

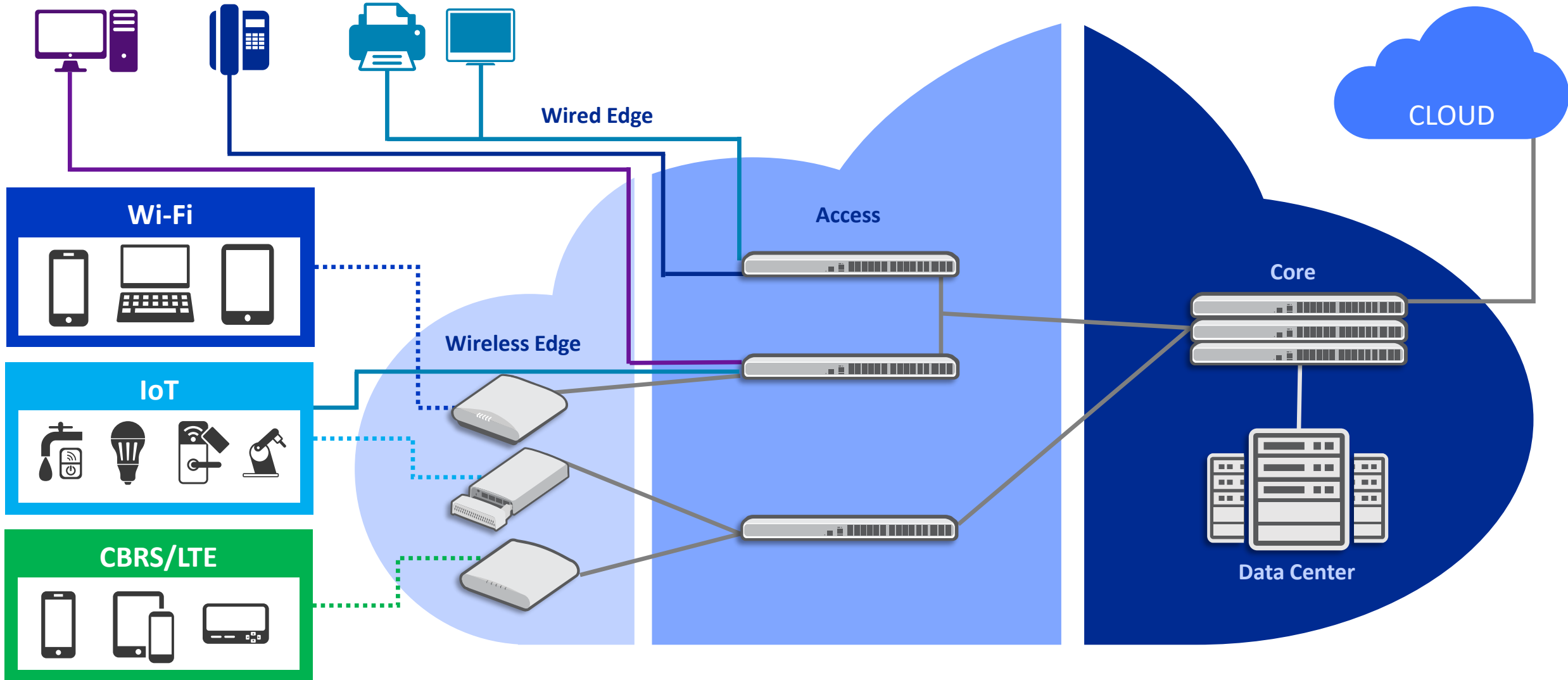
Ruckus Wired Portfolio Presentation

August 2021

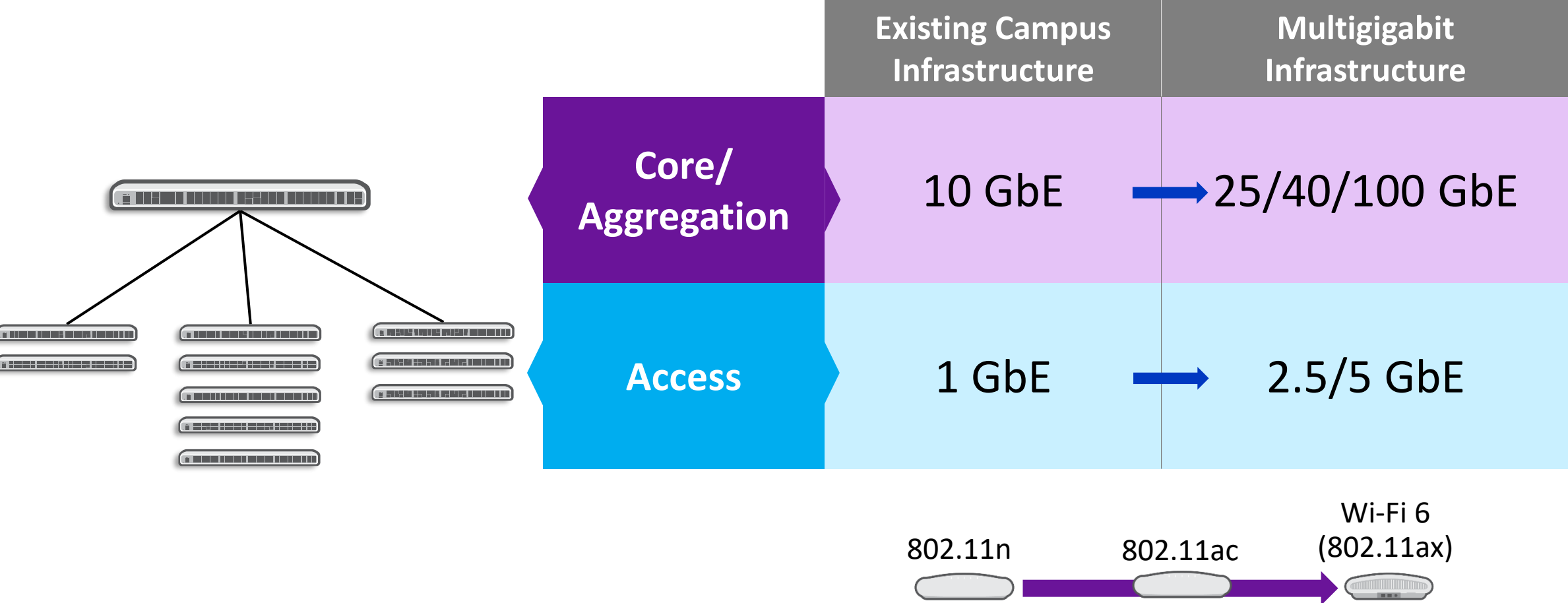


Ruckus Networks Connects Users
Network Edge Hardware Portfolio

Ruckus Networks Connects Users & Devices to the Cloud



Multigigabit Driving Refresh Of Core/Aggregation

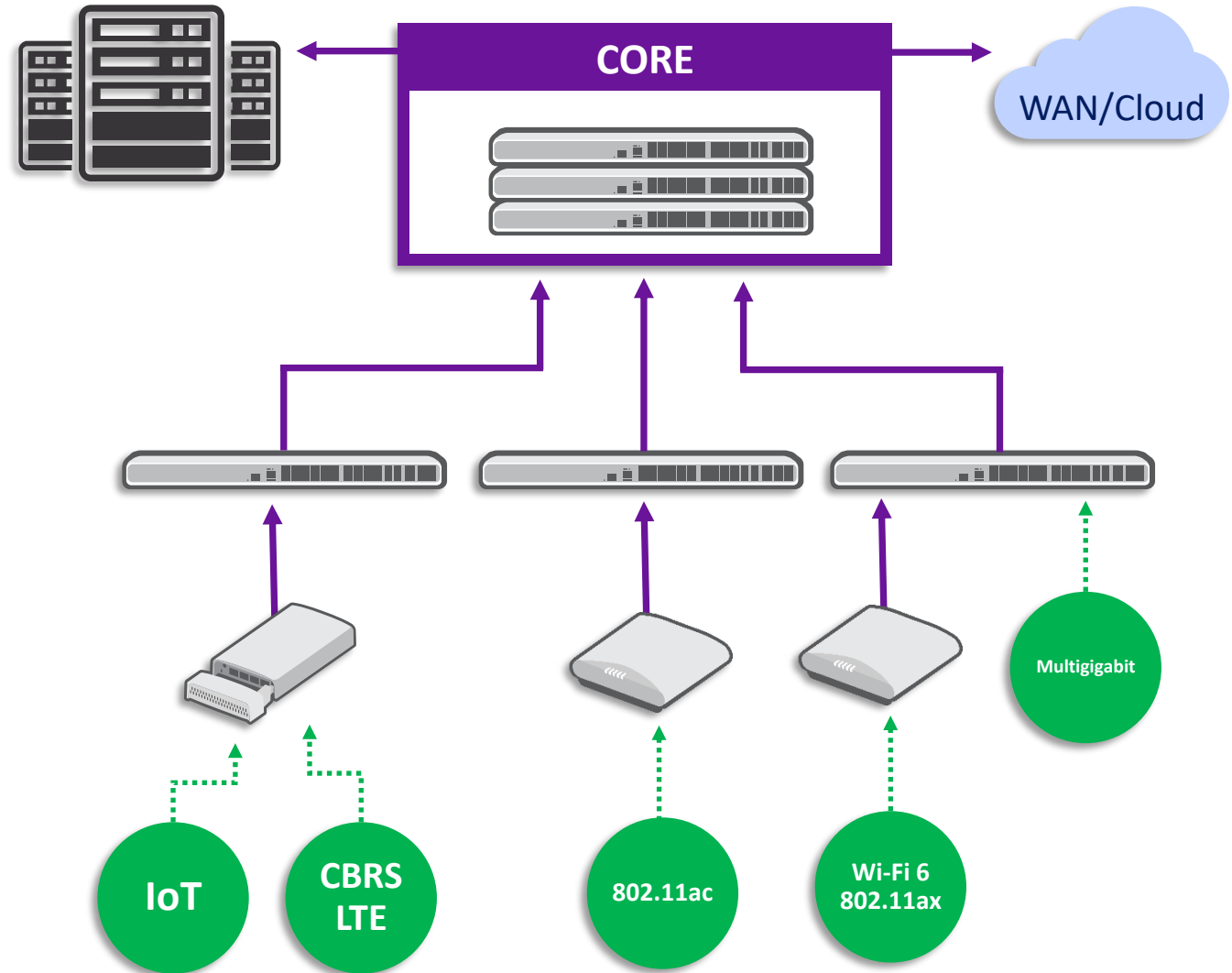


Trends Driving Enterprise Network Traffic

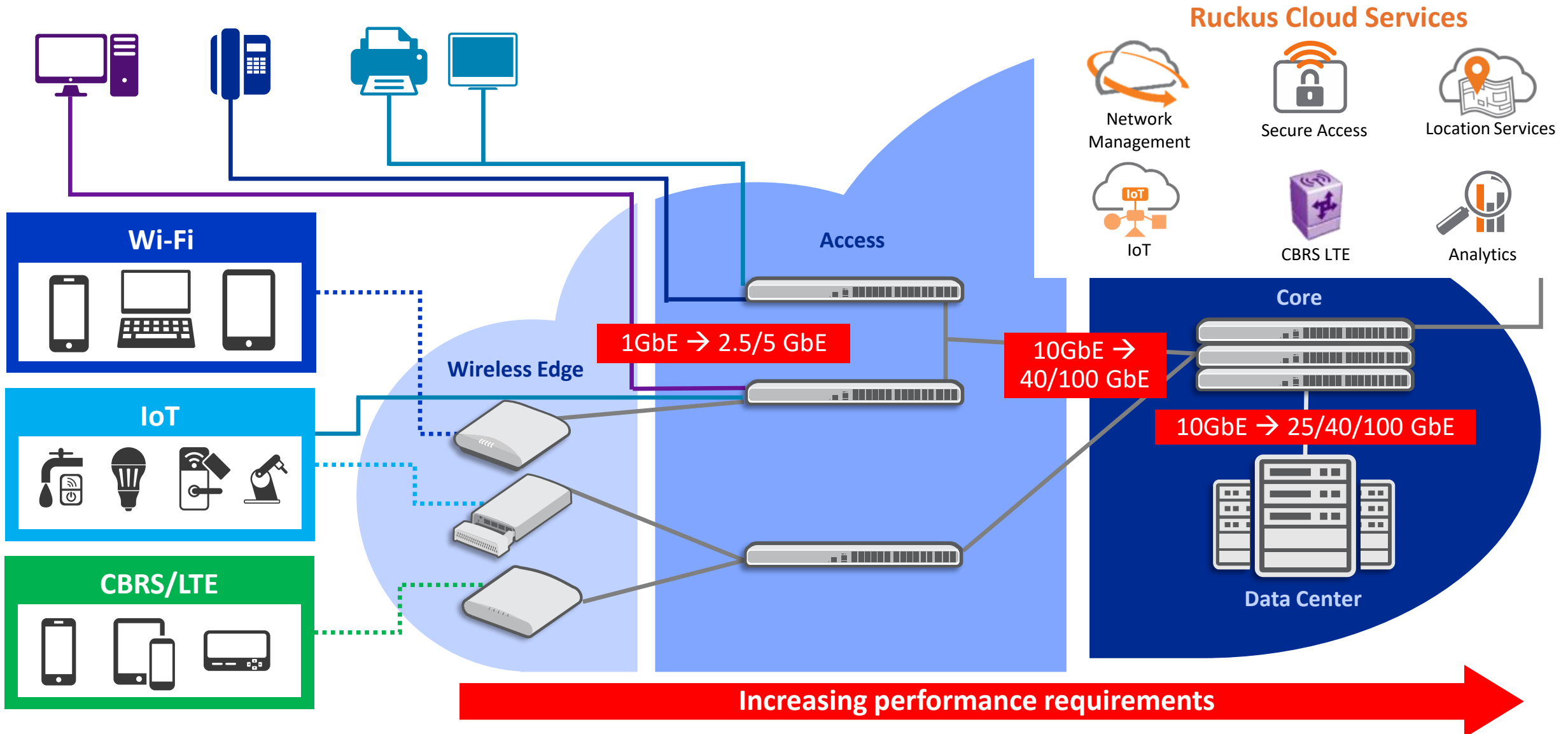
The Campus Core Is Under Stress

- Rapid increases in Wi-Fi speeds
- CBRS (LTE+5G) backhaul traffic
- IoT devices / Smart Buildings
- 10x Increase in wired edge speeds (Multigigabit/802.3bz)
- Cloud applications and video streaming

Driving dramatic increase in core traffic



Ruckus Networks Connects Users & Devices to the Cloud



Unified Network Management & Control

A range of options addresses the requirements of organizations of all types and sizes

Controller-less



*Plug-and-play
for smaller deployments*

Ruckus Unleashed

Cloud-managed



Cloud simplicity

Ruckus Cloud

Controller-managed



Scale & flexibility

SmartZone Network Controllers

Ruckus ICX Switches

Why Ruckus Switches Stand Apart

IT Challenges With Switching At Network Edge

Network Complexity



- Increasing burden on IT staff
- More time troubleshooting
- Higher costs to deploy/maintain

Ever-Growing Network Demand



- Inflexible architectures
- Fixed configurations
- Limited scale

Integrated Wireless Infrastructure



- Sufficient power and performance
- Managing wired & wireless networks
- Inconsistent security policies

Ruckus Switching Advantages

Simpler Networking



- Reduced management touch-points
- Single OS across all switches
- Automated deployment (Zero-Touch)

Optimized Wireless Underlay for Wi-Fi, LTE, IoT



- Enhanced performance and power
- Unified network management
- Unified security & policy mgt.

