

The background features a vibrant, multi-colored abstract design. On the left, there are horizontal, wavy bands of color in shades of red, orange, yellow, and green. On the right, a bright white light source emits a series of colorful rays in shades of blue, cyan, and yellow, creating a sunburst effect.

cisco *Live!*

Let's go

#CiscoLiveAPJC



The bridge to possible

Take The Easy Road to the Intersight API

Chris Gascoigne, Principal Systems Architect
[@chrisgascoigne@hachyderm.io](mailto:chrisgascoigne@hachyderm.io)
DEVNET-1490

Cisco Webex App

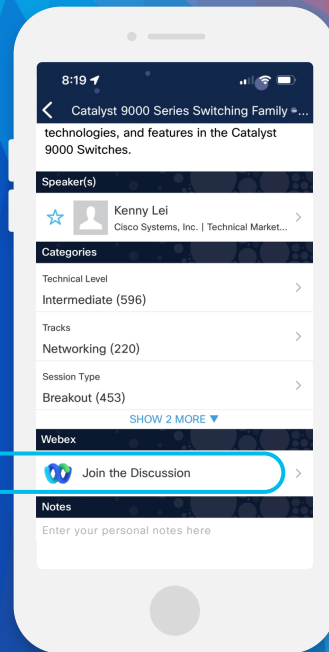
Questions?

Use Cisco Webex App to chat with the speaker after the session

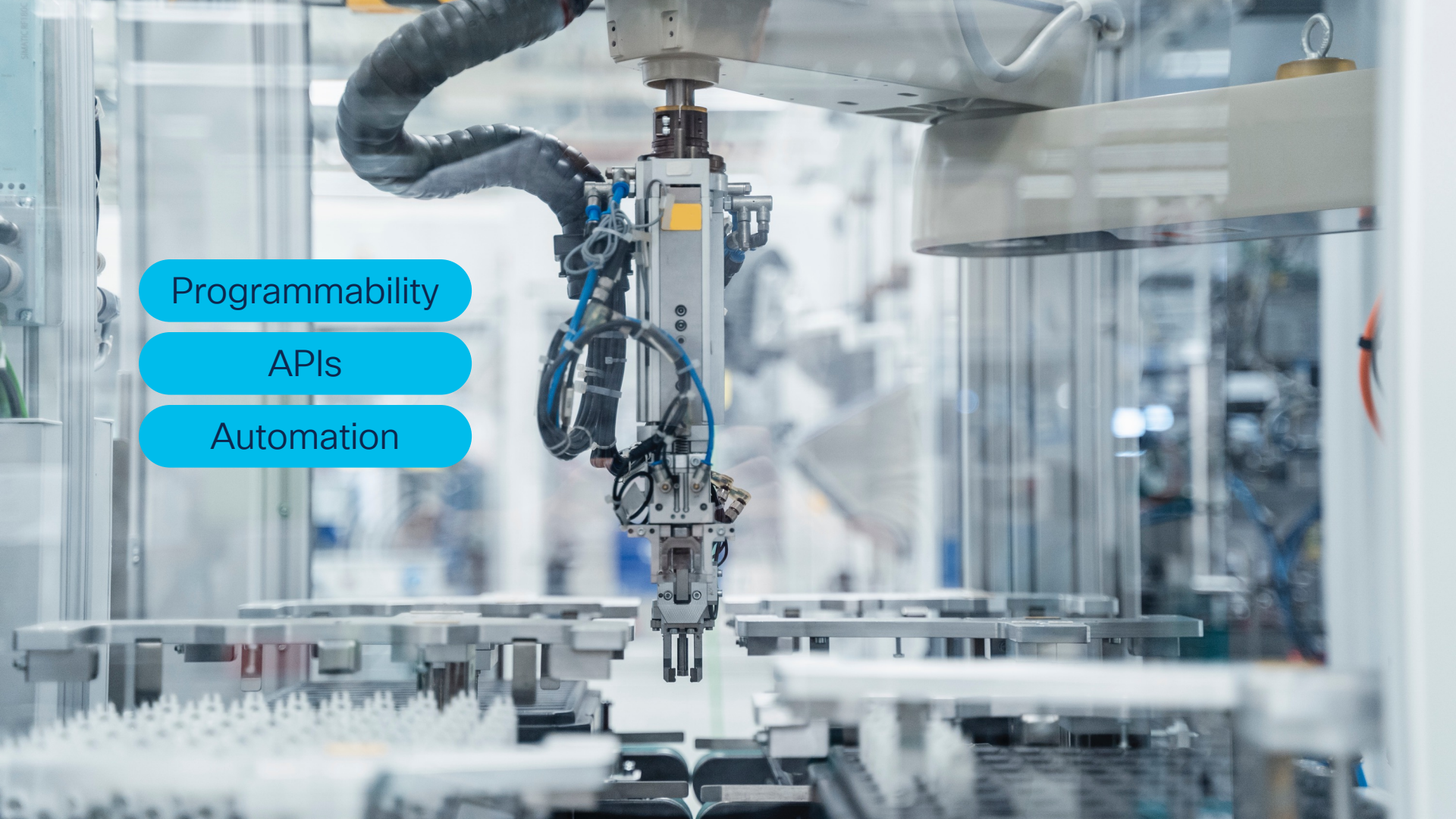
How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until December 22, 2023.



<https://ciscolive.ciscoevents.com/ciscolivebot/#DEVNET-1490>

A close-up, slightly blurred photograph of an industrial robotic arm in a factory. The arm is white and grey, with various cables and hoses attached. It is positioned over a work area with metal frames and components. The background is out of focus, showing more of the factory environment.

Programmability

APIs

Automation

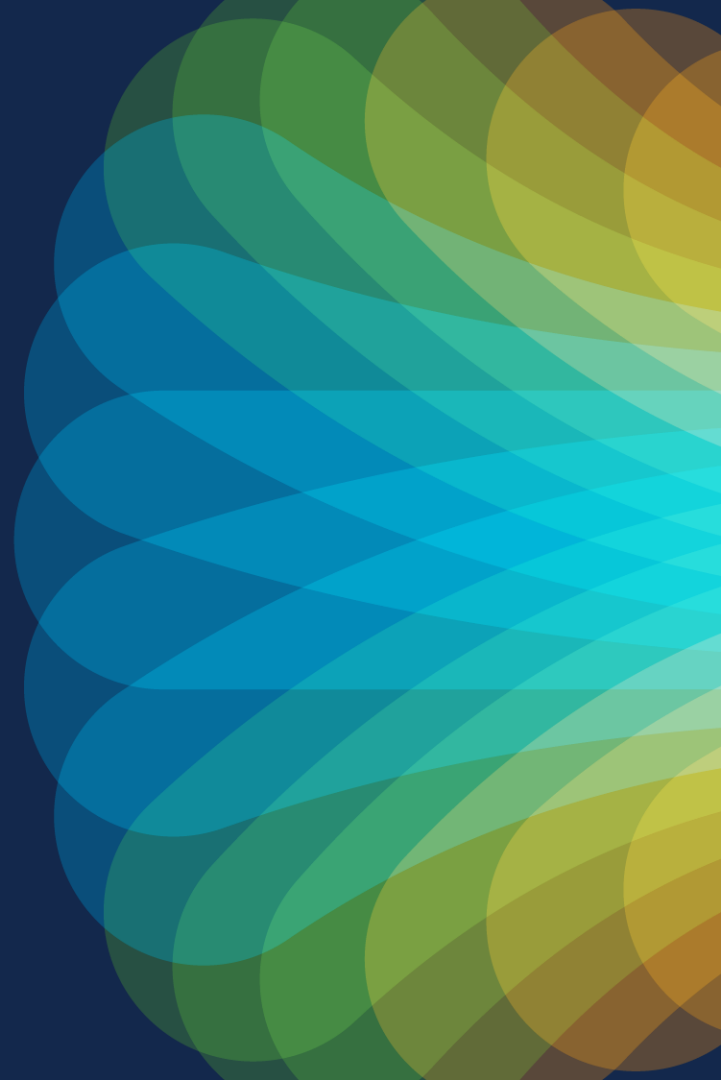




Agenda

- Meet the Intersight API
- How can we try out the API?
- The Intersight CLI - isctl
- Conclusion and Key Takeaways

