The bridge to possible

PX Cloud APIs

A gateway for partners to digitally connect with customers and get insights to grow their business

Arjun Reddy Donala, Technical Leader

Cisco Webex App

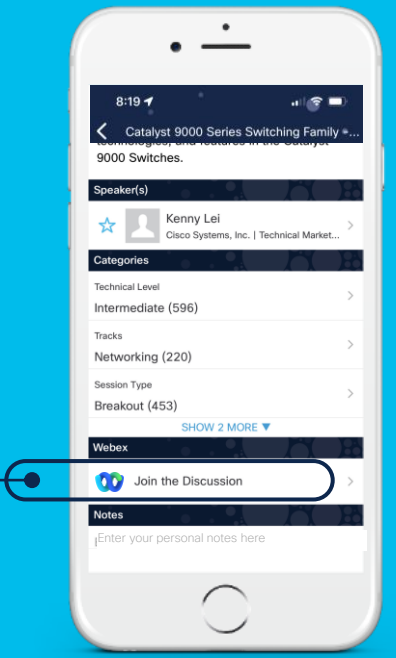
Questions?

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 until February 24, 2023.



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Agenda

- Introduction
- PX Cloud APIs
- Partner Use Cases
- Resources

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Introduction

Partner Lifecycle Services

Flexibility, Choice, and Partner Opportunity

<table>
<tr><th>Offer</th><th>Support model</th><th colspan="2">Service creation and delivery</th><th colspan="5">Digital experience</th></tr>
<tr><td>Cisco Delivered (resell)

Success Tracks
with PX Cloud</td><td>Cisco Solution Support</td><td colspan="2">Cisco
ATXs and
Accelerators</td><td>CX Cloud

PX Cloud</td><td colspan="4"></td></tr>
<tr><td>Partner Enhanced (resell or co-sell)

Success Tracks
with PX Cloud Enhanced Access</td><td>Cisco Solution Support</td><td>Cisco
ATXs and
Accelerators</td><td>Partner
ATXs and
Accelerators</td><td>CX Cloud

PX Cloud</td><td>Partner
publishing
on
CX Cloud</td><td>API
L1</td><td>API
L2</td><td>API
L3</td></tr>
<tr><td>Partner Led

PLS-Success Tracks
with PX Cloud APIs</td><td>PLS-Support</td><td>Cisco
ATXs and
Accelerators</td><td>Partner
ATXs and
Accelerators</td><td colspan="2">PX Cloud *</td><td>API
L1</td><td>API
L2</td><td>API
L3</td></tr>
</table>

Each offer requires different eligibility requirements.
PLS-Success Tracks, PX Cloud and PX Cloud Enhanced Access are future releases.

** Partners have the choice to create their own digital experience or use CX Cloud.*

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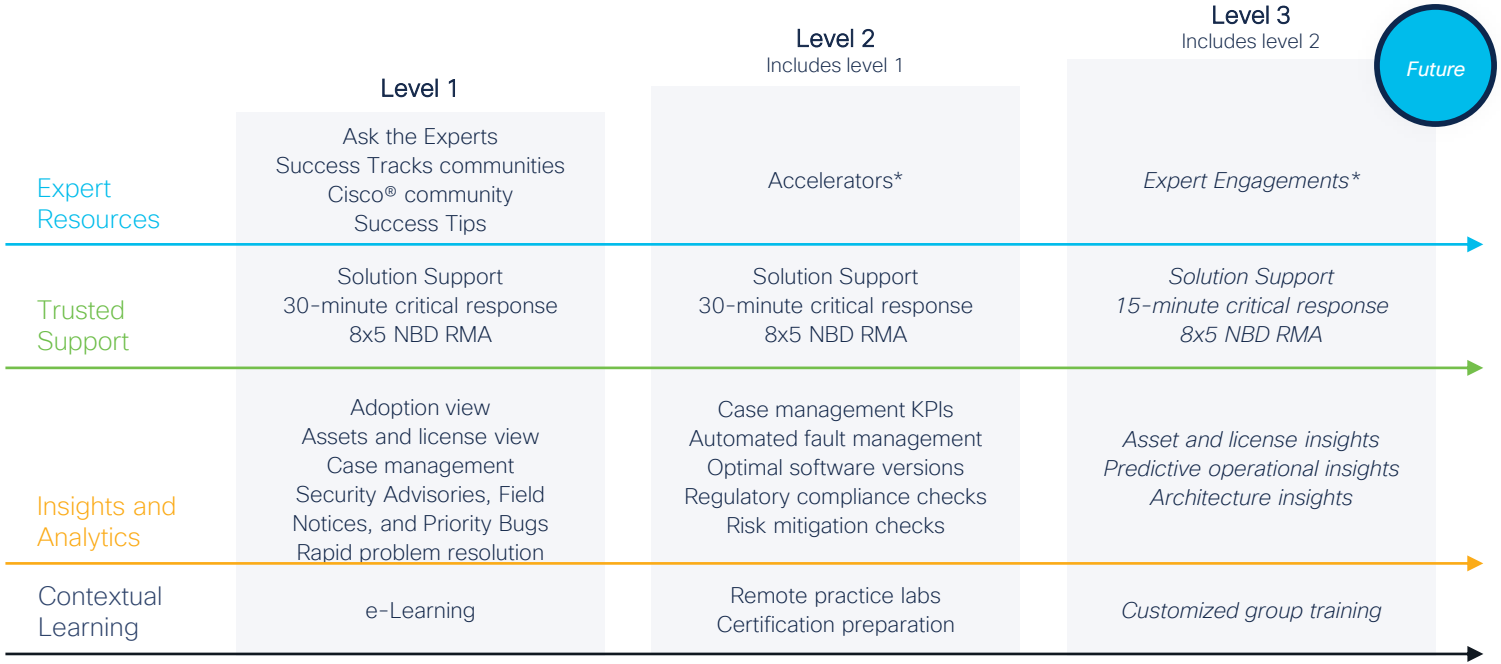
Cisco Success Tracks

Holistic services package for all architectures



Advanced Services | Training | Certification testing

* Feature consumption dependent on purchase amount

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CX Cloud and PX Cloud

Leverage insights to your advantage

- Customer access for CX Success Tracks
- Partner-branded ATX and Accelerators

Bi-directional, real time information exchange

Publish partner-defined and delivered Ask the Experts (ATX) and Accelerators (ACC) via PX Cloud*

- Partner-only access
- Partner access to CX Cloud view

PX Cloud features and data available via APIs*

- Partners can create their own offers such as ATX and ACC*

* PX Cloud Enhanced Access features. Available only to Customer Experience Specialized or Advanced Customer Experience Specialized partners.

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PX Cloud APIs

Why APIs?

Opportunities

- Real-time visibility of customer's data
- Access to Cisco's recommendations
- Telemetry based on Cisco's IC

Solution

- PX Cloud APIs

Integrate CX business and technology insights with your in-house 3rd party platforms.

