

# Welcome to the Intro to Software & Programmability through Cisco DevNet Webinar!

This is the first session of the Cisco DevNet Series. Details on further sessions will be posted on:

- [News/Events on NetAcad.com](http://News/Events on NetAcad.com)
- Student Monthly Newsletters
- NetAcad Social Media Channels
- [Netacadadvantage.com](http://Netacadadvantage.com)





# Introduction to Software & Programmability through Cisco DevNet

Cisco DevNet webinar series

Speakers: Kirsten Kuehl

Hostess: Kara Sullivan

27 July 2017



Welcome to the 1<sup>st</sup>  
session of the  
**Cisco DevNet**  
webinar series

- Use the Q and A panel to ask questions.
- Use the Chat panel to communicate with attendees and panelists.
- A link to a recording of the session will be sent to all registered attendees.
- Please take the feedback survey at the end of the webinar.



Joining You  
Today:



Kirsten Kuehl  
Head of Education Communities  
DevNet, Cisco





# Enabling the Student to Professional Journey

Kirsten Kuehl

Head of Education Communities

Cisco DevNet

# Building an Industry Ecosystem with DevNet



## Cisco's portfolio as a Platform for Innovation

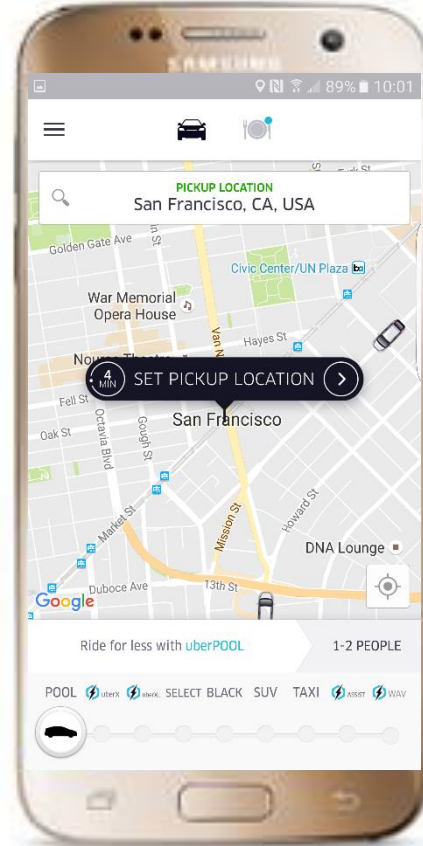


# What is an API?



Google Maps

**Braintree**  
A **PayPal** Company



# The API Economy is Here and Growing

## Developer sites or open APIs

34%

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Fortune 100

28%

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Global 100

Forrester, APIs Foster Innovation at the Largest Global Firms, Developers Help Connect Digital Ecosystems with Open Web APIs , Jan 4, 2017



# Why DevNet?

# 111 Billion

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## Lines of new code in 2017

Cybersecurity Business Report, World will need to secure  
111 billion lines of new software code in 2017, Dec 19 2016

# Number of Industry Professionals Today



Networking Professionals: 20M



Software Developers: 6M

# Network Programmability

54%  
cagr

\$937M

\$12.5B

2014

2020



IDC, Worldwide Datacenter SDN Market Expected to Reach \$12.5 billion by 2020, 03 Feb 2016