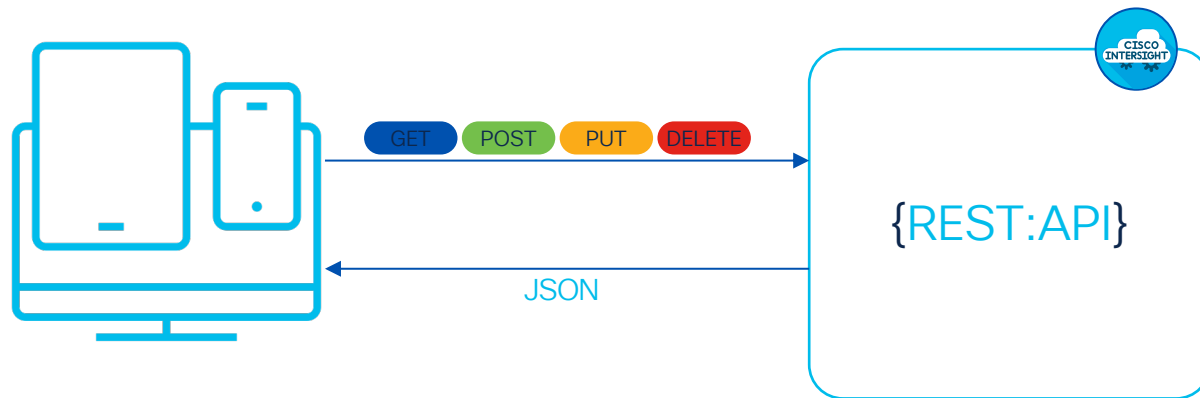
Meet the Intersight API



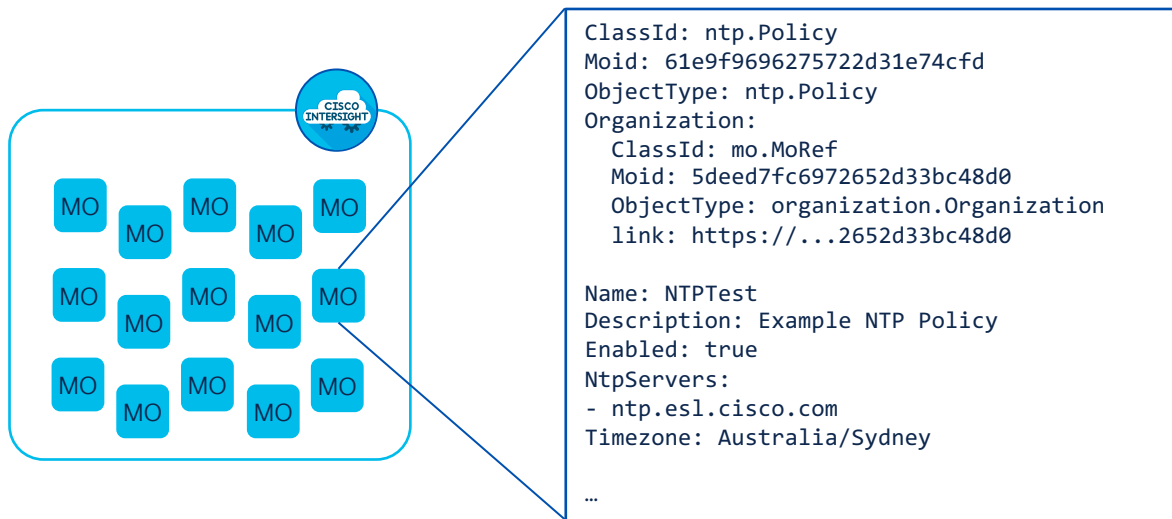
The API is behind everything



Intersight API - REST

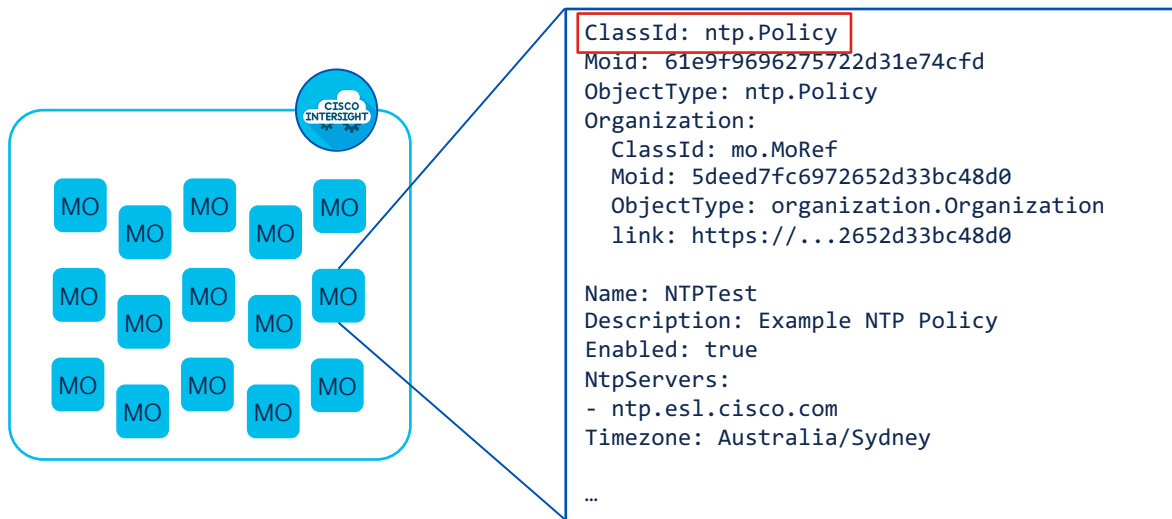


Intersight API – Managed Objects



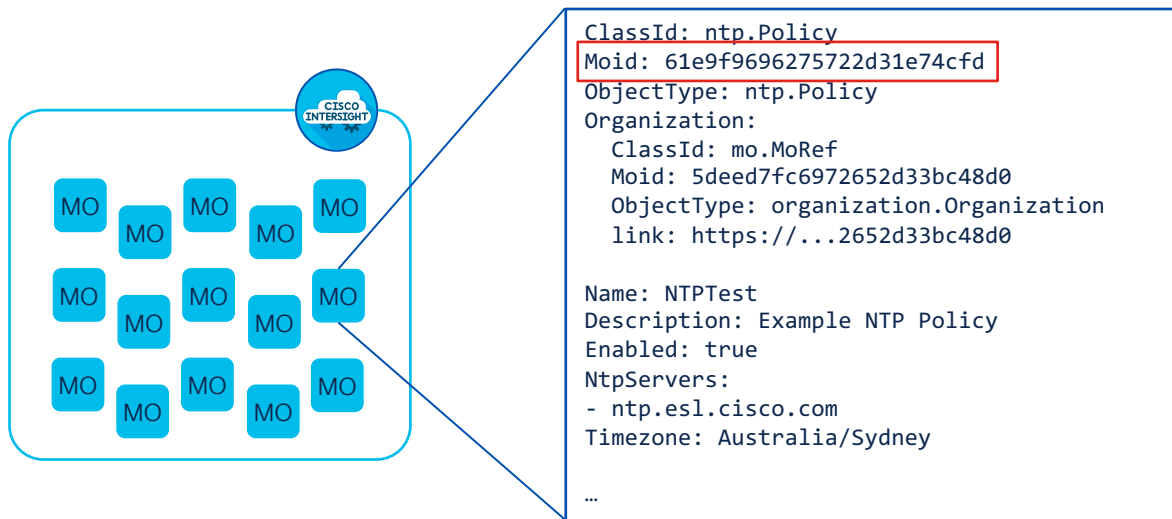
(Simplified Example)

Intersight API – Managed Objects



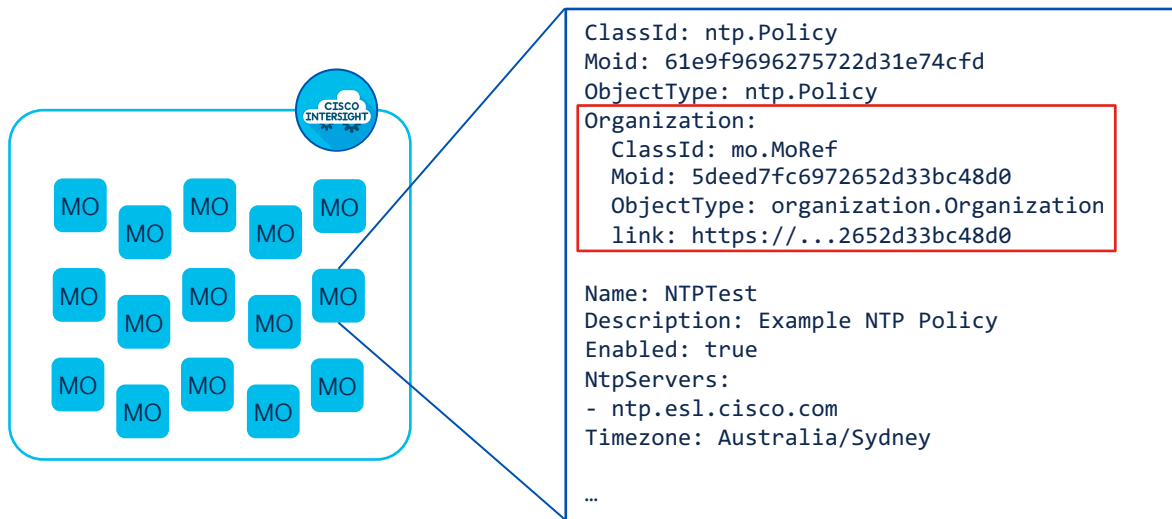
(Simplified Example)

Intersight API – Managed Objects



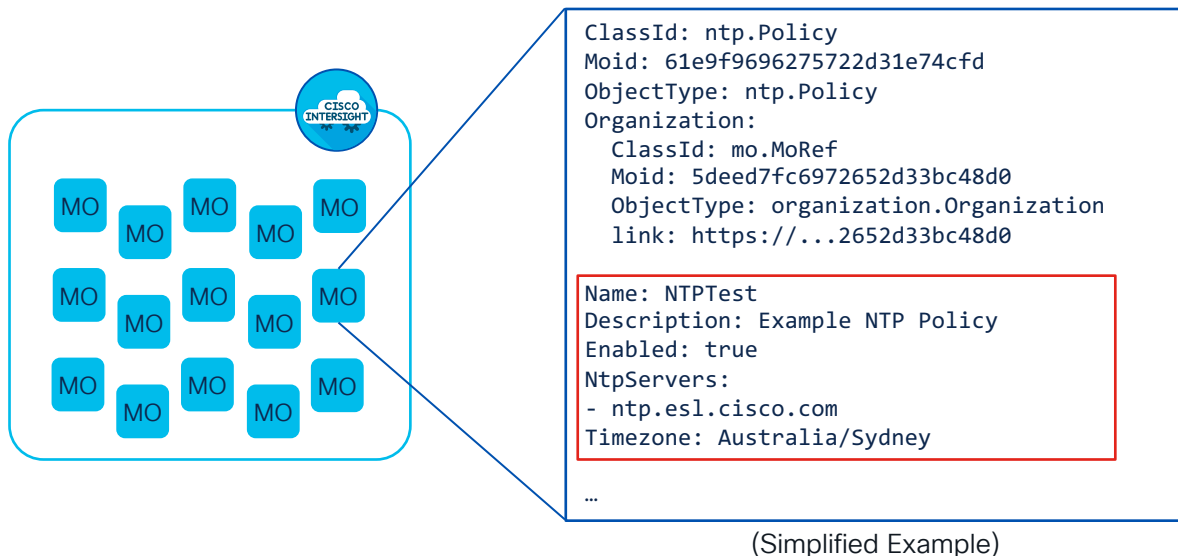
(Simplified Example)

Intersight API – Managed Objects



(Simplified Example)

Intersight API – Managed Objects



Intersight API – Endpoints

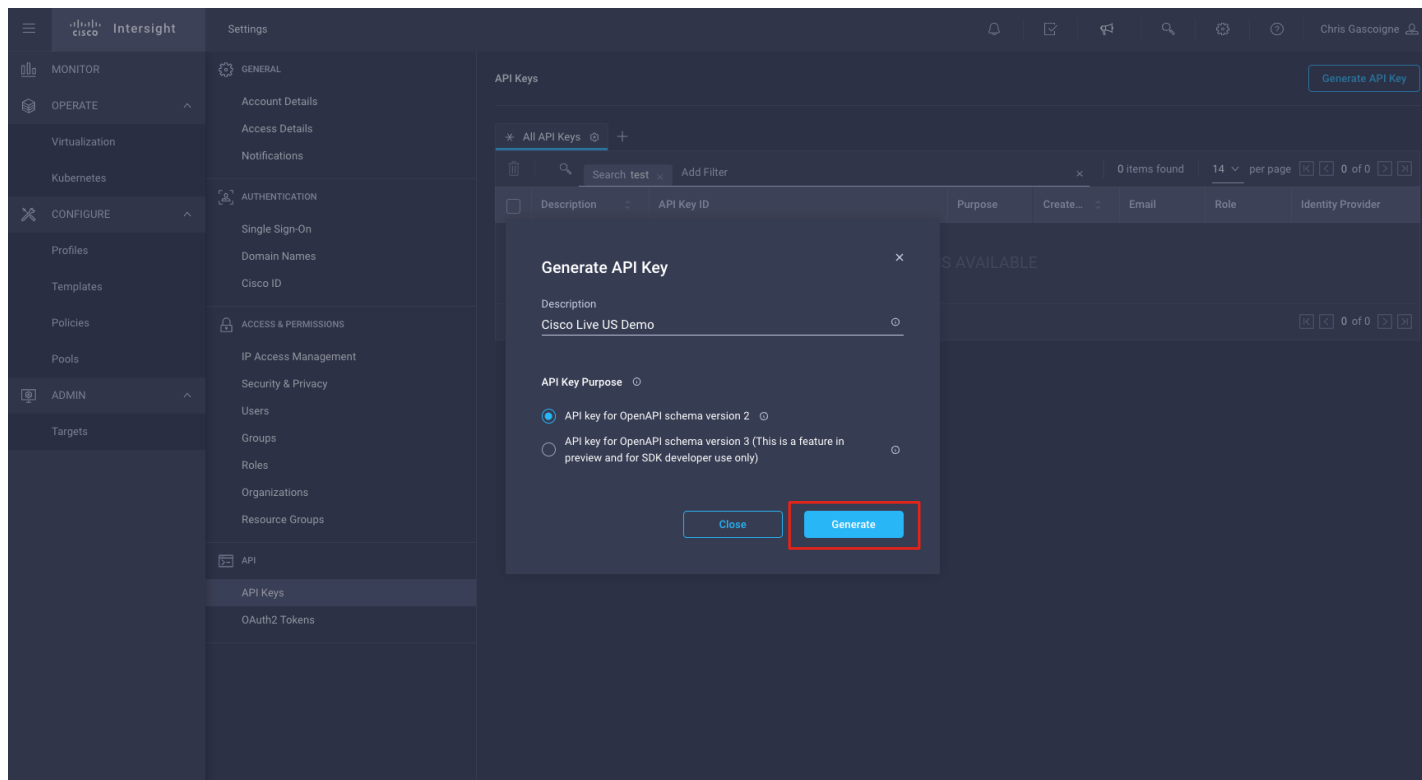
The screenshot displays the Cisco Intersight Developer Center API Reference page for the 'ntp/Policies' endpoint. The page is organized into several sections:

