

The background of the slide is a vibrant, abstract graphic. It features a series of overlapping, wavy bands of color in shades of red, orange, yellow, green, and blue, creating a sense of movement and energy. On the right side, there is a bright, multi-colored sunburst or starburst effect that radiates outwards, adding to the dynamic feel of the design.

cisco *Live!*

Let's go

#CiscoLive

Cisco Webex App

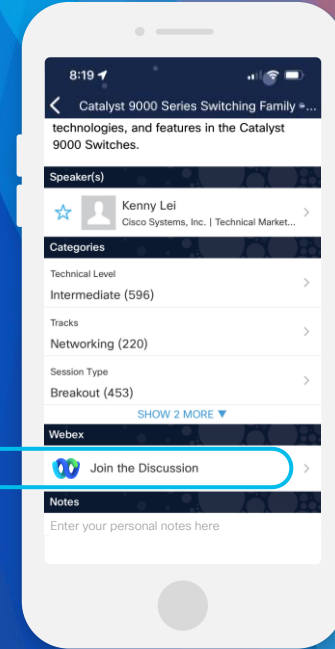
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<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKAPP-1022>



The bridge to possible

Cloud Native Application Observability Enhancements enabled by Cisco FSO Platform

Yogesh Ranjan, Director Product Management, Cisco FSO Platform
Bhuvnesh Kumar, Product Manager, Cisco FSO Platform
BRKAPP-1022



Yogesh Ranjan

- Director, Product Mgmt. – Cisco FSO Platform
- Vmware – Multi-Cloud IaaS Platform
- Symantec/Veritas – HA and DRaaS
- 20 years in various PM leadership roles



Bhuvnesh Kumar

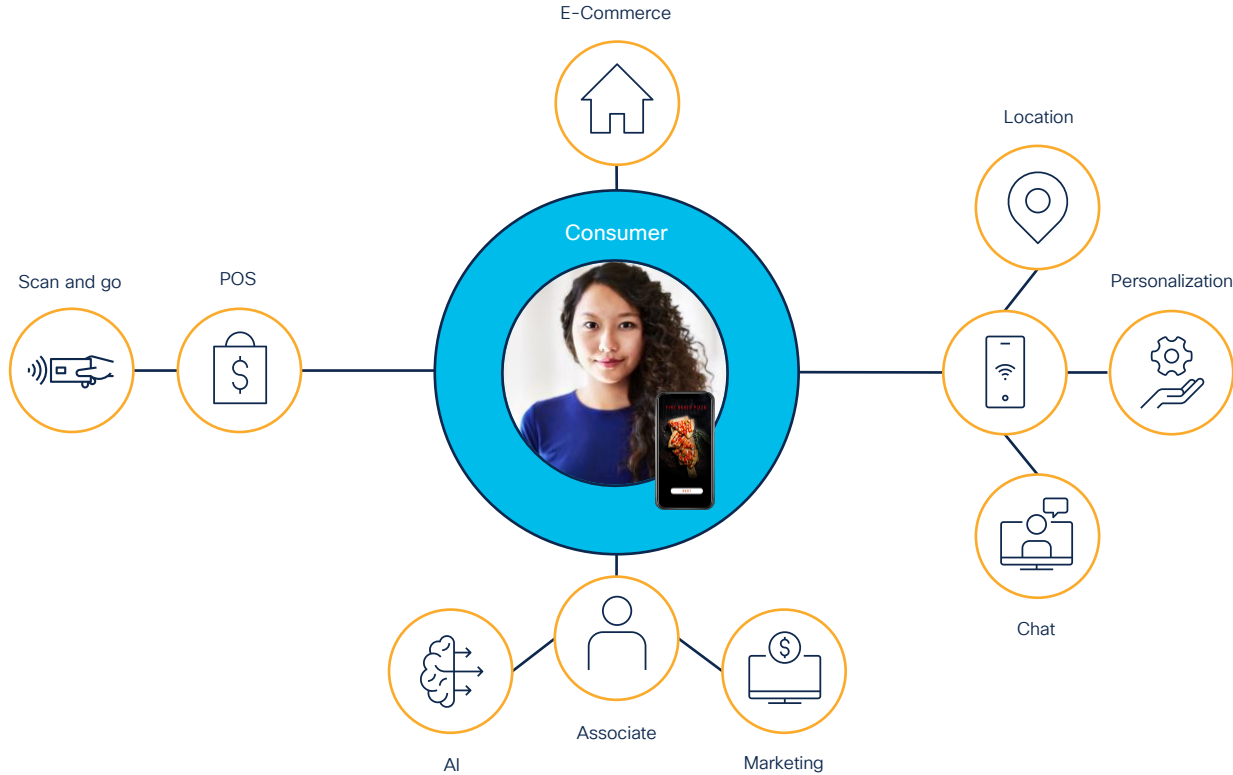
- Product Manager – Cisco FSO Platform
- MBA – USC Marshall School of Business
- 6 years at AppDynamics and Cisco
- Observability platform and integrations

Safe Harbor Statement

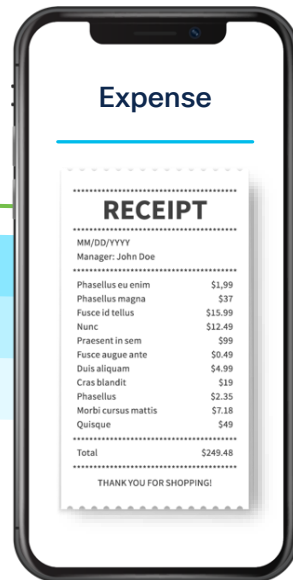
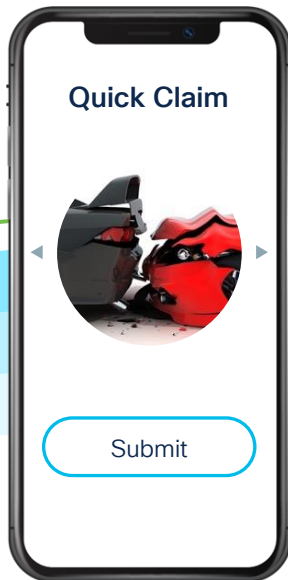
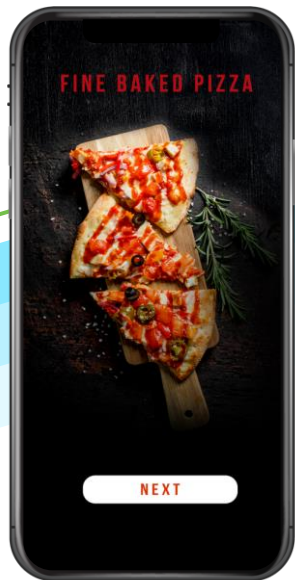
This presentation contains “forward-looking” statements that involve risks, uncertainties and assumptions. If the risks or uncertainties ever materialize or the assumptions prove incorrect, our results may differ materially from those expressed or implied by such forward-looking statements. All statements other than statements of historical fact could be deemed forward-looking, including, but not limited to, any projections of financial information; any statements about historical results that may suggest trends for our business; any statements of the plans, strategies, and objectives of management for future operations; any statements of expectation or belief regarding future events, technology developments, or enforceability of our intellectual property rights; and any statements of assumptions underlying any of the foregoing.

These statements are based on estimates and information available to us at the time of this presentation and are not guarantees of future performance. Actual results could differ materially from our current expectations as a result of many factors, including but not limited to: the unpredictable nature of our rapidly evolving market and quarterly fluctuations in our business; the effects of competition; and any adverse changes in our indirect channel relationships. These and other risks and uncertainties associated with our business are described in the company’s annual report on Form 10-K. The forward-looking statements in this presentation are made as of the date of the initial publication of this presentation, and we disclaim any obligation to update these statements at any time in the future.