Outcomes

- Build your unique customer experience
- Discover new business opportunities
- Drive customer adoption and renewals
- Deliver a predictive and proactive support

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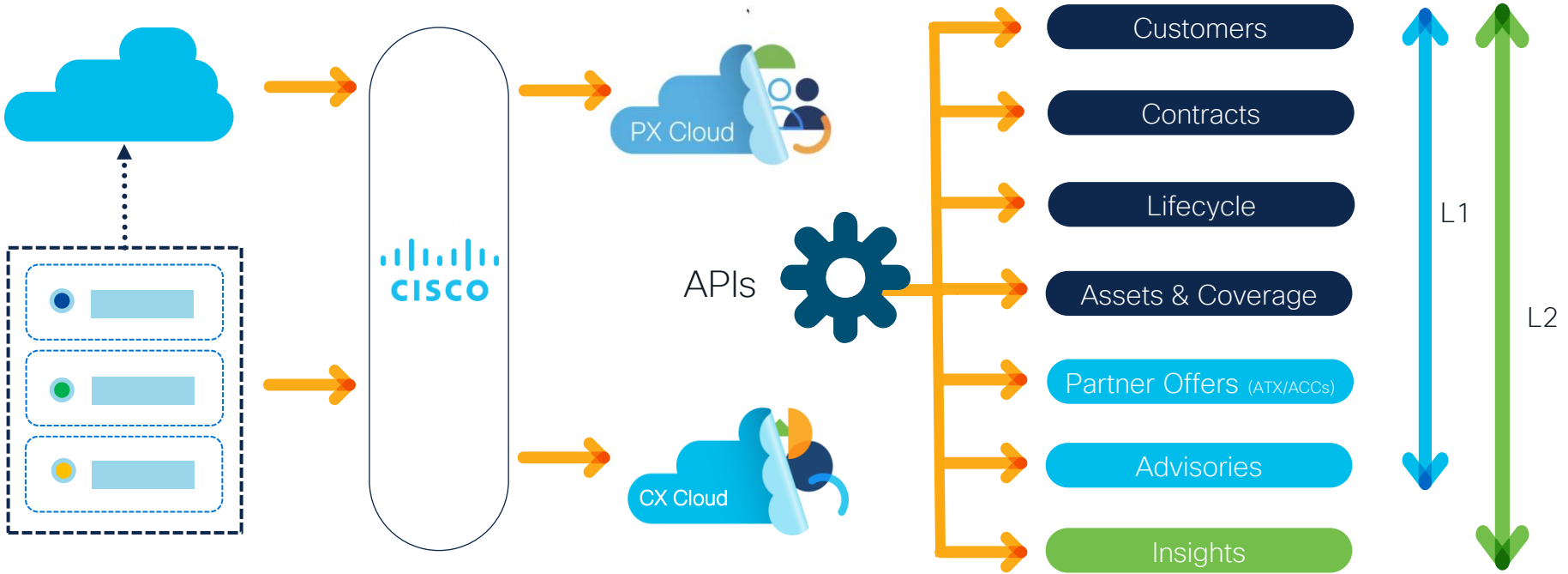
Cisco PX Cloud APIs at a glance



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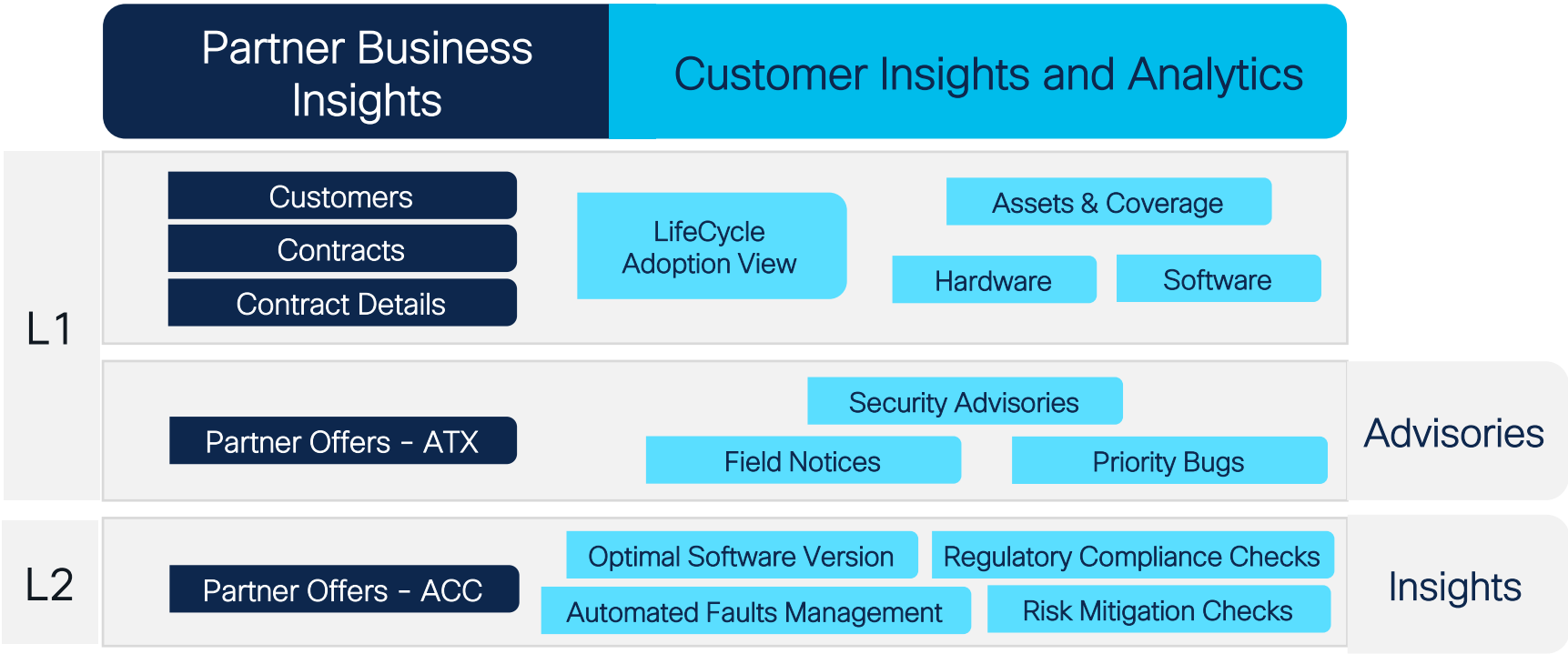
Cisco PX Cloud APIs