# Why DevNet?

Network  
programmability

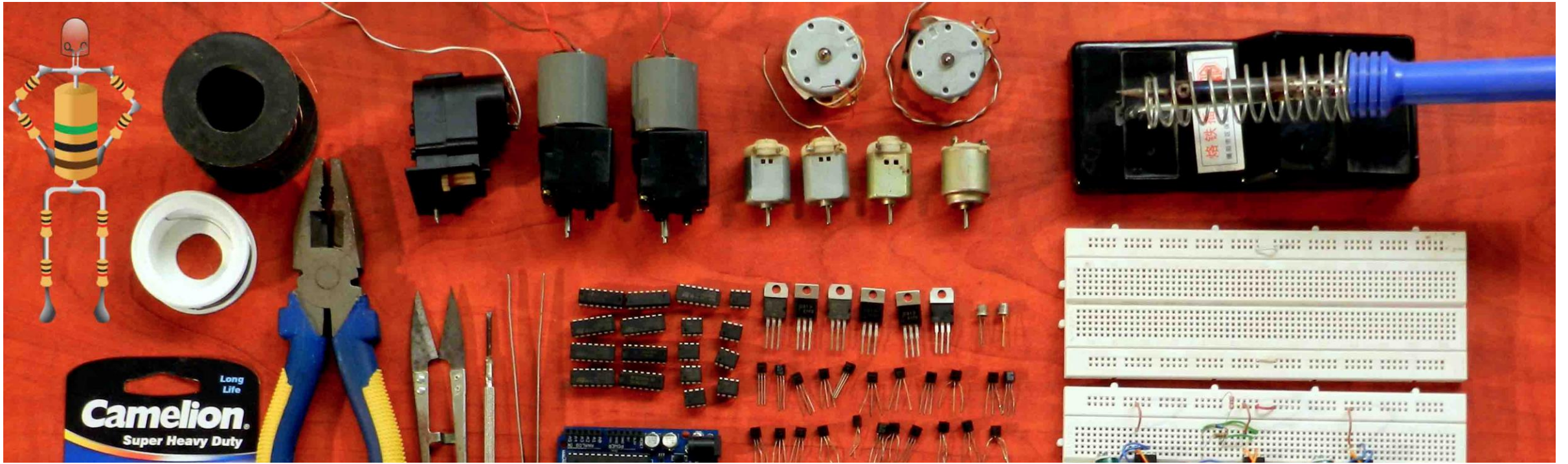
\$12.5B

(2020)

Security

\$116B

(2019)



**DevNet Portal =**

All the tools, in one place, ready to use

<https://developer.cisco.com>



developer.cisco.com

*Provides tools, resources, opportunities  
for learning, and the ability to grow careers.*

Learn

Code

Inspire

Connect

# Learn: DevNet Learning Tracks and Labs

Self-paced, step-by-step tutorials on a wide-range of programmability topics and solutions!

The screenshot displays the Cisco DevNet Learning Labs homepage. At the top, there's a navigation bar with 'Home', 'Learning Labs', 'Help', and 'Feedback'. A 'Welcome Brian Daugherty' message is visible in the top right. The main heading is 'DevNet Learning Labs', followed by a descriptive paragraph and a 'Get Started' button. Below this is a row of seven category tiles: SDN, Mobility, Coding, Collaboration, IoT, SDN, and Mobility. Each tile contains a brief description and a 'Get Started' link. In the foreground, four learning track cards are overlaid:

- Network Programmability for Application Developers**: Learn about network programmability from the perspective of an Application Developer. Contains information about basic networking concepts in addition to interfaces like RESTCONF.
- Cloud Collaboration**: Learn to build engaging User Experiences with Cisco's Cloud Collaboration platform. These learning labs will take you from zero to creating applications that automate Cisco Cloud, behave like interactive assistants or act on behalf of other users. If you prefer not...
- Cloud Native Applications**: Cloud Native applications are built to run on Cloud platforms, typically using a microservices architecture. You will be introduced to Cisco Shipped: a full container cloud native dev/test lifecycle platform. You will also be introduced to Manti, an open source and extensible installer package of popular Cloud Native tools for cluster management, scheduling, and container deployment.  
Beginner, Cloud native, Containers, Microservices, Cloud, Intermediate, Manti, Shipp...
- Data Center Programmability**: Use this learning track to create and link network elements in ACI. You will learn the different APIC interfaces, create API requests, write simple Python scripts, and work with the Cobra SDK, Arya development tool, and ACI toolkit.  
SDN, Data Center

At the bottom of each track card, there are statistics for Modules, Labs, and Hours:

- Network Programmability for Application Developers: 2 Modules, 10 Labs, 4 Hours
- Cloud Collaboration: 2 Modules, 6 Labs, 4 Hours

# Learn: NetAcad Specific Track

**DevNet Beginner** Beta

Welcome DevNet beginners! Each module will contain an overview, a glossary, use cases, explanation of the technology, and how to implement the technology. You'll also find information on how to extend your learning and where to find resources to receive assistance. Good luck!