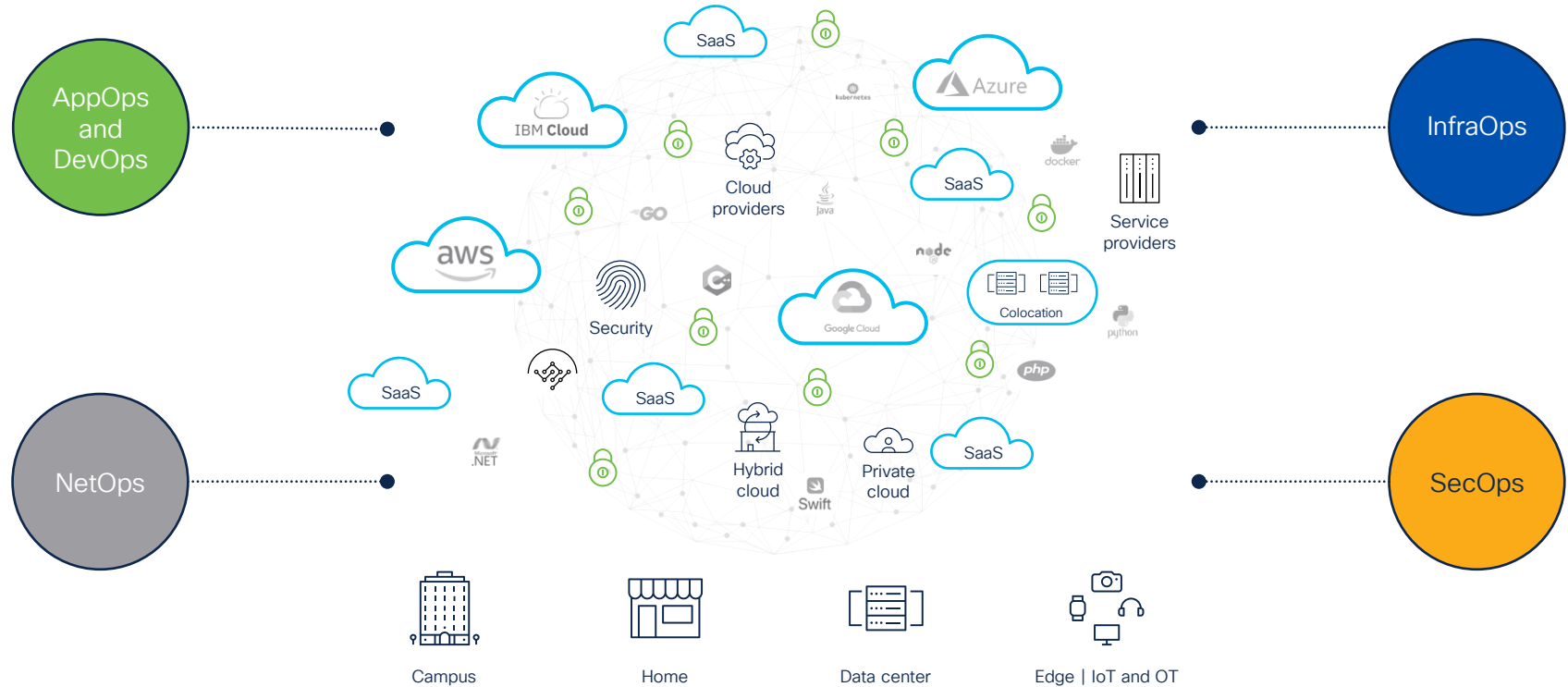
We live in an evolving and expanding digital world



Applications are the front door for digital experiences



But applications are built in complex environment



Which leads to

56%

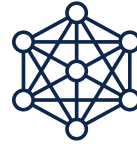
Use more than 10 application observability/monitoring tool

60%

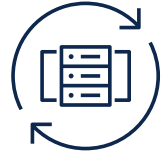
Say most observability tools serve narrow requirements and fail to enable a complete view

74%

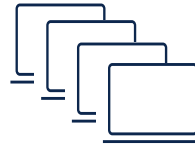
Struggle with data collection and correlation



Complexity



Data overload



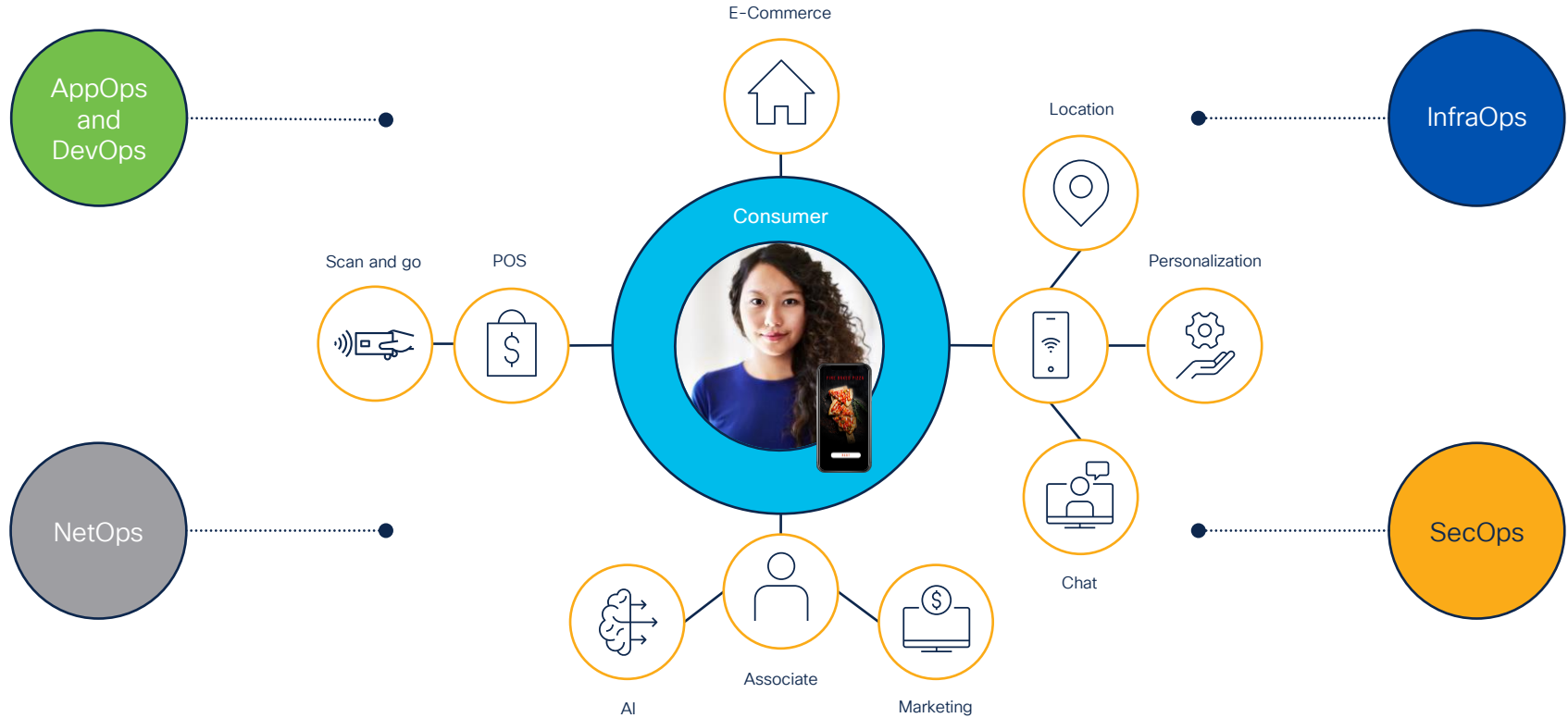
Tool sprawl



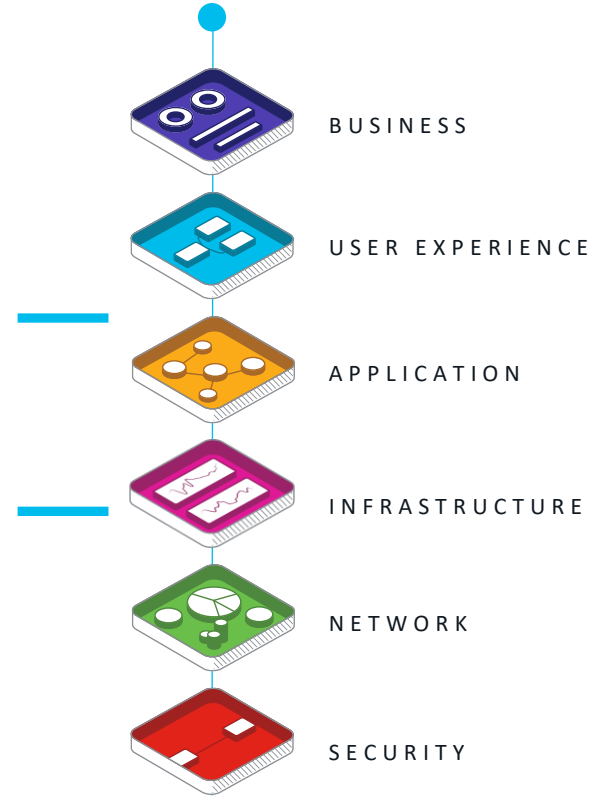
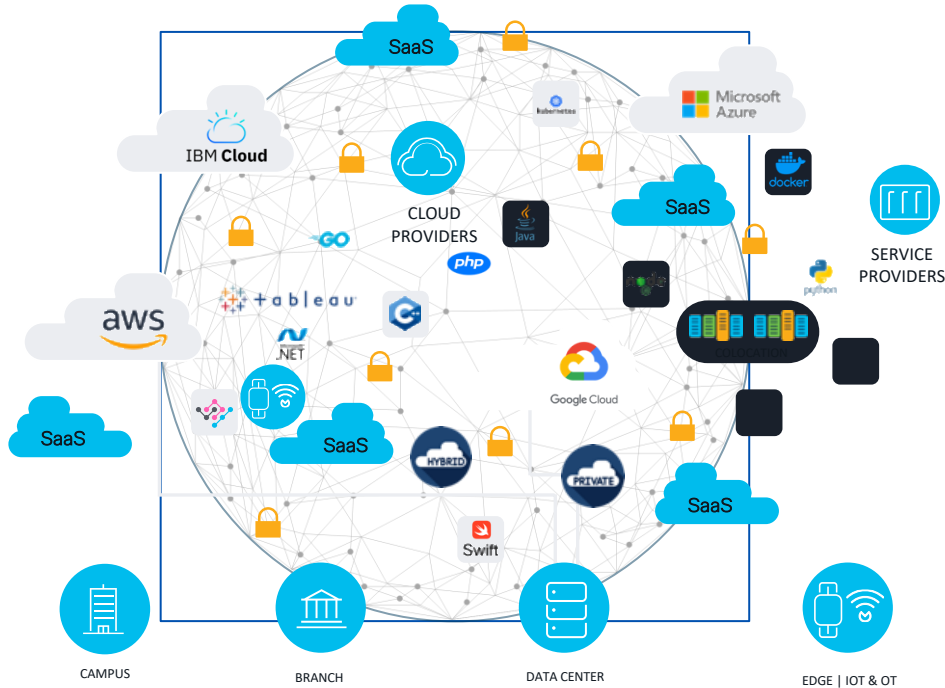
Friction
between teams