Future-proof Solutions



- Scale-out network architectures
- Flexible deployments
- Upgradeable uplinks

Simpler Networking

Fixed Switches Everywhere

ICX 7150

Entry-level Access



ICX 7250

Access



ICX 7550

Access-Aggregation



ICX 7650

Premium Access-Aggregation



ICX 7750

Aggregation-Core



ICX 7850

Aggregation-Core
Data Center



SIMPLE
FLEXIBLE
SCALABLE

- Purchase only what you need, when you need it
- Expand as needed
- Power and features of chassis
 - With flexibility, simplicity and lower cost of stackables

“The emergence of high-density fixed form factor switches can reduce or eliminate the need for costlier, oversized chassis-based switches. The move toward FFF switches will help network managers deliver higher-performance networks and reduce footprint, power, cooling and TCO.”

Andrew Lerner, Gartner

Simpler Networking

- Reduced management touch-points
- Single OS across all switches
- Automated deployment (Zero-Touch)

Ruckus Technologies That Simplify Networking

Advanced Stacking



Campus Fabric



Unified Management:
SmartZone or Ruckus Cloud



Flexible Deployment



Scale-up vs. Scale-out

Chassis scale-up

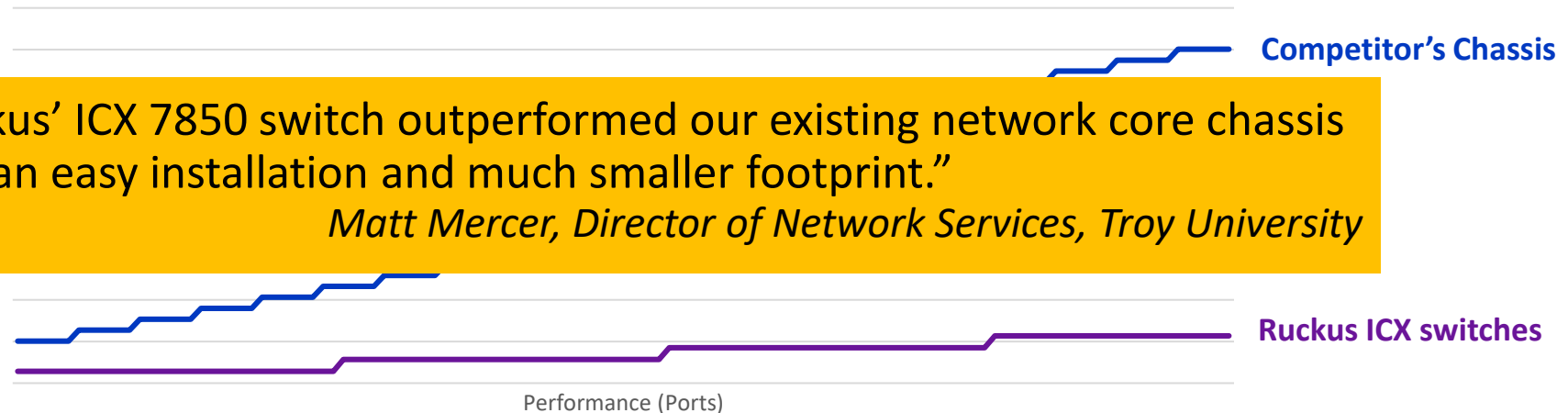


Ruckus scale-out: Pay-as-you-grow



“Ruckus’ ICX 7850 switch outperformed our existing network core chassis with an easy installation and much smaller footprint.”

Matt Mercer, Director of Network Services, Troy University



Ruckus Distributed Chassis

Benefits of a Chassis



- Single point of management
- High availability
 - Redundant controllers
 - Hitless software upgrades
 - Hot swappable modules
- Easy upgrades
- High scalability
- High performance

Ruckus Distributed Chassis

Benefits of a Chassis



- Single point of management
- High availability
 - Redundant controllers
 - Hitless software upgrades
 - Hot swappable modules
- Easy upgrades
- High scalability
- High performance

Plus the Flexibility of Fixed Form Factor



- Reduced up-front investment
- Buy only what you need
 - No fixed limitations
- Distributed configuration
 - Up to 10km
- Reduced power & cooling
- Flexible deployment: Stand-alone; ToR; Stack; Fabric

Ruckus Distributed Chassis

Benefits of a Chassis



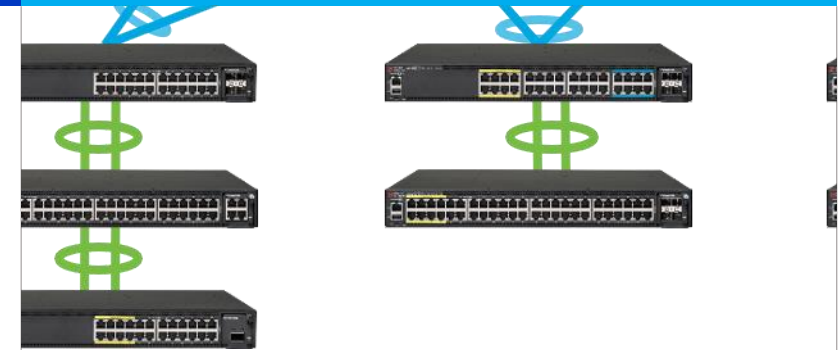
- Single point of management
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- Reduced up-front investment
- Buy only what you need
 - No fixed limitations
- Distributed configuration
 - Up to 10km
- Reduced power & cooling
- Flexible deployment: Stand-alone; ToR; Stack; Fabric

And Much More...



- Scales to
 - Up to 12 switches per stack
 - UP to 40 switches per fabric
- Simplified management
 - STP-free Layer 2 design
- 75% lower TCO

Ruckus Simplified Network Management



“Networks should be simple, but only Ruckus got the approach right.”

Jim Turner, Network Manager, Chichester High School



“Campus Fabric solution brings a totally different approach. It has cut the time required to troubleshoot and resolve issues by **80%**”

Ilan Schwartz, CIO, The Getter Group



“Because of the ability to stack up to **12** switches in a single stack, as well as this long-distance stacking, we're able to manage each building as a single logical unit”

Dmitry Shevchuk, Network Administrator, Santa Fe College

Optimized Wireless Underlay

Underlay for Wi-Fi, LTE, IoT

Optimized Wireless Underlay For Wi-Fi/IoT/LTE

Optimized performance and power



- Multi-Gigabit technology (1/2.5/5/10 GbE) options
- Upstream performance required for aggregation/core
- PoE power to 90W per port (802.3bt)

Unified network management



- Wired/Wireless management in SmartZone

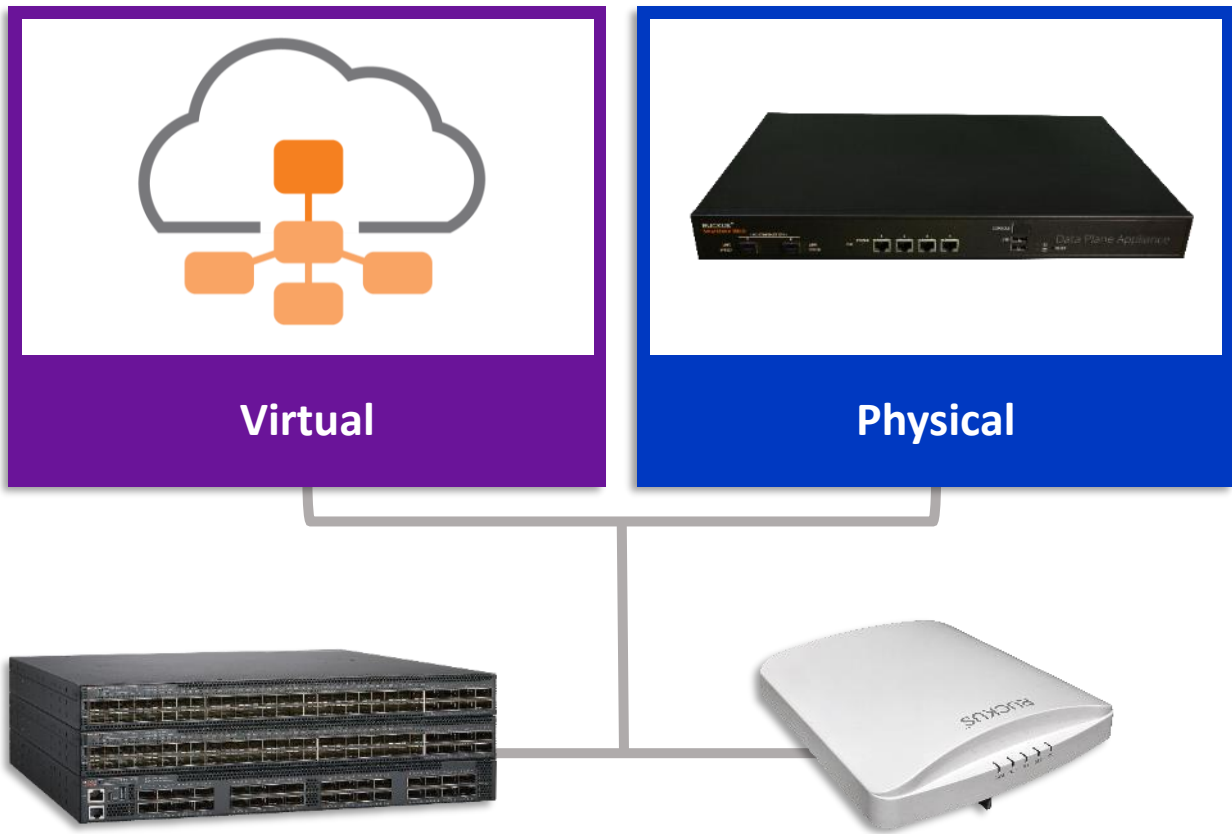
Unified security & policy mgt.



- On-boarding and Security with Cloudpath

SmartZone Network Controller

SmartZone OS



- SmartZone OS powers a family of **network controllers**
- **Unified:** Control and management of Ruckus APs and switches
- **Flexible:** Physical and Virtual Appliances deployment options
- **Scalable:** From midsize organizations to large service providers
- **Extensible:** Custom dashboards and management automation

Good Wi-Fi Requires a Robust Wired Network



“We needed to invest in our wired network. Our wireless network was experiencing oversubscription; speed, connectivity, and latency issues; and packet loss.”

Patrick Gittisriboongul, Huntington Beach UHSD



“The Ruckus wired and wireless networks really work together. It’s incredible to see both networks through a single pane of glass,”

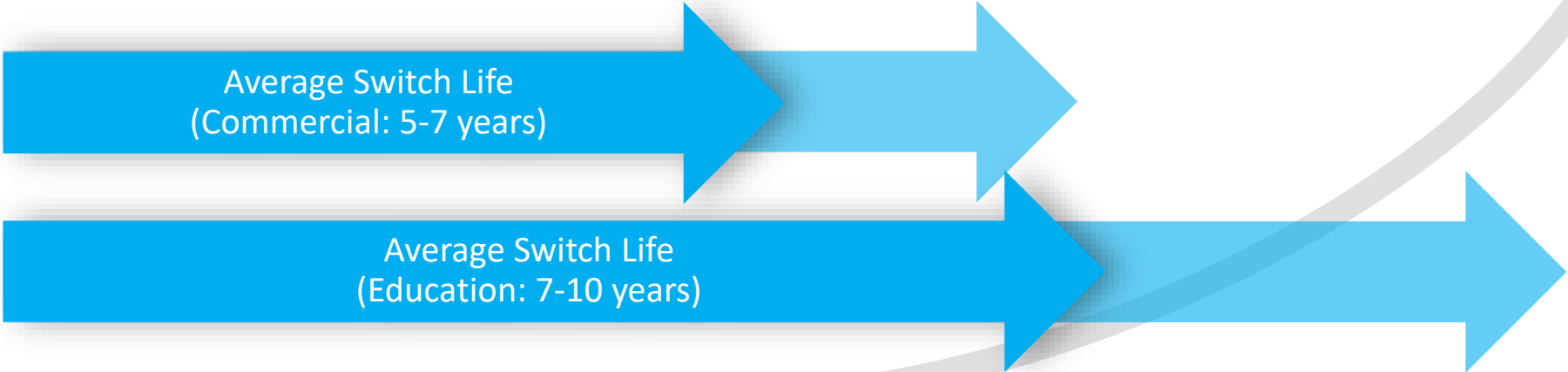
Chris Knowles, District of Mission



Future Proof Solutions

Infrastructure Life

Years



Increasing Wi-Fi Demands:

- Number of users
- Number of devices/user
- Faster devices
- Greater data usage

Future Proof Solutions



Scale-out network architectures
Flexible deployments
Upgradeable uplinks



**NOT RIP AND
REPLACE**

Ruckus Delivers Future Proof Solutions



“We’ve future-proofed ourselves with the technology, the switches, our reseller, and great support from Ruckus. We’ve got everything we wanted and more than we expected.”

Silver Valley Unified School District



“We wanted a network that would support demands five years into the future.”

Albertus Magnus College



“The scalability of the solution ensures that we are always ready to adapt to business growth.”