DevNet, DevNet Beginner, REST, Postman, Spark, Coding, Python, Collaboration, JS...

5 Modules	24 Labs	9 Hours
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**Overview & DevNet Resources Beginner** Beta  
A quick overview of the DevNet Beginner track, how to join DevNet, and how to access useful resources.  
⌚ 1 Hours

- Overview of DevNet  
Learn about DevNet's features and get Partnering and Marketing resources.

**Intro to Coding Fundamentals & REST APIs**  
Get started with coding basics, an intro to REST APIs and common developer tools.  
⌚ 3 Hours

- Overview of REST APIs  
Learn the basics of REST APIs. Use Postman to make REST API calls.
- Python Primer Level 1  
Learn...

**Spark APIs for Beginners** Beta  
An introduction to programming APIs, working with Cisco Spark.  
⌚ 2 Hours

- Introduction to Cisco Spark Apps  
Overview of Cisco Spark extensibility, covering capabilities, use-cases, and types of Cisco Spark Apps (integrations and bots).
- Creating Spark Rooms, Adding Participants and Posting Messages  
Learn how to use the Spark API to create a new persistent chat room, add a participant by email address, and post a new message

**Network Programmability**  
Learn about the fundamentals of Network Programmability and its corresponding technologies.  
⌚ 2 Hours

- What is Network Programmability?  
Learn about Network Programmability and its Relationship to SDN and DNA.
- APIC-EM Applications and Use Cases  
Introduction to APIC-EM Applications and their use cases.
- APIC-EM REST API with POSTMAN and Python Applications  
Learn how to call APIC-EM's REST APIs using POSTMAN and the Python programming language.
- Mission: Post Network Topology Data to a Spark Room  
Complete the mission for APIC-EM module

<http://bit.ly/DevNetTrack>



# Code: [developer.cisco.com/sandbox](https://developer.cisco.com/sandbox)

DEVNET

Log In | Register | Subscribe

Sandbox

Sandbox Catalog Docs Support

## Looking for a development lab?

Dig in with DevNet Sandbox - technology packed Cisco labs - today! FREE with 24x7 access!

Learn more Get started with Sandbox

EXPLORE TECHNOLOGIES

- Networking
- Data Center
- Cloud
- Security
- IoT
- Collaboration
- Analytics & Automation
- Open Source

# Inspire: DevNet Creations

- See what others are building with DevNet Creations
- Collaborate with a community of experts online
- Find inspiration for capstone projects
- Ask and answer questions in the forum

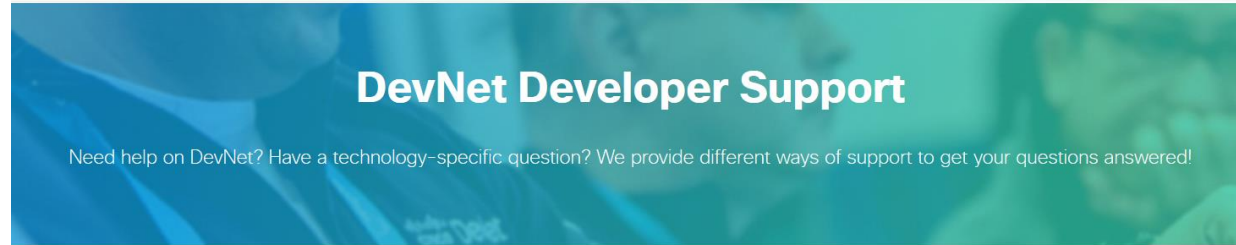
The screenshot shows the DevNet Creations website. At the top, there is a navigation bar with the Cisco DevNet logo, a search icon, and links for 'Log In', 'Register', and 'Subscribe'. Below the navigation bar, the main header features the 'DevNet Creations' title and a subtitle: 'A platform of ideas, innovations, and inspiration. Connect with your peers, get involved in projects, and showcase your innovations.' A prominent blue 'Submit Creations' button is located on the left side of the header. On the right, there is a large, colorful graphic of a lightbulb composed of many small triangles. Below the header, there is a search bar with the placeholder text 'Search Innovations by tag, technology, project name, team name...'. The main content area is titled 'Most Popular' and displays a grid of six featured projects. Each project card includes a title, a brief description, and the creator's name. The projects shown are: 'Cisco Dash' (by Cisco DevNet Team), 'Managing UCS Compute with Amazon Echo' (by ShotFirst), 'DevloT' (by Cisco DevNet Sparkers), 'GLANCE' (by Cisco DevNet Team), 'Firepower API Object Management' (by ShotFirst), and 'DEVNET EVENTS' (by Cisco DevNet Sparkers).

