Qualys VSCode Extension for IaC Security

In the current continuous integration and continuous deployment (CICD) environment, the security scans are conducted on cloud resources after deployment. As a result, you secure your cloud resources post deployment to respective Cloud accounts.

With an introduction of Infrastructure as Code (IaC) security feature as a VSCode extension by Qualys CloudView, you can now secure your IaC templates before the cloud resources are deployed in your cloud environments. The IaC Security feature will help you shifting cloud security and compliance posture to the left, allowing evaluation of cloud resource for misconfigurations much early during development phase.

The Qualys IaC Security VSCode extension empowers DevOps teams to build Infrastructure as Code (IaC) scans into their existing CI/CD processes. By integrating scans in this manner, cloud misconfigurations are detected and remediated earlier in the SDLC to catch and eliminate security flaws.


Pre-requisite

Ensure that you have the required subscription and permissions as stated below.

- Visual Studio Code version 1.64.0 or higher.
- Valid subscription for Qualys CloudView (Cloud Security Assessment) app.
- Enabled API access and a role is assigned with all the necessary permissions.

Install the Qualys IaC VSCode Extension

You can install the Qualys IaC VSCode extension from VSCode Extension Marketplace. Follow the below steps to set up the extension.

1. To install the extension from the VSCode marketplace, open VSCode.
2. Click the last icon on the left side of the page.

3. Enter Qualys in the search bar to search for all the Qualys extensions.

4. Click the Qualys IaC VSCode extension in the extensions list.

5. Click **Install** to install the extension in your VSCode. You can see the installed extension in the **Installed** tab when you navigate to **Organization Settings > Extension**.
The installation is now complete.

**Getting Started with the Extension**

To get started with the Qualys IaC Security Visual Studio Code extension,

1. Open the command palette with Ctrl + Shift + P,
2. Type Qualys to see all the available Qualys commands. Select Qualys IaC configuration to bring up the settings page.
3. Fill in the input fields such as Platform URL, Username, Password, etc.
Available Commands

The following commands are available from the command palette.

- **Qualys IaC Scan**
  - Performs a scan on a Terraform file opened on Visual Studio Code editor

- **Qualys IaC configuration**
  - Adjust Qualys IaC configuration for a particular project

Run A Scan

You can use the Qualys IaC Security extension as a pre-deployment task in your project pipeline. After installing, you can see the Qualys IaC Scan option when you open the context menu.
To run a simple static scan, choose the Qualys IaC Scan option from context menu or use shortcut key (Ctrl + Shift + Q).
Qualys IaC Scan Result

After the scan is complete, you can view output for details on the job execution. The **Summary** displays the details of the Terraform file that is scanned, errors (failures), scan time, and job details.

```
data "aws_iam_policy_document" testdoc {
  statement {
    sid = ""
    actions = ["sts:assumerole", "sts:assumeshouldertoken"]
    resources = ["arn:aws:iam:::myuser"]
  }
}
```

```
data "aws_iam_policy_document" testdoc1 {
  statement {
    sid = ""
    effect = "Allow"
    actions = ["sts:createpolicy", "iam:deletepolicy"]
    resources = ["arn:aws:iam:::myuser"]
  }
}
```

---

**File Name**: iam_policy_document.tf

Scan launched successfully. Scan ID: 168999371-ef08-4326-b8f9-d6e1b0be07f5

Fetching the scan status with scan ID: 168999371-ef08-4326-b8f9-d6e1b0be07f5

The scan status is: FINISHED

**Result Summary**

<table>
<thead>
<tr>
<th>Check Type</th>
<th>Passed</th>
<th>Failed</th>
<th>Failed Stats</th>
<th>Skipped</th>
<th>Parsing Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>terraform</td>
<td>15</td>
<td>1</td>
<td>high=1, low=0, medium=0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**Terraform Checks**

<table>
<thead>
<tr>
<th>Control Id</th>
<th>Control Name</th>
<th>Criticality</th>
<th>Result</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>304</td>
<td>Ensure no IAM policies documents allow &quot;*&quot; as a statement actions</td>
<td>HIGH</td>
<td>FAILED</td>
<td>aws_iam_policy_document.testdoc3</td>
</tr>
</tbody>
</table>

**Remediation**

<table>
<thead>
<tr>
<th>Control Id</th>
<th>Remediation</th>
</tr>
</thead>
<tbody>
<tr>
<td>304</td>
<td>Remove any &quot;*&quot; Statement actions form the policy document for the aws_iam_policy_document</td>
</tr>
</tbody>
</table>