Getter Group

REDEFINE CONNECTIVITY

COMMSCOPE®

now meets next

Unified Network Management & Control

A range of options addresses the requirements of organizations of all types and sizes

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Ruckus Unleashed

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Cloud simplicity

Ruckus Cloud

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Scale & flexibility

SmartZone Network Controllers

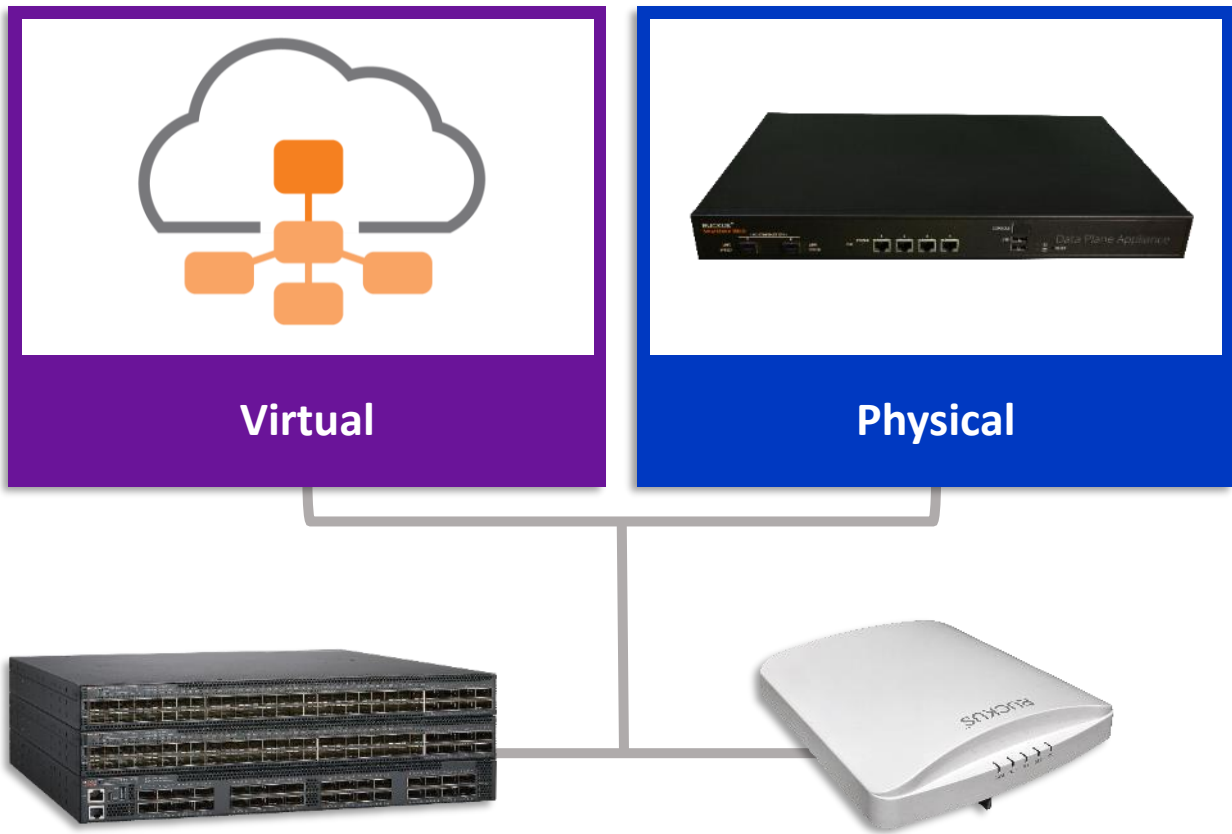
Unified Management With
SmartZone Network Controller
more details

SmartZoneOS Functional Overview

Operation, Administration & Management	Security & Policy	Network Intelligence	Connectivity	Architecture
				
<p>Manage complex LAN/WLAN networks and environments</p>	<p>Ensure network, data and device security</p>	<p>Gain insight into network health, performance and trends</p>	<p>Ensure great network performance for end users</p>	<p>Deployment model alternatives and flexibility</p>

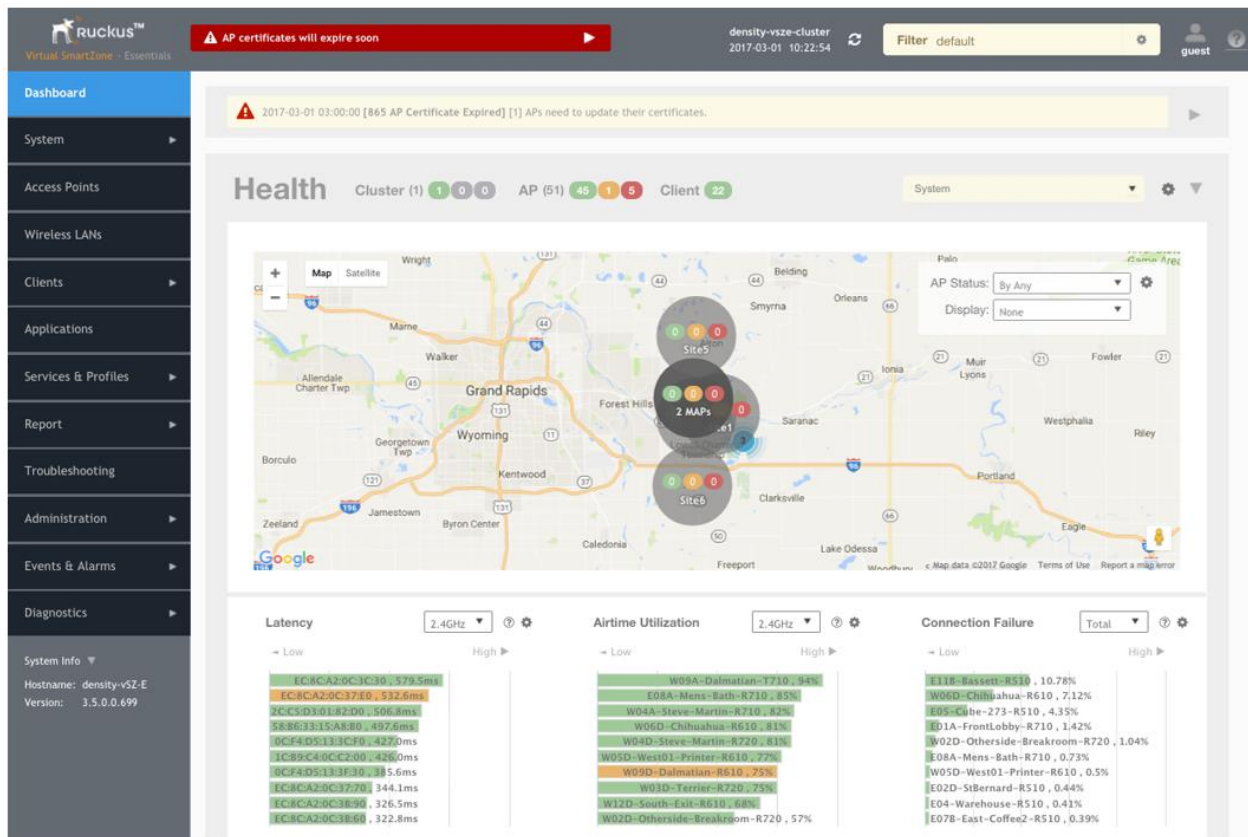
SmartZone Network Controller

SmartZone OS



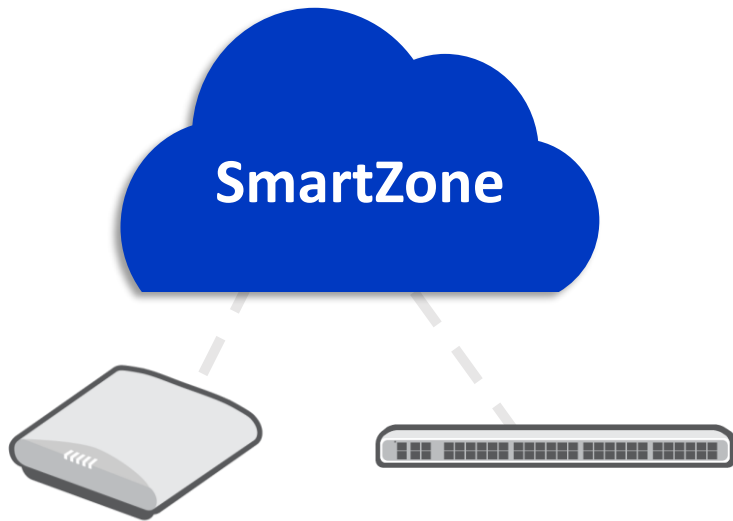
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- **Unified:** Control and management of Ruckus APs and switches
- **Flexible:** Physical and Virtual Appliances deployment options
- **Scalable:** From midsize organizations to large service providers
- **Extensible:** Custom dashboards and management automation

Streamline Network Operations



- Data-rich dashboard
- Google and indoor mapping
- Health and traffic analytics
- Visual troubleshooting
- All-in-one

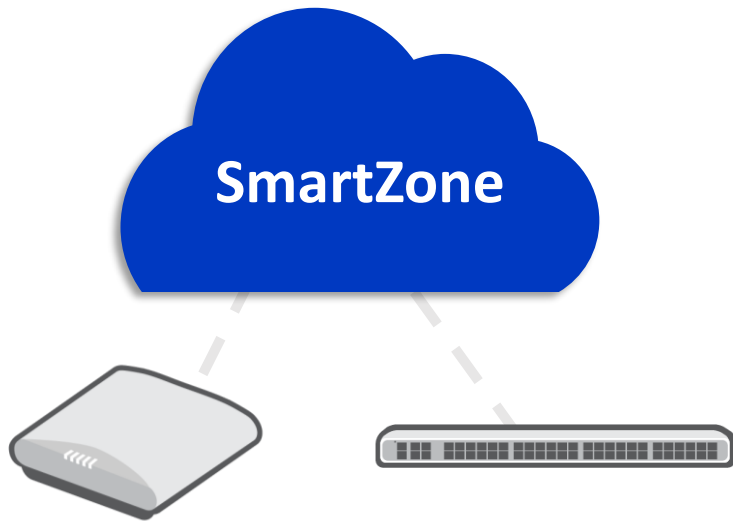
SmartZone Network Controller



Centralized management for Wired and Wireless

- Consistent user experience
- Supports ICX 7000 switches (no ICX 6000)
- Switch license independent of AP license
 - One license per switch
 - Stack - switch license required for every switch member
- Supported across all SZ models