# Connect: Meet and learn @Cisco Live / DevNet Zone



- Presentations
- Instructor-driven class rooms
- Demo pods and workshops
- On-site Learning Tracks
- Bootcamps and coding camps




# Connect: Support



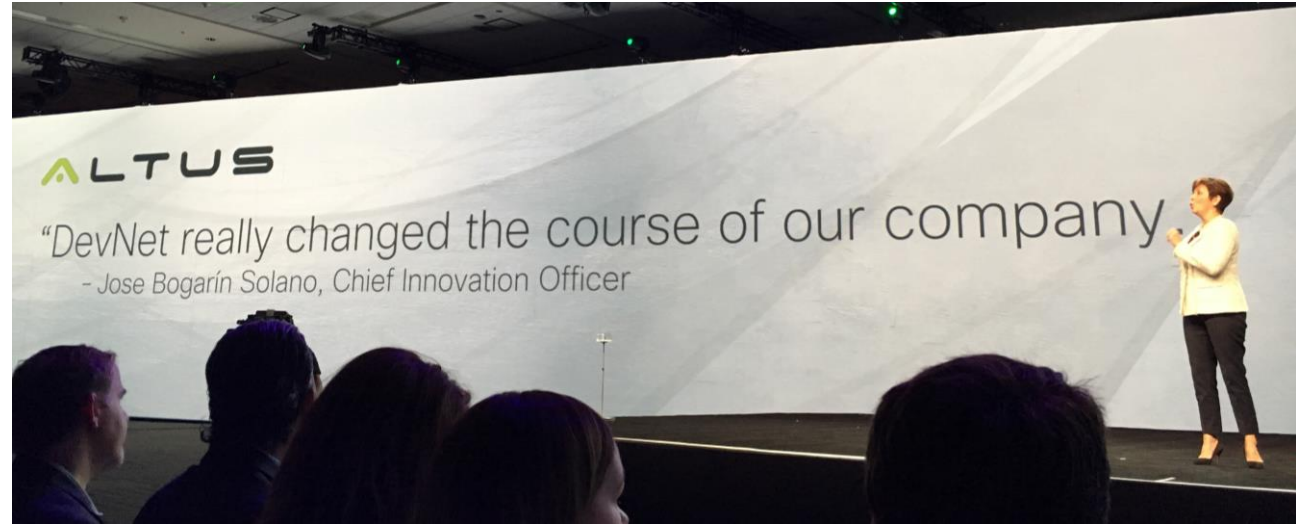
**DevNet Developer Support**

Need help on DevNet? Have a technology-specific question? We provide different ways of support to get your questions answered!

How can we help you?

 <h3>Spark Chat</h3> <ul style="list-style-type: none"><li>✓ Free access for all via <a href="#">Cisco Spark</a></li><li>✓ Get guidance among DevNet resources (Sandbox, APIs, etc)</li><li>✓ Get quick answers from the DevNet experts and community</li></ul> <p><a href="#">Chat now</a></p>	 <h3>Community Forum</h3> <ul style="list-style-type: none"><li>✓ Free access for all</li><li>✓ Engage with DevNet and community experts on technology-specific questions</li><li>✓ Search the forums' knowledge base or start a new discussion</li></ul> <p><a href="#">Join the discussion</a></p>	 <h3>Support Ticket</h3> <ul style="list-style-type: none"><li>✓ Paid access</li><li>✓ Work 1-on-1 with a DevNet support engineer, response-time guaranteed</li><li>✓ Available for over 30 technologies <a href="#">Technologies we support</a></li></ul> <p><a href="#">Purchase ticket</a></p>
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# Learning and Connecting to Further Career