So, teams need to see the full stack of available data

Shared context across the digital experience



Full-Stack Observability



65%

say they want a
programmable and
extensible observability
solution that can be
used for use cases
specific to their business
and environment



Developer platform is a growth strategy

Unleash a new Observability eco-system to fuel growth and open new opportunities and route-to-markets



Some of the world's top companies are ecosystem driven

Apple estimated that billings and sales facilitated by the App Store to be at \$643 billion in 2020

Developer platforms have been central to connecting millions of developers and business worldwide with tens of millions of consumers through their apps

Accelerate growth with extensible architecture

Developer Ready Platform is all about creating a seamless and collaborative environment and remove points of friction among internal and external development teams

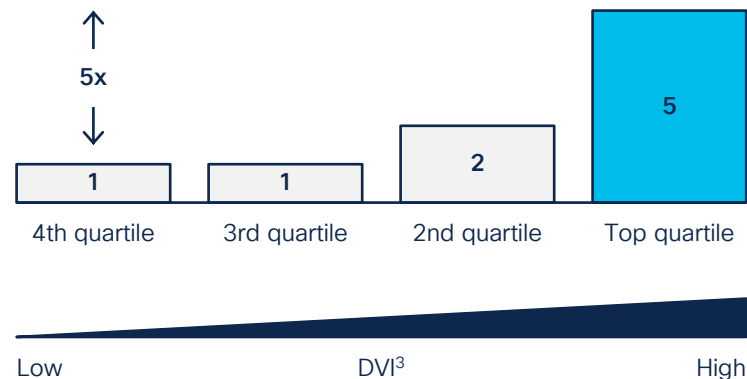
Organizations that fall into the top quartile of McKinsey's DVI index have extensible and flexible software architectures where different software components can be built independent of each other

55%
higher innovation

4x+
faster growth

Revenue CAGR¹ by DVI quartile, all companies

2014-18, n=239, %



Cisco Full-Stack Observability

Full Stack Observability (FSO)

is a requirement for business to deliver the most **optimal and secure experience** to users and applications.

Cisco Full-Stack Observability brings together data from multiple operations domains to provide **unified visibility**, derive **real-time insights** and recommend **actions** helping to:



Focus on what matters most: revenue, user experience, risk, costs



Reduce time to resolution of incidents and performance issues;



Minimize tool sprawl



Break down silos by reducing friction among teams, typically infrastructure, security, applications, networking and cloud

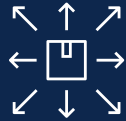
A developer ready FSO platform



Time to value for customers



Developer community



Extensible and developer ready FSO platform



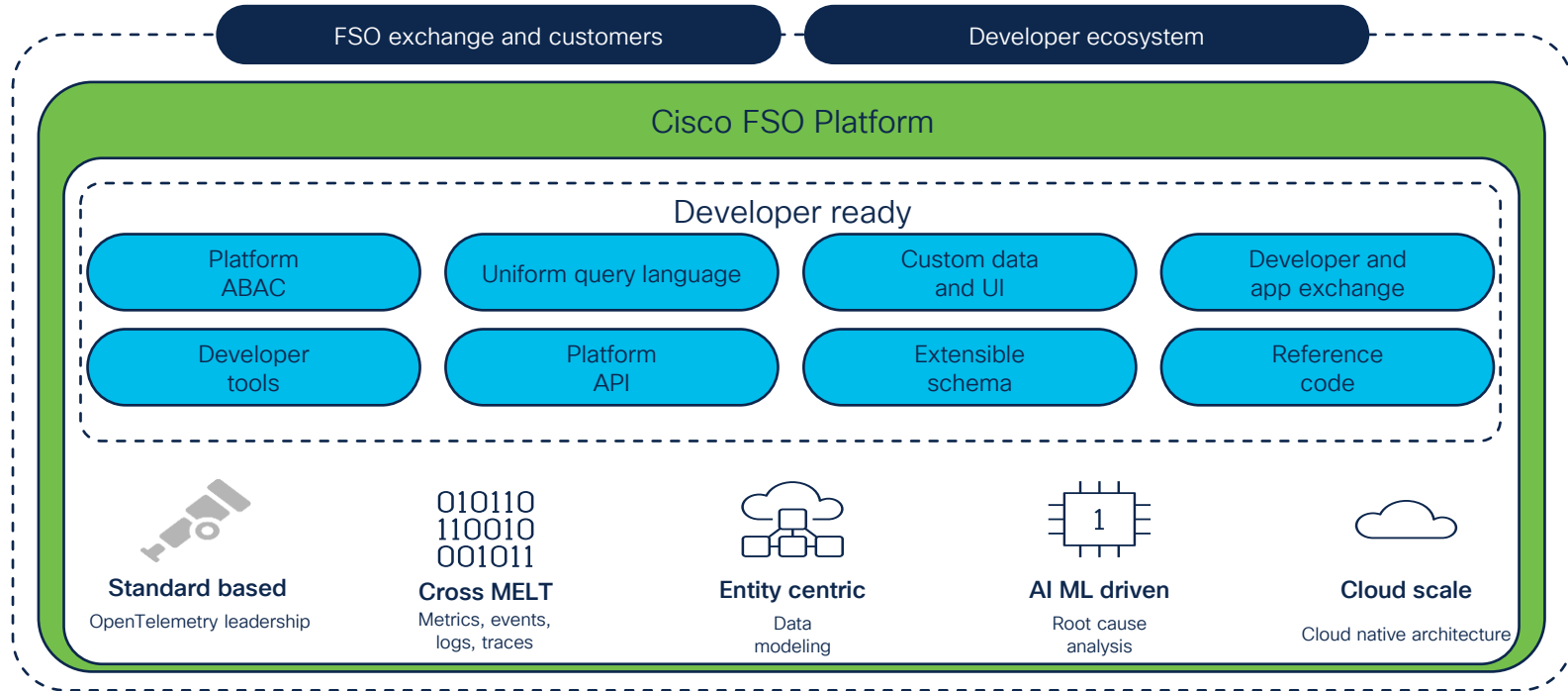
Developer productivity



FSO ecosystem

What is Cisco FSO platform?