- Header:** Cisco Intersight Developer Center, Guides, API Reference, Downloads, Support, and a user profile for Chris Gascoigne.
- API Reference v1.0.9-6484:** A search bar and a list of endpoints. The 'ntp/Policies' endpoint is highlighted with a red box.
- Endpoint Details:** The 'ntp/Policies' endpoint is selected, showing the following methods:
 - POST:** Create a 'ntp.Policy' resource.
 - GET:** Read a 'ntp.Policy' resource. (This method is highlighted with a red box.)
 - POST:** Update a 'ntp.Policy' resource.
 - PATCH:** Update a 'ntp.Policy' resource.
 - DELETE:** Delete a 'ntp.Policy' resource.
- Parameters:** The 'Parameters' tab is active, showing the following parameters:
 - \$filter (string):** Filter criteria for the resources to return. A URI with a \$filter query option identifies a subset of the entries from the Collection of Entries. The subset is determined by selecting only the Entries that satisfy the predicate expression specified by the \$filter option. The expression language that is used in \$filter queries supports references to properties and literals. The literal values can be strings enclosed in single quotes, numbers and boolean values (true or false).
 - \$orderby (string):** Determines what properties are used to sort the collection of resources.
 - \$top (integer):** Specifies the maximum number of resources to return in the response.
- REST Client:** A sidebar on the right showing the endpoint path `GET /api/v1/ntp/Policies` (highlighted with a red box) and a 'Send' button.

Intersight API - Authentication

The screenshot displays the Cisco Intersight user interface. On the left is a navigation sidebar with sections: MONITOR, OPERATE, CONFIGURE, and ADMIN. The main content area is titled 'Settings' and contains a sub-menu on the left with options: GENERAL, AUTHENTICATION, ACCESS & PERMISSIONS, and API. The 'API' section is selected, and 'API Keys' is highlighted. The main panel shows the 'API Keys' management interface. At the top right of this panel, a red rectangular box highlights the 'Generate API Key' button. Below this, there is a search bar with the text 'Search test' and a filter button. A table header is visible with columns: Description, API Key ID, Purpose, Create..., Email, Role, and Identity Provider. The table body is empty, displaying 'NO ITEMS AVAILABLE'. At the bottom right of the table area, pagination controls show '0 of 0' items.

Intersight API - Authentication



Intersight API - Authentication

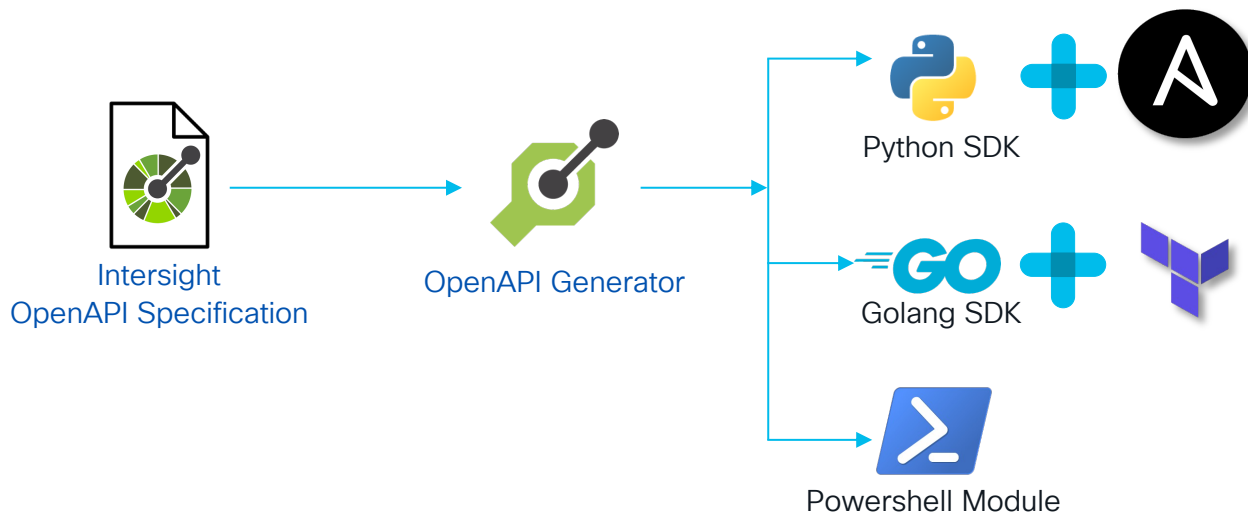
The screenshot shows the Cisco Intersight interface with the 'Generate API Key' dialog box open. The dialog contains the following information:

- API Key ID:** 61970b917564612d333d4d41/61970b917564612d333d4d46/626f14f57564612d333c3b49
- Secret Key:** -----BEGIN RSA PRIVATE KEY-----
MIIEowIBAAKCAQEAwrf2ko3D8fC4ENPw2Izy1gzanaNEPfp
qtWZChBIZ.IqFxxJtK
RgX7S/IM0BaqiEytTeCOsoc1TZ9wfxZlZuxyH9a6+h6g7wc
QPR7AUIGY0hnT130t
JkNDcZvKRTc5uayNikU2SbxzcpvFaPzx2dfhoEuTAiZd4nCS
wF6l69Kp1U0zPzxn

Two red arrows point from text boxes to the API Key ID and the Secret Key fields:

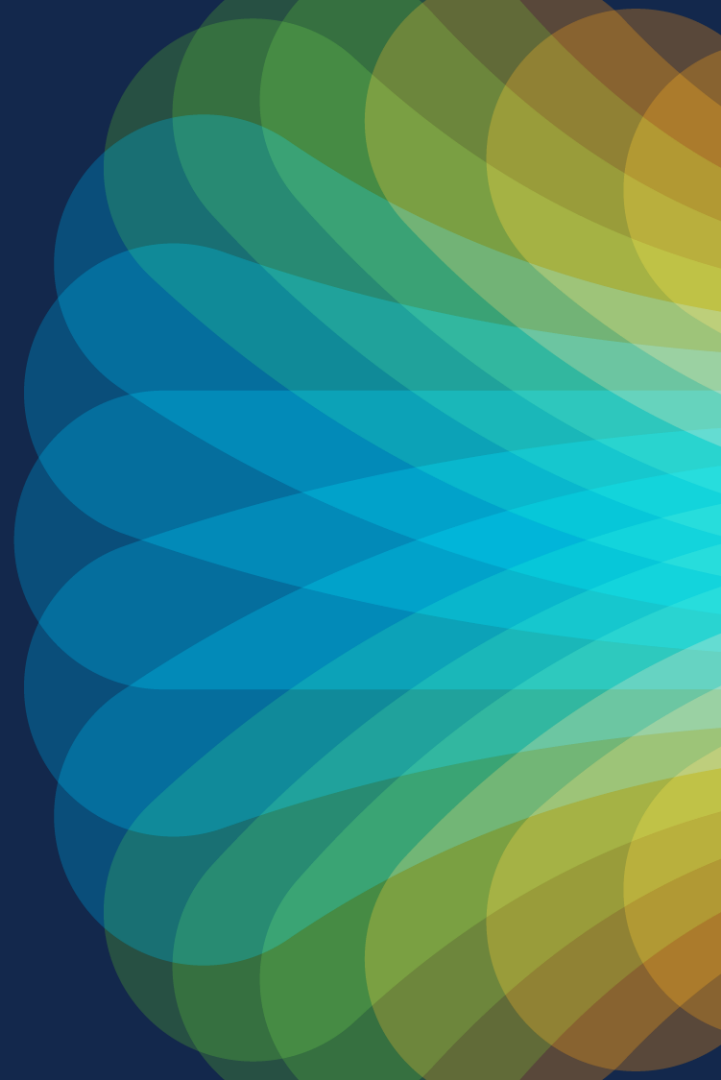
- Arrow 1 points to the API Key ID field. The text box says: "Will be used to tell Intersight API which API key you are using".
- Arrow 2 points to the Secret Key field. The text box says: "Secret (Private) Key used to sign API requests".

Intersight API – OpenAPI Specification



<https://intersight.com/apidocs/downloads/>

How can we try
out the Intersight
API?



Intersight API Documentation Browser

 Intersight Developer Center

Guides API Reference Downloads Support

Chris Gascoigne

Guides

API Overview

Supported HTTP Methods

Management Information Model

Query Syntax

API Error Handling

Security Considerations

Versioning

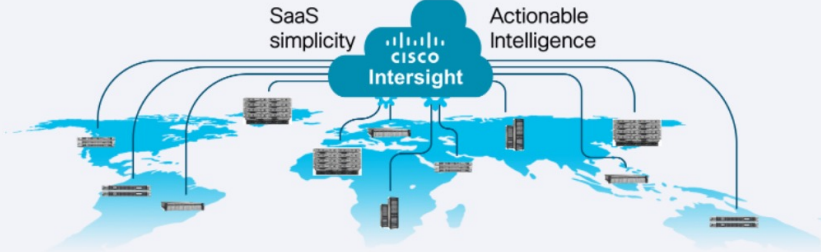
API Processing Runtime

Frequently Asked Questions

Cisco Intersight RESTful API

Intersight API Overview

This document presents the fundamentals of the Intersight API. Cisco Intersight provides a cloud-based RESTful API to manage Cisco Unified Computing System™ (Cisco UCS®) and Cisco HyperFlex® systems across multiple Data Centers.



The Intersight API is a programmatic interface that uses the REST architecture to provide access to the Intersight Management Information Model. API requests may be read-only query with no side-effects or produce modifications of the resources. The response may confirm that some alteration has been made to the resource and it may provide hypertext links to related resources or collections of resources. The Intersight API accepts and returns messages that are encapsulated through JavaScript Object Notation (JSON) documents and uses HTTP over TLS as the transport protocol.

Cisco Intersight provides the benefits of cloud-based management that customers have come to appreciate with Software-as-a-Service (SaaS)

<https://www.intersight.com/apidocs/>

Intersight API Documentation Browser

 Intersight Developer Center

API Reference v1.0.9-6484

Search...

aaa/AuditRecords

aaa/RetentionConfigs

aaa/RetentionPolicies

access/Policies

access/PolicyInventories

adapter/ConfigPolicies

adapter/ExtEthInterfaces

adapter/HostEthInterfaces

adapter/HostFcInterfaces

adapter/HostIsclsInterfaces

adapter/UnitExpanders

adapter/Units

appliance/AppStatuses

appliance/AutoRmaPolicies

appliance/BackupPolicies

appliance/Backups

appliance/CertificateSettings

Description

aaa/AuditRecords

AuditRecord presents the configuration changes made by the user per transaction.