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PX Cloud APIs

APIs

Reports

{RESTful}

{JSON}
Response

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PX Cloud API Access

From partner onboarding to API requests

Application Registration

Generate Access Keys

- Client ID
- Client Secret

Bearer Token Generation

Create Bearer Token

- Bearer Token
- Refresh every 2 hours

Partner Onboarding

Entitlement Check

- Success Track Transaction
- PLS Eligible

API Requests

API Invocation

- Authorization Header with Bearer Token
- Invoke PX Cloud API

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Demo

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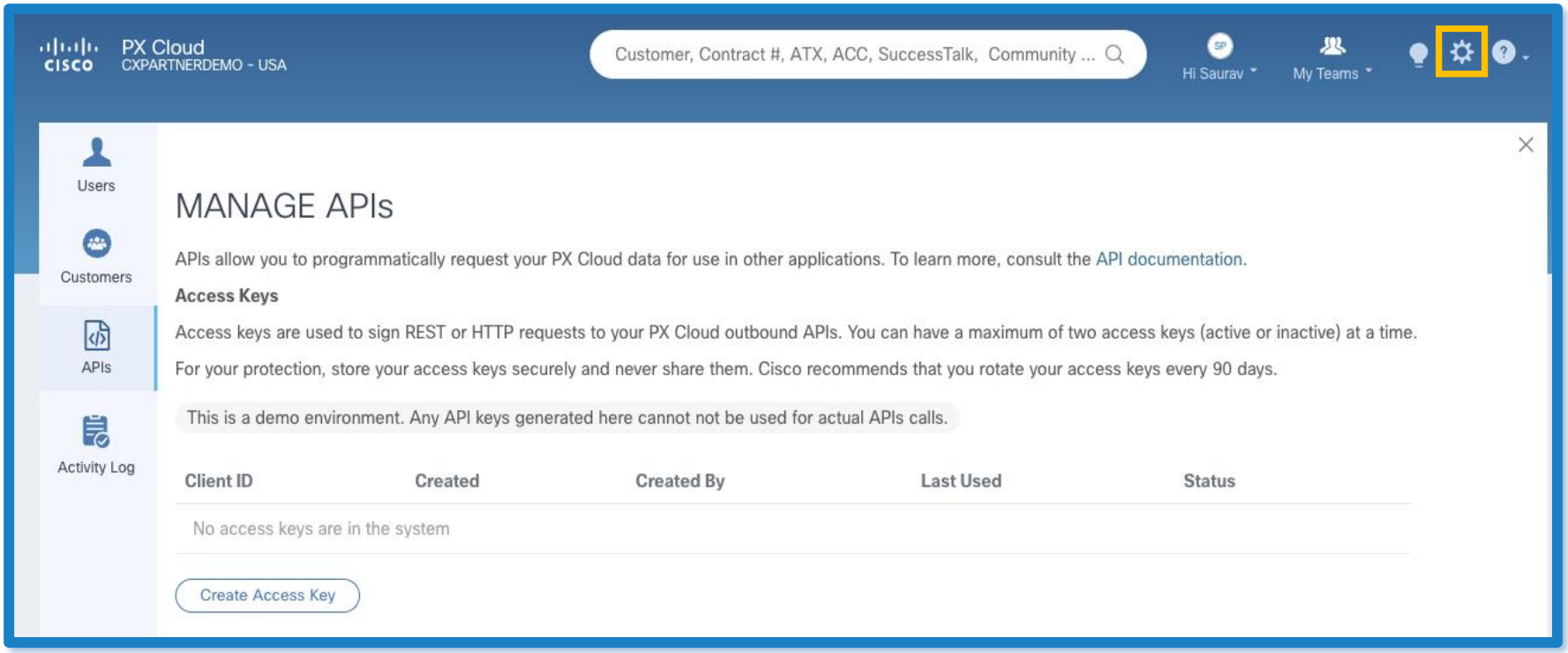
Application registration



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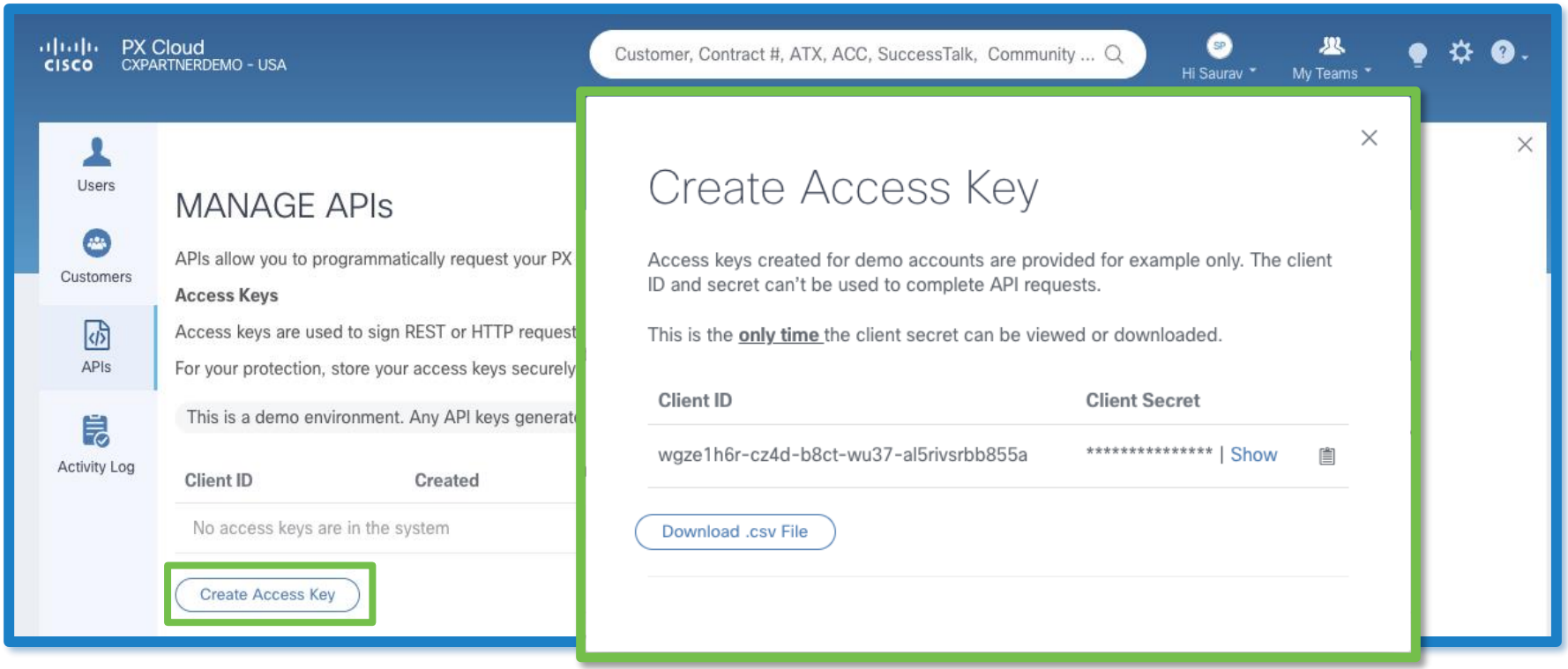
Application registration



