

Network Programmability

▶ Speaker: Guzmán Monné
▶ Charla: Network Programmability

JOBIC 2017
Sextas Jornadas Binacionales
de Informática y Comunicaciones

“ It’s no longer the big beating the small, but the fast beating the slow.

Eric Pearson, CIO, International Hotel Group (IHG)

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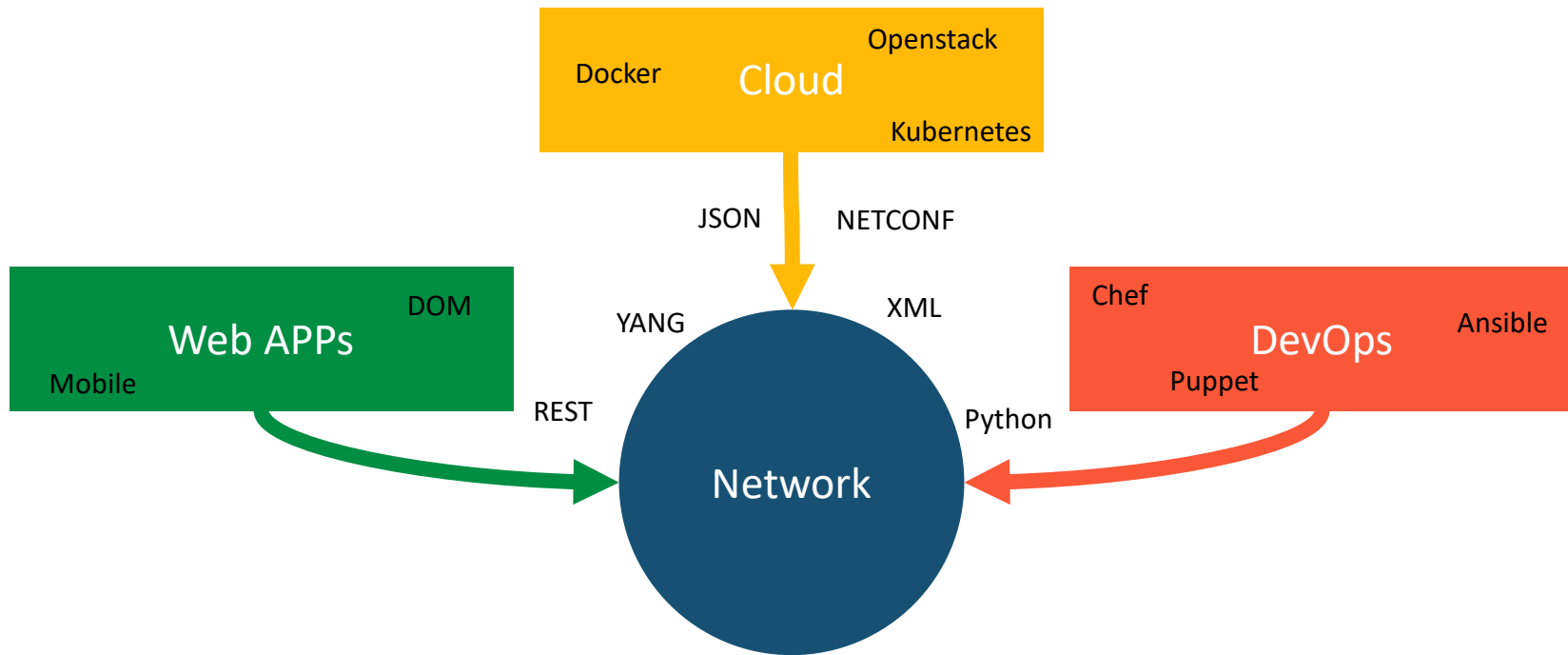


Agility and accelerated time
to market.

Do more with less resources.

Create business value from
network services.

Re-evaluating the place of the Network?