Model Schema

ClassId: string The fully-qualified name of the instantiated, concrete type.
This property is used as a discriminator to identify the type of the payload when marshaling and unmarshaling data.

ObjectType: string The fully-qualified name of the instantiated, concrete type.
The value should be the same as the 'ClassId' property.

AccountMoid: string (Read Only) The Account ID for this managed object.

CreateTime: string (Read Only) The time when this managed object was created.

DomainGroupMoid: string (Read Only) The DomainGroup ID for this managed object.

ModTime: string (Read Only) The time when this managed object was last modified.

Moid: string The unique identifier of this Managed Object instance.

Owners: array Array

Object: object

Item: string (Read Only) The array of owners which represent effective ownership of this object.

SharedScope: string (Read Only) Intersight provides pre-built workflows, tasks and policies to end users through global catalogs.
Objects that are made available through global catalogs are said to have a 'shared' ownership. Shared objects are either made globally available to all end users or restricted to end users based on their license entitlement. Users can use this property to differentiate the scope (global or a specific license tier) to which a shared MO belongs.

Tags: object Array

Key: string The string representation of a tag key.

Intersight API Documentation Browser

 Intersight Developer Center

API Reference v1.0.9-6484

ntp

capability/EquipmentPhysicalDefs

cloud/TtcAgentpools

iam/EndPointPrivileges

niatelemetry/ApicNtpAuths

ntpPolicies

POST Create a 'ntp.Policy' resource.

GET Read a 'ntp.Policy' resource.

GET Read a 'ntp.Policy' resource.

POST Update a 'ntp.Policy' resource.

PATCH Update a 'ntp.Policy' resource.

DELETE Delete a 'ntp.Policy' resource.

storage/NetAppNtpServers

Guides API Reference Downloads Support

Chris Gascolgne

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Tags: object Array

Key: string The string representation of a tag key.

Intersight API Documentation Browser

The screenshot displays the Intersight API Documentation Browser interface. The top navigation bar includes the Cisco logo, 'Intersight Developer Center', and links for 'Guides', 'API Reference', 'Downloads', and 'Support'. The user 'Chris Gascoigne' is logged in. The left sidebar shows a search bar with 'ntp' and a list of API categories, with 'ntp/Policies' expanded. The main content area shows the 'GET' endpoint for 'Read a 'ntp.Policy' resource.' with a 'REST Client' toggle. The 'Parameters' tab is active, showing query parameters: '\$filter' (string), '\$orderby' (string), '\$top' (integer), '\$skip' (integer), '\$select' (string), and '\$expand' (string). Each parameter has a description. The right sidebar shows the 'REST Client' panel with the endpoint '/api/v1/ntp/Policies' and a 'Send' button highlighted with a red box. Below the 'Send' button are tabs for 'Response Text' and 'Response Info'.

Intersight API Documentation Browser

The screenshot displays the Intersight API Documentation Browser interface. The left sidebar shows a tree view of API endpoints, with 'ntp/Policies' expanded. The main content area shows the 'GET /api/v1/ntp/Policies' endpoint, which is used to read a 'ntp.Policy' resource. The endpoint description states: "Filter criteria for the resources to return. A URI with a \$filter query option identifies a subset of the entries from the Collection of Entries. The subset is determined by selecting only the Entries that satisfy the predicate expression specified by the \$filter option. The expression language that is used in \$filter queries supports references to properties and literals. The literal values can be strings enclosed in single quotes, numbers and boolean values (true or false)." The endpoint also lists several query parameters: \$filter (string), \$orderby (string), \$top (integer), \$skip (integer), \$select (string), and \$expand (string). The REST Client tab is active, showing the endpoint URL and a 'Send' button. The response text is displayed, showing a JSON object with 'ObjectType' and 'Results'.

Intersight Developer Center

Guides API Reference Downloads Support

Chris Gascoigne

API Reference v1.0.9-6484

ntp

capability/EquipmentPhysicalDefs

cloud/TtcAgentpools

iam/EndPointPrivileges

niatlemetry/ApicNtpAuths

ntp/Policies

POST Create a 'ntp.Policy' resource.

GET Read a 'ntp.Policy' resource.

GET Read a 'ntp.Policy' resource.

POST Update a 'ntp.Policy' resource.

PATCH Update a 'ntp.Policy' resource.

DELETE Delete a 'ntp.Policy' resource.

storage/NetAppNtpServers

GET Read a 'ntp.Policy' resource.

Parameters Response Model

\$filter (string) query

Filter criteria for the resources to return. A URI with a \$filter query option identifies a subset of the entries from the Collection of Entries. The subset is determined by selecting only the Entries that satisfy the predicate expression specified by the \$filter option. The expression language that is used in \$filter queries supports references to properties and literals. The literal values can be strings enclosed in single quotes, numbers and boolean values (true or false).

\$orderby (string) query

Determines what properties are used to sort the collection of resources.

\$top (integer) query

Specifies the maximum number of resources to return in the response.

\$skip (integer) query

Specifies the number of resources to skip in the response.

\$select (string) query

Specifies a subset of properties to return.

\$expand (string) query

Specify additional attributes or related resources to return in addition to the primary resources.

REST Client

GET /api/v1/ntp/Policies

+ Query Parameter

Send 200 Success

Response Text Response Info

```
1 {
2   "ObjectType": "ntp.Policy.List",
3   "Results": [
4     {
5       "AccountMoid": "61970b917564612d33",
6       "Ancestors": [],
7       "AuthenticatedNtpServers": [],
8       "ClassId": "ntp.Policy",
9       "CreateTime": "2022-05-01T23:42:11",
10      "Description": "Example NTP Policy",
11      "DomainGroupMoid": "61970b91756461",
12      "Enabled": true,
13      "ModTime": "2022-05-01T23:42:11.95",
14      "Moid": "626f1ad36275722d30486f94",
15      "Name": "NTPTest",
16      "NtpServers": [
17        "ntp.esl.cisco.com"
18      ],
19      "ObjectType": "ntp.Policy",
20      "Organization": {
21        "ClassId": "mo.MoRef",
22        "Moid": "61970b946972652d3380135",
23        "ObjectType": "organization.Orga",
24        "link": "https://www.intersight.",
25      },
26      "Owners": [
27        "61970b917564612d333d4d41"
28      ],
29    }
30  ]
31 }
```

Postman

Download Postman

Download the app to quickly get started using the Postman API Platform. Or, if you prefer a browser experience, you can try the new web version of Postman.

The Postman app

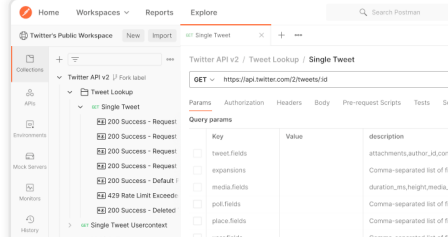
The ever-improving Postman app (a new release every week) gives you a full-featured Postman experience.

Mac Intel Chip Mac Apple Chip

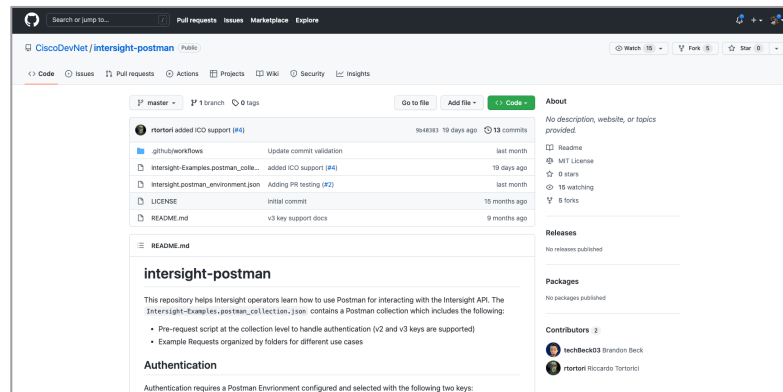
By downloading and using Postman, I agree to the [Privacy Policy](#) and [Terms](#).

Version undefined · [Release Notes](#) · [Product Roadmap](#)

Not your OS? Download for Windows (x64) or Linux (x64)



<https://www.postman.com>



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Code Issues Pull requests Actions Projects Wiki Security Insights

master 1 branch 0 tags

Go to file Add file Code

About

No description, website, or topics provided.

Readme MIT License 0 stars 16 watching 5 forks

Releases

No releases published

Packages

No packages published

Contributors

techBeck03 Brandon Beck rtortori Riccardo Tortori

rtortori added ICO support (#4)

github/workflows Update commit validation last month

intersight-examples/postman_collection added ICO support (#4) 19 days ago

intersight-postman_environment.json Adding PR testing (#2) last month

LICENSE Initial commit 16 months ago

README.md v3 key support docs 9 months ago

README.md

intersight-postman

This repository helps Intersight operators learn how to use Postman for interacting with the Intersight API. The Intersight-Examples/postman_collection.json contains a Postman collection which includes the following:

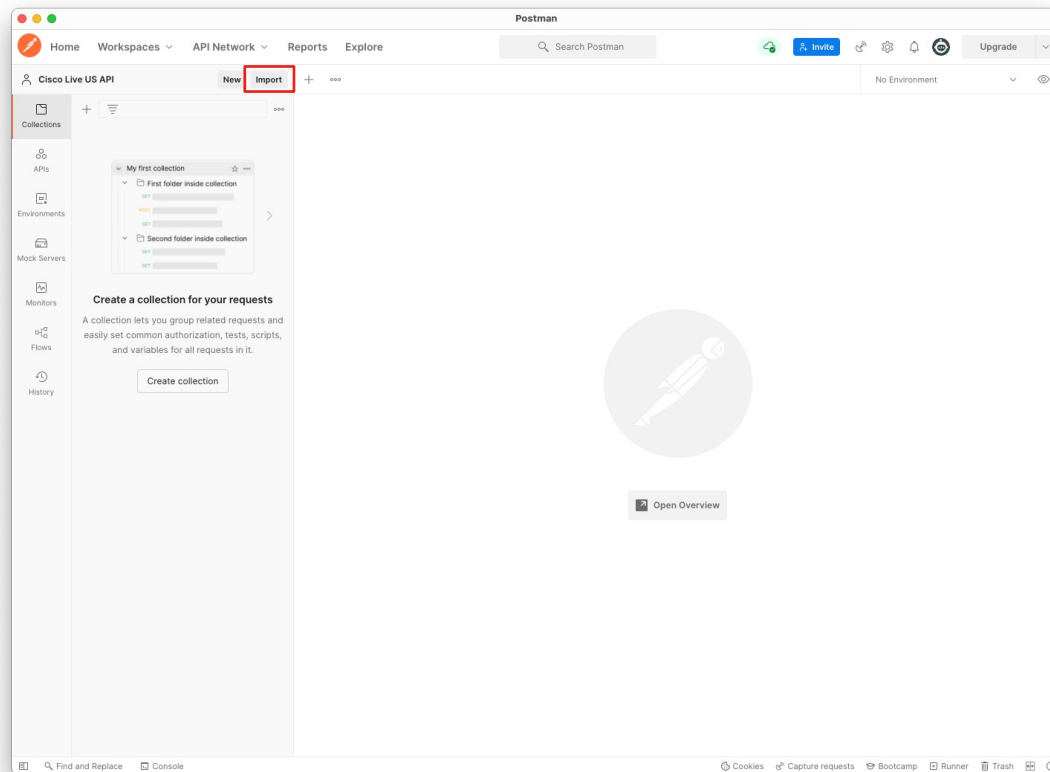
- Pre-request script at the collection level to handle authentication (v2 and v3 keys are supported)
- Example Requests organized by folders for different use cases