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PX Cloud APIs

Partner Business Insights

Customers — /v1/customers

Contracts — /v1/contracts, /v1/contracts/details

Partner Offers (ATX & ACC) — /v1/partnerOffers, /v1/partnerOffersSessions

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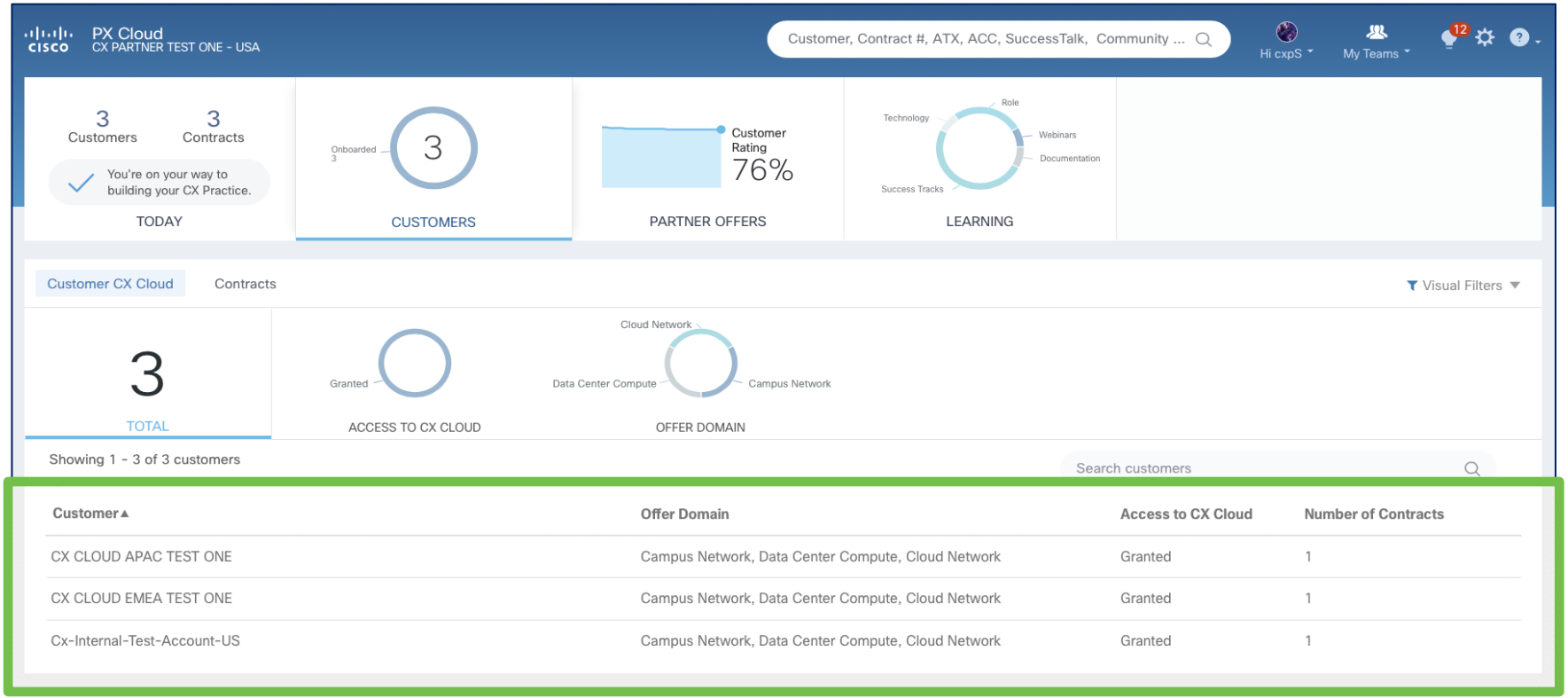
How to find your list of customers

PX Cloud Portal



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List of customers

API response

Get: https://api-cx.cisco.com/px/v1/customers


```
{
    "items": [
        {
            "customerName": "CX CLOUD EMEA TEST ONE",
            "customerId": "GPLwztDM2ZSjK0X",
            "successTracks": [
                {
                    "id": "38396885",
                    "access": true
                } ,
                {
                    "id": "40485321",
                    "access": true
                }
            ]
        },
        {
            "customerName": "Cx-Internal-Test-Account-US",
            "customerId": "B0zOXTjY3BCzK0",
            "successTracks": [
                {
                    "id": "38396885",
                    "access": true
                },
                {
                    "id": "40485321",
                    "access": true
                }
            ]
        }
    ],
    "totalCount": 2
}
```


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PX Cloud APIs

Customer Data

Customer Adoption View /v1/customers/{customerId}/lifecycle

Customer Data Reports /v1/customers/{customerId}/report

Customer Data & Analytics

Report types

- Assets
- Hardware
- Purchased Licenses
- Licenses with Assets
- Software
- Security Advisories
- Field Notices
- Priority Bugs

Note: Customer must approve Partner access

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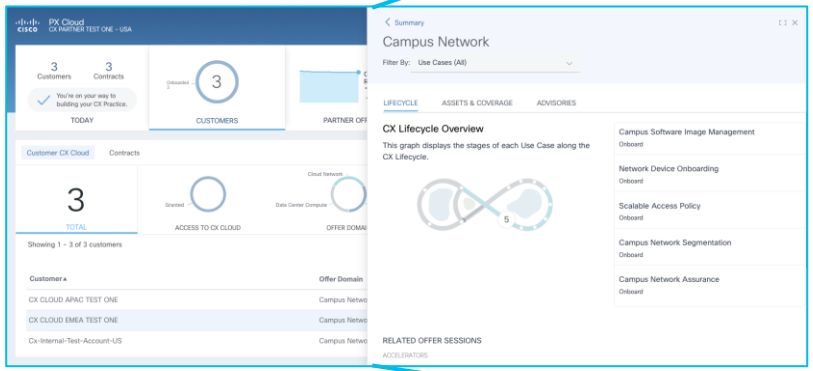
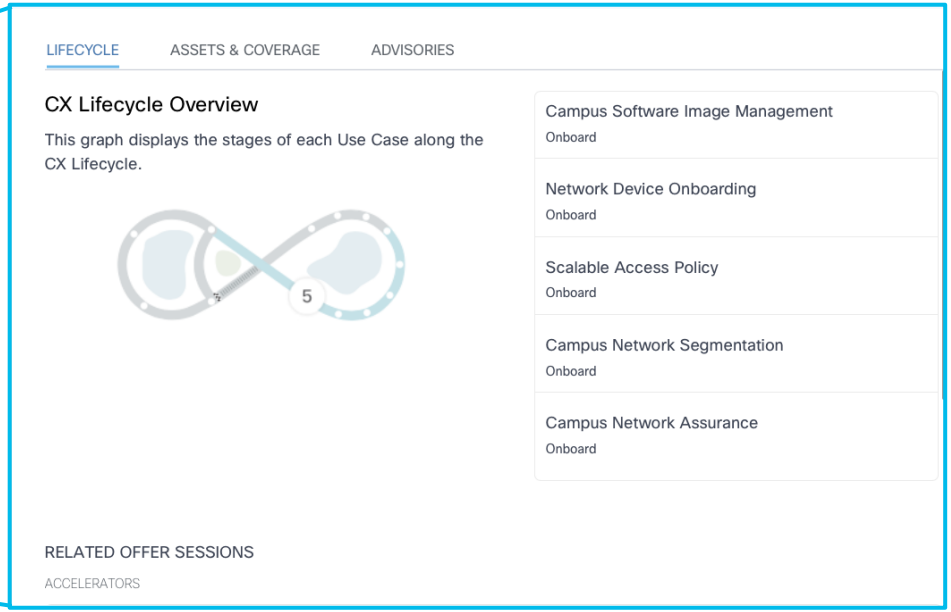
Customer adoption view

PX Cloud Portal





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Customer adoption view

API response

Get: https://api-cx.cisco.com/px/v1/customers/{customerId}/lifecycle


```
{
    "items": [
        {
            "successTrack": "Campus Network",
            "id“ : "38396885",
            "usecases": [
                {
                    "name": "Network Device Onboarding",
                    "id": "39304061",
                    "currentPitstop": "Onboard",
                    "pitstops": [ … ]
                },
                {
                    "name": "Campus Network Assurance",
                    "id": "39304064",
                    "currentPitstop": "Onboard",
                    "pitstops": [ … ]
},
```

```
"pitstops": [
        {
        "name": "Engage",
        "pitstopActions": [
        {
        "name": "View the Plug and Play Page",
        "id": "IBN_BAM_NDO_ENG_1",
        "completed": false,
        "manualCheckAllowed": false
        },
        {
        "name": "View the Inventory Page",
        "id": "IBN_BAM_NDO_ENG_2",
        "completed": false,
        "manualCheckAllowed": false
        }
    ]
},
```