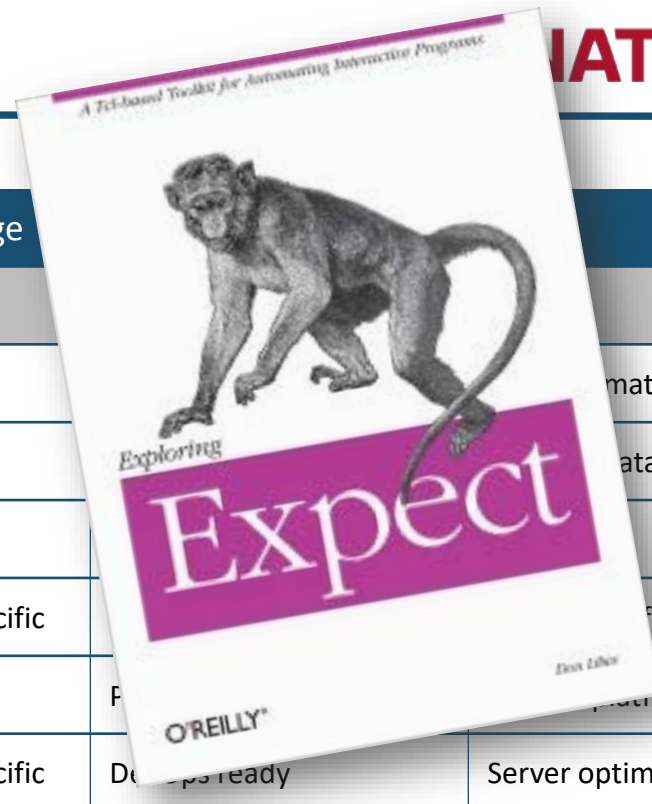
“

By 2020, only 30% of network operations teams will use the command line interface (CLI) as their primary interface, which is a decrease from 85% in YE16

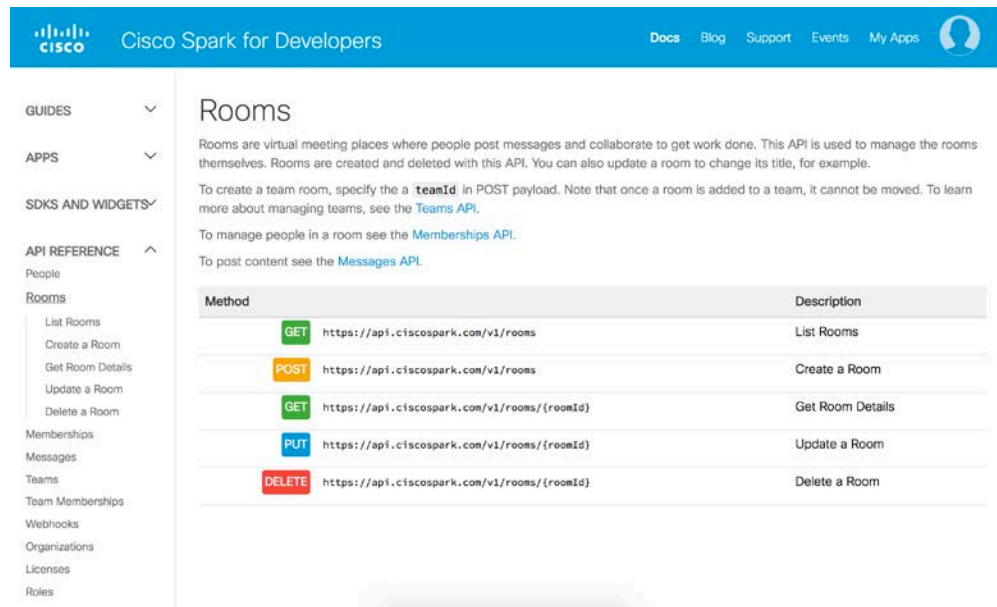
Gartner – 2017 Strategic Roadmap for Networking.

Configuration Automation Methods

Protocol/Tool	Platform Availability					Coverage		
	XR	NX	XE	IOS	ASA			
CLI						All		Information friendly
NETCONF						All		Data models
YANG						Growing		
REST						Task-specific		Forms
JSON-RPC						All		Platforms
Puppet/Chef						Task-specific	Desktop ready	Server optimized
Openstack						Task-specific	Cloud ready	Limited use cases



- UCS Director.
- Spark.
- Meraki.
- ACI.
- APIC-EM.
- Cisco Mobility Experience (CMX)
- Prime Infrastructure.
- RESTCONF.
- Tropo.



