Guidance to detect Anomalous activity

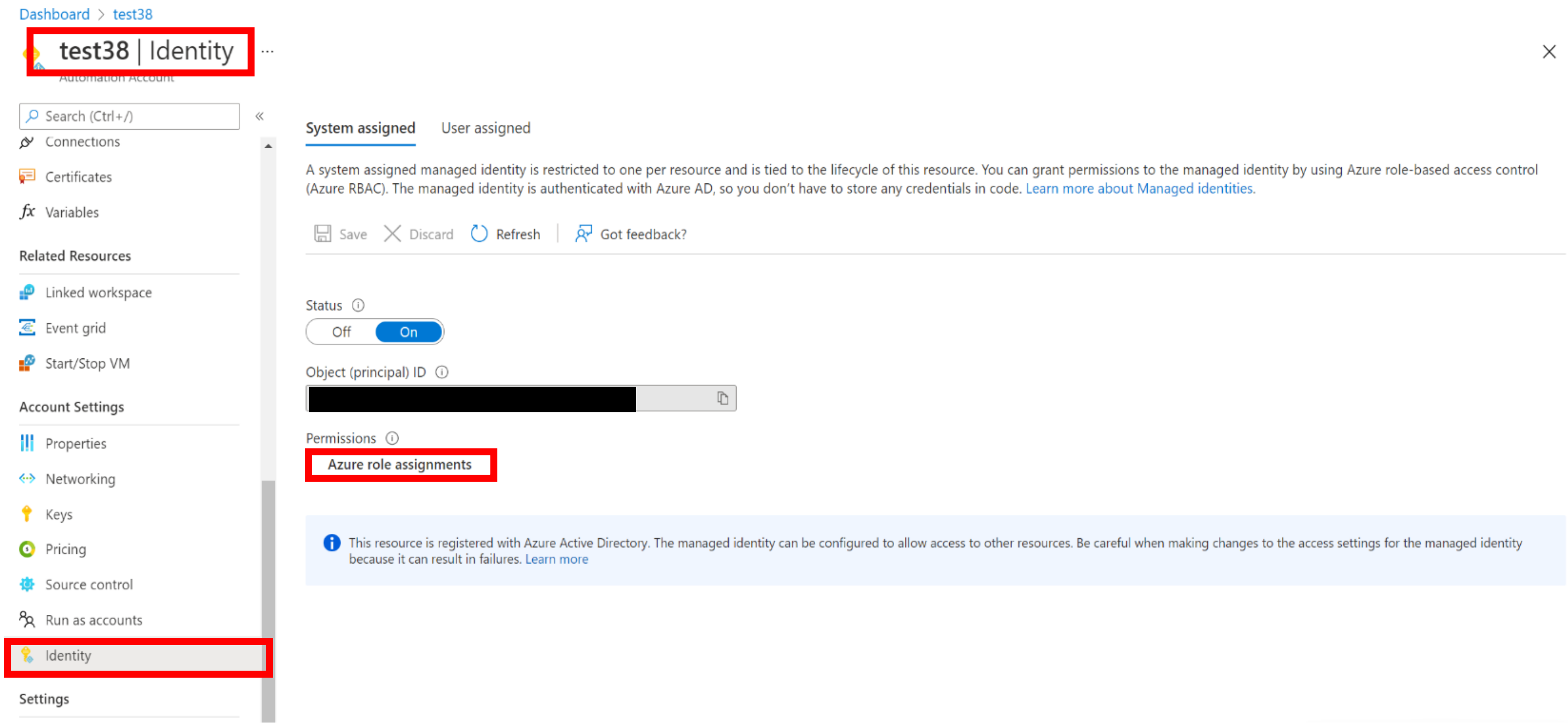
Step 1: Retrieve automation accounts that were exposed