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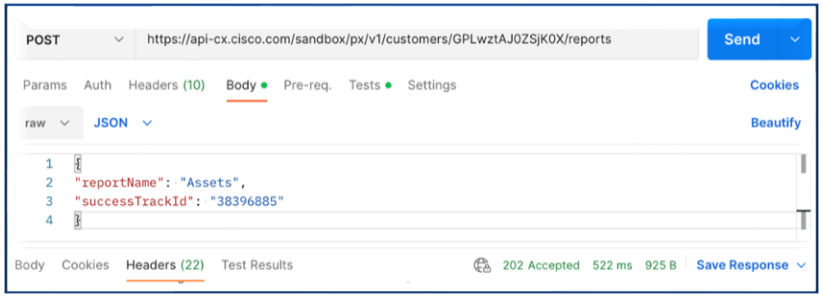
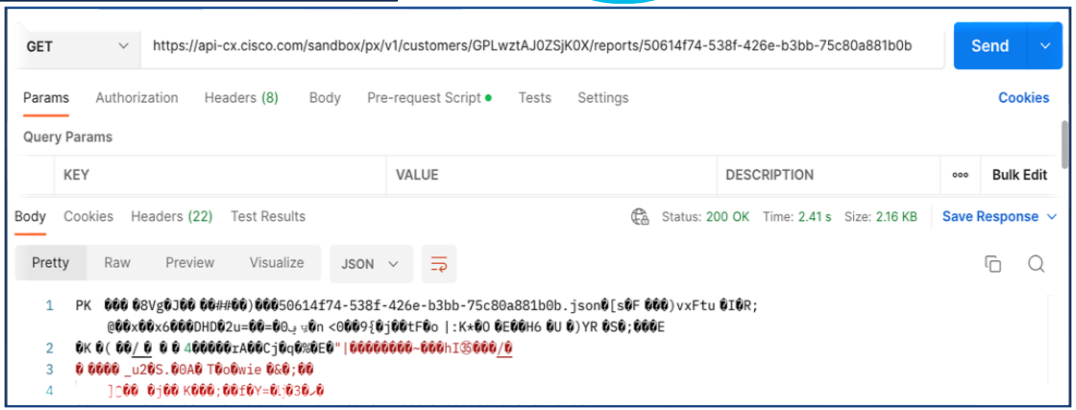
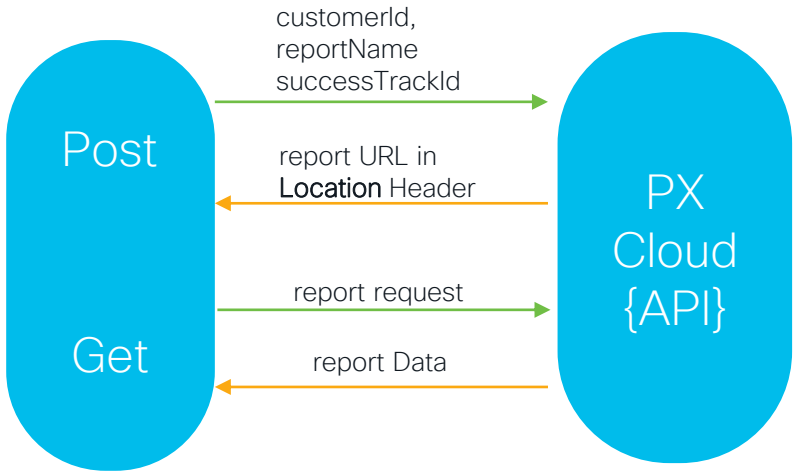
Customer Data Reports API

Execution







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Customer Data Reports

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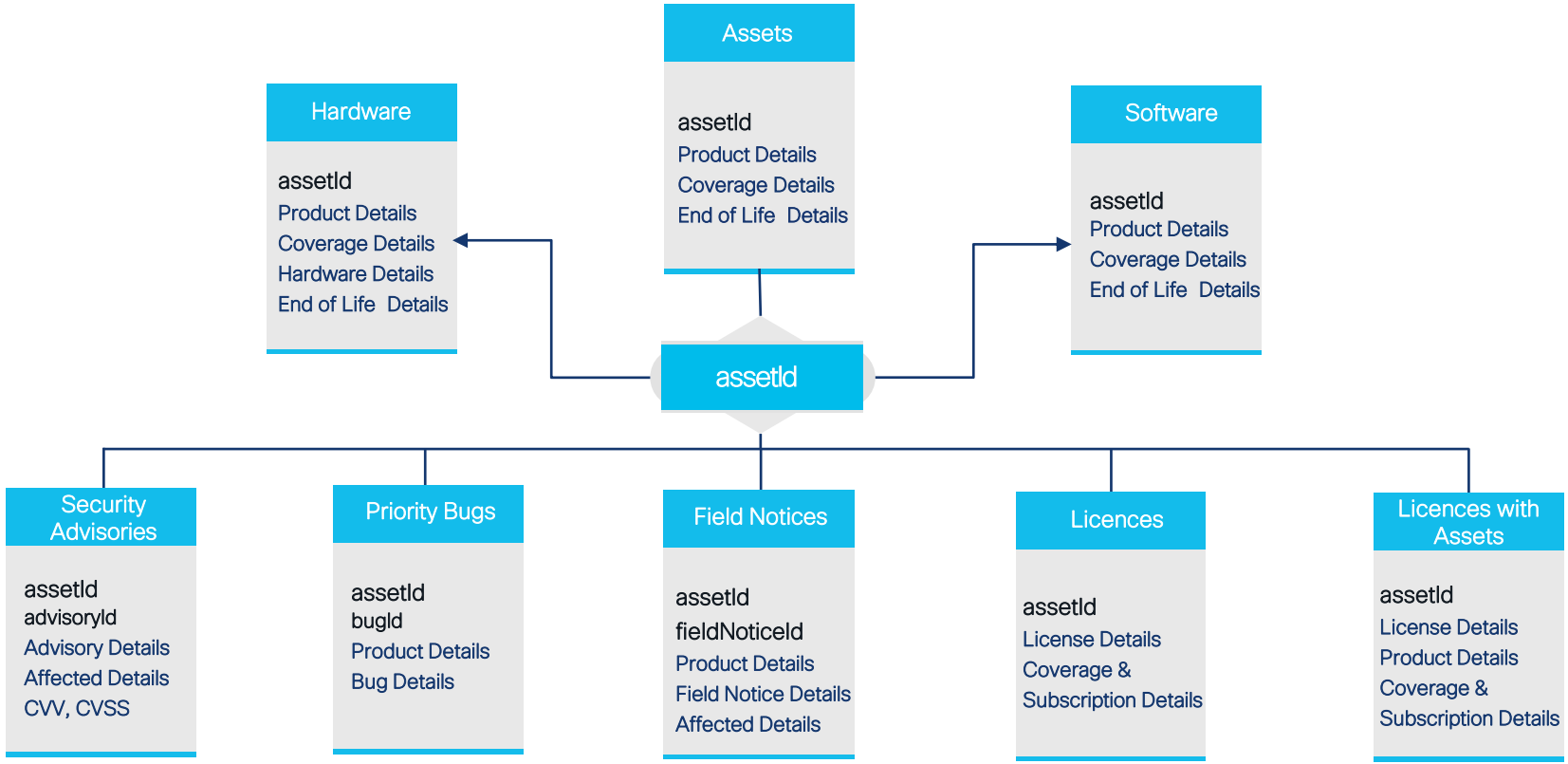
Customer Data Reports – Mapping