The screenshot shows the Cisco Spark for Developers API documentation. The left sidebar contains a navigation menu with categories: GUIDES, APPS, SDKS AND WIDGETS, and API REFERENCE. Under API REFERENCE, there are sub-categories: People, Rooms, Memberships, Messages, Teams, Team Memberships, Webhooks, Organizations, Licenses, and Roles. The 'Rooms' category is selected, and its sub-items are: List Rooms, Create a Room, Get Room Details, Update a Room, and Delete a Room. The main content area is titled 'Rooms' and contains an introduction, usage instructions, and a table of API methods.

Cisco Spark for Developers

Rooms

Rooms are virtual meeting places where people post messages and collaborate to get work done. This API is used to manage the rooms themselves. Rooms are created and deleted with this API. You can also update a room to change its title, for example.

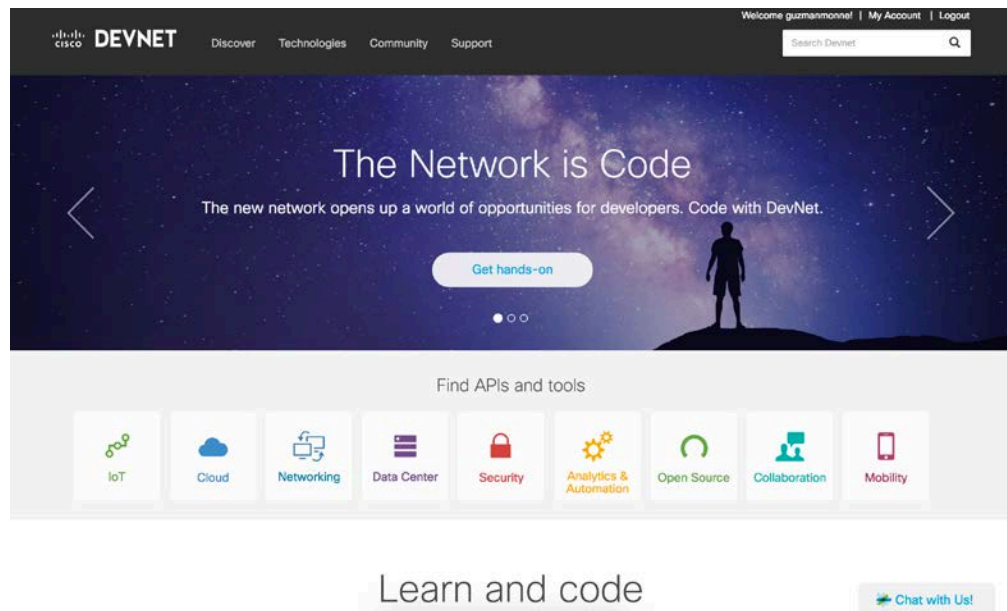
To create a team room, specify the `teamId` in POST payload. Note that once a room is added to a team, it cannot be moved. To learn more about managing teams, see the [Teams API](#).

To manage people in a room see the [Memberships API](#).

To post content see the [Messages API](#).

Method	Description
GET https://api.ciscospark.com/v1/rooms	List Rooms
POST https://api.ciscospark.com/v1/rooms	Create a Room
GET https://api.ciscospark.com/v1/rooms/{roomId}	Get Room Details
PUT https://api.ciscospark.com/v1/rooms/{roomId}	Update a Room
DELETE https://api.ciscospark.com/v1/rooms/{roomId}	Delete a Room