Single Console For Wired/Wireless Management



Dashboard

System

Access Points

Switches

Wireless LANs

Clients

Applications

Services & Profiles

Report

Troubleshooting

Administration

Events & Alarms

Diagnostics

System Info

Hostnames: ICX...-4183A

Switches (3185) 3073 Online 2472 Flagged 112 Offline

System > Anitha_ICX

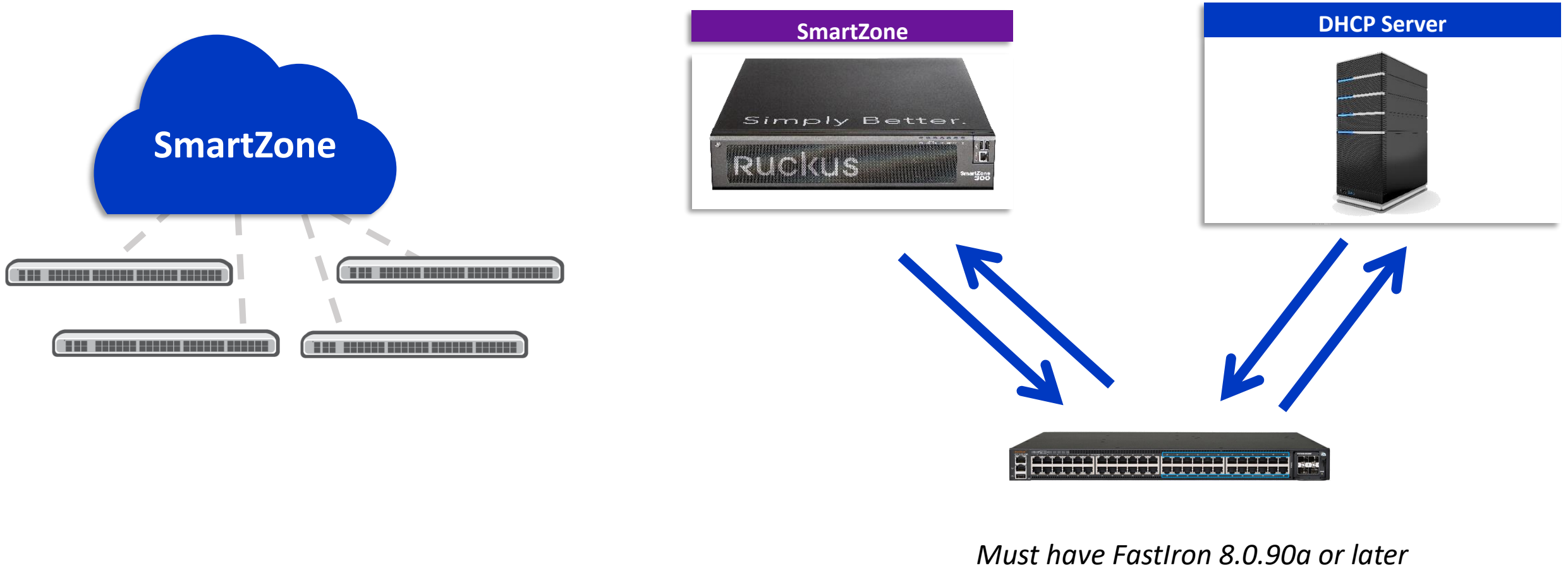
+ [edit] [delete] More

[refresh] [back] [reboot] [move] [delete] More

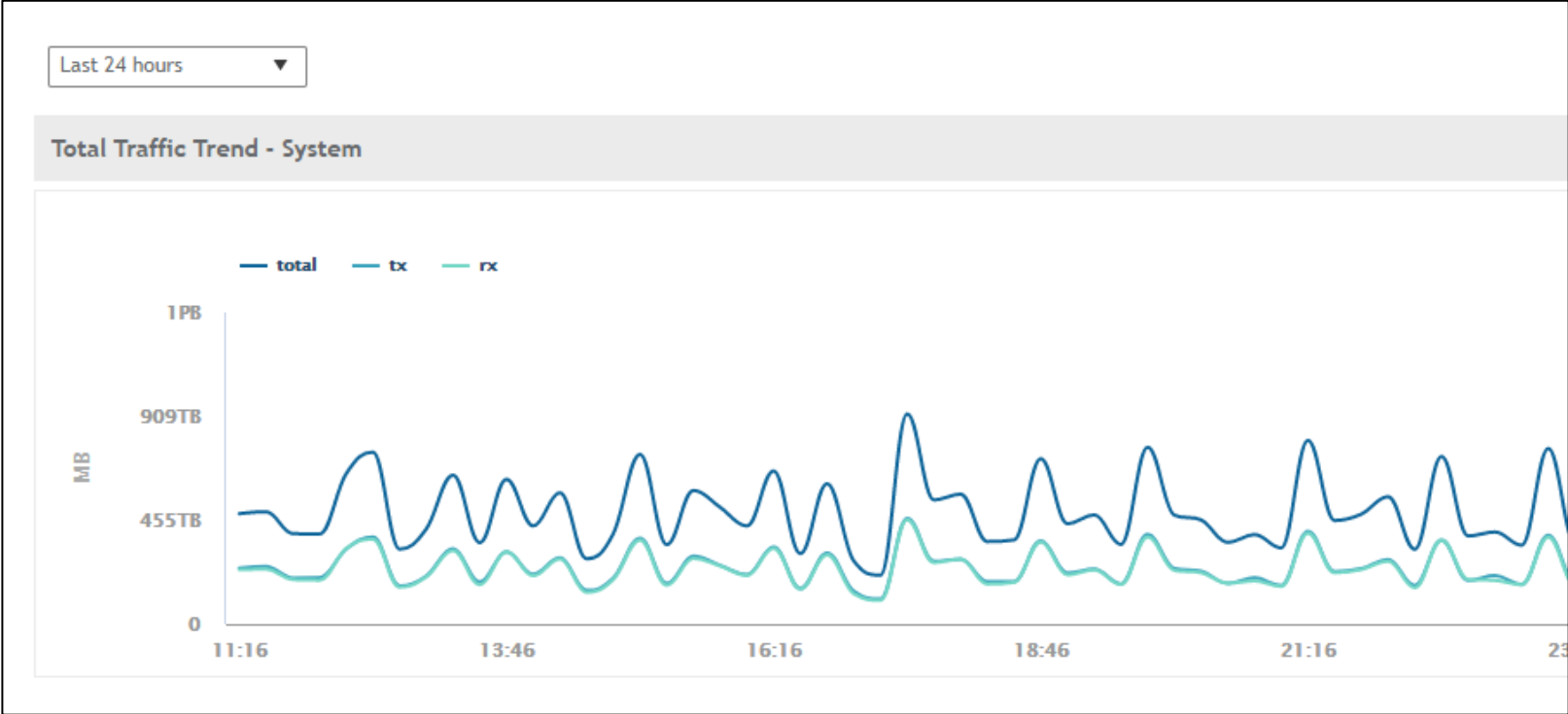
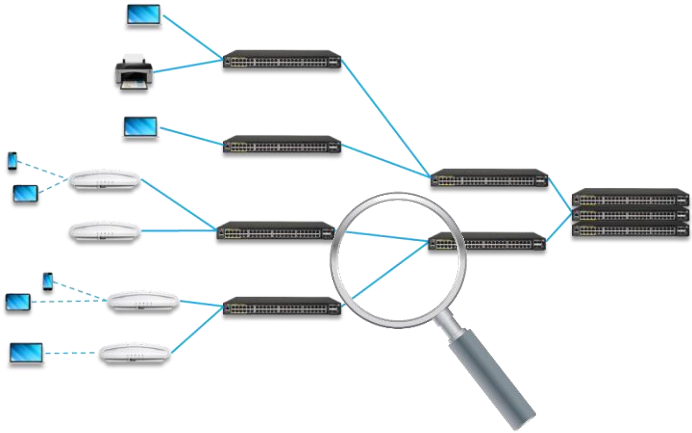
- [D] System 247 110
 - [D] Arris-Ruckus 1 1
 - + [SG] Fong-ICX 1 1
 - + [SG] ICX-Sim1
 - + [D] ICX-Density
 - [D] ICX-Scale 20
 - + [SG] Router 9
 - + [SG] Switch 5
 - [SG] Anitha_ICX 2 1
 - + [SG] Default Group
 - [SG] IDC-ICX 53 37
 - + [SG] Kelly_ICX 8 7
 - [SG] L3_Team 10 3
 - + [SG] SUN-ICX 71 61
 - [SG] Sang 2309
 - + [SG] TN_ICX

Switch Name	Switch Group	MAC Address	Model	IP Address	Status	Uptime	Firm
minion	Anitha_ICX	60:9C:9F:BC:84:EC	ICX7150-48P	10.176.187.208	Online	3 days, 19:36:51	SPRO
- spatha_stack	Anitha_ICX	CC:4E:24:6D:29:F8	ICX7450	10.176.187.205	Online	61 days, 19:20:21	SPRO
spatha_stack (Member)	N/A	N/A	ICX7450-48P	N/A	N/A	N/A	N/A
spatha_stack (Member)	N/A	N/A	ICX7450-48P	N/A	N/A	N/A	N/A
spatha_stack (Standby)	N/A	N/A	ICX7450-24G	N/A	N/A	N/A	N/A
spatha_stack (Active)	N/A	N/A	ICX7450-24G	N/A	N/A	N/A	N/A
= cloud-switch	Anitha_ICX	CC:4E:24:DE:16:BE	ICX7250	10.176.187.210	Online	2 days, 23:12:19	SPRO
cloud-switch ()	N/A	N/A	ICX7250-24P	N/A	N/A	N/A	N/A
cloud-switch ()	N/A	N/A	ICX7250-24	N/A	N/A	N/A	N/A
ICX7250-48 Router	Anitha_ICX	78:A6:E1:01:FC:5C	ICX7250-48	10.176.187.235	Online	20:09:22	SPRO
ICX7250-48P Router	Anitha_ICX	CC:4E:24:B4:2D:C0	ICX7250-48P	10.176.187.201	Online	1 day, 22:04:07	SPRO
SSH-HIGHCPU-TEST-RUNNIN...	Anitha_ICX	D4:C1:9E:14:53:39	ICX7650-48P	10.176.187.219	Online	12 days, 12:05:29	TNRD
minion3	Anitha_ICX	60:9C:9F:F4:F4:D4	ICX7150-24	10.176.155.13	Offline	4:11:28	SPRO
minion4	Anitha_ICX	60:9C:9F:F4:FE:B4	ICX7150-24	10.176.155.14	Online	2 days, 16:58:03	SPRO
minionprod	Anitha_ICX	78:A6:E1:40:FB:56	ICX7150-48	10.176.187.234	Online	1 day, 11:25:12	SPRO
ICX7850-48F Router	Anitha_ICX	D4:C1:9E:17:8A:67	ICX7850-48F	10.176.187.217	Online	46 days, 21:24:47	TNRD

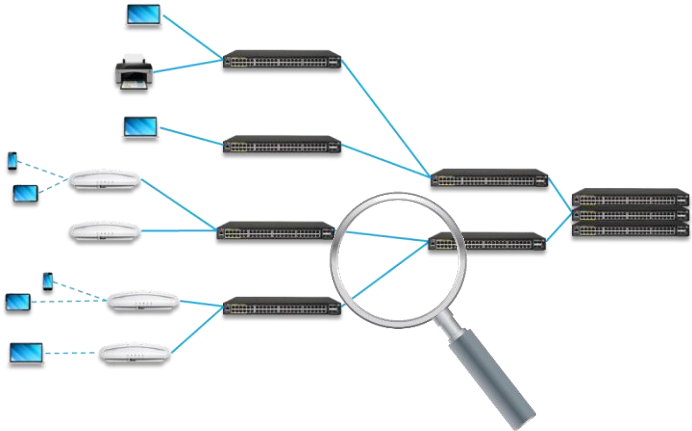
Automated Deployment – Behind The Scenes



Monitoring Network Status



Monitoring Switch Status



Port Naming Unit/Module/Port

Diagram Legend

- Up
- Linked to Ruckus AP
- PoE Detected Ports
- Down
- Admin Down
- Stacking Ports

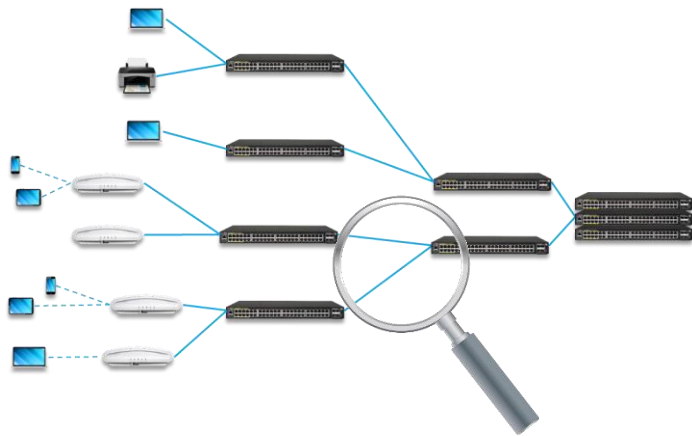
Ports View

Management Port ICX7150-24P **i**

UNIT 1 (Standalone)

Module	1	3	5	7	9	11	13	15	17	19	21	23	Module	X1	Module	X1	X3
MODULE 1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	MODULE 2	<input type="checkbox"/>	MODULE 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		X2		X2	X4
	2	4	6	8	10	12	14	16	18	20	22	24					

Maintenance



Port Settings

Selected Port(s): 1/1/38

Port Name:

Port Enabled:

Tagged VLANs:

Untagged VLAN:

POE Enable:

POE Class:

POE Priority:

Ingress ACL: + ✎

Egress ACL: + ✎

Port Speed:

RSTP Admin Edge Port:

STP BPDU Guard:

STP Root Guard:

DHCP Snooping Trust Port:

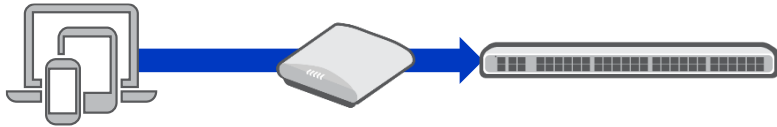
IPSG:

LLDP:

OK




Cancel

Troubleshooting







Client Connectivity

Client MAC:

	Client	58:D5:6E:00:73:1E
	Access Point	Ruckus Demo AP (24:79:2...:06:16:F0)
	Switch (Port)	ICX-7150-TME (Ethernet1/1/1)

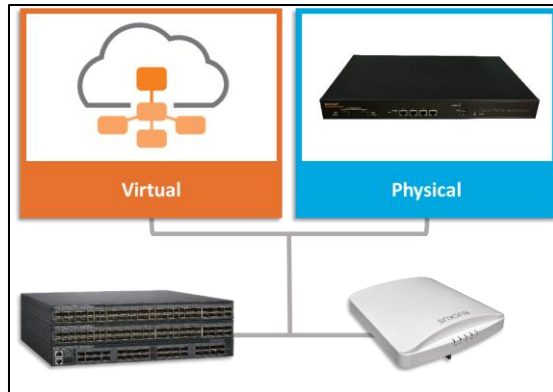
The diagram shows a vertical flow of connectivity from the Client to the Access Point, and then to the Switch (Port). The Access Point and Switch (Port) entries are circled in blue.

SmartZone Network Controller Family

	Appliances	Virtual Appliances
Medium Enterprise & Distributed Campus	<p>SmartZone 100 (SZ100)</p>  <p><i>60,000 clients per cluster</i> <i>3,000 APs</i> <i>600 switches</i></p>	<p>Virtual SmartZone - Essentials (vSZ-E)</p>  <p><i>60,000 clients per cluster</i> <i>3,000 APs</i> <i>600 switches</i></p>
Operators, ISPs, MSPs, Large Enterprise & Large Campus	<p>SmartZone 300 (SZ300)</p>  <p><i>450,000 clients per cluster</i> <i>30,000 APs</i> <i>6,000 switches</i></p>	<p>Virtual SmartZone - High Scale (vSZ-H)</p>  <p><i>450,000 clients per cluster</i> <i>30,000 APs</i> <i>6,000 switches</i></p>

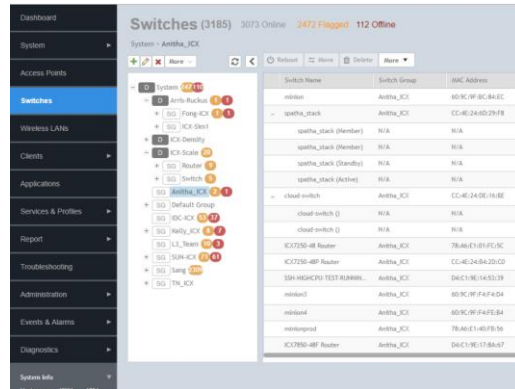
SmartZoneOS Differentiators

Single Element



- Unified Wired & Wireless management
- Single pane-of-glass

Consistent Experience



- Consistent interface for APs and Switches
- Discovery, Registration, Zero-Touch Deployment
- Management across NAT boundaries

Carrier Grade



- Scale
- Multi-tenancy
- High-Availability Clustering

Open API



- Customized dashboards
- Integration with 3rd-party applications
- Automated management

Unified Management With
Ruckus Cloud

It's Not Ruckus Cloud Wi-Fi Anymore!



Ruckus Cloud Wi-Fi



Ruckus Cloud

Ruckus Cloud Delivers...



Simplified management
of your multi-site network

Subscription includes:

Management License

- One per AP or Switch

Reporting & Analytics

VAR Dashboard

Native Mobile App

Feature and Security Updates

24x7 Technical Support

Supports a Wide Range of indoor/outdoor Wi-Fi 6(802.11ax), 802.11ac APs and Switches

Full List of Ruckus Cloud supported APs: www.ruckuswireless.com/cloud-devices



The IT world is divided into...