Authentication

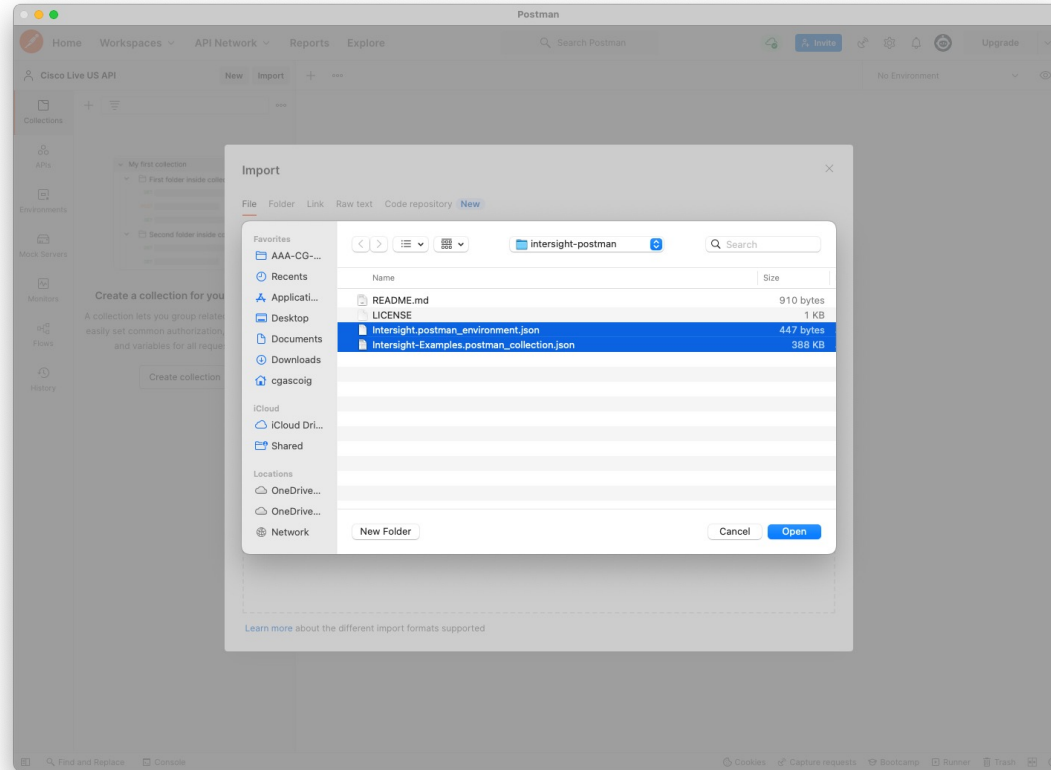
Authentication requires a Postman Environment configured and selected with the following two keys:

