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Endpoint Identity overview

With Endpoint Identity, you can integrate Tanium with Cloud Access Security Brokers and Zero Trust Network Access providers, such as Cloudflare and Google BeyondCorp, to verify that devices connecting to your cloud applications and zero trust networks are managed by Tanium.

Integration overview scenario

When Endpoint Identity is configured on Tanium endpoints, an authentication or authorization provider can query the endpoint for information. This information helps the authentication or authorization provider decide whether to allow that endpoint and user to access a privileged application.

The following image illustrates how this works.

1. An employee requests access to an application. For example, the employee might be requesting access from an updated company-provided computer, an outdated company-provided computer, or a home computer.

2. The authentication or authorization provider receives the request and does the following:
   - Verifies endpoint security with Endpoint Identity. Endpoint Identity returns information to the authentication or authorization provider that verifies if the endpoint has a Tanium Client installed.
   - Verifies user identity.

3. Based on the verification results and company policies, the authentication or authorization provider grants or denies the employee access to the application.
   For example, the employee might be able to access a critical application from a Tanium-managed computer but cannot access that same application on a non-Tanium managed computer. The employee might be able to access a non-critical application on a non-Tanium managed computer.

Configuration overview

To configure Tanium endpoints to provide Endpoint Identity data, deploy configurations and packages to the endpoints. For more information, see Configure Endpoint Identity on endpoints on page 10.
Identity provider integration

After you configure the endpoints, the Endpoint Identity API returns platform information about Tanium-managed endpoints to the authentication or authorization provider. Tanium calculates the values each time that an API request is received. The authentication or authorization provider can then manage access to cloud applications or zero-trust networks based on this endpoint information.
Endpoint Identity requirements

Review the requirements before you install and use Endpoint Identity.

Core platform dependencies

Make sure that your environment has Tanium™ Core Platform servers 7.2 or later.

Endpoints

Supported operating systems

The Windows endpoint operating system is supported with Endpoint Identity.

For Tanium Client operating system support, see Tanium Client Management User Guide: Client version and host system requirements.

Third-party software

Endpoint Identity enables platform integration with the following third-party vendors:

- Cloudflare
- Google BeyondCorp

Host and network security requirements

Endpoint Identity requires specific ports and processes to run.

Ports

The following ports are required for Endpoint Identity communication.

<table>
<thead>
<tr>
<th>Component</th>
<th>Port</th>
<th>Direction</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endpoints</td>
<td>17472</td>
<td>Inbound / Outbound</td>
<td>Client / server communication</td>
</tr>
</tbody>
</table>

Security exclusions

If security software is in use in the environment to monitor and block unknown host system processes, Tanium recommends that a security administrator create exclusions to allow the Tanium processes to run without interference. The configuration of these exclusions varies depending on AV software. For a list of all security exclusions to define across Tanium, see Tanium Core Platform Deployment Reference Guide: Host system security exclusions.
### Endpoint Identity security exclusions

<table>
<thead>
<tr>
<th>Target Device</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endpoints (Windows)</td>
<td><code>&lt;Tanium Client&gt;\TaniumCX.exe</code></td>
</tr>
</tbody>
</table>
Installing Endpoint Identity

Use the Tanium Solutions page to install Endpoint Identity.

Before you begin

- Read the release notes.
- Review the Endpoint Identity requirements on page 7.

Import Endpoint Identity

1. From the Main menu, go to Administration > Configuration > Solutions and scroll to the Content section.

2. Select Endpoint Identity, click Import Selected, and complete the import.
   
   For more information, see Tanium Console User Guide: Manage Tanium shared services and content.
Configure Endpoint Identity on endpoints

When you configure Endpoint Identity on Tanium endpoints, an identity provider can query the endpoint for information. This information helps the identity provider decide whether to allow that endpoint and user to access a privileged application. To configure Endpoint Identity, you must distribute tools and configuration packages to the endpoints.

The following instructions use actions to distribute configuration packages to endpoints. For an enterprise-wide deployment, use scheduled actions to simplify distribution. For details, see Managing scheduled actions and action history.

Distribute the Zero Trust tool

Use the Endpoint Identity action group to distribute the Zero Trust tool to the endpoints. For instructions, see Tanium Endpoint Configuration User guide: Configure action groups for content-only solutions.

Generate key pairs

Generate RSA key pairs:

- One RSA key pair for the client/integration partner. The public key is used as the client public key in the configuration packages. Check with the third-party integration vendor on this item. They might provide the file to you, or provide instructions on how to generate and export these key pairs. This file must be named client-public.key.

- One RSA key pair for the Tanium Endpoint Identity solution. Put the server-private.key file in the configuration packages. Provide the server-public.key file to the integration vendor.

Generate Tanium RSA key pair with OpenSSL

If you have OpenSSL installed, you can run the following commands. Note that the commands may vary depending on the keys supported by the library you are using.

```
openssl genpkey -out <<client-private.key>> -algorithm RSA -pkeyopt rsa_keygen_bits:2048
```

```
openssl rsa -in <<client-private.key>> -outform PEM -pubout -out <<client-public.key>>
```

```
openssl genpkey -out <<server-private.key>> -algorithm RSA -pkeyopt rsa_keygen_bits:2048
```
openssl rsa -in <<server-private.key>> -outform PEM -pubout -out <<server-public.key>>

**Validate server key pair**

Validate that the MD5 hashes on the `server-private.key` and `server-public.key` match. If you have OpenSSL installed, you can run the following commands:

```
openssl rsa -noout -modulus -in <<server-private.key>> | openssl md5

openssl rsa -noout -modulus -pubin -in <<server-public.key>> | openssl md5
```

**Update configuration packages**

Update the Endpoint Identity configuration packages to include port and key pair settings.