Large, Specialized IT Organization

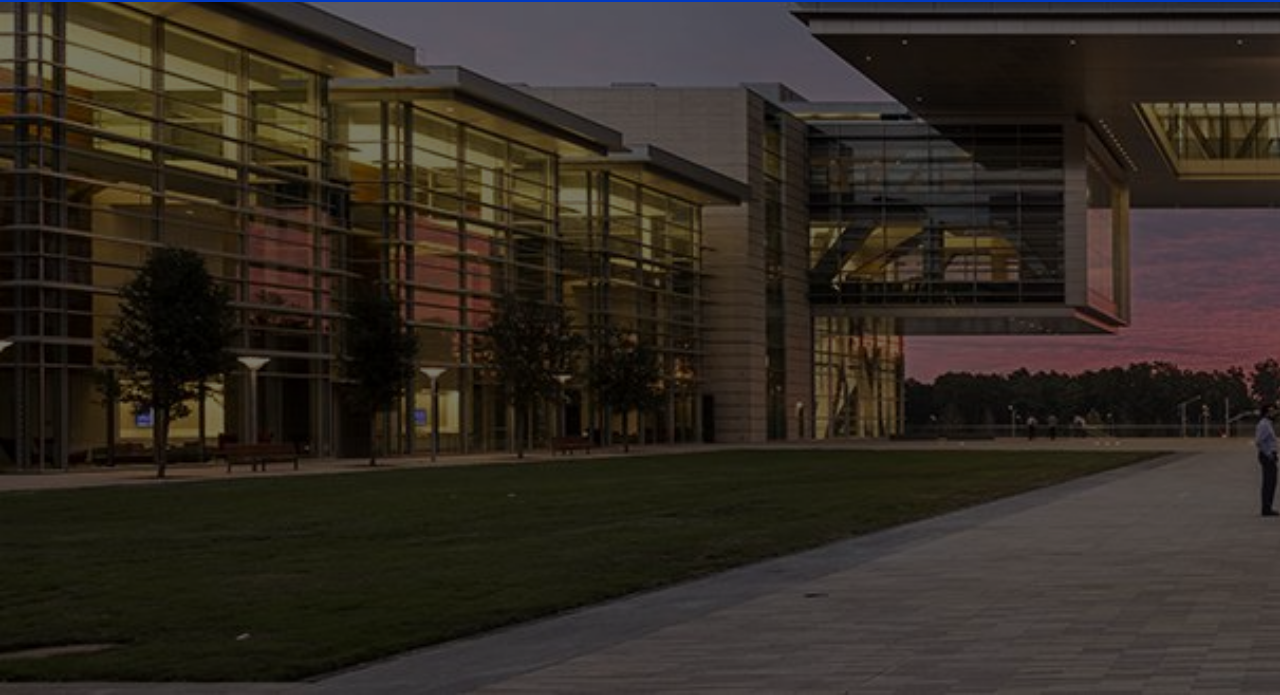
IT staff dedicated solely to managing the network

Wants: Control

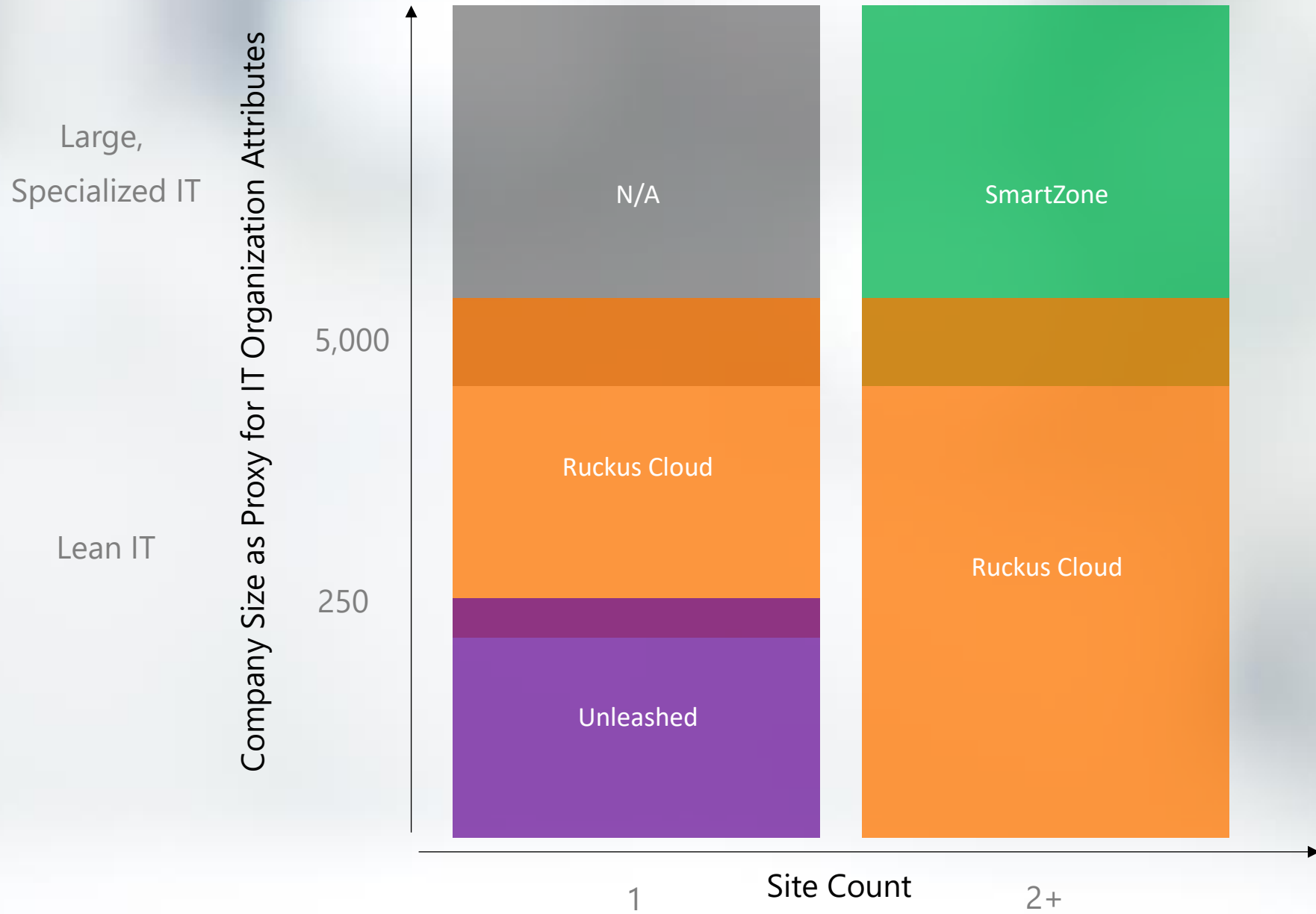
Lean IT Organization

Few staff with none 100% dedicated to the network

Wants: Simplicity



Lead with these architectures



Cloud-Managed Switch Features at GA

Switch monitoring

Zero-Touch Provisioning and Configuration*

Stacking

Client visibility

Troubleshooting

Mobile App

** Cloud deployment will over-write any existing configuration on the switch*

ICX Switches With Cloud Management Support



ICX 7150*



ICX 7550



ICX 7650



ICX 7850

Requires ICX FastIron 8.0.90d or later

** ICX 7150-C08PT to be supported in a future release*

Switch Management Options

	SmartZone	Cloud
Recommended deployment	<ul style="list-style-type: none"> Greenfield or Brownfield Large/Specialized IT – Greater controls 	<ul style="list-style-type: none"> Greenfield Lean IT – Simplified IT
ICX Platforms	All ICX 7000s	ICX 7150/7550/7650/7850
Deployment options	<ul style="list-style-type: none"> On-premise Private or Public Cloud Managed by Customer or MSP 	<ul style="list-style-type: none"> Ruckus Cloud <ul style="list-style-type: none"> Hosted/managed by Ruckus VAR management option
CLI based config	Allowed	Not Allowed
<ul style="list-style-type: none"> Monitoring (PoE usage; Traffic stats) Remote Ping/ Trace Route Client MAC search wired/wireless Client visibility 	Yes	Yes
Zero-Touch Provisioning: Switch on-boarding	Factory default or ICX with config	Factory default
<ul style="list-style-type: none"> Topology Custom Alarms API 	Yes*	<Roadmap>
Mobile app	No	Yes

* Topology available in SmartZone 5.2, Q4 2019

- Search...
- Dashboard
- Venues
- Networking Devices
- Networks
- Switch Configuration
- Users
- Events
- Analytics
- Administration

Alarms

No Active Alarms

Venues

1

Networking Devices

Wi-fi 1

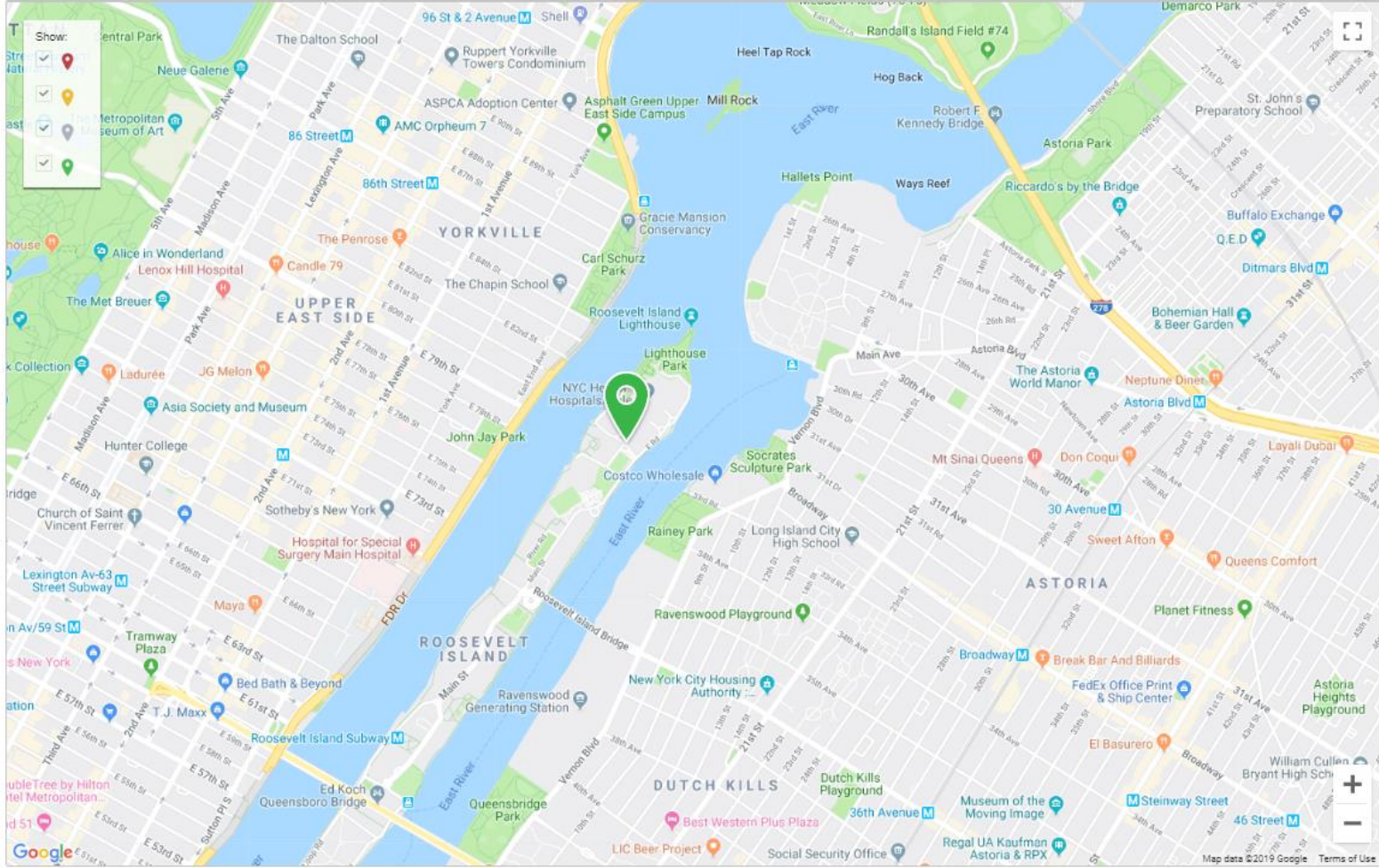
Switch 6

Clients

Wi-fi 0

Switch 2

- [Add Venue](#)
- [Add Net. Device](#)
- [Add Network](#)



24 hours | 7 days | 30 days | WiFi

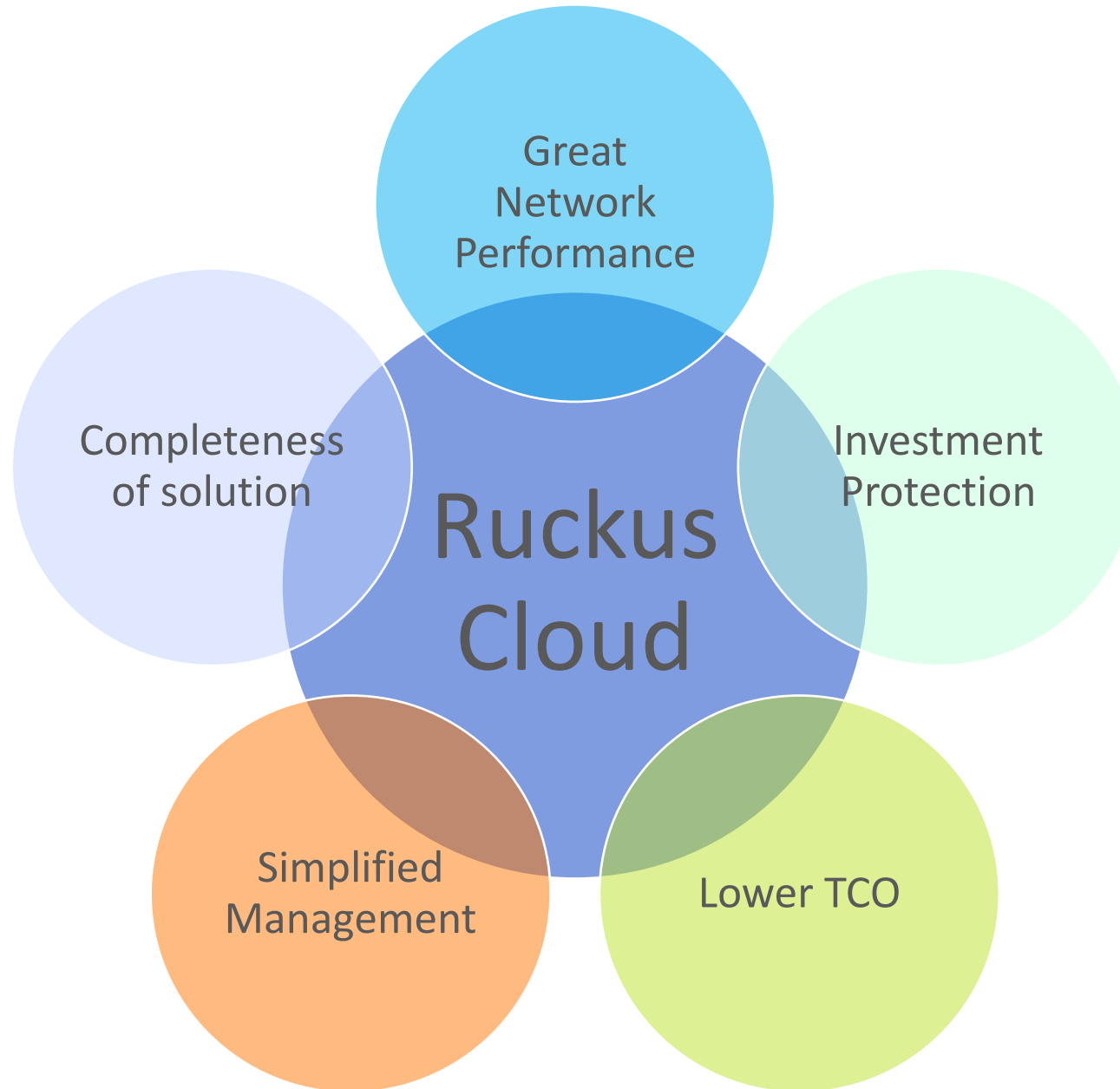
Traffic by usage

No data to display

Clients Count

No data to display

Why Ruckus Cloud Management for Wired + Wireless?