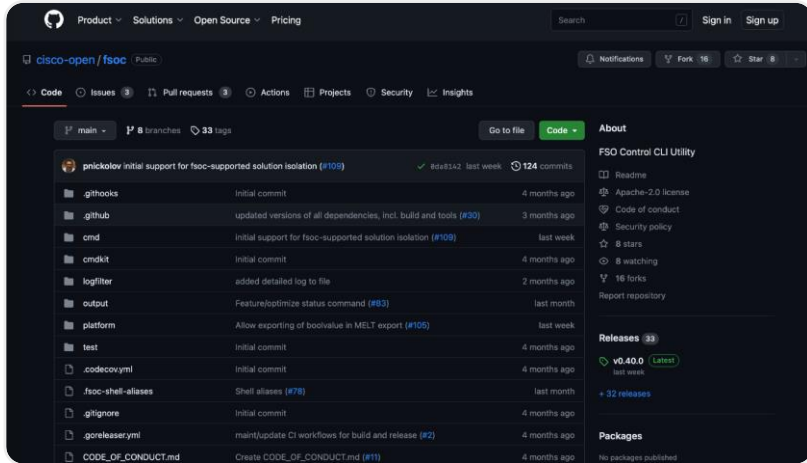
Empowers a new observability ecosystem



FSO Platform Experience

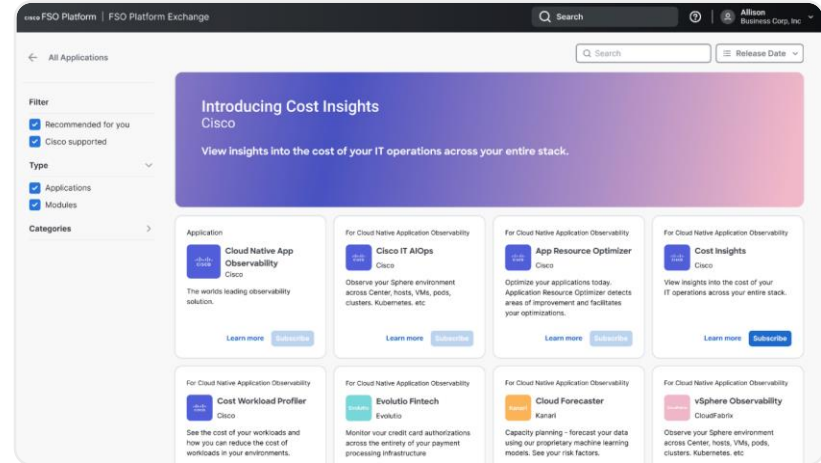
Developers

Developer tools and environment
for applications and modules development



Users

Search, browse, and discover modules
through FSO Platform Exchange



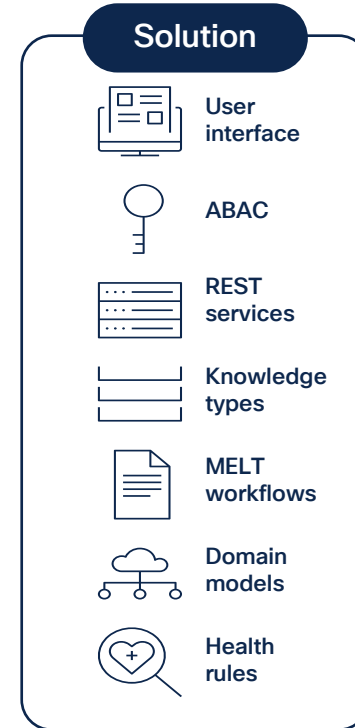
Building on FSO Platform



Anatomy of a Solution

Build Modules with the FSO Platform

- FSO modules are manifested by building a solution package and submitting it to the FSO Platform
- Solution package is a zip file comprising of collection of JSON configs
- Solution package can comprise of new or extended
 - entity domain models,
 - MELT configs,
 - custom data collectors,
 - data transformation workflows,
 - REST services,
 - new or extended UI templates



Building on the Cisco FSO platform

FSO developer platform accelerates creation of new observability experiences



Platform extensibility

Custom data
collection and
ingestion

Extensible
domain and
data models

Custom user
experiences

Flexible data
processing and
transformation

Use-case
driven RBAC

Flexible
metering and
licensing



Learning and support

Developer
documentation

Getting
started

Reference
modules and
applications

Developer
support

Partner
program

DevNet
community



Developer tools

UI authoring
tool

FSO CLI
tool (FSOC)