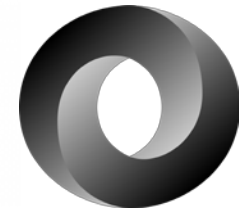
- UCS Director.
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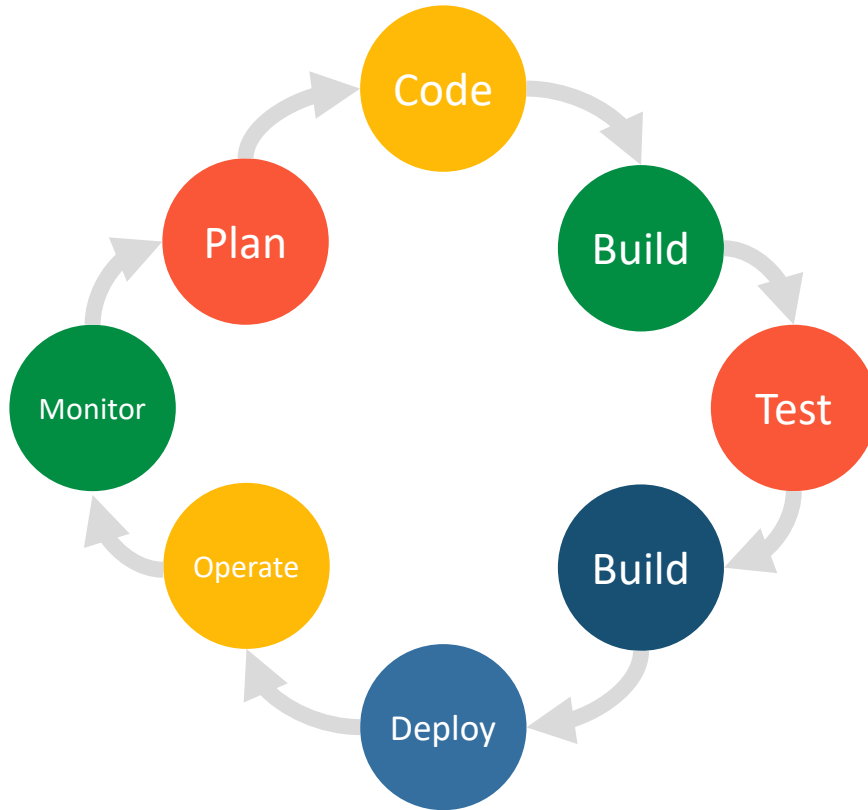


Cisco Devnet

<https://developer.cisco.com>

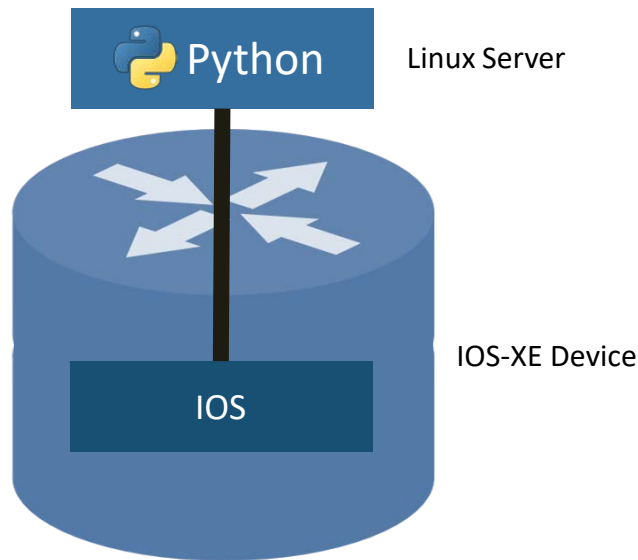
- Programming basic constructs.
- Python.
- JavaScript.
- REST / Web Services.
- XML / JSON / YAML.
- Basic SQL.
- Bash scripting.
- **The ability to communicate *effectively* with programmers.**





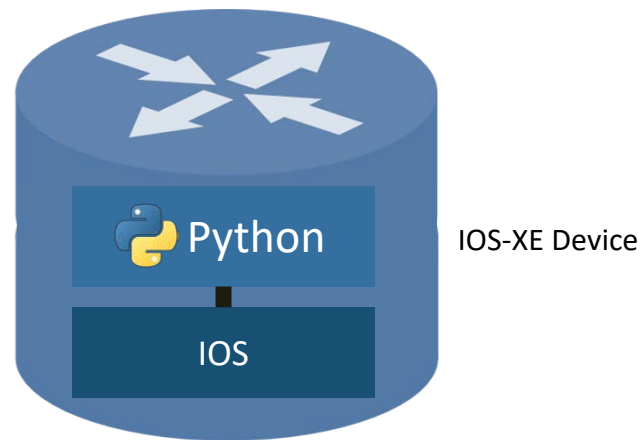
JUnit

"Off-Box"