Run the Following query to retrieve a set of automation accounts in your subscription

connect-azaccount
Select-AzSubscription -Subscription <SubscriptionID>
*get-azautomationaccount | where-object {($_.Identity -ne $null -and $_.Location -eq "WestEurope" -and $_.CreationTime -le "2021-10-10T23:59:00")} | fl **

Step 2: For every automation account in step 1, Check resources that had exposure

a) Go to your Automation account in Azure Portal. Navigate to the Identity tab under “Account Settings”. Take note of the Id of your automation account on top left corner (The Id in the example below is ‘test 38’). Then click on the “Azure role assignments”.
[Note the snapshot below is for ‘System Assigned’. The vulnerability extends to ‘User assigned’ as well]



A system assigned managed identity is restricted to one per resource and is tied to the lifecycle of this resource. You can grant permissions to the managed identity by using Azure role-based access control (Azure RBAC). The managed identity is authenticated with Azure AD, so you don't have to store any credentials in code. Learn more about Managed identities.

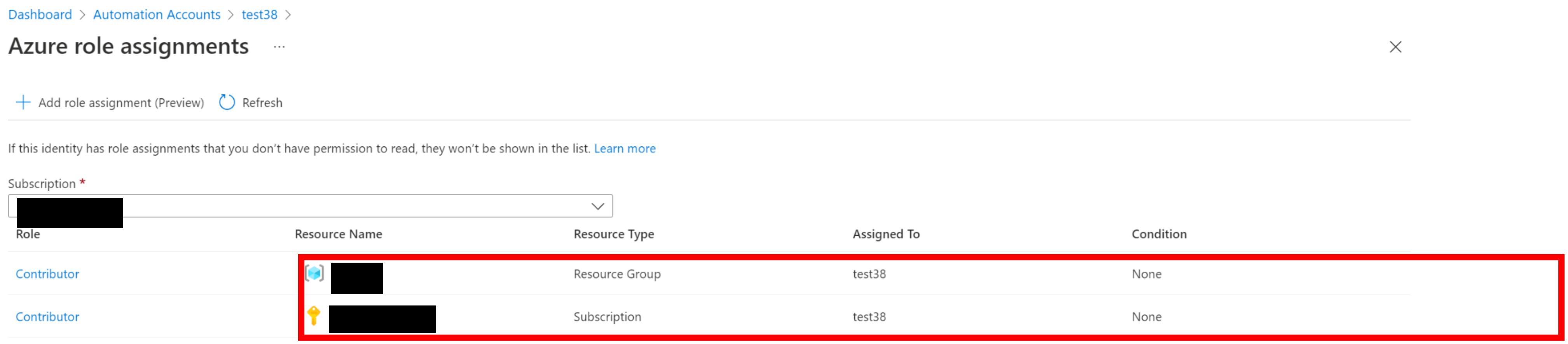
Status: Off | On

Object (principal) ID: [redacted]

Permissions

This resource is registered with Azure Active Directory. The managed identity can be configured to allow access to other resources. Be careful when making changes to the access settings for the managed identity because it can result in failures. Learn more

b) The page will list all Azure resources that are linked to Managed identities.