1,600+ Partners Find Value in DevNet



# DevNet by the Numbers

**440,000**

Members

**24,000+**

Companies

**1,639**

Channel Partners

**252**

Learning Labs

**80**

Active API Sets

**172**

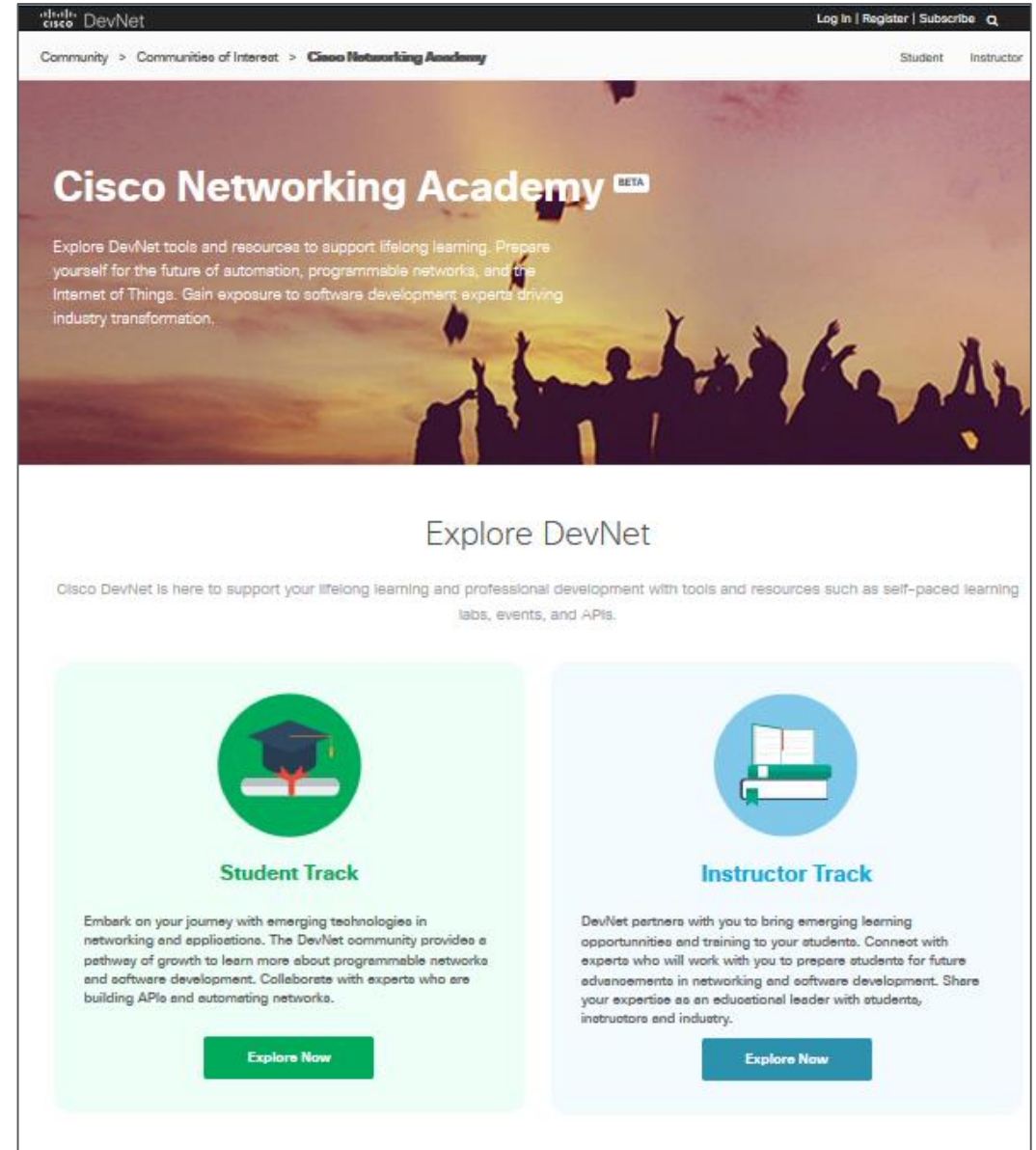
Yearly Events

# NetAcad Community

Join the DevNet NetAcad Community:

<https://developer.cisco.com/site/netacad/>

Customized DevNet experience to align with you in bringing new enrichment resources to your classrooms.