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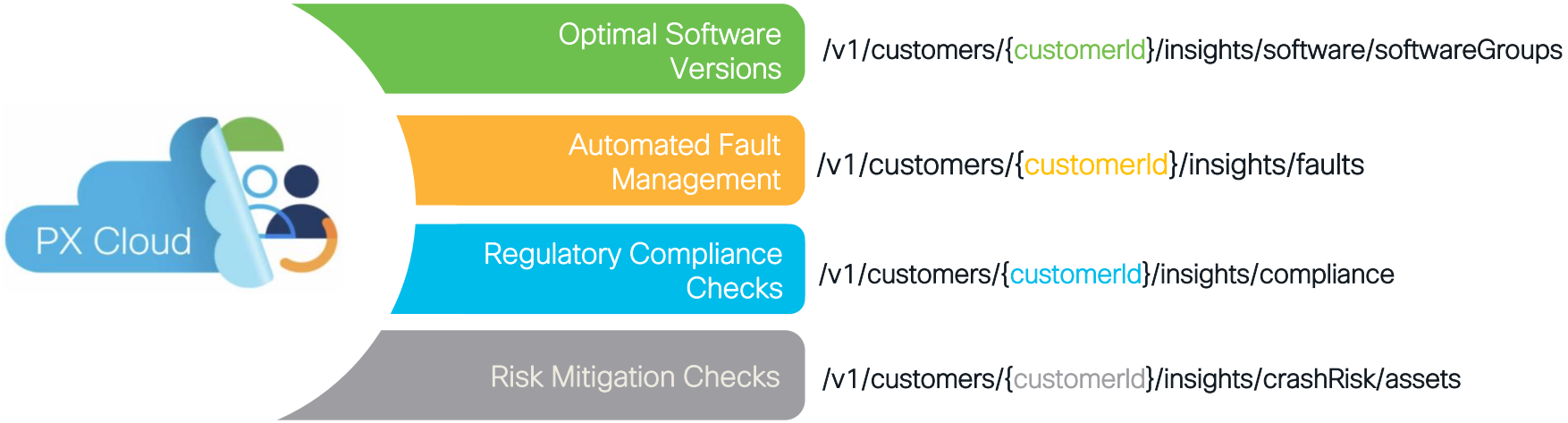
PX Cloud APIs

Customer Data Insights



Customer Data INSIGHTS

Note: Customer must approve Partner access

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Supported Success Tracks

APIs

API Data	Campus Network	Data Center Compute	Cloud Network
Lifecycle	✓	✓	✓
Assets & Coverage	✓	✓	✓
Advisories	✓	✓	✓
Insights	✓	✗	✗

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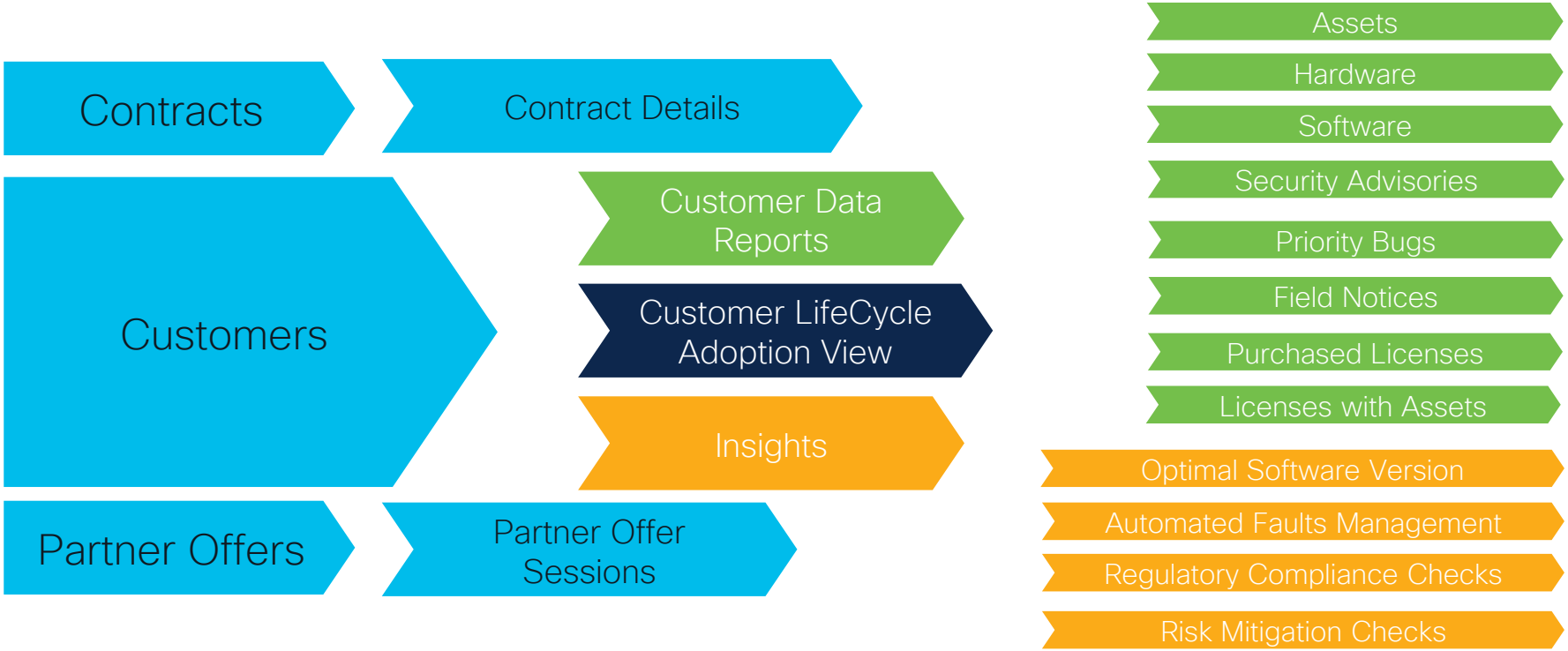
API Execution Order