1. From the Main menu, click Administration > Content > Packages.
2. In the filter, type **Endpoint Identity** to display Endpoint Identity - Configure Endpoint Identity [Windows].
3. Select the configuration package and click Edit.
4. Edit the package to set the keys and port to use. In the Files section of the package, download the config.json file. Update the port and origin allowed list.
   - The `httpPort` property is the port on which the endpoint listens for calls from the authentication or authorization provider. The value is **8181** by default.
   - The `serverPrivateKey` and `clientPublicKey` properties are ignored if you upload these files into the package. If you define these properties in the config.json file, the values must be a single line, inserting \n for any breaks.
   - The `originAllowed` property is a comma-separated list of domains that are allowed to make requests. Get this list from the integration vendor. This list should not contain any white space. You can use a leading asterisk * to indicate that any subdomain is allowed. You cannot use an asterisk by itself as a value.

   Verify that the config.json is valid after updating. An example follows:

   ```json
   {
     "httpPort": 8181,
     "serverPrivateKey": "",
     "clientPublicKey": "",
     "originAllowed": "provider.com"
   }
   ```

5. Upload the configured config.json file in the package. Delete the existing config.json file, then click Add > Local File.
6. Add the client public key provided by the integration vendor to the package. Click Add > Local File. This file must be named client-public.key. Uploading this file overrides the clientPublicKey value in the config.json file.

7. Add the server private key that you generated for Tanium Endpoint Identity. Click Add > Local File. This file must be named server-private.key. Uploading this file overrides the serverPrivateKey value in the config.json file.

8. Save the package.

**Distribute configuration package**

Distribute the Endpoint Identity configuration package to the endpoints. Create a question that targets the Windows operating system, then deploy an action to the endpoints. For more information about deploying actions, see Tanium Interact User guide: Deploying Actions.

1. Target a set of endpoints by asking a question: Get Is Windows from all machines


**Check Zero Trust tool installation**

To check the status of tool installation on your endpoints, ask the question: Get Endpoint Configuration - Tools Status from all machines.

**What to do next**

The third-party identity provider can now use the Endpoint Identity API to get information about the Tanium-managed endpoints. The API provides if the endpoint has the Tanium Client installed, the platform of the endpoint and the last time that the endpoint connected to the Tanium Server.
Troubleshooting Endpoint Identity

To collect and send information to Tanium for troubleshooting, collect relevant information.

**Troubleshooting Cloudflare integration issues**

Confirm the following items are properly configured in Cloudflare for Teams.

- **Authentication domain.** In Cloudflare for Teams, click **Access > Authentication > Login**. Verify that the authentication domain matches the domain in `config.json` or that you use `*.cloudflareaccess.com`.

```plaintext
Access
Authentication

Login   App Launcher   Device Posture

Login methods

Google   Test   Edit
One-time PIN   Test   Edit

Auth domain

This domain is shared across all sites in your Cloudflare account where you have configured Access.

taniumaccessdemo.cloudflareaccess.com   Edit
```
• Device posture. In Cloudflare for Teams, click **Access > Authentication > Device Posture.** Click **Edit** for the Tanium endpoint protection provider. Verify the following:
  
  - **Port** matches the port number specified in `config.json`. The value is **8181** by default.
  - **Public key** is the `server-public.key`.
  - The certificate downloaded by clicking **Download Certificate** is the `client-public.key`.

---

**Edit Tanium**

Name

Converge Demo

Port

8181

Public key

```
-----BEGIN PUBLIC KEY-----
MIIBJjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEA5PgLoJk3UOa3T9iIFlUj
NQmv9oTTKgJ7U1p88T7oW/h0ho2el4OchluoQ8ydImOxuoOb
-----END PUBLIC KEY-----
```

You will need to provide Tanium with your Cloudflare for Teams public certificate. Use the button below to generate your certificate.

Download Certificate

Save

Delete
• Application configuration. In Cloudflare for Teams, click **Access > Applications**. Click **Edit** for the application. Verify the following:

  ◦ **Rule action** is set to **Allow**.
  ◦ The **Include** rule specifies the type of users to include, for example, users with emails ending in @tanium.com.
  ◦ The **Require** rule specifies **Tanium** and the name of the Tanium endpoint protection provider.

![Edit a rule for Explicit Trust Demo](image)

### Remove Zero Trust tool from endpoints

You can deploy an action to remove the Zero Trust tool from endpoints.

1. In Interact, ask the question: **Get Endpoint Configuration - Tools Status from all machines with Is Windows equals True**.

2. Deploy an action to the targeted set of endpoints. Click **Deploy Action**. Deploy the **Endpoint Configuration - Uninstall Tool [Windows]** package.

3. Select the **Zero Trust** tool.
4. Click **Show preview to continue**.

5. A results grid at the bottom of the page displays the targeted endpoints for your action. If you are satisfied with the results, click **Deploy Action**.

![NOTE] If you have enabled Endpoint Configuration approval, tool removal must be approved in Endpoint Configuration before tools are removed from endpoints.

**Contact Tanium Support**

To contact Tanium Support for help, sign in to [https://support.tanium.com](https://support.tanium.com).