- Configuration management automation.
- Telemetry / Operational data.
- Controller use case including APIC-EM

"On-Box"

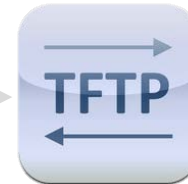


- Provisioning automation.
- Automating Embedded Event Manager.
- Application development.
- IoT.



```
Cat3850#sh run | sec event  
event manager applet config_change  
  event syslog pattern "5-CONFIG_I"  
  action 0 cli command "enable"  
  action 1 cli command "guestshell run bash backup-spark.py"
```

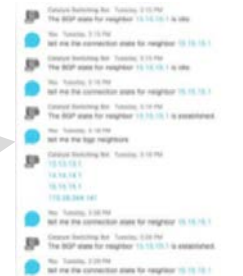
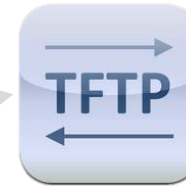
Catalyst 3850





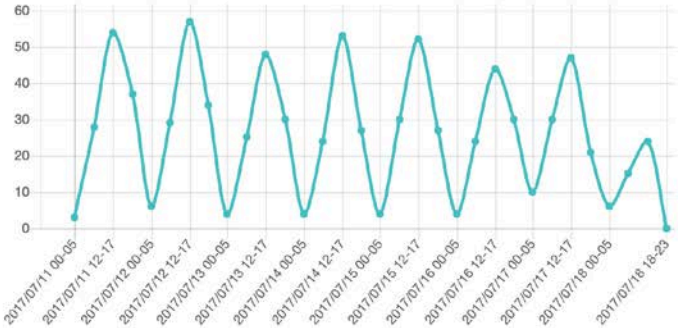
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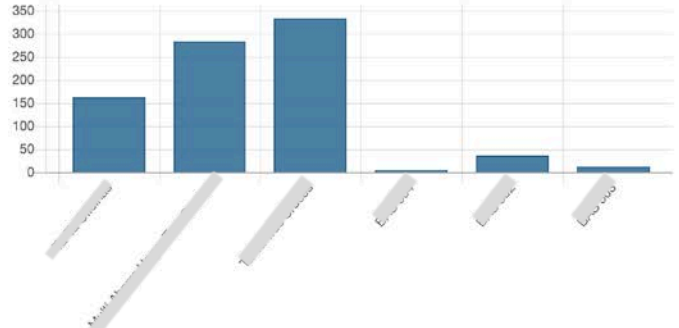




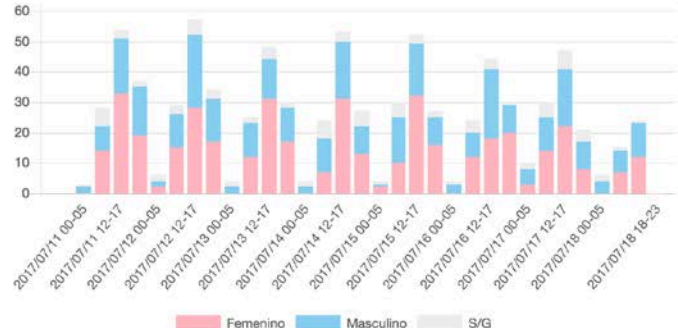
Clientes [6 horas]



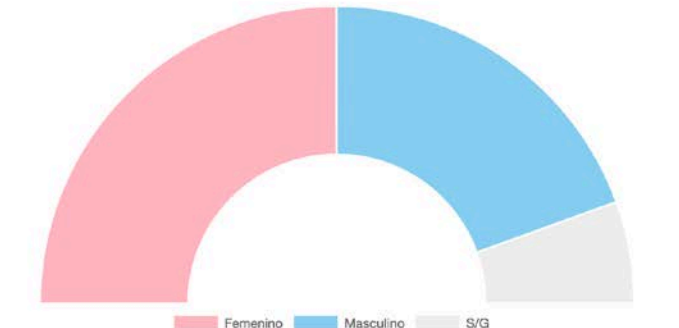
Clientes por Ubicación [Total]



Genero [6 horas]



Genero [Total]



!Muchas Gracias!



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