The screenshot shows the Cisco Networking Academy website. At the top, there is a navigation bar with the Cisco DevNet logo, a search icon, and links for 'Log In', 'Register', and 'Subscribe'. Below the navigation bar, there is a breadcrumb trail: 'Community > Communities of Interest > Cisco Networking Academy'. The main header features the text 'Cisco Networking Academy' with a 'BETA' badge. Below this, a paragraph describes the academy's mission: 'Explore DevNet tools and resources to support lifelong learning. Prepare yourself for the future of automation, programmable networks, and the Internet of Things. Gain exposure to software development experts driving industry transformation.' The background of this section is a sunset with silhouettes of graduates celebrating. Below the header, there is a section titled 'Explore DevNet' with a sub-header: 'Cisco DevNet is here to support your lifelong learning and professional development with tools and resources such as self-paced learning labs, events, and APIs.' There are two main content cards. The first is the 'Student Track', which features a green circular icon with a graduation cap and a book. The text below the icon says: 'Embark on your journey with emerging technologies in networking and applications. The DevNet community provides a pathway of growth to learn more about programmable networks and software development. Collaborate with experts who are building APIs and automating networks.' Below this text is a green 'Explore Now' button. The second card is the 'Instructor Track', which features a blue circular icon with an open book and a graduation cap. The text below the icon says: 'DevNet partners with you to bring emerging learning opportunities and training to your students. Connect with experts who will work with you to prepare students for future advancements in networking and software development. Share your expertise as an educational leader with students, instructors and industry.' Below this text is a blue 'Explore Now' button.



# DevNet – NetAcad Community - Student Page

- Learning Tracks to get started with coding and automation
- Community Managers to support
- Inspiration, Events, Forums

The screenshot shows the Cisco Networking Academy Student Community page. At the top, there's a navigation bar with 'DevNet' and 'Cisco Networking Academy' links. The main heading is 'Cisco Networking Academy BETA Student Community'. Below this, a sub-heading reads 'Get started with DevNet' with a tagline 'Inspiration, learning opportunities, events, professional networking, and more!'. There are two columns of text: 'Why DevNet?' with three bullet points (exploring software with Learning Tracks, learning from experts, and browsing projects) and 'We'd love to hear from you' with a paragraph and a 'Tell us what you think' button. The bottom section is titled 'Learn new networking technologies & programming skills' and features three cards: 'Network Programmability for Network Engineer', 'Cloud Native Applications', and 'Data Center Programmability', each with an icon, a brief description, and a 'Explore Learning Track' link.

# DevNet – NetAcad Community - Instructor Page

- Learning Tracks to support your classroom activities
- Tools to write your own labs
- Community Managers to support
- Inspiration, Events, Forums
- Provide Feedback

The screenshot shows the Cisco DevNet Instructor Community page. At the top, there's a navigation bar with 'Log In | Register | Subscribe' and a search icon. Below that, the breadcrumb trail reads 'Community > Communities of Interest > Cisco Networking Academy'. The main header area features a large image of a classroom and the text 'Cisco Networking Academy BETA Instructor Community'. A sub-header 'Instructor Community' is followed by a paragraph: 'Explore tools, resources, learning labs, and team projects. DevNet has a variety of ways to support you in inspiring your students to learn emerging technologies in networking and software development.' Below this is a section titled 'Why DevNet?' with the subtext 'DevNet can be your partner in bringing emerging technologies and training to your students.' This section contains two columns of text. The left column, 'Join the Community & Advance Future Networks', lists three benefits with checkmarks: exploring software with Learning Tracks, getting inspired by innovation projects, and connecting with experts. The right column, 'We'd love to hear from you', explains the community's purpose and includes a 'Tell us what you think' button. The bottom section, 'Explore DevNet resources', features four icons in blue circles: a microscope for 'Discover learning labs', a calendar for 'Join DevNet events', a lightbulb for 'See what others are creating', and a flask for 'Create a learning lab'. Each icon is accompanied by a brief description and a 'Learn more' link.

