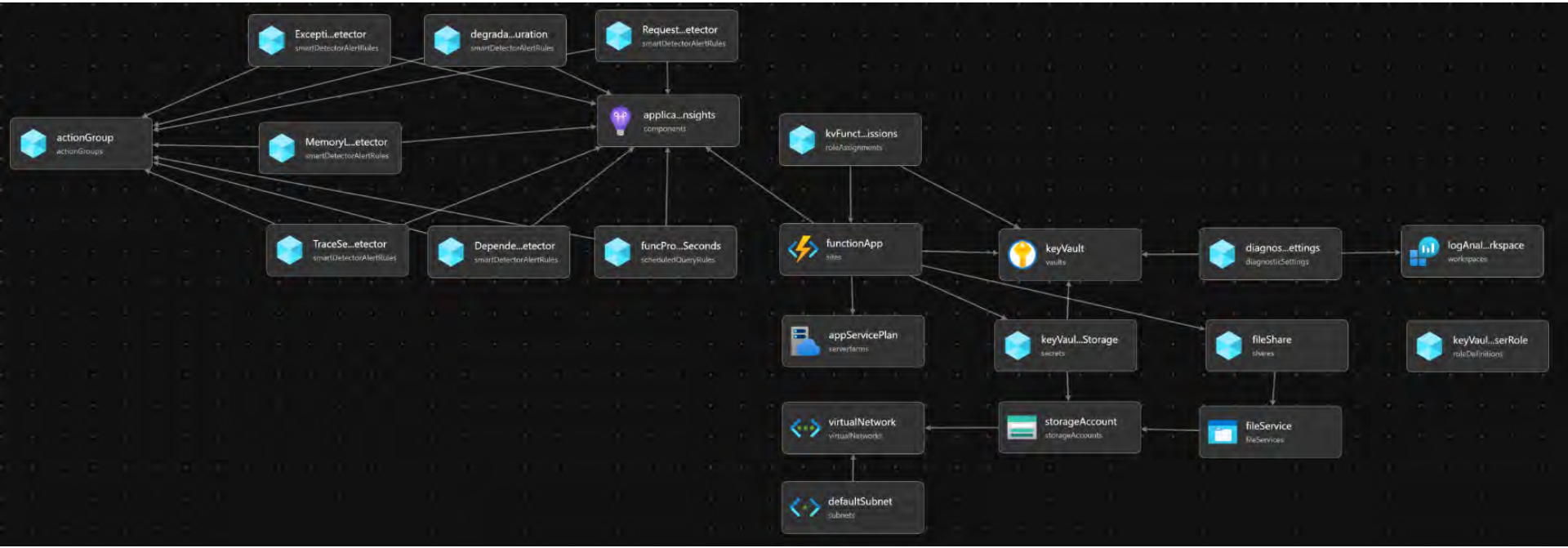
Resource deployment scopes

1. Sub: Creating the resource group
2. Group: Function Resources within a resource group
3. Group: Centrally stored KeyVault Secret (shared services resource gorup)
4. MG: Role assignment