Entity and
MELT data
explorer



Commercialization

FSO Platform
Exchange

Marketing
and branding

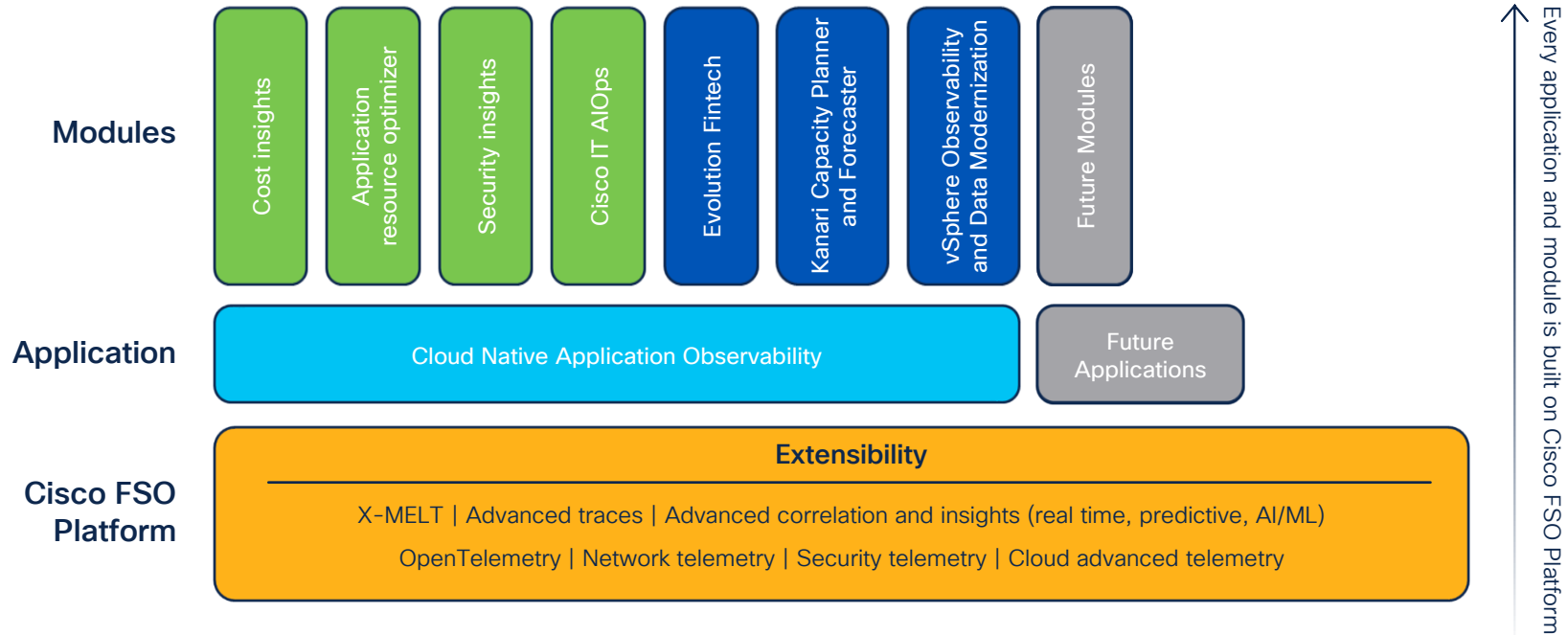
Application
monetization
and GTM

FSO Platform Exchange – Applications and Modules



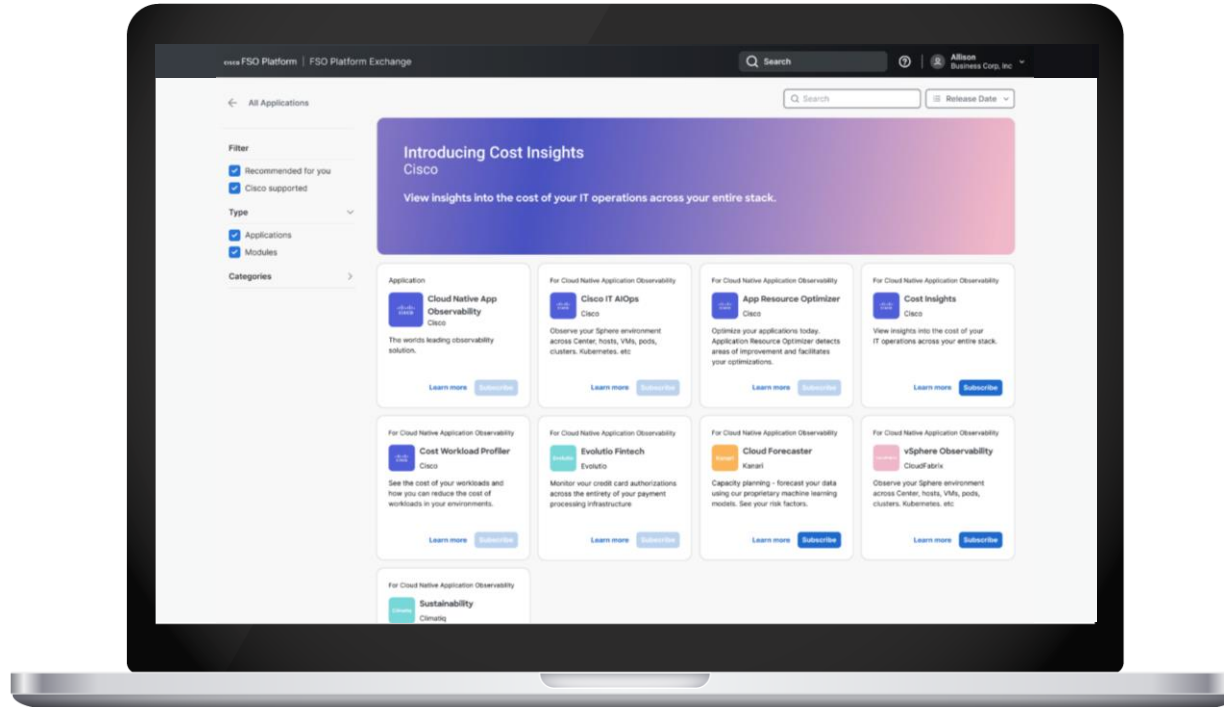
Cisco FSO Platform

Applications and Modules



Cisco FSO Platform Exchange

Hub for FSO applications and modules



Cisco 1st Party Applications and Modules

Cloud Native Application Observability

Monitor Cloud Native Applications



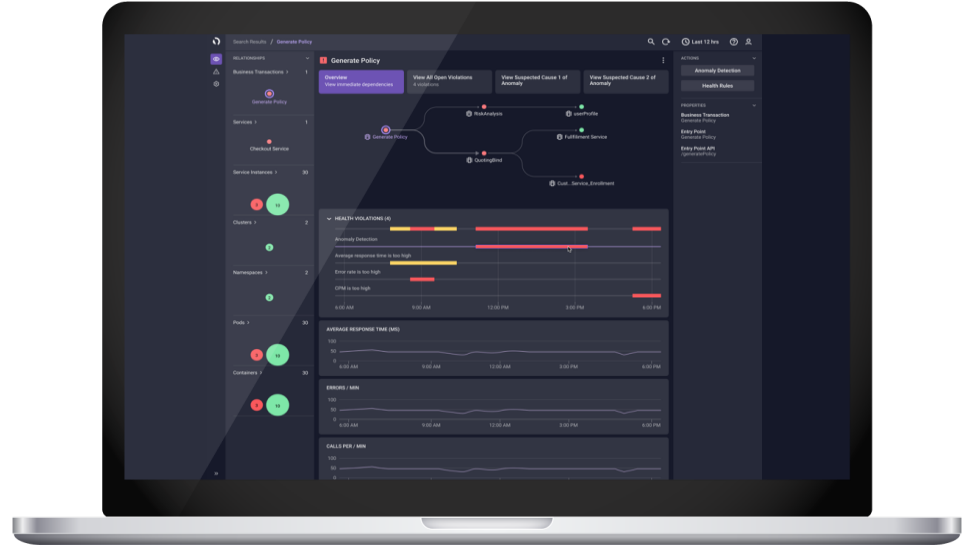
Ready-made domain models and correlated data across domains for full-stack observability up, down, and across the stack



Observe modern applications built on cloud and for cloud



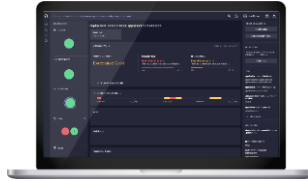
Purpose built from the ground up on Cisco FSO Platform



Cloud Native Application Observability

Cisco built Applications and modules on FSO Platform

K8S Profiler &
Application
Resource
Optimizer



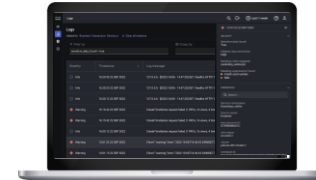
Cisco IT
service
management



Cost
Insights



Security
insights



Cloud Native Application Observability

FSO Platform Optimization and Insights in Action

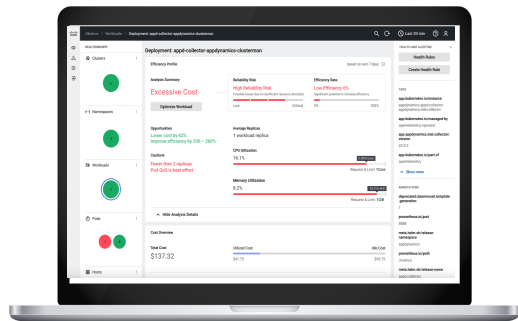
Visibility



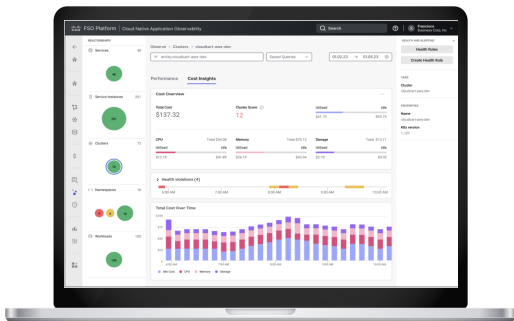
Insights



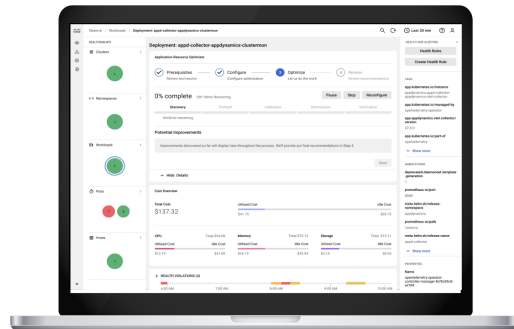
Action



K8S Cost and Workload
Profiler



Cost Insights



Application Resource
Optimizer

K8S Cost and Workload Profiler

Efficiency Profile on K8S workloads

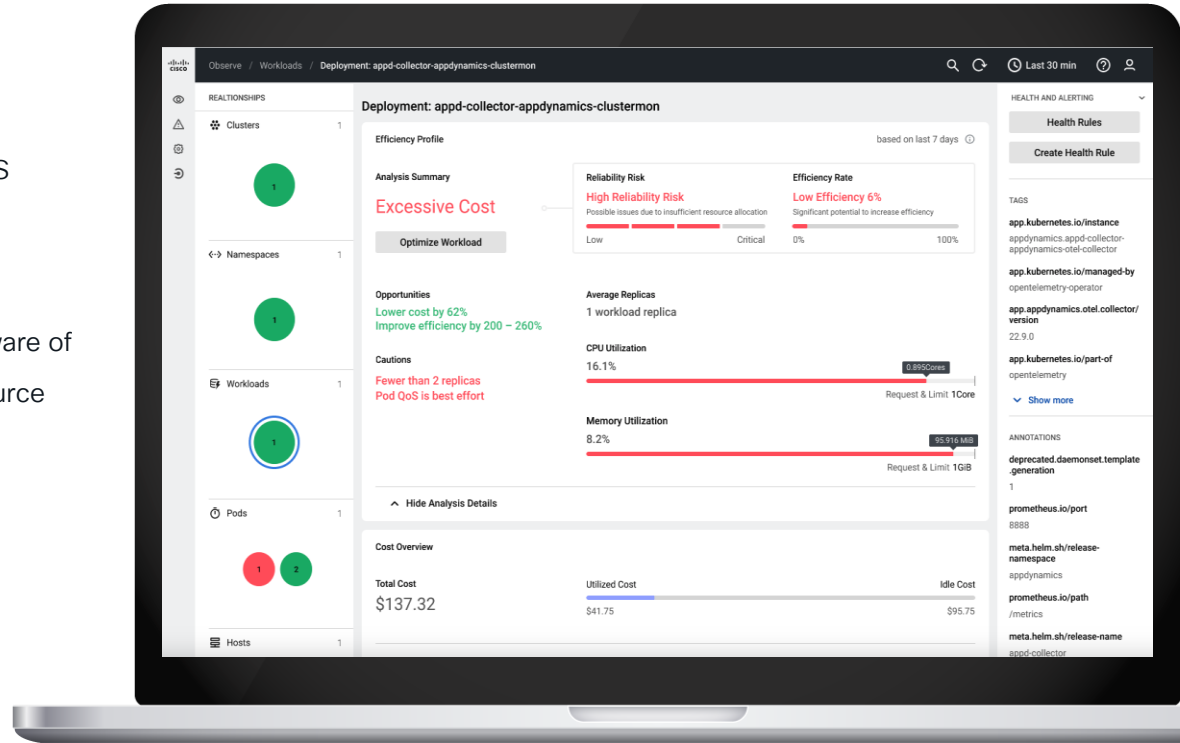
- First level of visibility for K8s
- Highlight efficiency & resource usage for K8S workloads

Risk profile of K8S workloads

- Highlight Reliability Risks user might not be aware of
- Analyze resource usage and identify low resource usage to enable savings