Dashboard > Automation Accounts > test38 >

Azure role assignments ···

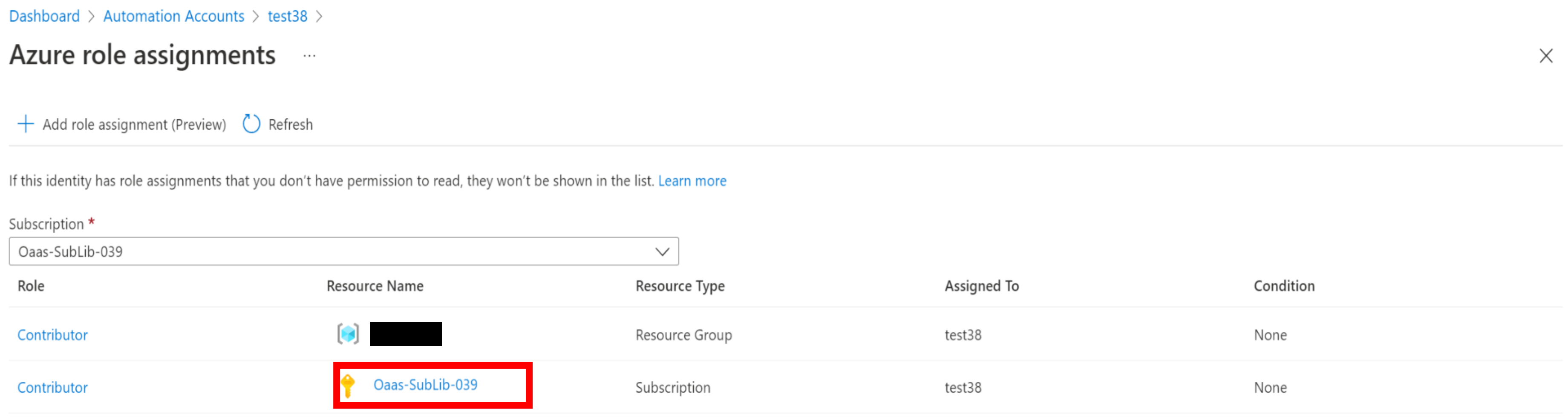
If this identity has role assignments that you don't have permission to read, they won't be shown in the list. Learn more

Subscription *: [redacted]

Role	Resource Name	Resource Type	Assigned To	Condition
Contributor	[redacted]	Resource Group	test38	None
Contributor	[redacted]	Subscription	test38	None

Step 3: Scan Logs for anomalous activity

a) For the previous step (Step 2b), click on the resource to be redirected to the portal page of that resource