No other cloud-managed network solution offers all five benefits in one single solution

Ruckus Cloud Licensing

	1-Year	3-Year	5-Year	5-Year e-Rate (EDU only)
AP	\$95	\$190	\$285	\$190
<u>SWITCH LICENSES</u>				
ICX 7150 8-Port Compact (ICX7150-C08P only)	\$50	\$100	\$150	\$100
ICX 7150 all other models	\$125	\$250	\$375	\$250
ICX 7650	\$450	\$900	\$1350	\$900
ICX 7850	\$960	\$1920	\$2880	\$1920

Cloud licenses for switches includes Remote TAC support (RMT)

- No need to purchase switch support
- No need for RMT3 bundles

Unified Management With
Ruckus Unleashed
more details

Unleashed Unified Network Monitoring and Management

Controller-less Plug & Play Solution Targeted at Smaller Deployments

Up to 8 Switches Max per Unleashed network

The screenshot displays the Ruckus Unleashed dashboard interface. At the top left is the Ruckus logo (an ARRIS company) and 'UNLEASHED'. The top right shows the system name 'Nats-Unleashe...fice', up time '20m 31s', and user 'admin' with 'Help' and 'Log Out' links. The main content area lists several network components, each with a status indicator and a right-pointing arrow:

- Internet:** Status 'Connected'.
- WiFi Networks:** Status 'Working 4', 'Disabled 0'. Includes a traffic graph showing 'Traffic: 0.17 MB'.
- Clients:** Status 'Connected 1', 'Disconnected 0'. Includes a graph labeled 'Clients'.
- Access Points:** Status 'Working 1', 'Disconnected 0'.
- Switches:** Status 'Working 1', 'Disconnected 0'. This section is highlighted with an orange border and a red arrow pointing to it.
- Admin & Services:** No status indicator.

Summary of Switches Connected

The screenshot displays the 'Switches' management interface. At the top, there are status indicators: 'Total 1', 'Working 1', and 'Disconnected 0'. Below this, there are action buttons: 'Add', 'Edit', 'Remove', and 'More'. A 'Data duration' dropdown is set to '1 hour'. The main content area is divided into a left sidebar and a main summary panel.

Left Sidebar:

- A summary card titled 'Summary - Total 1 ICX' is highlighted with a red box. It shows a bar chart with 2 blue bars and 8 grey bars, labeled 'Ports'.
- Below it is a card for a specific switch: 'ICX7150-C08P-.[c0:c5:20:b0:a3:65]'. It also shows a bar chart with 2 blue bars and 8 grey bars, labeled 'Ports'.
- A large number '1' is positioned to the left of the switch card.

Main Summary Panel:

- The title 'Summary' is at the top right.
- A red box highlights a text summary: 'Summary of all ICXs in the Unleashed network. Supports up to 8 switches'.
- Below this is a 'Ports Info' section with a 'Hide Ports Info' dropdown.
- A donut chart shows the status of 10 ports: 2 are connected (blue), 8 are available (grey), and 0 are connected with warning (orange) or blocked by admin (black). The total 'Total 10' is displayed in the center.
- Legend for the donut chart:
 - Connected (Blue)
 - Connected with Warning (Orange)
 - Available (Grey)
 - Block by Admin (Black)
- POE Budget Usage section: 'Total: 62000 mWatts'. A bar chart shows 0 mWatts used (white) and 62000 mWatts available (teal).
- A red box highlights a button at the bottom right: 'Show Events & Alarms ▶'.
- An 'Events & Alarms' section with a bell icon is at the bottom left.

Switch Information

The screenshot displays a network management interface for switch information. It is divided into three main sections:

- Summary - Total 1 ICX:** A top-left panel showing a bar chart with two bars, one labeled '2' and one labeled '8', with the word 'Ports' below it.
- Switch List:** A middle-left panel containing a single entry for 'ICX7150-C08P-..[c0:c5:20:b0:a3:65]' with a small bar chart (2 and 8) and 'Ports' below it. A red arrow points from this entry to the detailed view.
- ICX7150-C08P-Switch [c0:c5:20:b0:a3:65]:** A large central panel containing three main menu items: 'Ports Info' (with a monitor icon), 'Health' (with a heart icon), and 'Events & Alarms' (with a bell icon). A red box highlights this entire section.
- Navigation Panel:** A right-side panel containing four links: 'Show General Info', 'Show Ports Info', 'Show Health', and 'Show Events & Alarms', each with a right-pointing arrow. A red box highlights this panel.

More Switch Information

The screenshot displays the 'Switches' management interface. At the top, there are status indicators: 'Total 1', 'Working 1', and 'Disconnected 0'. Below this, there are action buttons: 'Add', 'Edit', 'Remove', and 'More'. A 'Data duration' dropdown is set to '1 hour'. On the left, a 'Summary - Total 1 ICX' section shows a bar chart with 2 ports highlighted in blue and 8 ports in grey. Below this, a list of switches shows one entry: 'ICX7150-C08P-...[c0:c5:20:b0:a3:65]' with a '1' next to it and a bar chart showing 2 ports highlighted. A red arrow points from this entry to the right-hand panel. The right-hand panel displays detailed information for the selected switch: 'ICX7150-C08P-Switch [c0:c5:20:b0:a3:65]'. A red arrow points to a 'Hide General Info' dropdown menu. Below this is a table of switch details.

Name	ICX7150-C08P-Switch
MAC Address	c0:c5:20:b0:a3:65
IP Address	172.16.113.195
Model	ICX7150-C8P
State	Connected
Gateway	172.16.113.254
Version	SPS08091
Serial number	FMF3833Q0P3
Last Seen	2019/09/12 11:28:44
Uptime	38m 28s

Click on 'Show General Info' after selecting a switch to know about its model, serial number, version info etc

More Switch Information

1

ICX7150-C08P--[c0:c5:20:b0:a3:65]

Ports: 2 8

Ports Info

Hide Ports Info

Switch specific info

- Connected
- Connected with Warning
- Available
- Block by Admin

Total 10

POE Budget Usage
(Total: 62000 mWatts)

- Used
- Available (100%)

0
62000

Reset Port

Click on the port to see port specific info at the bottom

Mouse over to get more info

Management Port

ICX7150-C8P

UNIT 1 (standalone)

MODULE1

1 3 5 7

2 4 6 8

MODULE2

1

2

Upgrade, Backup & Restore Switch

The screenshot displays the 'Switches' management page. At the top, there are status indicators: 'Total 1', 'Working 1', and 'Disconnected 0'. Below this, there are action buttons: 'Add', 'Edit', 'Remove', and 'More'. A red box highlights the 'More' button with the text: 'Choose the switch and click 'More' to upgrade, backup & restore switch config'. A red arrow points from this box to the 'More' button. A dropdown menu is open from the 'More' button, showing options: 'Upgrade', 'Back up', and 'Restore'. The main content area shows a summary for 'Total 1 ICX' with a 'Ports' indicator showing 2 connected and 8 available. Below this, a specific switch is listed: 'ICX7150-C08P-..[c0:c5:20:b0:a3:65]'. To the right of the switch name is a 'Show General Info' link. Below the switch name, there is a 'Ports Info' section with a donut chart showing 'Total 10' ports. The chart is divided into 2 connected ports (blue), 8 available ports (grey), and 0 ports with warnings or blocked by admin. To the right of the donut chart is a 'POE Budget Usage' section with a bar chart showing 0 used and 62000 available (100%) out of a total budget of 62000 mWatts.

Switches

Total 1 Working 1 Disconnected 0

Add Edit Remove More

Summary - Total 1 ICX

2 8 Ports

ICX7150-C08P-..[c0:c5:20:b0:a3:65]

1 2 8 Ports

Ports Info

Connected
Connected with Warning
Available
Block by Admin

Total 10

POE Budget Usage (Total: 62000 mWatts)

Used
Available (100%)

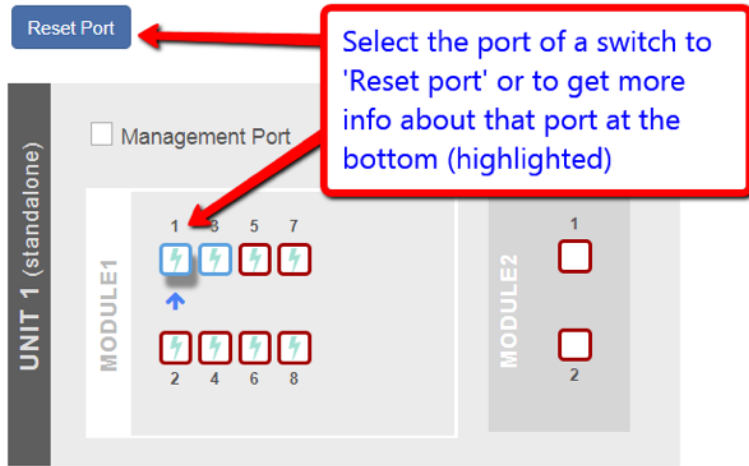
0 62000

Show General Info

Hide Ports Info

Data duration: 1 hour

Enable/Disable Switch Port



Hide Port List ▼

Search 🔍 ↻ ⚙️

Port Name	MAC Address	Port Number	Link Status	Admin Status	Pa
GigabitEthernet1/1/1	c0:c5:20:b0:a3:65	1/1/1	up	up	3.9
GigabitEthernet1/1/2	c0:c5:20:b0:a3:66	1/1/2	down	up	0 E
GigabitEthernet1/1/3	c0:c5:20:b0:a3:67	1/1/3	up	up	18.
GigabitEthernet1/1/4	c0:c5:20:b0:a3:68	1/1/4	down	up	0 E
GigabitEthernet1/1/5	c0:c5:20:b0:a3:69	1/1/5	down	up	0 E
GigabitEthernet1/1/6	c0:c5:20:b0:a3:6a	1/1/6	down	up	0 E

Supported ICX Switches

- Ruckus Unleashed supports all Ruckus ICX 7000 switches
- Requires FastIron firmware 8.0.90 or later
- Supports up to 8 switches per Unleashed network

Suggested Access Switches

	1-2 APs	3-4 APs	5+ APs
Wi-Fi 5 APs	ICX 7150-C08P	ICX 7150-C12P	ICX 7150-24P/ -48PF
Wi-Fi 6 APs	ICX 7150-C10ZP	ICX 7150-C10ZP	ICX 7150-48ZP

A graphic consisting of several overlapping geometric shapes. A large orange trapezoid is on the left, with a white text label 'ICX Product Portfolio' centered within it. To its right is a solid yellow rectangle. Below the orange trapezoid is a pink triangle pointing to the right. At the bottom left is a solid purple horizontal bar.

ICX Product Portfolio

Ruckus ICX Switch Portfolio

Aggregation/Core

Access

ICX 7150 Z-Series

Multigigabit Entry-Level Access



ICX 7150

Entry-Level Access



ICX 7250

Access



ICX 7550

Access-Aggregation



ICX 7650

Premium Access-Aggregation



ICX 7750

Aggregation-Core



ICX 7850

Premium Aggregation-Core



Optical Modules and Cables



Ruckus ICX **Access** Switches

ICX 7650
ICX 7650 Z-Series



ICX 7550



ICX 7150
Z-Series



ICX 7250



ICX 7150



	ICX 7650 ICX 7650 Z-Series	ICX 7550	ICX 7150 Z-Series	ICX 7250	ICX 7150
Positioning	Top-of-the-Line <ul style="list-style-type: none"> • Top performance • 2.5/5/10GbE Multigig • 90W/port PoE 	Midrange <ul style="list-style-type: none"> • 100G uplinks / Modular • 2.5/5/10GbE Multigig • 90W/port PoE 	Affordable Multigig <ul style="list-style-type: none"> • 2.5GbE Multigig • 90W/port PoE 	Access Workhorse <ul style="list-style-type: none"> • Good performance 	Basic Access <ul style="list-style-type: none"> • Great value-for-the-money
Uplink/Stacking	2 x 100 GbE or 2 x 40 GbE	3 x 40/100 GbE or 4 x 10 GbE	8 x 10 GbE	8 x 10 GbE	4 x 10GbE
Multigigabit	2.5/5/10 GbE	2.5/5/10 GbE	2.5 GbE	-	-
Hot-Swap PSU & Fans	Yes	Yes	Yes	External only	-

See ICX Family Datasheet for full feature comparison

Ruckus Compact Switches

ICX 7150-C10ZP
Compact Multigig



ICX 7150-C12P
Mid-Range Compact



ICX 7150-C08P
Entry-Level Compact L2 GigE



ICX 7150-C08PT
Extended Temperature
Compact L2 GigE



When/Where to sell	Wi-Fi 6 AP's High-end Workstations	Most out-of-closet uses Wi-Fi 5 AP's	Limited capabilities If price is #1 criteria	Locations without Temperature controls
Multigigabit (2.5/5/10 GbE)	✓			
PoE/PoE+	✓ up to 90W/port	✓	✓	✓
PoE Budget	240W	124W	62W	62W
Managed by SmartZone or Ruckus Cloud	✓	✓	✓	✓*
Silent Operation (Fanless)	✓	✓	✓	✓
ICX 7150 family features: Stacking; Upgradeable 1/10GbE uplinks	✓	✓	Not stackable, L2 only 1 GbE only	Not stackable, L2 only 1 GbE only
List Price	\$3200	\$1000	\$835	\$2365

* Ruckus Cloud management support in a future software release

Ruckus **Multigigabit** Switches

ICX 7650-48ZP
Premium Multigig



ICX 7550-24/48ZP
Midrange Multigig



ICX 7150-C10ZP
Compact Multigig



ICX 7150-48ZP
Entry-level Multigig



When/Where to sell	Premium Wi-Fi 6 and Future-Proofing	Wi-Fi 6 and Future-Proofing	Small deployments Out-of-closet	Affordable option for Wi-Fi 5/6
2.5/5/10 GbE for Wi-Fi 6 & Future-Proof	✓ 24 ports	✓ 12/12 ports	✓ 2 ports	
2.5 GbE for Wi-Fi 5/6		✓ 12/36 ports	✓ 8 ports	✓ 16 ports
90W PoE for High-end AP's, Lighting, displays, etc.	✓ 24 ports	✓ 24/48 Ports	✓ 4 ports + 6 ports w/PoE Overdrive*	✓ 16 ports
List Price	\$15,875	\$8,500	\$3200	\$6150