Free Module

- No additional charge with FSO
- Leverages existing data to provide analysis



Cost Insights

Cost Insight Module for Cloud Native Application Observability

Cost Analysis for K8s Resources

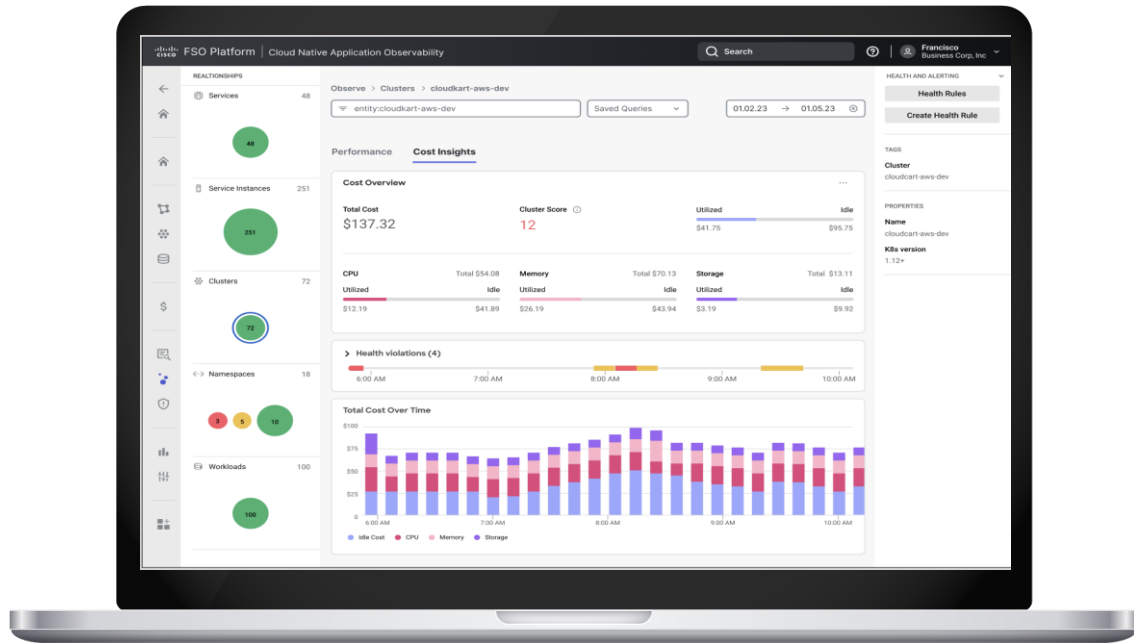
- Understanding costs for K8s components
- Visibility at Clusters, Workloads, Namespaces, Pods
- Gain a deeper visibility into Cloud Spend

Allocation vs Utilization

- Compare allocation of resources to usage
- Understand usage trends of Compute and Memory
- Identify over-provisioned resources and saving opportunities

Cost Insights for APM services

- Correlate Cost data from Infrastructure with APM
- Ability to track costs over time to understand spend
- Manage Cost for cloud native services effectively



Application Resource Optimizer

Optimization on K8s Workloads

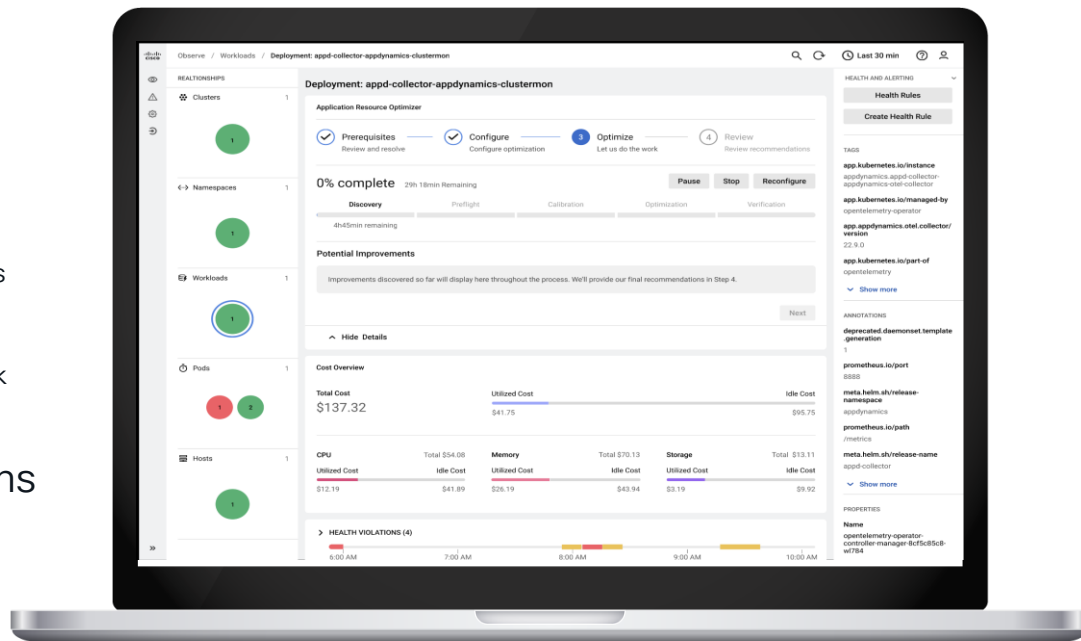
- Run continuous tests on K8s workloads
- Improve your resource allocation & performance
- Reduce your cloud spend by identifying excess allocation

AI/ML Engine to Power Optimizations

- Leverage Machine Learning to provide recommendations
- Continuous optimization to assist with every release
- Suggest recommendations that Humans won't even think of

Providing Optimization Recommendations

- Leverage recommendations to bring costs down
- Optimal, Lower Latency and Lower Cost Options
- Apply tested recommendations with confidence



Application security

Security insights Module for business risks insights on CNAO



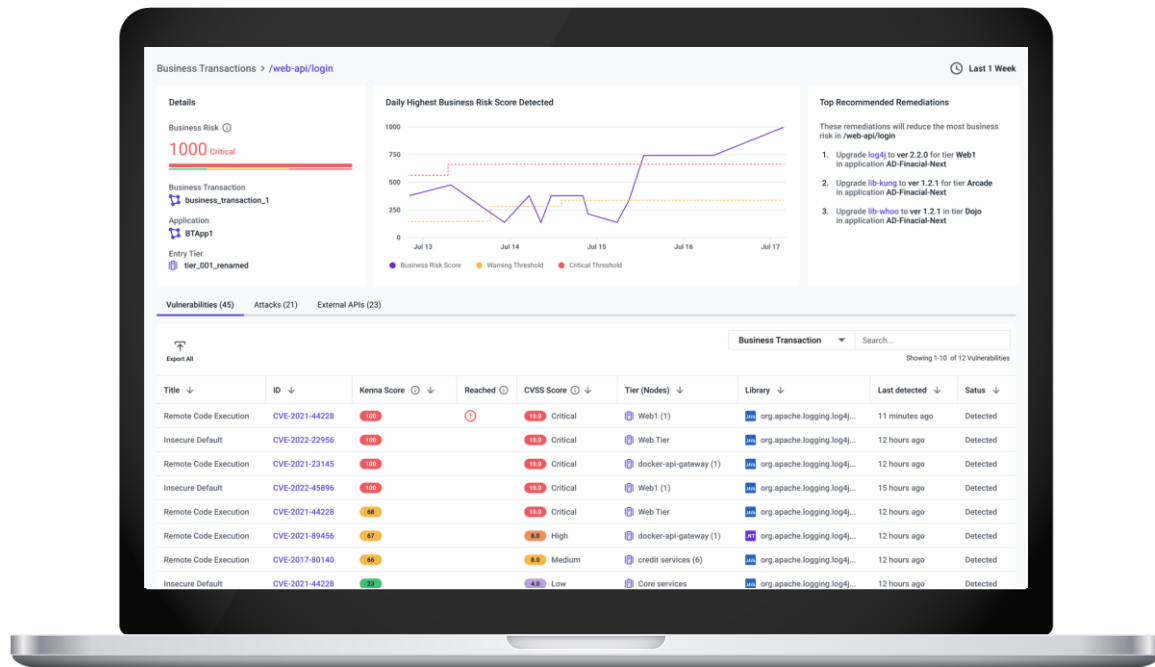
Locate how and where an attack occurs with business transaction mapping



Leverage threat intelligence feeds from Cisco Talos, Kenna and Panoptica to quickly assess the likelihood a threat will be exploited



Combine threat and vulnerability intelligence with business impact and runtime behavior to provide a business risk score