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API Execution Order

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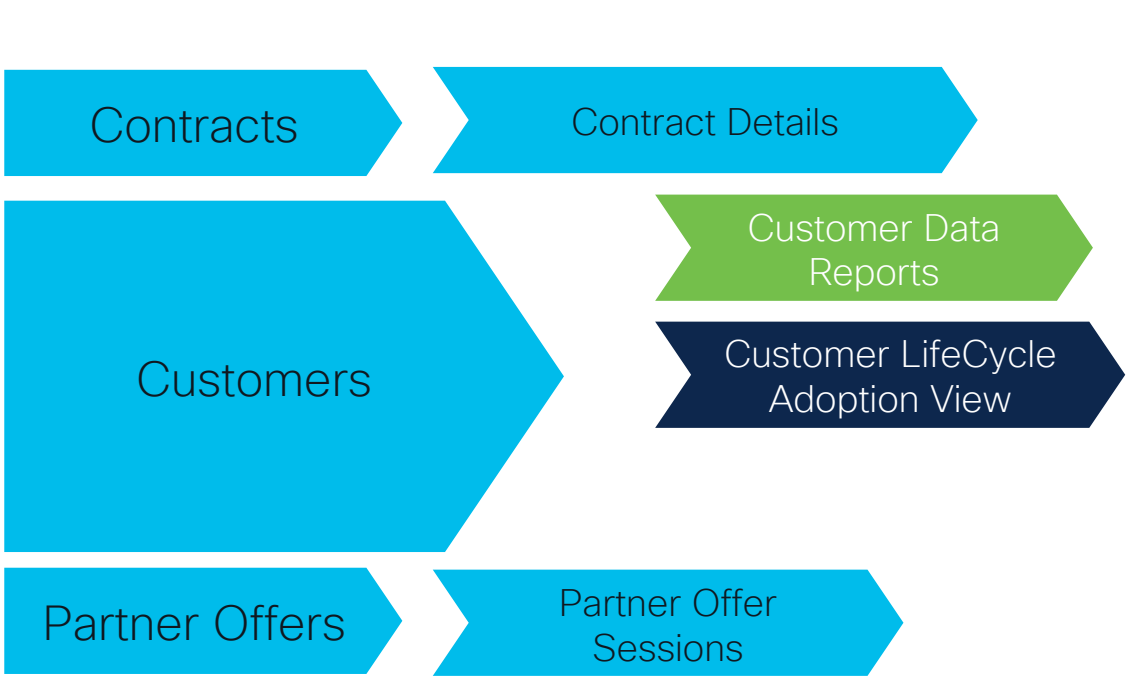
API Execution Order



- Assets
- Hardware
- Software
- Security Advisories
- Priority Bugs
- Field Notices
- Purchased Licenses
- Licenses with Assets

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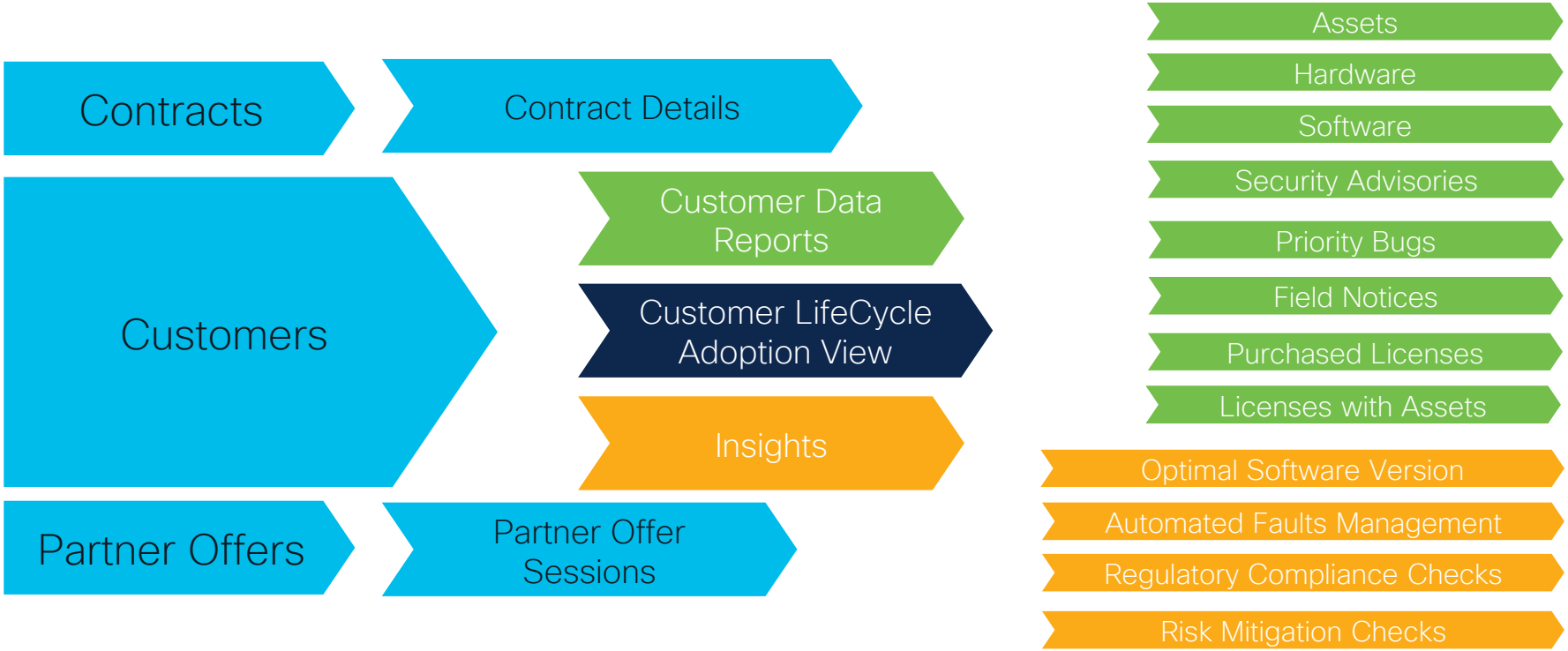
API Execution Order



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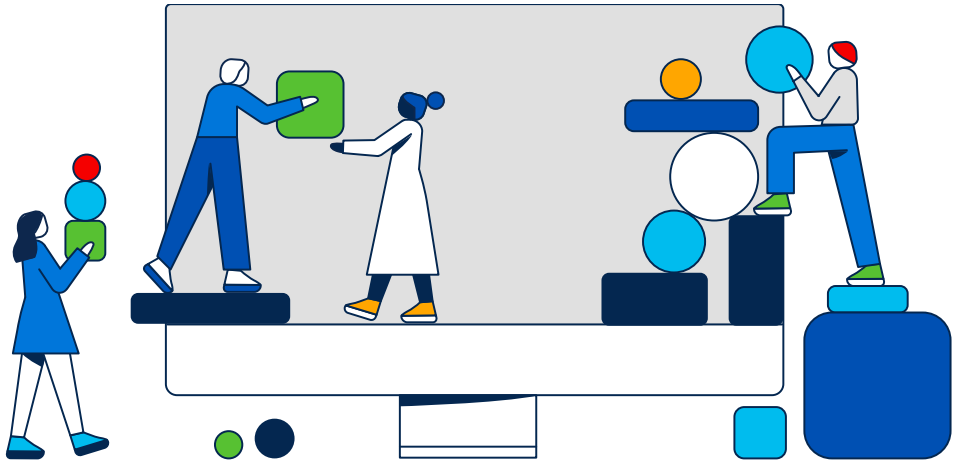
API Sandbox

https://api-cx.cisco.com/sandbox/px/v1/

- No Onboarding Required
- No PLS Offer Required
- Dedicated Access Keys
- Play with mock APIs