<https://github.com/CiscoDevNet/intersight-postman>

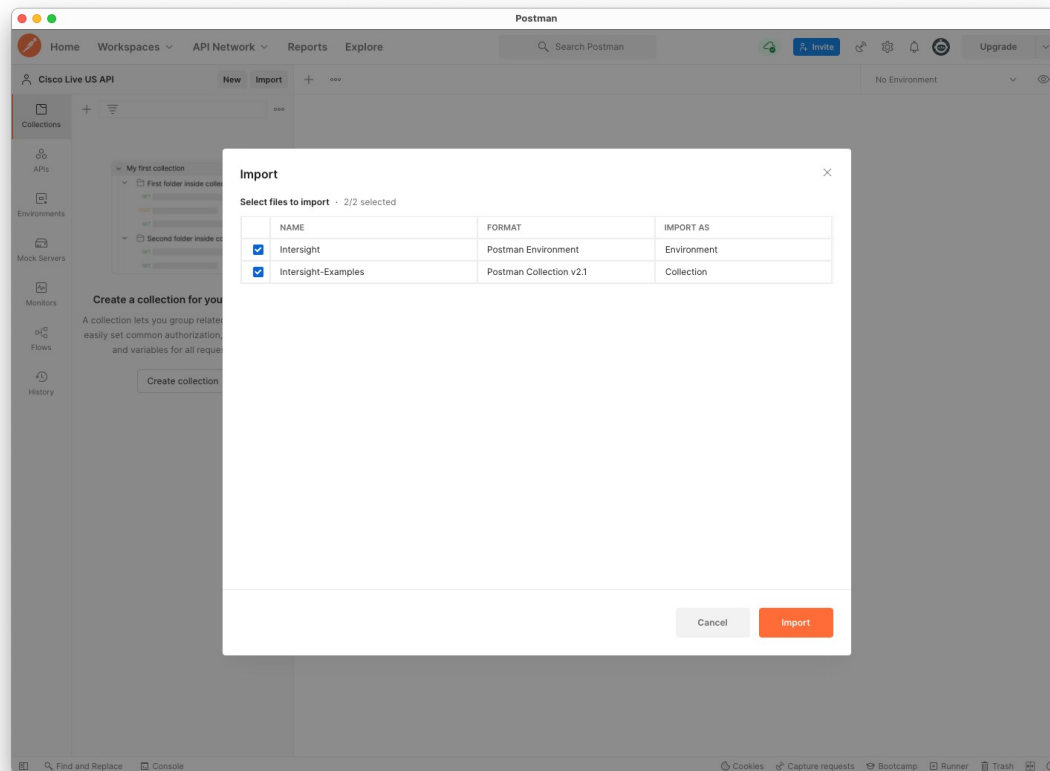
Postman



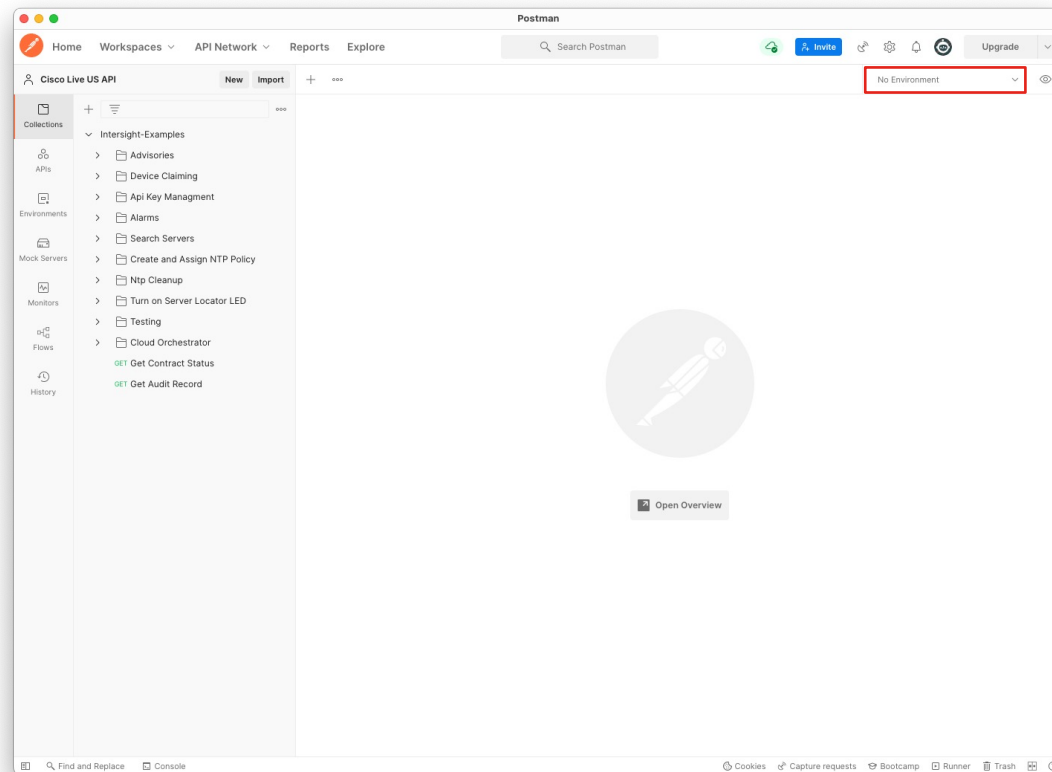
Postman



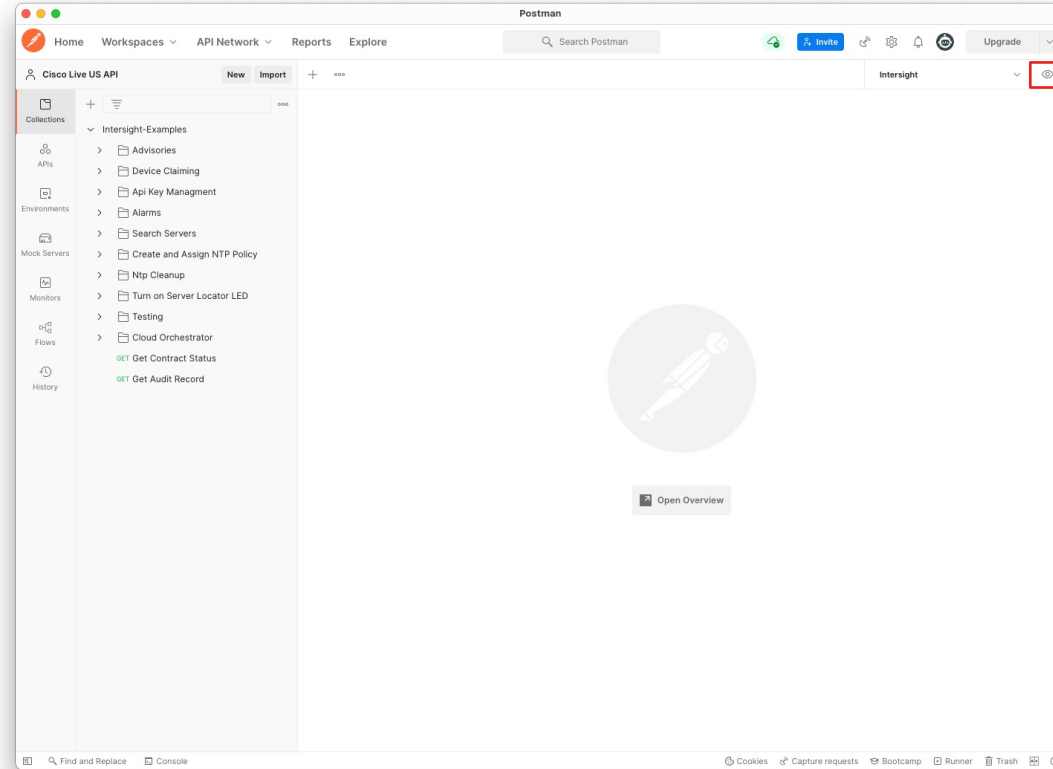
Postman



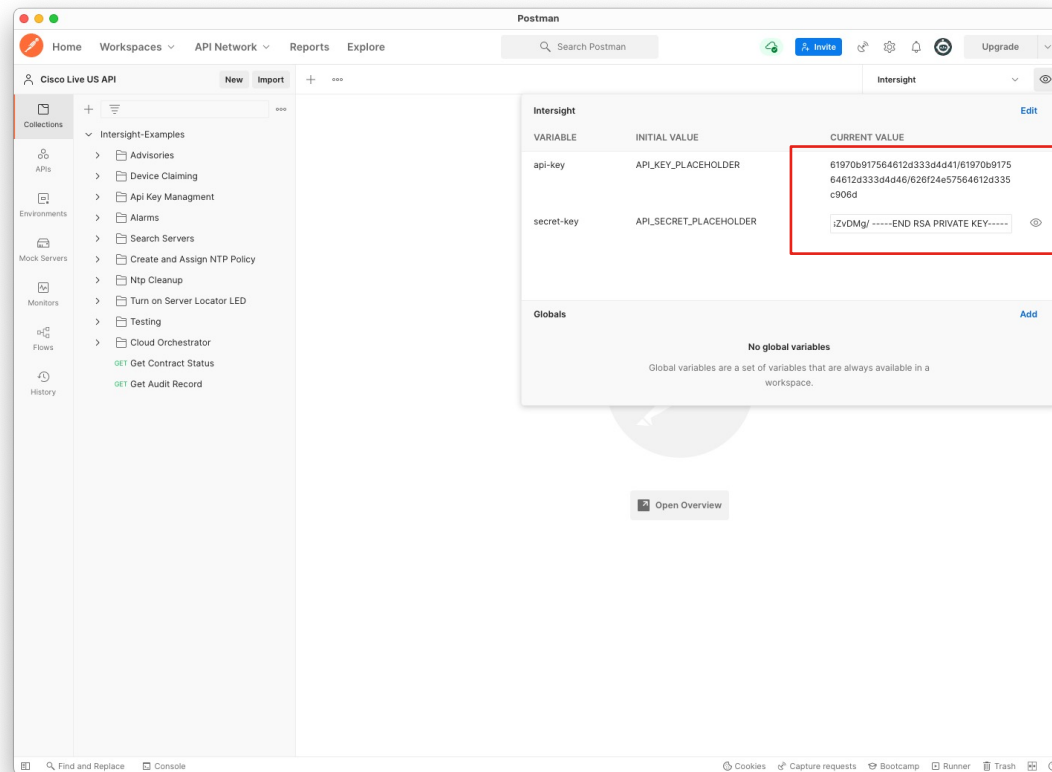
Postman



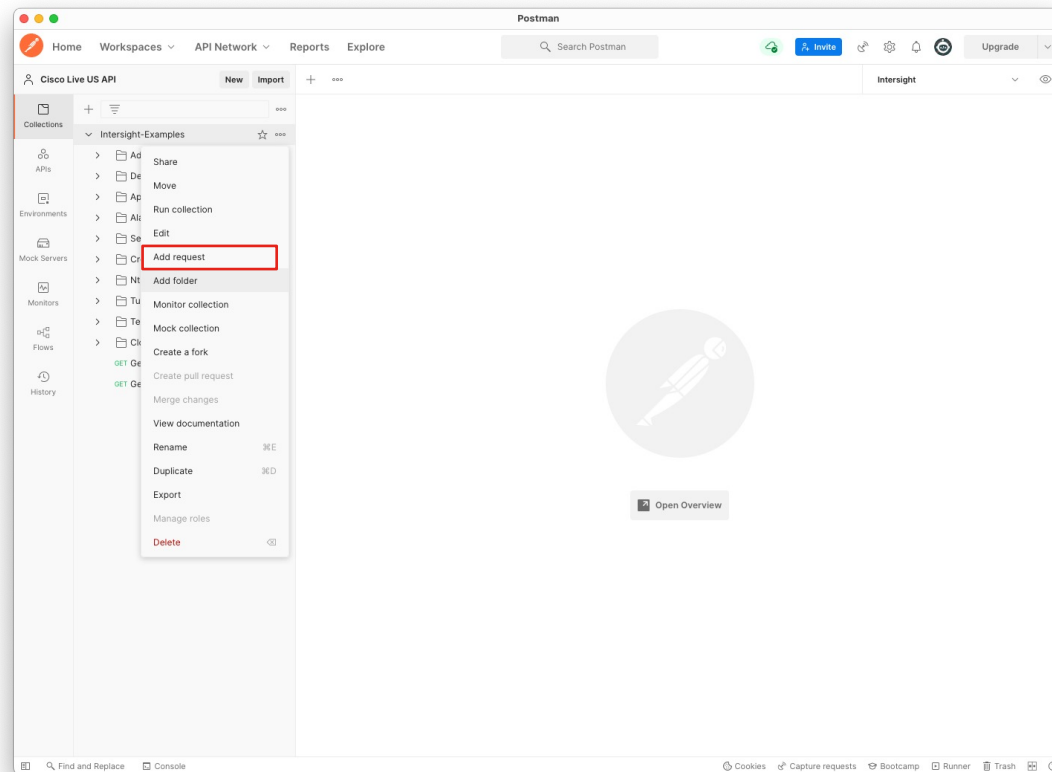
Postman



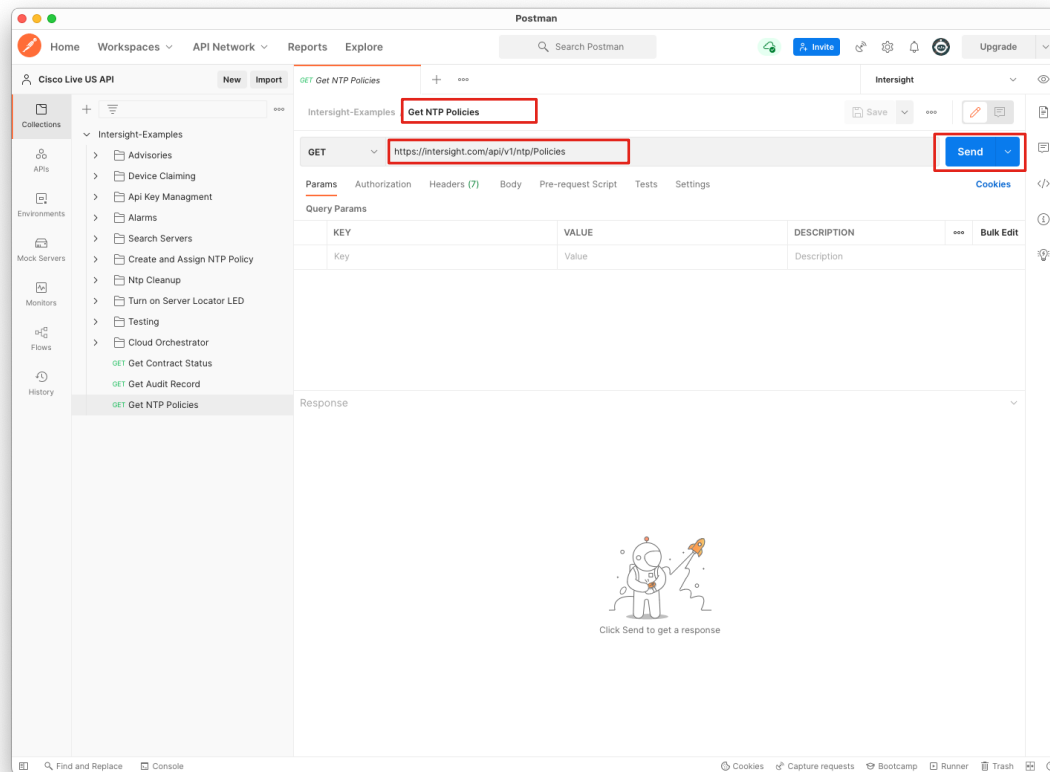
Postman



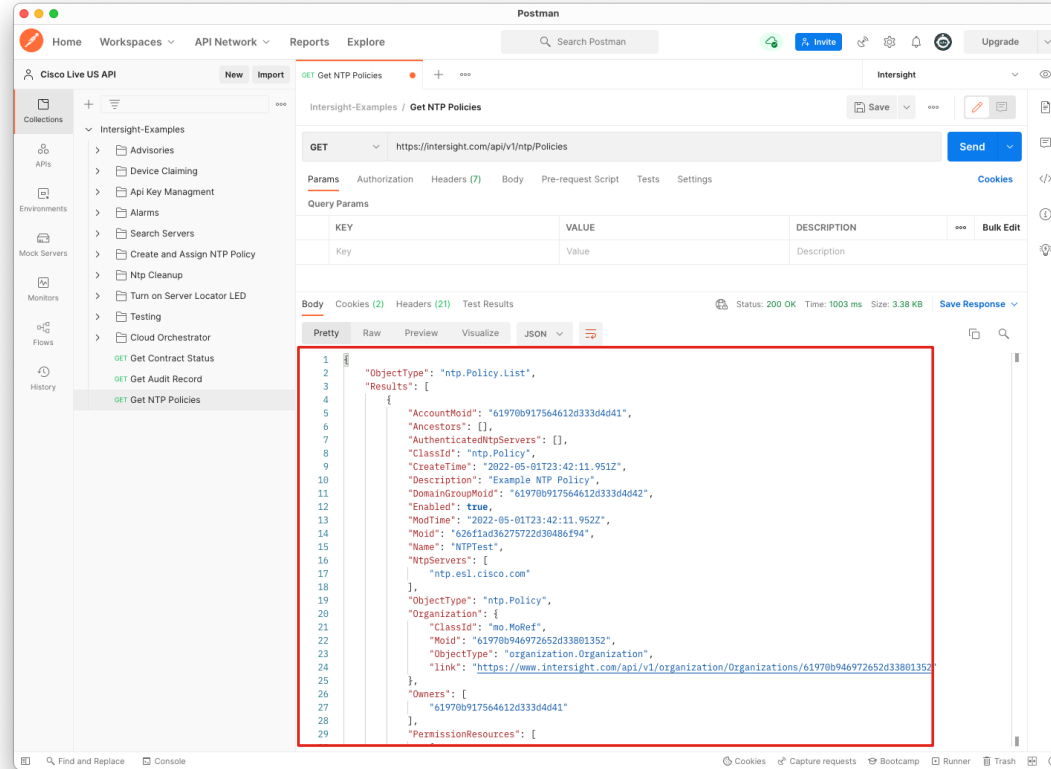
Postman



Postman



Postman



API Browser and Postman

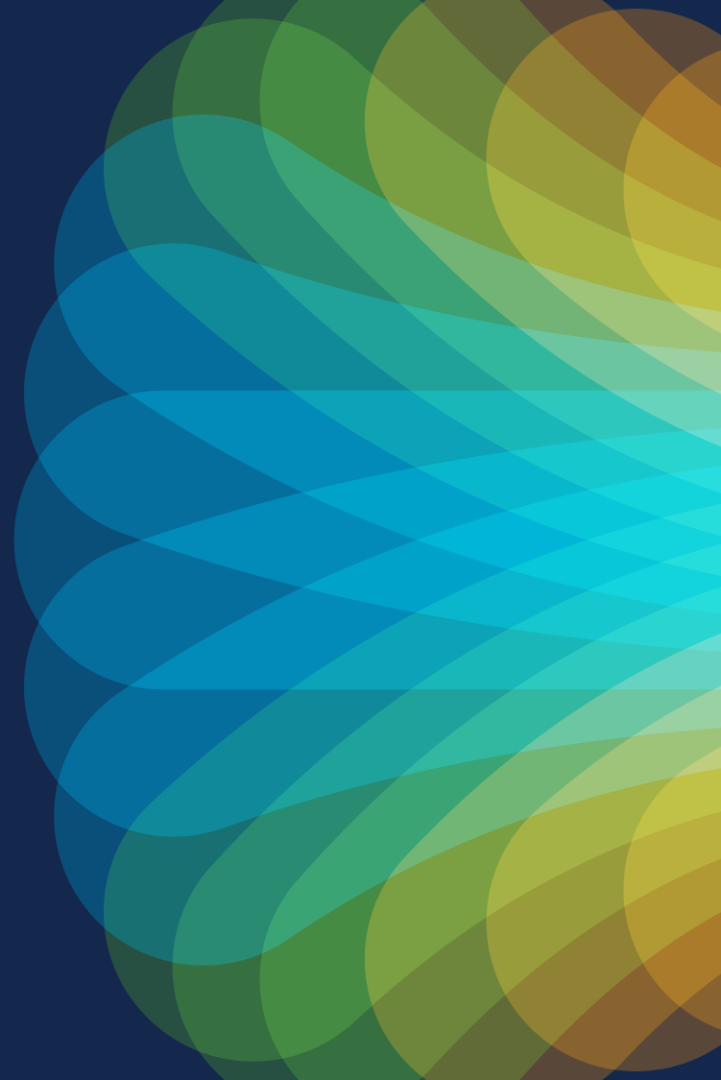
API Browser

- Nothing to install
- Authenticated automatically (no API keys required)
- Always up to date
- Good for ad-hoc requests to learn the API
- Can only be used manually

Postman

- Uses API key authentication
- Postman does not support HTTP Signature Authentication – need to use pre-request script from GitHub.
- Can be somewhat automated with “Flows”

The Intersight CLI - *isctl*



isctl is a *kubectl*-inspired CLI for Intersight

- Generated automatically from the Intersight OpenAPI v3 spec
- Written in Go and distributed as MacOS, Linux and Windows binaries (no dependencies)
- Human, JSON or YAML output
- JSONPath and custom-column support for data extraction and transformation

Getting Started – Installation

Windows

Using the [scoop.sh](https://github.com/cgascoig/isctl/raw/devel/isctl.json) package manager:

```
scoop install https://github.com/cgascoig/isctl/raw/devel/isctl.json
```

MacOS

Using the [Homebrew](https://brew.sh/) package manager:

```
brew install cgascoig/isctl/isctl
```

Linux / manual install

<https://github.com/cgascoig/isctl>

User Guide: <https://isctl.netlify.app/>

Getting Started – Initial Configuration

```
> isctl configure
keyID is currently ''
Enter new keyID or press Enter to keep existing:
61970b917564612d333d4d41/61970b917564612d333d4d46/626f24e57564612d335c906d
key filename is currently ''
Enter new key file name or press Enter to keep existing: ~/dev/api-keys/intersight-cgascoig-clus-demo.pem
Intersight API server is currently 'intersight.com'
Enter new Intersight API server or press Enter to keep existing:
INFO[0053] Writing config file
```

isctl – First Request

```
> isctl get ntp policy
```

Name	Moid	AuthenticatedNtpServers	Enabled	NtpServers	Timezone
NTPTest	626f1ad36275722d30486f94		True	ntp.esl.cisco.com	Australia/Sydney
NtpTest1	626f4f476275722d304c406b		True	1.1.1.1, 2.2.2.2	Pacific/Niue
NtpTest2	626f4f4f6275722d304c40df		True	1.1.1.1, 2.2.2.2	Pacific/Niue
NtpTest3	626f4f556275722d304c4148		True	1.1.1.1, 2.2.2.2	Pacific/Niue
NtpTest4	626f4f5c6275722d304c41c3		True	1.1.1.1, 2.2.2.2	Pacific/Niue
NtpTest5	626f4f636275722d304c421e		True	1.1.1.1, 2.2.2.2	Pacific/Niue

Basic commands

- *isctl* command structure is generated automatically from the API structure:
- `isctl <get|create|update|delete> GROUP CLASS [flags]`

```
> # Get all NTP Policies
> isctl get ntp policy

> # Get all rack servers
> isctl get compute rackunit

> # Create new NTP Policy named "NtpTest" in Org "default" with NtpServers "1.1.1.1" and "2.2.2.2"
> isctl create ntp policy --Name NtpTest --Organization default --NtpServers 1.1.1.1,2.2.2.2

> # Update existing NTP Policy named "NtpTest" in Org "default" with NtpServers "1.1.1.1"
> isctl update ntp policy name NtpTest --NtpServers 1.1.1.1

> # Delete existing NTP Policy named "NtpTest"
> isctl delete ntp policy name NtpTest
```

Output options

- By default a “**human-readable**” table format is used unless there would be a lot of columns
- “-o” can be used to specify
 - **JSON** or **YAML** (useful for piping into other tools)
 - “**custom-columns**” (a table where you can customize the columns)
 - **XLSX**

```
> isctl get ntp policy -o custom-columns="NAME:.Name,ENABLED:.Enabled"
```

-----	-----
NAME	ENABLED
-----	-----
NTPTest	True
NtpTest1	True
...	

Advanced queries – "Select"

- The Intersight API has a "select" parameter to choose which attributes to include in the response.

```
> isctl get ntp policy --select Name,NtpServers
```

Name	Moid	NtpServers
NTPTest	626f1ad36275722d30486f94	ntp.esl.cisco.com
NtpTest1	626f4f476275722d304c406b	1.1.1.1, 2.2.2.2
NtpTest2	626f4f4f6275722d304c40df	1.1.1.1, 2.2.2.2
NtpTest3	626f4f556275722d304c4148	1.1.1.1, 2.2.2.2
NtpTest4	626f4f5c6275722d304c41c3	1.1.1.1, 2.2.2.2
NtpTest5	626f4f636275722d304c421e	1.1.1.1