Ruckus ICX Aggregation/Core Switches

ICX 7850
-32Q/-48F/-48FS



ICX 7750-26Q/-48F



ICX 7650-48F



ICX 7550-24F
ICX 7550-48F



ICX 7150-24F



	ICX 7850 -32Q/-48F/-48FS	ICX 7750-26Q/-48F	ICX 7650-48F	ICX 7550-24F ICX 7550-48F	ICX 7150-24F
Positioning	Large Core/ Data Center High density 10/25/40/100 GbE	Large Aggregation/ Medium Core High density 10/40 GbE	Medium Aggregation 1/10 GbE	Small Aggregation 1/10GbE	Small Aggregation Fiber Access 1GbE
Downlinks	32 x 100GbE* or 48 x 1/10/25 GbE	26 x 40 GbE** or 48 x 10GbE	24 x 10GbE and 24 x 1GbE	24 x 1/10GbE or 36 x 1GbE + 12 1/10GbE	24 x 1GbE
Uplinks / Stacking	40/100 GbE	1/10/40 GbE	10/40/100 GbE	10/40/100 GbE	1/10 GbE
Switching Capacity	6.4 Tbps	2.56 Tbps	1.13 Tbps	1.02 Tbps	132 Gbps
L3 Routing Features	Best	Best	Better	Good	Good

* 10/25 GbE breakout
cables available

** 10 GbE breakout
cables available

Ruckus ICX Switches – Limited Lifetime Warranty

Limited Lifetime Warranty included with all ICX 7000 switches*

As long as the original purchaser owns and uses equipment

Hardware warranty:

- Includes power supplies and fans
- NBD advanced replacements

Software warranty – lifetime software maintenance updates

Access to online support portal

Technical support:

- 90 days, 8x5 telephone support included with ICX 7850, 7750, ICX 7650, ICX 7450, ICX 7150
 - 3 years, 24x7 phone support option available (RMT3 SKUs)
- 3 years, 24x7 telephone support included with ICX 7250

* ICX 7150-C08PT includes 13-Month Hardware Warranty

ICX Switches



Ruckus ICX 7150 Switch Family

Entry-level Layer 2/3 Stackable Campus Switches With Premium Capabilities

Compact Switches



**Office/Classroom/Retail
Out-of-Closet**

- Compact form-factor
- PoE/PoE+/90W
- Silent operation
- Up to 2 x 10GbE uplinks

Stackable 24-/48-Port



**Connectivity for AP's,
computers, other devices**

- IDF closet or out-of-closet
- Good coverage and performance
- Up to 4 x 10GbE uplinks

Entry-Level Multigigabit



**High performance
network edge**

- Connections up to 2.5GbE
- Up to 8 x 10GbE uplinks
- Hot-swap power and fans
- Up to 1480W PoE

Fiber Access



**Entry-Level Fiber Access &
Aggregation**

- Fiber-to-the-room
- Small aggregation
- Up to 4 x 10GbE uplinks

ICX 7150 Switch Raises the Bar For Entry-level Stackables

1RU models

- 24-port and 48-port
- PoE+ and non-PoE

4x 1/10 GbE uplink/stacking ports (8x1/10GbE Z-Series)

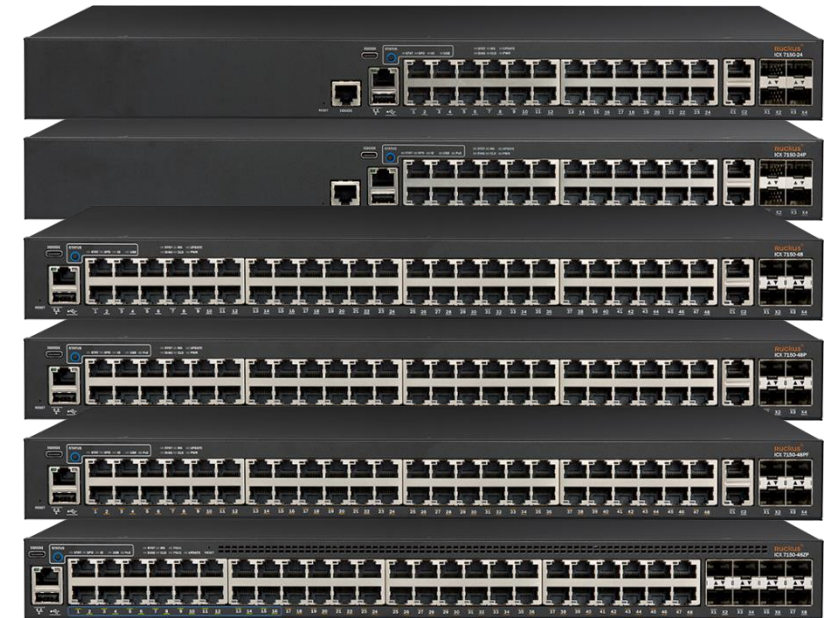
Highest PoE+ budget in this class (up to 1480W)

Silent operation

- Compact and non-PoE: Fanless
- 24-/48-port PoE+: Fanless mode

Base Layer 3 included (Static and RIP)

Layer 3 License (OSPF, VRRP, PIM, PBR)



ICX 7150 Compact Switches

Extend switching beyond the wiring closet

ICX 7150-C10ZP

Compact Multigig



ICX 7150-C12P

Mid-Range Compact L3 10GbE



ICX 7150-C08P

Entry-Level Compact L2 GigE



ICX 7150-C08PT

Extended Temperature
Compact L2 GigE



2.5/5/10GbE + 90W PoE	2	-	-	-
2.5GbE + 90W PoE	2	-	-	-
2.5GbE + PoE+/PoE Overdrive*	6	-	-	-
1 GbE + PoE+	-	12	8	8
1GbE RJ45 Uplink	-	2	-	-
SFP/SFP+ Uplink	2 (1/10GbE)	2 (1/10GbE)	2 (1GbE only)	2 (1GbE only)
PoE Budget (max)	240W	124W	62W	62W
Operating Temperature Range	0° to 40°C	0° to 40°C	0° to 40°C	-40° to 65°C
Management Interface Ports	OOB Management, USB Console, Serial Console, Status Button, USB External Storage	OOB Management, USB Console, Serial Console, Status Button, USB External Storage	USB Console, Status Button	USB Console, Status Button
Features	Same as ICX 7150 family	Same as ICX 7150 family	Same As ICX 7150 family, except: L2 only (no L3), No stacking	Same As ICX 7150 family, except: L2 only (no L3), No stacking
MSRP (Base System)	\$3,200	\$1,000	\$835	\$2,365

* Up to 45W/port for Ruckus AP's

All Compact Switches:

- Small form factor—fanless design
- Integrated power supply
- PoE+ for VoIP, cameras, wireless APs
- Kensington lock

Ruckus ICX 7150 Z-Series Switch (ICX 7150-48ZP)

First entry-level Multigigabit Ethernet switch

2.5 Gigabit Ethernet technology

- 16x 100/1000Mbps/2.5GbE ports
- 32x 10/100/1000Mbps ports

Redundant, load-sharing, hot-swap power supplies and fans

PoE+ & PoH* (90W) with up to 1480W PoE budget

Stacks with ICX 7150 family

- Up to 8x 10GbE uplinks
- Doubles the stacking bandwidth



* IEEE 802.3bt-ready

ICX 7150-24F Fiber Access Switch

Entry-level 24x 1G SFP ports

- Stacks with ICX 7150 family
- 4x SFP+ 10GbE uplinks (with license)
- L2/L3 capabilities (RIP, OSPF)

Benefits Highlight

- Extend the family of ICX fiber switches at the entry-level
- First entry level enterprise-class fiber switch
- Enables fiber to the room deployment as an access switch.
- Effectively competes with PON solutions



ICX 7250 Switches – Access “Workhorse”



Ultimate price-performance access switch

- 24/48-port
- PoE+ and non-PoE

High-performance scalability

- 8×10 GbE uplink/stacking ports

Future-proof functionality

- 1 GbE → 10 GbE
- Layer 3 features
- EEE

Advanced external power supply

- Redundant system power
- Incremental PoE power

ICX 7450 Switches

Enterprise stackable switch delivers premium capabilities and ultimate flexibility



- Five models
 - 24-port and 48-port
 - PoE/PoE+ and non-PoE
 - 48-port SFP Fiber
 - Flexible uplinks/stacking options
 - 40GbE
 - 10GbE
 - 1GbE
 - PoE+ and 90W PoH (IEEE 802.3bt)
 - IPsec and MACsec encryption
 - EEE
 - High-capacity AC/DC power options (up to 1,000 W)
 - Reversible front-to-back or back-to-front airflow
- Optimum high availability
- Redundant, hot-swappable, power supplies and fans

ICX 7450 Optional Interface Modules

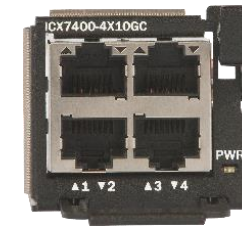
ICX7400-1X40Q



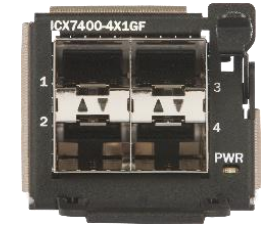
ICX7400-4X10GF



ICX7400-4X10GC



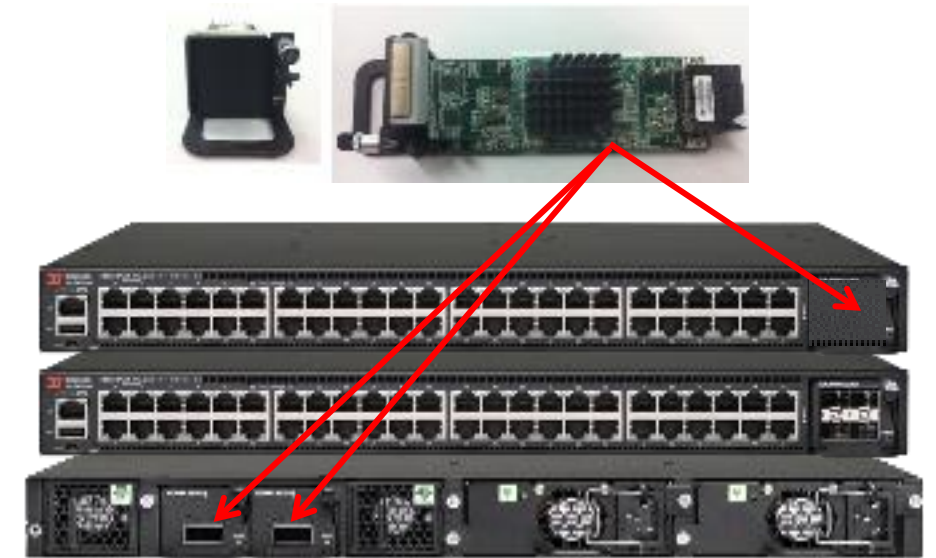
ICX7400-4X1GF



Bandwidth	80Gbps	80Gbps	80Gbps	8Gbps
Port Type	1x40GE QSFP+	4x10GE SFP+	4x10GE RJ-45	4x1GE SFP
Module Slot	Front (24) or Rear (24/48)	Front or Rear	Front or Rear	Front only
Function	Stacking (rear), Uplink	Stacking (front) Uplink with MACsec LRM optic support	Uplink	Uplink

ICX 7450 IPsec VPN Modules

- Hardware assisted AES-128, AES-256 and IKEv2 encryption
- Up to 100 IPsec tunnels per module (8.0.70)
- 10Gbps total throughput, max 10G per tunnel
- Multiple modules per stack for redundancy (1 active per stack)
- FIPS certification and Suite-B compliant
- Interoperates with any standard IPsec implementation
- PKI for key management
- Rich feature set
 - IPv4, IPv6, OSPF, BGP, QoS, PBR, VRF, NAT traversal, ACL and Jumbo frames supported



ICX 7550 Midrange Access & Entry-level Aggregation



Gigabit



Gigabit POE



Multigigabit



1/10G Fiber



Uplink
Stacking
40 / 100
Gbps

Multigig
Ethernet
2.5 / 5 / 10
Gbps

High-
Power
PoE
Up to 90W

SmartZone,
Unleashed
or Cloud
Managed

Broadest portfolio of media, speeds and PoE, pay as you grow scalability

ICX 7550 Switch Family

Gigabit



**Connectivity for computers, printers, etc.
Small DC ToR**

- Standard 1G connectivity
- Campus wiring closet
- ToR 1G switch
- Resilient design
- Uplink options up to 4 x 40G

Gigabit PoE



**Connectivity for non-wifi6 APs
other PoE devices**

- Traditional POE Ethernet
- Campus wiring closet
- Large PoE budget
- Uplink options up to 4 x 40G

Mid-Range Multi-Gigabit



**Connectivity for wifi6 APs
larger PoE devices**

- 2.5/5/10G multi-gigabit Ethernet
- High power PoE 90W 802.3bt
- Large PoE budget
- Uplink options up to 3 x 100G

Fiber Aggregation/ToR



1/10G Fiber Aggregation/Core

- Small Campus Core
- Campus aggregation
- 24 x 10G version
- Up to 2 x 100G uplinks

Mix and match any combination in a unified stack

ICX 7650 Switches

Premium Access Switches



ICX7650-48ZP (Z-Series)

- 24 x 2.5/5/10 GbE w/ PoE+/802.3bt*
- 24 x 1 GbE w/ PoE+



ICX7650-48P

- 48 x 1 GbE w/ PoE+
- (8 ports include 802.3bt*)

Medium Aggregation/Core Switch



ICX7650-48F

- 24 x 10GbE (SFP+) Fiber
- 24 x 1GbE (SFP) Fiber

Features:

- 100G or 40GbE uplink/stacking ports (rear)
- Plus optional uplink module (front):
 - 4x 10GbE or 2x 40GbE or 1x 100GbE
- Dual Hot-swap power supplies and fans
- Layer 3 services (comparable to ICX 7750)
- LRM Optics for legacy fiber deployments
- 256bit MACsec on 10G SFP+ ports
- Campus Fabric CB

* IEEE 802.3bt (90 Watts) - Compatible with 60W PoE++

ICX 7650 Optional Interface Modules

ICX7650-1x100GQ



ICX7650-2x40GQ



ICX7650-4x10GF



Port Type	1 × 40/100G QSFP28	2 × 40G QSFP+	4 × 10G SFP+
Module Slot	Front	Front	Front
Function	Uplink	Uplink	Uplink
Bandwidth	100 Gbps	80 Gbps	40 Gbps

ICX 7650 Switch Review

The Ruckus ICX 7650 switch, comes loaded with extra features and capacity that can help colleges stay relevant and supportive of new technology as it advances.

The idea is to have the ICX support today's technology, the next generation's and the one after that.