Dashboard > Automation Accounts > test38 >

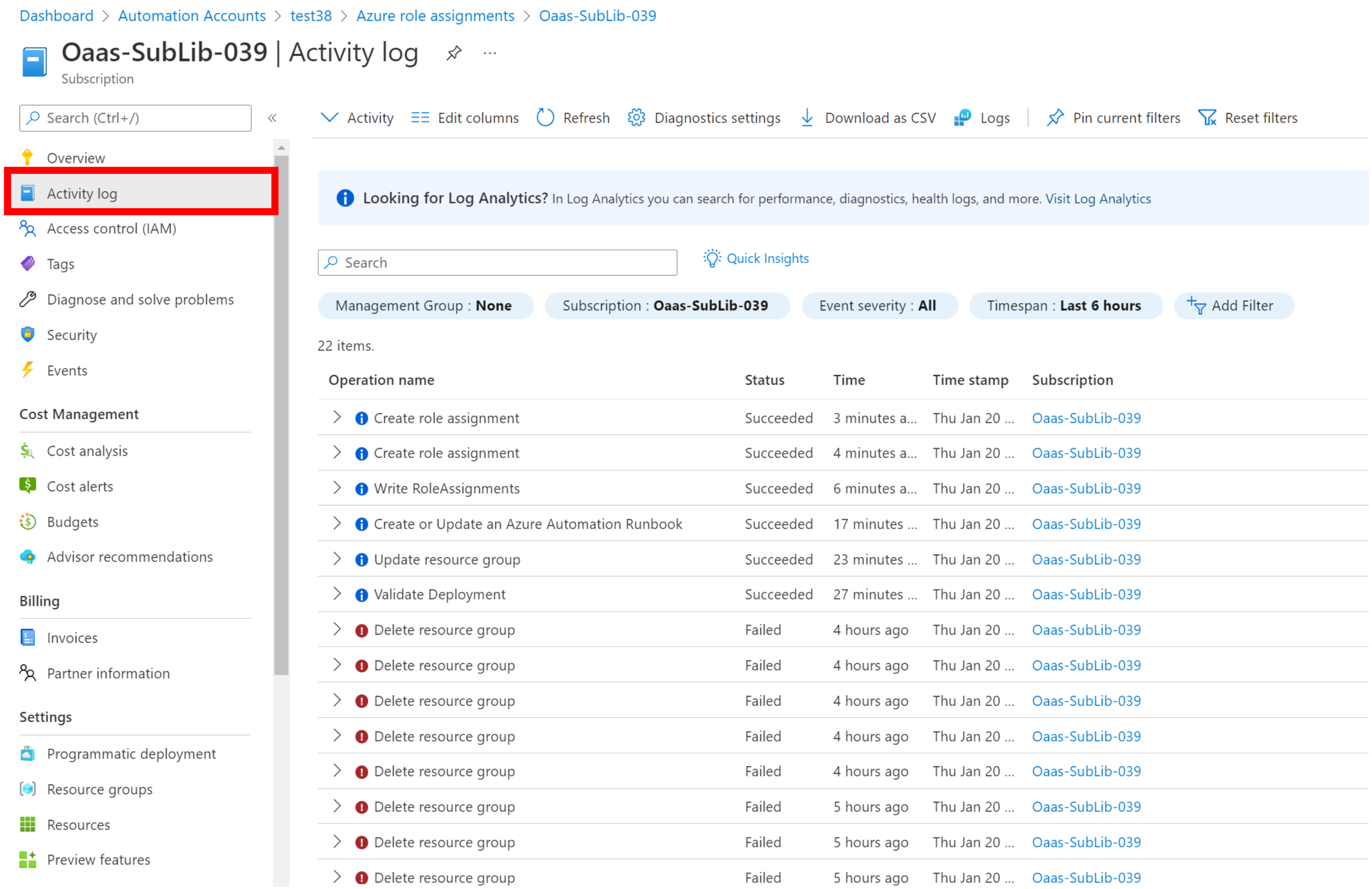
Azure role assignments ···

If this identity has role assignments that you don't have permission to read, they won't be shown in the list. Learn more

Subscription *: Oaas-SubLib-039

Role	Resource Name	Resource Type	Assigned To	Condition
Contributor	[redacted]	Resource Group	test38	None
Contributor	Oaas-SubLib-039	Subscription	test38	None

b) On the resource portal page, navigate to the “Activity logs”



Oaas-SubLib-039 | Activity log

Subscription

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Management Group : **None** Subscription : **Oaas-SubLib-039** Event severity : **All** Timespan : **Last 6 hours**

22 items.

Operation name	Status	Time	Time stamp	Subscription
Create role assignment	Succeeded	3 minutes a...	Thu Jan 20 ...	Oaas-SubLib-039
Create role assignment	Succeeded	4 minutes a...	Thu Jan 20 ...	Oaas-SubLib-039
Write RoleAssignments	Succeeded	6 minutes a...	Thu Jan 20 ...	Oaas-SubLib-039
Create or Update an Azure Automation Runbook	Succeeded	17 minutes ...	Thu Jan 20 ...	Oaas-SubLib-039
Update resource group	Succeeded	23 minutes ...	Thu Jan 20 ...	Oaas-SubLib-039
Validate Deployment	Succeeded	27 minutes ...	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	4 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	4 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	4 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	4 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	4 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	5 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	5 hours ago	Thu Jan 20 ...	Oaas-SubLib-039
Delete resource group	Failed	5 hours ago	Thu Jan 20 ...	Oaas-SubLib-039

c) Set “Timespan” from December 1, 2021, to December 10, 2021, and scan for any anomalous activity. Possible actions include (not an exhaustive list): Resetting of a password on a VM, change access level from “Contributor” to higher privileges, Starting and Stopping of a VM. Such an event will be logged by the Automation Id (Collected in Step 2a) in the column “Event initiated by”

d) Repeat steps 3a to 3c for every resource discovered in step 2b.