Advanced queries – “Expand”

- The Intersight API has an “expand” parameter that enables references to be expanded inline

```
> isctl get ntp policy --name NTPTest -o yaml --select Name,Organization
ClassId: ntp.Policy
Moid: 626f1ad36275722d30486f94
Name: NTPTest
ObjectType: ntp.Policy
Organization:
  ClassId: mo.MoRef
  Moid: 61970b946972652d33801352
  ObjectType: organization.Organization
  link: https://.../61970b946972652d33801352
```

(without “expand”)

Advanced queries – “Expand”

- The Intersight API has an “expand” parameter that enables references to be expanded inline

```
> isctl get ntp policy --name NTPTest -o yaml --select Name,Organization --expand Organization
ClassId: ntp.Policy
Moid: 626f1ad36275722d30486f94
Name: NTPTest
ObjectType: ntp.Policy
Organization:
  ClassId: organization.Organization
  Moid: 61970b946972652d33801352
  ...
  Name: default
  ObjectType: organization.Organization
  ...
```

(with “expand”)

Advanced options - JSONPath

- JSONPath (<https://goessner.net/articles/JsonPath/>) is an expression language for querying JSON documents
- *isctl* can use JSONPath to extract specific information from the API call results

```
# Get a single attribute from a call that returns a single MO
> isctl get ntp policy name NTPTest --jsonpath '$.Name'
NTPTest

# Get a single attribute from each element in a list of results
> isctl get ntp policy --jsonpath '$[*].Name'
NTPTest
NtpTest1
NtpTest2
NtpTest3
NtpTest4
NtpTest5
```

Use case examples

- Find all the Trusted Platform Modules in blade and rack servers and their activation status

```
> isctl get equipment tpm --expand 'ComputeBoard($expand=ComputeRackUnit,ComputeBlade)' -o custom-  
columns=TPMSerial:.Serial,BladeSerial:.ComputeBoard.ComputeBlade.Serial,RackSerial:.ComputeBoard.ComputeRackUnit.Serial,Activat  
ionStatus:.ActivationStatus,AdminState:.AdminState
```

TPMSerial	BladeSerial	RackSerial	ActivationStatus	AdminState
NA	<none>	FCH2035V0CP	unknown	unknown
FCH1807J9V6	FCH18097X4Z	<none>	unknown	unknown
FCH1803JEVA	FCH18097X4Z	<none>	activated	enabled
FCH2041774F	FCH2046736C	<none>	activated	enabled
FCH20337FE5	FCH210977GZ	<none>	activated	enabled

Use case examples

- Find all NTP policies with “NtpTest” in the name and change their NtpServers to 1.1.1.1:

```
> for moid in $(isctl get ntp policy --filter "contains(Name, 'NtpTest')" --jsonpath '$[*].Moid'); do isctl update ntp policy moid ${moid} --NtpServers 1.1.1.1; done
```

```
> isctl get ntp policy --filter "contains(Name, 'NtpTest')"
```

Name	Moid	AuthenticatedNtpServers	Enabled	NtpServers	Timezone
NtpTest1	626f4f476275722d304c406b		True	1.1.1.1	Pacific/Niue
NtpTest2	626f4f4f6275722d304c40df		True	1.1.1.1	Pacific/Niue
NtpTest3	626f4f556275722d304c4148		True	1.1.1.1	Pacific/Niue
NtpTest4	626f4f5c6275722d304c41c3		True	1.1.1.1	Pacific/Niue
NtpTest5	626f4f636275722d304c421e		True	1.1.1.1	Pacific/Niue

Use case – inventory

```
> isctl inventory compute -o xlsx=out.xlsx
INFO[0000] Collecting compute inventory
INFO[0000] Collecting compute.PhysicalSummary inventory
INFO[0000] Auto pagination requesting batch, skip=0, top=1000
INFO[0001] Auto pagination requesting batch, skip=1000, top=1000
INFO[0001] Auto pagination finished: no more results
INFO[0001] Collecting processor.Unit inventory
INFO[0001] Auto pagination requesting batch, skip=0, top=1000
INFO[0002] Auto pagination requesting batch, skip=1000, top=1000
INFO[0003] Auto pagination finished: no more results
INFO[0003] Collecting memory.Unit inventory
INFO[0003] Auto pagination requesting batch, skip=0, top=1000
INFO[0005] Auto pagination requesting batch, skip=1000, top=1000
INFO[0007] Auto pagination requesting batch, skip=2000, top=1000
INFO[0008] Auto pagination finished: no more results
INFO[0008] Collecting storage.Controller inventory

...

INFO[0017] Auto pagination requesting batch, skip=0, top=1000
INFO[0018] Auto pagination requesting batch, skip=1000, top=1000
INFO[0019] Auto pagination finished: no more results
INFO[0019] Collecting equipment.Transceiver inventory
INFO[0019] Auto pagination requesting batch, skip=0, top=1000
INFO[0020] Auto pagination requesting batch, skip=1000, top=1000
INFO[0021] Auto pagination finished: no more results
INFO[0021] Output written to xlsx file /tmp/out.xlsx
```