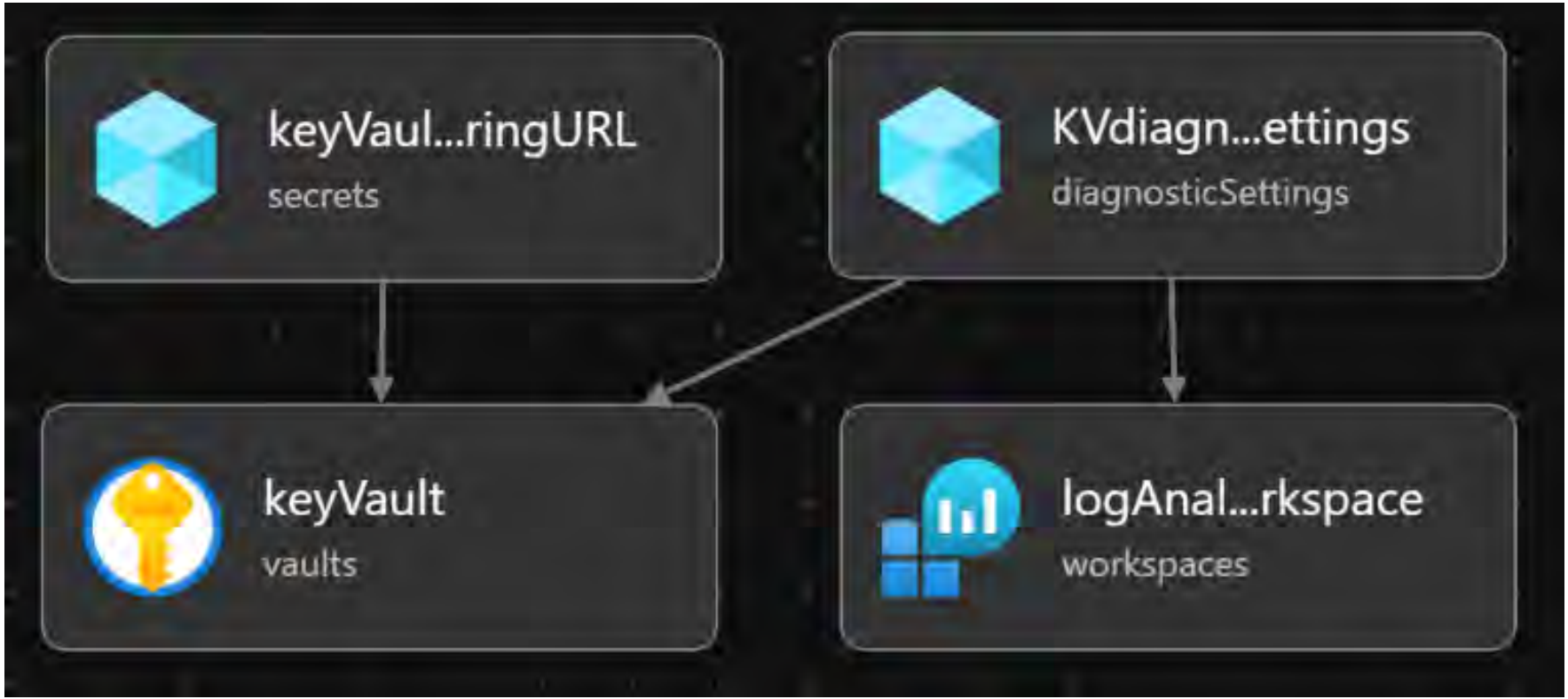
Release Deployment Methodology

1. Plan
2. Review
3. Do
4. Test
5. Eat your own dog food

Exemption Function API Resources



Shared Services Resource Group



IAM Management Group Role

Use Case: Kion Cost Management Exports

EA portal will retire by November 2023. You can view your billing account usage and charge information on the Azure Portal. Learn more.

Grant the Container Permissions

To manage your billing data, your storage container must be enabled for blob storage. This part of the process is done in the Azure Portal.

5. Add the Storage Blob Data Reader Role to the Container

1. In the Azure Portal, navigate to **Cost Management > Exports**.
2. Click the name of your export.
3. Click the link next to **Storage account**.
4. In the left menu, click **Containers**.
5. Click the **Role Assignments** tab.
6. Click **Add**.
7. In the **Role** dropdown, select **Storage Blob Data Reader**.
8. In the **Assign access to** dropdown, select **User, group, or service principal**.
9. In the **Select** dropdown, select your **Kion app registration**.

Demo: Kion Cost Management Exports (~3 minutes)

- Release pipeline inclusion of exemption function
- Actual code to invoke
- Results from release pipeline for an exemption
- Policy exemption in Azure

Creating Azure Policy Exemptions using the Azure Exem

KB0013843
12 views

To ensure the security of your resources, we use Azure Policies to define and enforce policies to meet
you may need to create exemptions for certain policies. In this article, we will discuss the exemption fu
CIS benchmark policy exemptions.