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Developer Tools

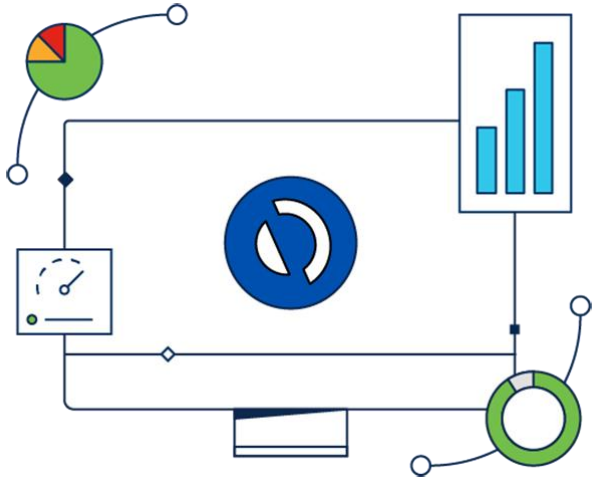
Swagger™ Documentation

POSTMAN Collection

Java, Python
Samples

json csv

Data Miner
JSON, CSV Download
Utility



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API Error Codes

Status Code	Status Message	Meaning
400	Bad Request	Request was malformed or the contents invalid
401	Unauthorized	Authorization missing or access denied
403	Forbidden	Access not allowed
404	Not found	Resource not found
429	Too Many Requests	Client has sent too many requests in a given amount of time
500	Internal Server Error	The server encountered an unexpected condition
502	Bad Gateway	Invalid response from another server while processing the request
503	Service Unavailable	Server is unable to complete request
504	Gateway Timeout	Timeout encountered from another server while processing request

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Use Cases

Leverage PX Cloud APIs to Build New Partner Services

More Opportunities,

More Revenue

Offer new value-add capabilities

Differentiate yourself from competitors

Increase customer loyalty

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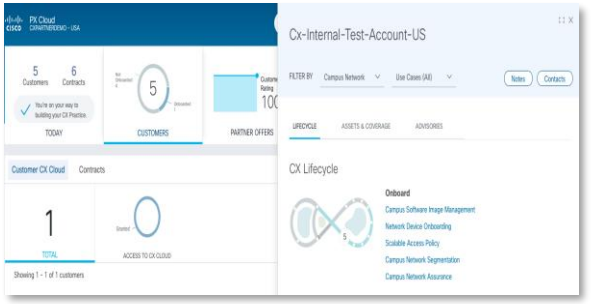
Targeted Onboarding Services

Use Case

PX Cloud Feature	Relevant PX Cloud APIs	Enabled Partner Use Case
View customers' Lifecycle Stage  	• Customer Lifecycle API Returns the following customer lifecycle data: o CX solution o Use case o Pitstop information for the customer	• By maintaining a library of services across the Lifecycle, you can help customers meet their needs based on their product maturity • Learning that the customer is currently in the onboarding stage allows you to tailor your conversation with customer to focus on deployment and training offerings.

Lifecycle Services (Customer Adoption View)

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Software Image Management

Use Case

PX Cloud Feature	Relevant PX Cloud APIs	Enabled Partner Use Case
Asset Management: Software Version Information 	• Affected Assets (via reports) • Insights - Software Groups	• **Create and implement software golden image:** Use Cisco-provided install base data to rationalize software versions across the customer network. • **On-going Software management:** Leverage optimal software version functionality to ensure golden image is up-to-date, all known patches and work-arounds are applied, and to manage any needed golden

Proactive Network Management

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Known Issue Identification & Remediation

Use Case

PX Cloud Feature

Cisco's known issue insights

Relevant PX Cloud APIs

- Affected Assets
- Insights - Crash Risk
- Insights - Fault Summary
- Priority bugs

Enabled Partner Use Case

- Cisco products: Use Cisco-provided diagnostic and risk data to remediate potential issues before
- Multi-vendor environment: Combine Cisco PX Cloud insights with insights partners collect about non-Cisco OEM devices to create a more holistic view of their customers' networks

Proactive Network Management

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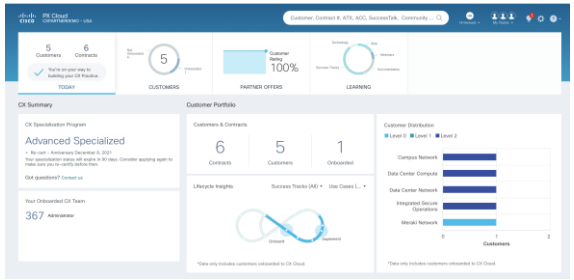
Integration of PX Cloud with 3rd party CS* platforms

Use Case

PX Cloud Feature	Relevant PX Cloud APIs	Enabled Partner Use Case
Customer Lifecycle and Insights data 	• Customer Lifecycle • Assets • Field Notices • Insights – Faults • Insights – Software Groups • Insights – Compliance • Insights – Crash Risk	• APIs allow for integration of PX Cloud data with your choice of customer success platform, such as NetformX, Gainsight, Totango and ServiceNow or your own proprietary platform. • Integrate Cisco data and insights into existing platforms to reduce training and overhead costs while also providing a single pane of glass view for customers.

Managed Services

*CS: Customer Success

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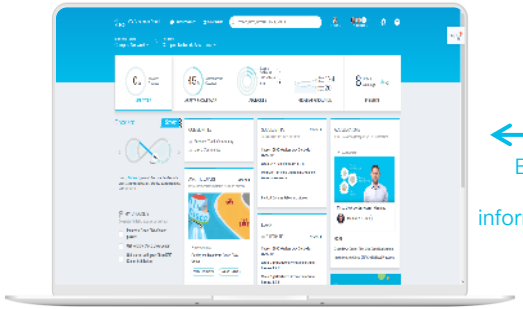
Cisco PX Cloud Integration with Gainsight

CX Cloud
(for customers)



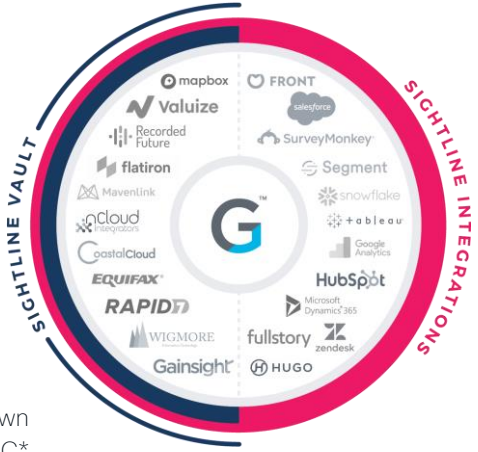
- Customer access for CX Success Tracks
- Partner-branded ATX and Accelerators

Bi-directional, real time information exchange

PX Cloud
(for partners)

- Partner-only access
- Partner access to CX Cloud view

PX Cloud connects via **APIs**



- Partners can create their own offers such as ATX and ACC*

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Resources

PX Cloud Developer Portal – DevNet

https://cs.co/api

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Resources

PX Cloud for Partners Learning Map
https://salesconnect.cisco.com/#/mylearningmap/SC_LMS_2568

Success Tracks for Partners Hub
https://salesconnect.cisco.com/#/program/PAGE-16808

PX Cloud API documentation (Cisco DevNet)
https://developer.cisco.com/docs/px-cloud/

CX Success Hub
https://www.cisco.com/c/m/en_us/successhub.html

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What's your current status with the PX Cloud and APIs ?

Participants can vote
at **Slido.com** with **#3989321**

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Get Ready for Cisco PX Cloud

1. **Complete PLS Eligibility**
   - ✓ Cisco Customer Experience Specialization: Specialized or Advanced level
   - ✓ Partner Program enrollment with PLS Terms
2. **Sell Success Tracks to Customers**
3. **Onboard PX Cloud**
   - ✓ Complete on-line learning
   - ✓ Log in to platform
4. **Request Customer for access to CX Cloud Data**

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The bridge to possible
Thank you
cisco Live!

CISCO Live!
ALL IN