Use case – inventory

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1	Name	Moid	AccountMoid	AdminPower	AlarmSumma	Ancestors	AssetTag	AvailableMen	BiosPostCom	ChassisId	ClassId	ConnectionSt	CpuCapacity	CreateTime	DeviceMoid	Dn	DomainGrou
2	se-cimc-6-c22	5cac0f70617c	59c84e4a162	policy	{\"ClassId\": \"co		Test	131072	false		compute.Phys		27.2	2019-04-09TC	5cac0f536f72	sys/rack-unit-	5b25418d7a
3	anzsp-mel03-	5f0527cd617c	59c84e4a162	policy	{\"ClassId\": \"co			524288	false		compute.Phys: A,B		67.200005	2020-07-08TC	5f0527c06f72	sys/rack-unit-	5b25418d7a
4	anzsp-mel03-	5f0527cd617c	59c84e4a162	policy	{\"ClassId\": \"co			524288	false		compute.Phys: A,B		67.200005	2020-07-08TC	5f0527c06f72	sys/rack-unit-	5b25418d7a
5	anzsp-mel03-	5f0527cd617c	59c84e4a162	policy	{\"ClassId\": \"co			524288	false		compute.Phys: A,B		67.200005	2020-07-08TC	5f0527c06f72	sys/rack-unit-	5b25418d7a
6	C220-FCH200	5f2a581c617c	59c84e4a162	policy	{\"ClassId\": \"co		Unknown	262144	false		compute.Phys		46	2020-08-05TC	5f2a57ea6f72	sys/rack-unit-	5b25418d7a
7	C460-FCH181	5f2a82d7617c	59c84e4a162	policy	{\"ClassId\": \"co		Unknown	163840	false		compute.Phys		64	2020-08-05TC	5f2a82ce6f72	sys/rack-unit-	5b25418d7a
8	C220-FCH200	5f63eb5b617c	59c84e4a162	policy	{\"ClassId\": \"co		Unknown	262144	false		compute.Phys		46	2020-09-17TC	5f63eb356f72	sys/rack-unit-	5b25418d7a
9	C220-FCH200	5f7bed0b617c	59c84e4a162	policy	{\"ClassId\": \"co		Unknown	262144	false		compute.Phys		46	2020-10-06TC	5f7beceb6f72	sys/rack-unit-	5b25418d7a
10	ANZ-SE-DC-HX	607ff57d617c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		55.199997	2021-04-21TC	607ff5706f72	sys/rack-unit-	5b25418d7a
11	ANZ-SE-DC-HX	607ff57d617c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		55.199997	2021-04-21TC	607ff5706f72	sys/rack-unit-	5b25418d7a
12	ANZ-SE-DC-HX	6080e9e8617c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		55.199997	2021-04-22TC	607ff5706f72	sys/rack-unit-	5b25418d7a
13	C220-FCH210	60826288617c	59c84e4a162	policy	{\"ClassId\": \"co		Unknown	131072	false		compute.Phys		38.4	2021-04-23TC	608262e6f72	sys/rack-unit-	5b25418d7a
14	Hyperflex-1	60b72106767c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		52	2021-06-02TC	60b720f96f72	sys/rack-unit-	5b25418d7a
15	Hyperflex-3	60b72106767c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		52	2021-06-02TC	60b720f96f72	sys/rack-unit-	5b25418d7a
16	Hyperflex-4	60b72106767c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		52	2021-06-02TC	60b720f96f72	sys/rack-unit-	5b25418d7a
17	Hyperflex-2	60b72106767c	59c84e4a162	policy	{\"ClassId\": \"co			393216	false		compute.Phys: A,B		52	2021-06-02TC	60b720f96f72	sys/rack-unit-	5b25418d7a
18	Hyperflex-1-1	60b72107767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			524288	false	1	compute.Phys		72.799995	2021-06-02TC	60b720f96f72	sys/chassis-1/	5b25418d7a
19	Hyperflex-1-2	60b72107767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			327680	false	1	compute.Phys		52	2021-06-02TC	60b720f96f72	sys/chassis-1/	5b25418d7a
20	Hyperflex-1-3	60b72107767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			393216	false	1	compute.Phys		117.59999	2021-06-02TC	60b720f96f72	sys/chassis-1/	5b25418d7a
21	Hyperflex-1-5	60b72107767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			786432	false	1	compute.Phys		129.6	2021-06-02TC	60b720f96f72	sys/chassis-1/	5b25418d7a
22	Hyperflex-1-8	60b72107767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			393216	false	1	compute.Phys		38.4	2021-06-02TC	60b720f96f72	sys/chassis-1/	5b25418d7a
23	Hyperflex-1-7	60b72107767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			524288	false	1	compute.Phys		56	2021-06-02TC	60b720f96f72	sys/chassis-1/	5b25418d7a
24	ANZ-SE-DC-HX	60dfb3dd617c	59c84e4a162	policy	{\"ClassId\": \"co			360448	false		compute.Phys: A,B		55.199997	2021-07-03TC	607ff5706f72	sys/rack-unit-	5b25418d7a
25	C220-FCH200	611ef5be767c	59c84e4a162	policy	{\"ClassId\": \"co		IHIS	262144	false		compute.Phys		46	2021-08-20TC	611ef5ac6f72	sys/rack-unit-	5b25418d7a
26	MEL-DC4-UCS	61553b90767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			524288	false	1	compute.Phys		55.199997	2021-09-30TC	606410d06f72	sys/chassis-1/	5b25418d7a
27	MEL-DC4-UCS	61553b91767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			786432	false	1	compute.Phys		55.199997	2021-09-30TC	606410d06f72	sys/chassis-1/	5b25418d7a
28	MEL-DC4-UCS	61553b91767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			524288	false	1	compute.Phys		55.199997	2021-09-30TC	606410d06f72	sys/chassis-1/	5b25418d7a
29	MEL-DC4-UCS	61553b91767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			262144	false	1	compute.Phys		46	2021-09-30TC	606410d06f72	sys/chassis-1/	5b25418d7a
30	MEL-DC4-UCS	61553b91767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			589824	false	1	compute.Phys		55.199997	2021-09-30TC	606410d06f72	sys/chassis-1/	5b25418d7a
31	MEL-DC4-UCS	6156c38767c	59c84e4a162	policy	{\"ClassId\": \"co			262144	false		compute.Phys: A,B		44	2021-10-01TC	606410d06f72	sys/rack-unit-	5b25418d7a
32	MEL-DC4-UCS	6156c367767c	59c84e4a162	policy	{\"ClassId\": \"co			262144	false		compute.Phys: A,B		44	2021-10-01TC	606410d06f72	sys/rack-unit-	5b25418d7a
33	MEL-DC4-UCS	61efa81c767c	59c84e4a162	policy	{\"ClassId\": \"co			262144	false		compute.Phys: A,B		44	2022-01-25TC	606410d06f72	sys/rack-unit-	5b25418d7a
34	Hyperflex-1-6	62fc4221767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			360448	false	1	compute.Phys		83.2	2022-08-17TC	60b720f96f72	sys/chassis-1/	5b25418d7a
35	Hyperflex-1-4	62fc425d767c	59c84e4a162	policy	{\"ClassId\": \"co {\"ClassId\": \"mi			655360	false	1	compute.Phys		28.8	2022-08-17TC	60b720f96f72	sys/chassis-1/	5b25418d7a
36	C220-WZP21	63eedabb767c	59c84e4a162	policy	{\"ClassId\": \"co		Location: NSD	393216	false		compute.Phys		55.199997	2023-02-17TC	63eeda786f72	sys/rack-unit-	5b25418d7a

compute.PhysicalSummary equipment.Chassis equipment.Flex equipment.LoCard equipment.Psu equipment.Transceiver graphics.Card memory.Unit network.Element pci.Device pci.Node processor.Unit storage +

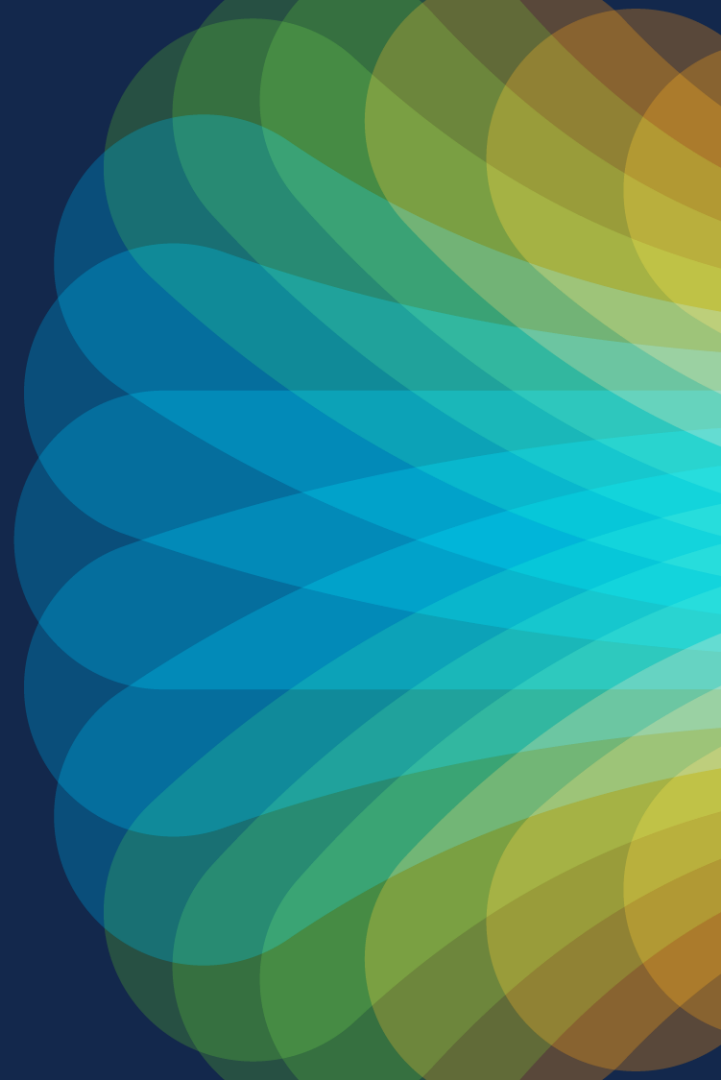
Use case – declarative infrastructure

```
ClassId: ntp.Policy
ObjectType: ntp.Policy
Name: isctl-test
Enabled: true
NtpServers:
  - 1.1.1.1
Organization: MoRef[Name:isctl-test]
---
ClassId: organization.Organization
ObjectType: organization.Organization
Name: isctl-test
```

ntp_organization.yaml

```
> isctl apply -f ntp_organization.yaml
INFO[0001] Performing update operation on existing MO (Name: isctl-test, Moid: 60138f066972652d33286fa0, ClassId: organization.Organization)
INFO[0002] Performing create operation on new MO (Name: isctl-test, ClassId: ntp.Policy)
Apply completed successfully
```

Conclusion



Conclusion

- You don't need to be a rocket scientist to get started with the Intersight API
- For learning the API and one-off tasks, the API Documentation Browser and Postman are great places to start
- *isctl* is a powerful CLI tool to work with the API and can be used for complete automation tasks
- Try it out and share your feedback!



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The background is a vibrant, abstract graphic featuring a rainbow color palette. On the left, there are horizontal, wavy bands of color transitioning from red at the top to blue at the bottom. On the right, a bright white light source emits a series of sharp, triangular rays of color in a radial pattern, also using the rainbow spectrum. The overall effect is energetic and celebratory.

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