Demo



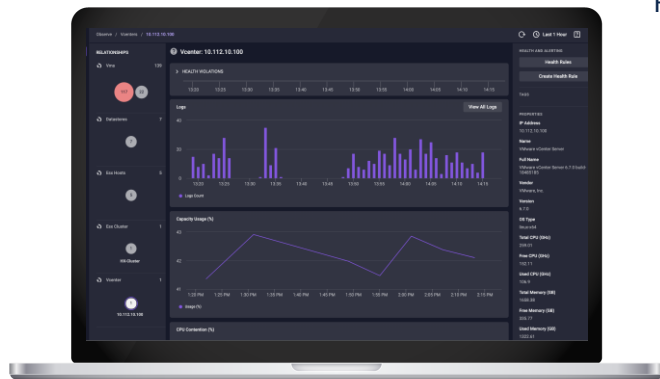
Extend – 3P Applications and Modules

Unleash the eco-system with partner modules

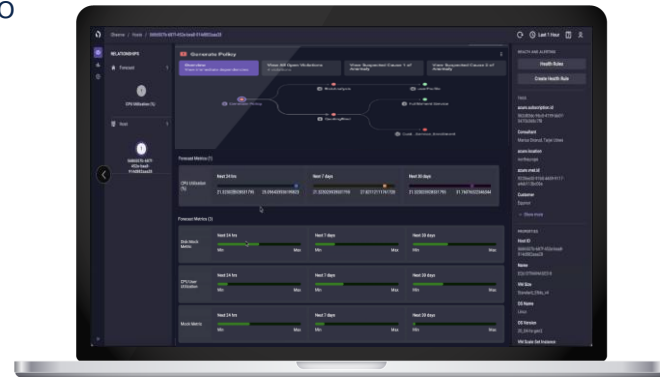
Modules built by Partners



Payment Monitoring - Evolutio



vSphere Observability - CloudFabrix



Capacity Forecaster - Kanari

VMware vSphere Observability Module

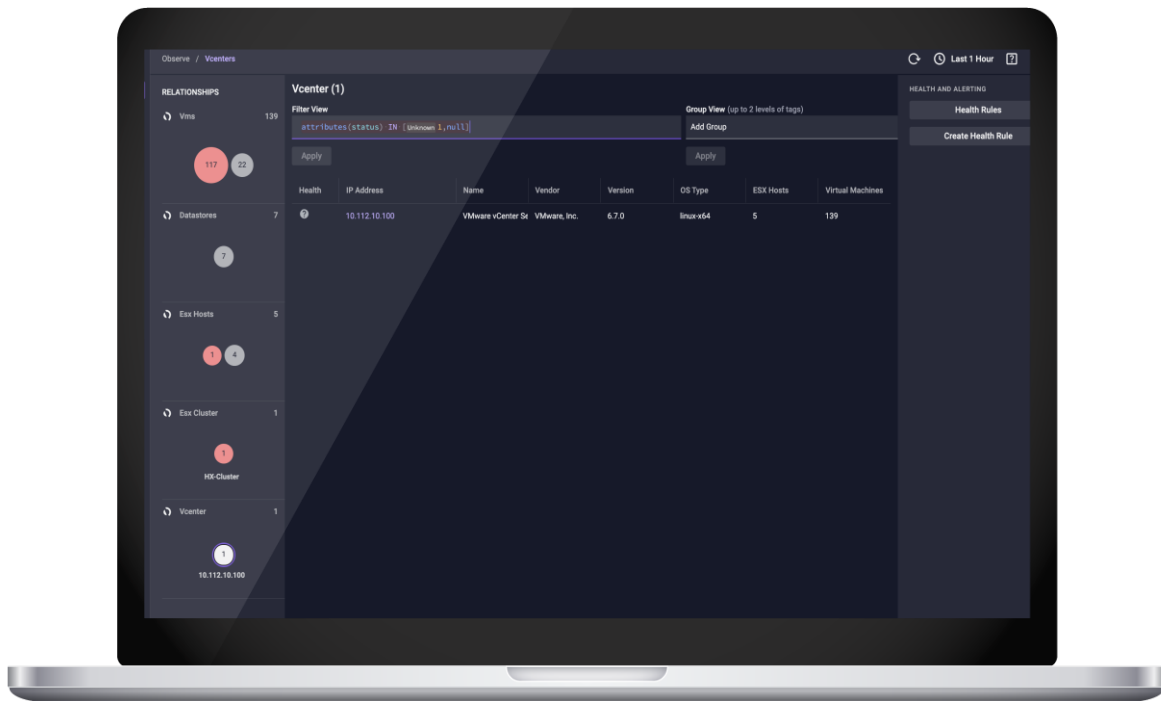
CloudFabrix module to observe vSphere environments

Observe vSphere through the FSO Platform

Locate how and where an attack occurs
with business transaction mapping

Enrich your vSphere and vROps data with your environment's Kubernetes and Infrastructure data

Powerful correlation between K8S
clusters and hosts living within vSphere
environment



FinOps Business Insights Module

Payments monitoring by Evolutio

Reduce revenue losses for financial customers' resulting from credit card authorization failures

- by monitoring financial customers' KPIs such credit card authorizations

Get KPIs and insights across regions and sites

- by ingesting business data and correlating business KPIs with infra health

Draw business insights such as infra health impact on hourly credit card authorization

- by grouping and aggregating based on metadata like region, schemes, infra components (gateways/protocols) etc.



Kanari Capacity Planner and Forecaster Module

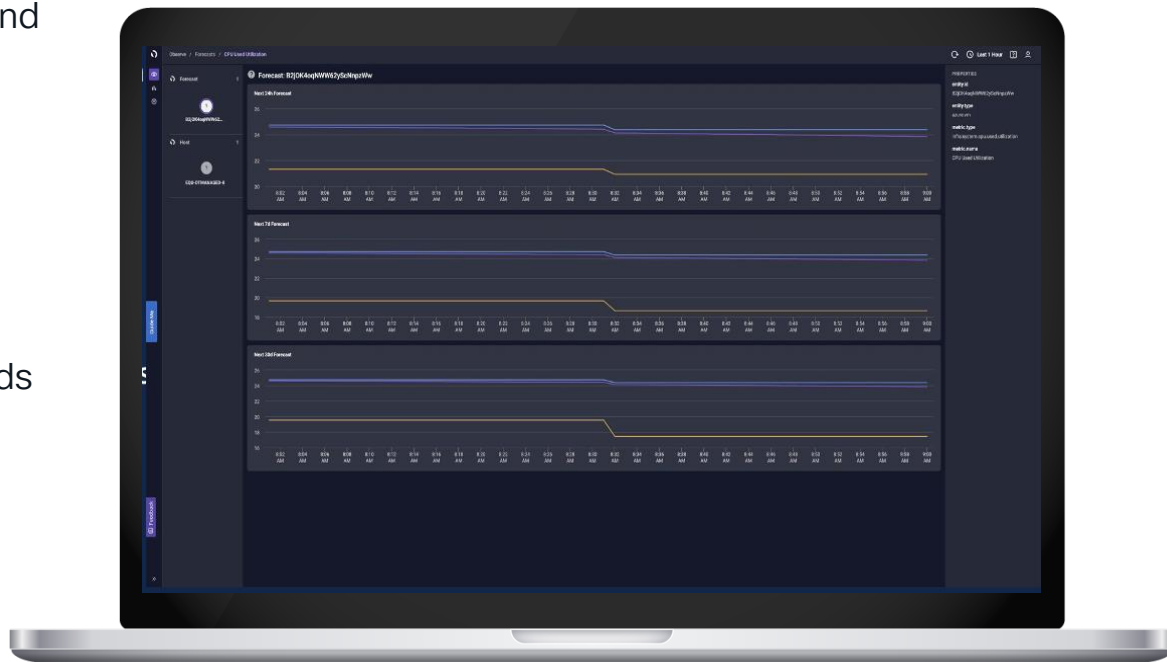
Capacity planning and forecasting through predictive ML algorithms

Insights on infrastructure risk factors and derive capacity forecasts and plans based on it

by using predictive ML algorithms like ARIMA, SARIMA, LSTM

Baseline and track capacity forecast overtime to analyse how capacity needs are changing over time