Security Implications

Creating policy exemptions can have security implications. Exemptions should only be created after c
require CAB review (see KB0013947). You should ensure that the exemption is necessary, any mitiga
your compliance requirements. You should also consider the potential impact on the security of your r

Lessons Learned

Azure Resources

- Daily cost is < $0.01
- Redeployment was a pain

DevOps

- Deployment sometimes fails, then works
- AZ deployment what-if is noisy
- Task variables (inline vs script)
- Bicep variables and token replacement
- Classic interface vs pipeline as code

Future Work

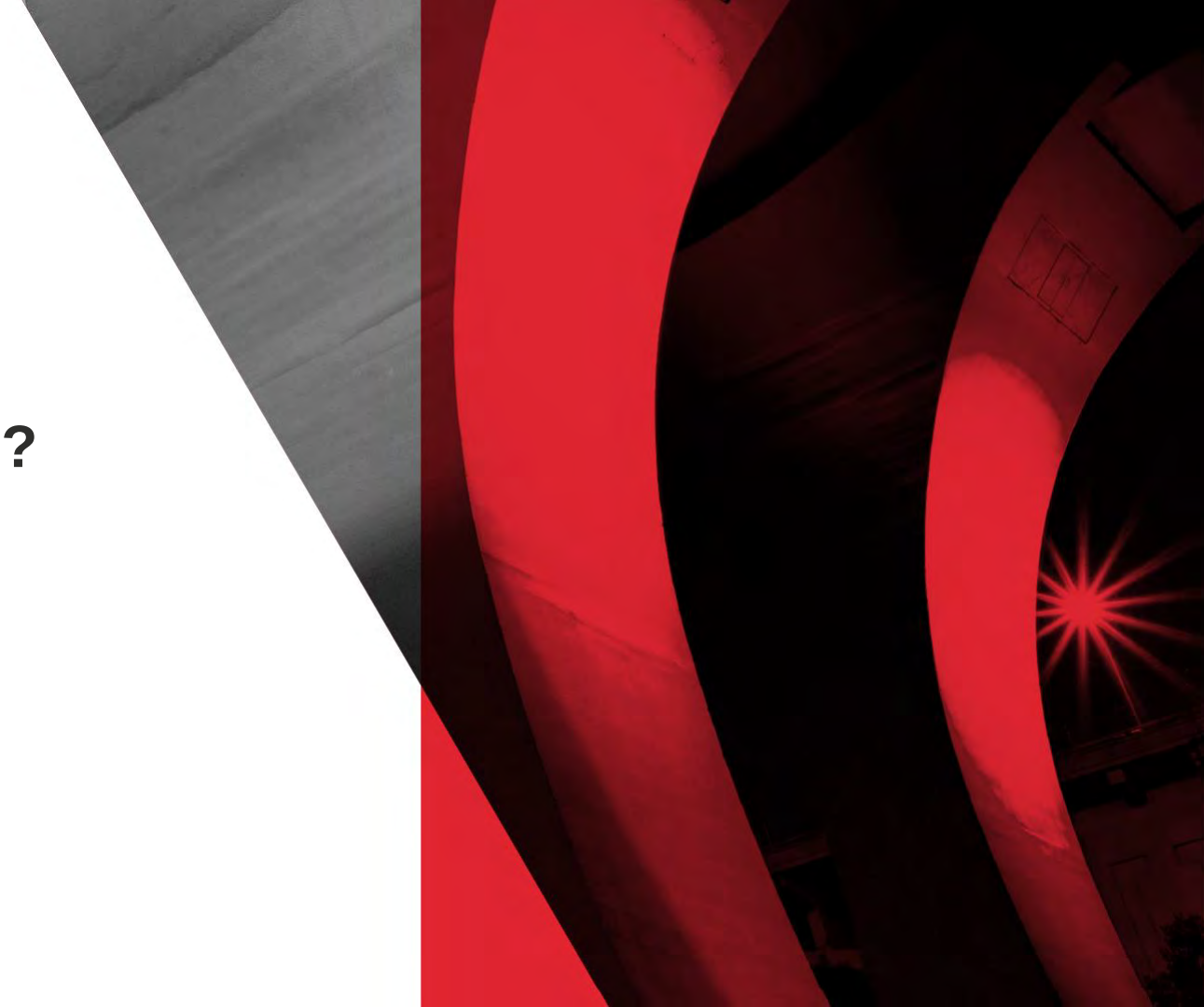
Exemption Governance

- Exemption request documentation
- Exemption attestation process
- Allowable exemptions

DevOps/ Code

- Create exemptions on RGs

QUESTIONS?



THANK YOU

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