# Sign Up with DevNet...as easy as 1,2,3!

<https://developer.cisco.com/site/netacad>

Join DevNet for free

DevNet helps to answer questions so you can keep learning about the future of networking.

Become a DevNet member today

## 3 simple steps to becoming a DevNet member

Becoming a member of the DevNet Community is free, easy, and gives you access to useful resources and tools.

### Step 1

Create a Cisco ID >  
(if you don't already have one)

### Step 2

Log in to DevNet and create  
your account >

### Step 3

Complete your profile (at any  
time) and earn points towards  
Cisco DevNet badges.

Connect with us ...

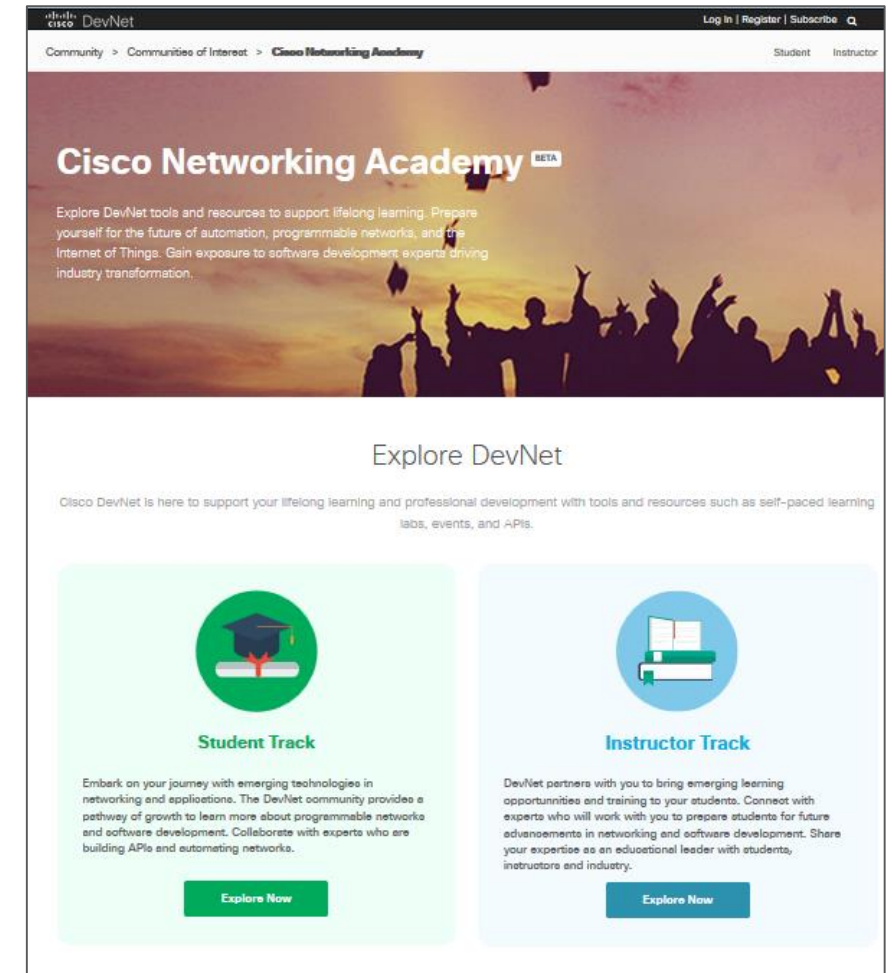
"I would like to join these DevNet Communities of Interest:

Digital Network Architecture (DNA)  
Women in Tech (WiT)  
Meraki  
Networking Academy (NetAcad)

# Join the DevNet Community !



- ❑ Signup at [developer.cisco.com](https://developer.cisco.com)
- ❑ Join the DevNet NetAcad community
- ❑ Give your community feedback
- ❑ Engage students in enrichment activities
- ❑ Review new learning labs & give feedback
- ❑ **Twitter** : @CiscoDevNet , @kuehltweet



# Q&A