through time series graphs



ITSM and AIOps module for hybrid cloud

IT Service Management and AIOps by CiscoIT

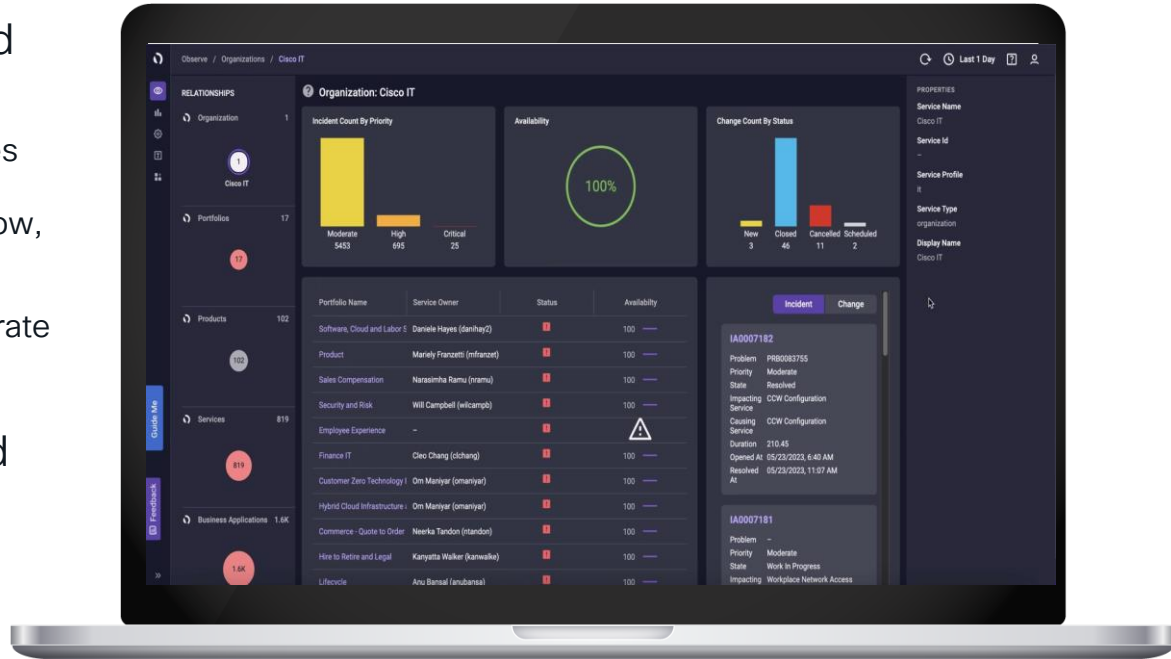
Full stack view across your hybrid cloud environment

Ingest data from various different sources such as ScienceLogic, ThousandEyes, ServiceNow, Cisco InPERA, and AppDynamics

Correlate and visualize together to generate actionable insights

Get a single view for incident and tickets across your hybrid cloud environment

Unified Incident and Service Management across disparate systems



Benefits of Cisco FSO Platform

Empowers a new observability ecosystem



Natively supports
OpenTelemetry



Anchored on MELT



Fully extensible



Provides Unified
Query Language (UQL)



OTEL based Unified View of Data

MELT data from multiple cloud & non-cloud sources are combined for a single entity view to reduce MTTR



Out of box correlation

Users can derive insights from multiple domains across business, apps & infrastructure



Create value-added solutions

Build your own applications and/or extend existing applications with modules, domain-models, dashboards, and custom experiences



Empower developers

Provide 3rd party developers the tools and processes to build new applications and modules

How to buy

FSO Essentials

+ Other CX offers (TBD)

+ CX QuickStart

+ **Product add-ons

Extend observability with Cisco FSO Platform

Application security

Modern application monitoring

Hybrid application monitoring

FSO Essentials package provides full stack visibility, insights, and actions, tied to business context, across application monitoring and application security

FSO Advantage

+ Other CX offers (TBD)

+ CX QuickStart

+ **Product add-ons

Extend observability with Cisco FSO Platform

Digital experience monitoring

Application dependency monitoring

Application security

Modern application monitoring

Hybrid application monitoring

FSO Advantage package provides full stack visibility, insights, and actions, tied to business context, across application monitoring, network and application security

FSO Premier

+ Other CX offers (TBD)

+ CX QuickStart

+ **Product add-ons

Extend observability with Cisco FSO Platform

Application resource optimization

Hybrid cost optimization

Digital experience monitoring

Application dependency monitoring

Application security

Modern application monitoring

Hybrid application monitoring

FSO Premier package provides full stack visibility, insights, and actions, tied to business context, across application monitoring, network and application security and helps you to optimize resources

5%

Stacked discount on these packages and if you take optional CX services from us we provide another 3% discount

8%

Total package discount with services attached

List of Related Sessions

Session #	Title	Time
LABCLD-1011	Full Stack Observability – Monitoring and troubleshooting a sample application –	Walk In Any Time
DEVLIT-1294	Empower a new observability ecosystem with an open and extensible Cisco FSO Platform	Tue Jun 6, 4 – 4:30 pm
PSOAPP-1009	Extend observability with Cisco FSO Platform	Tue Jun 6, 2:30 – 3:00 pm
DEVLIT-1297	Optimize Cost and Resources with Cisco Full-Stack Observability	Tue Jun 6, 3 – 3:30 pm
IBOAPP-2105	Cisco FSO Platform: Product and Engineering SME's answer all your questions –	Wed Jun 7, 1– 2 pm
BRKAPP-1916	New – Optimization with Cisco Full-Stack Observability for Kubernetes Workloads	Thu Jun 8, 8 – 9am

Fill out your session surveys!



Attendees who fill out a minimum of four session surveys and the overall event survey will get **Cisco Live-branded socks** (while supplies last)!



Attendees will also earn 100 points in the **Cisco Live Challenge** for every survey completed.



These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

Continue your education



- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand

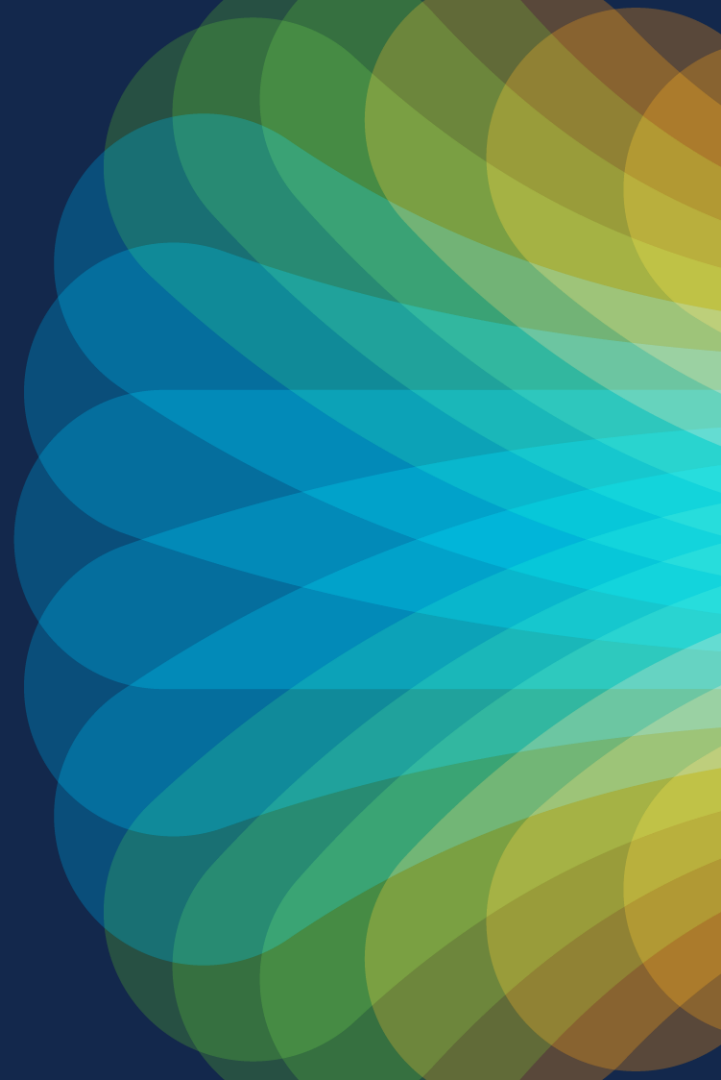


The bridge to possible

Thank you



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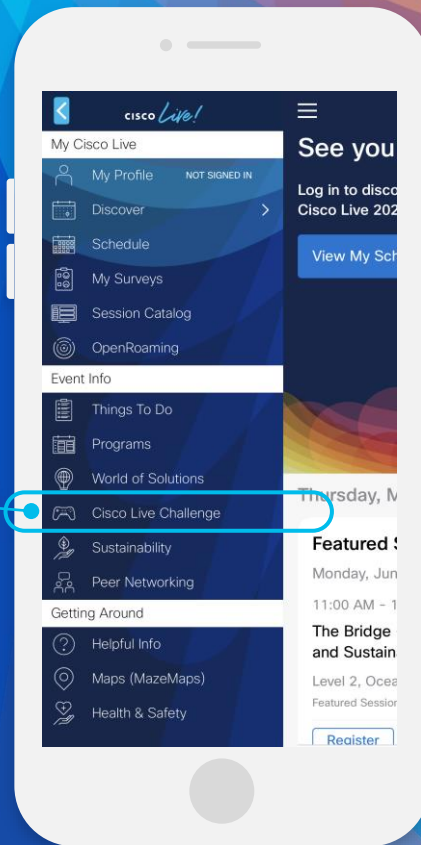


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Get points for attending this session!

How:

- 1 Open the Cisco Events App.
- 2 Click on 'Cisco Live Challenge' in the side menu.
- 3 Click on View Your Badges at the top.
- 4 Click the + at the bottom of the screen and scan the QR code:



The background features a vibrant, multi-colored abstract design. On the left, there are overlapping, 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. The overall composition is dynamic and energetic.

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