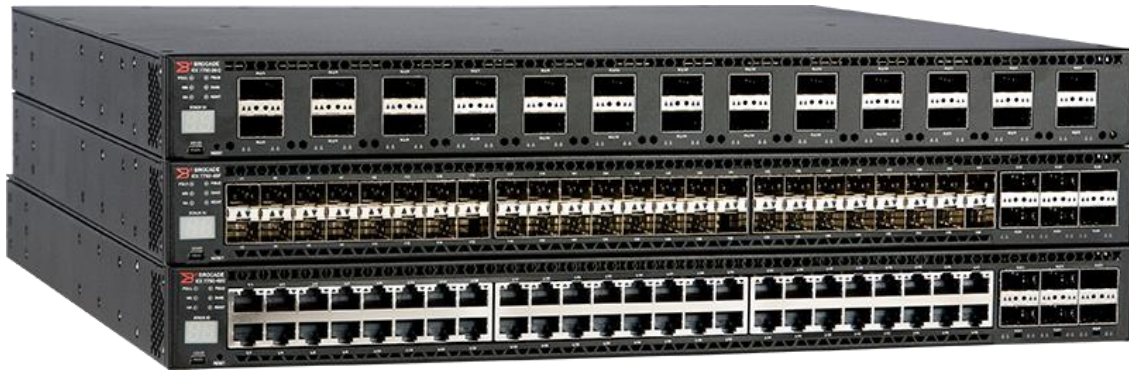


John Breeden II
EdTech Magazine
August 2018

<https://edtechmagazine.com/higher/article/2018/08/ruckus-icx-7650-48zp-switch-helps-future-proof-your-network>

ICX 7750 Switches

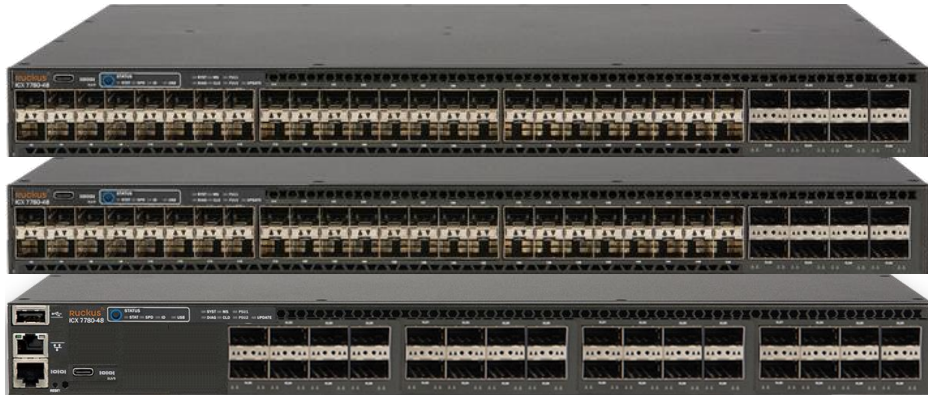
High-performance distributed chassis system



- High-density:
 - 32 x40GbE
 - 48 x10GbE (96 x10GbE with breakout cables)
- Up to 12x40 GbE uplinks/stacking ports
- Chassis performance (5.76 Tbps aggregated stacking bandwidth)
- Full IPv4 and IPv6 routing support, includes BGP and VRF
- Extended operating temp (up to 50°C)

ICX 7850 Switches

High-density Aggregation/Core For 100 GbE Edge-to-Core Networks



- High-performance connectivity for:
 - Campus network core and aggregation
 - Data Center connections
- Industry-leading port density:
 - 32 x 100 GbE (128 x 10/25 GbE with breakout cables)
 - 48 x 10/25 GbE
- Up to 6 x 100 GbE uplinks/stacking ports
- Up to 6.4 Tbps switching capacity
- Chassis performance (9.6 Tbps aggregated stacking bandwidth)
- Distributed stacking
 - Up to 12 units
 - Up to 10km

Introducing the Extended Temperature
Compact Switch
ICX7150-C08PT

Opening New Deployment Scenarios

Target Use Cases:

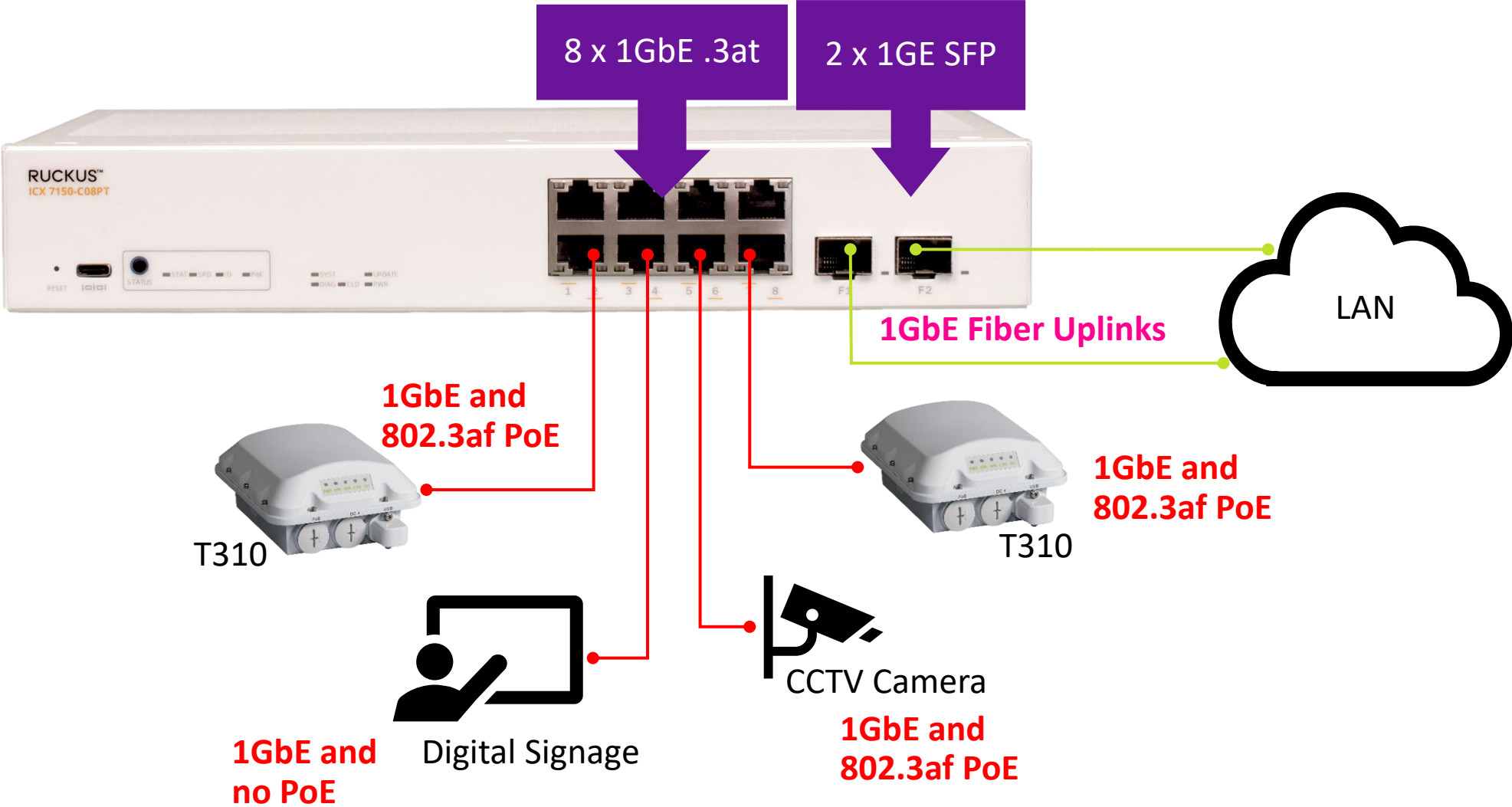
- Indoor Location Without Temperature Control
- Outdoor Location in Enclosure / Cabinet
- Outdoor APs backhaul

Target Verticals:

- Smart Cities
- Service Providers
- Education
- Hospitality
- MDU

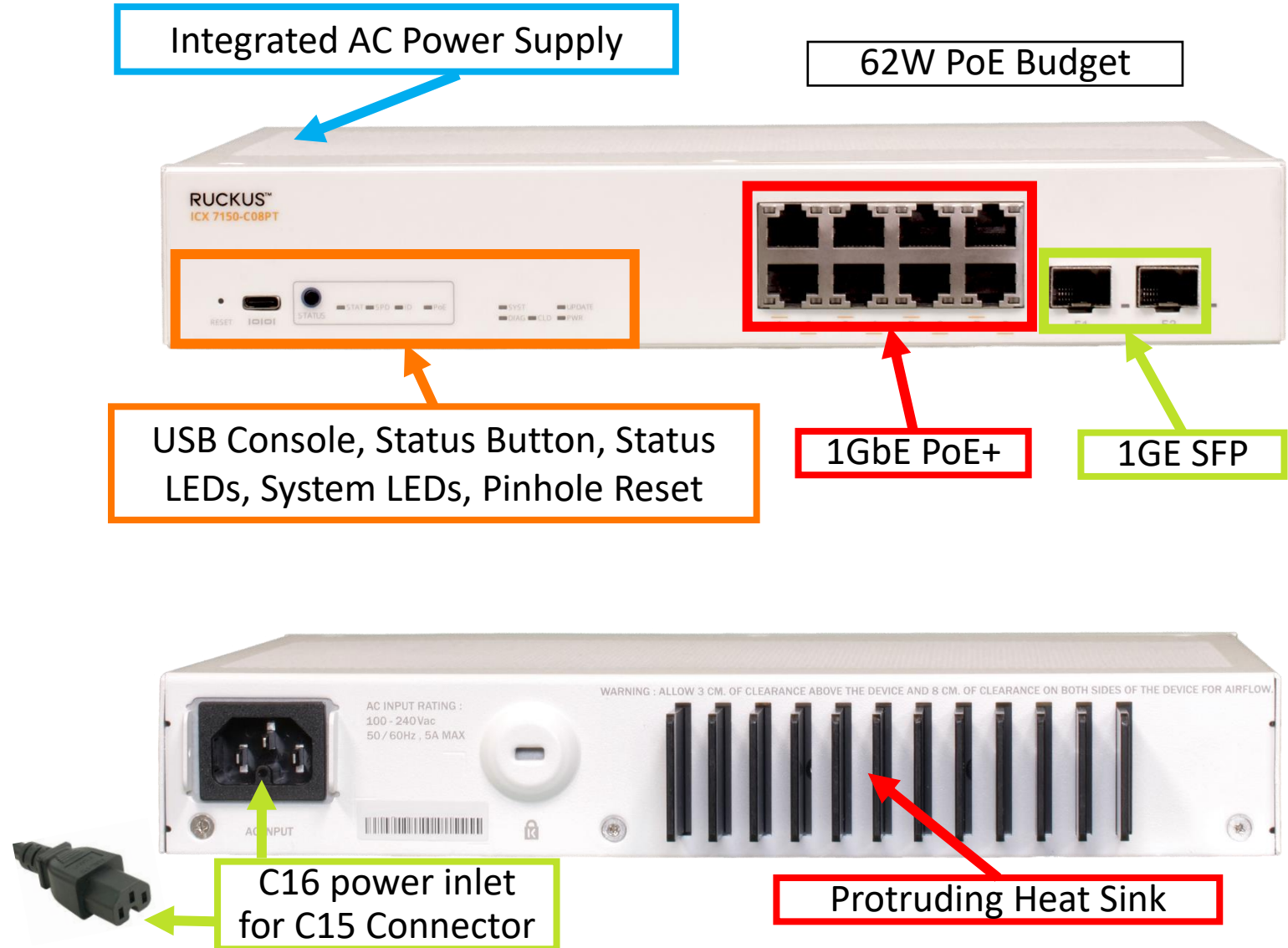


ICX7150-C08PT: Sample Use Case



ICX7150-C08PT: Extended Temperature Compact Switch

- Compact switch form factor
- Fanless
- Operating Temperature: **-40° to 65°C**
- 8 x 1GE PoE/PoE+ ports
- 2 x 1GE SFP port, No stacking
- 62W PoE budget
- Integrated AC Power Supply
- Mounting: Desktop, Wall, Rack, DIN Rail
- IP30 rating

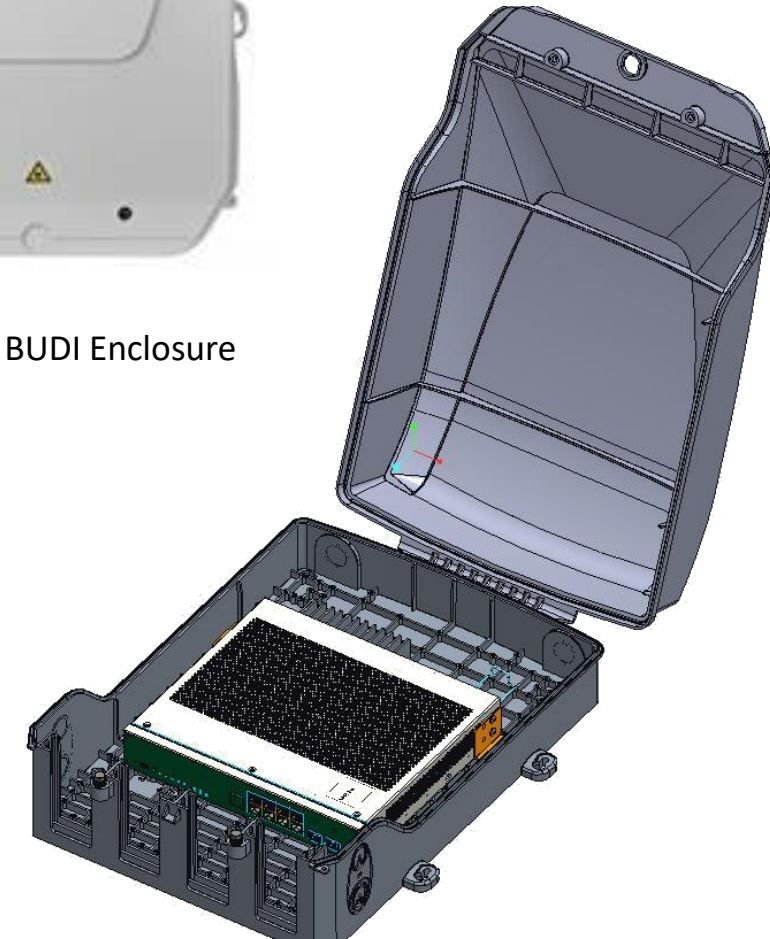


What IP30 Means

- The ICX 7150-C08PT is not an outdoor switch (not IP67 like the outdoor APs)
- Not waterproof
- Not Dust proof
- Need an enclosure for outside deployment
- Enclosures available from CommScope



CommScope BUDI Enclosure



Ruckus Technologies
More Technical/Architectural Details

ICX Stacking Advantages Simplify Management



WHY SHOULD I CARE?

- | | |
|---------------------------|---------------------|
| Greater scalability | Simpler management |
| Reduced costs | Flexible deployment |
| Stacking cables | High availability |
| Stacking modules/licenses | |



Standard Ethernet cables (not proprietary)

Long-distance stacking—Up to 10 km

Up to 12 units per stack

In Service Software Upgrade (ISSU)

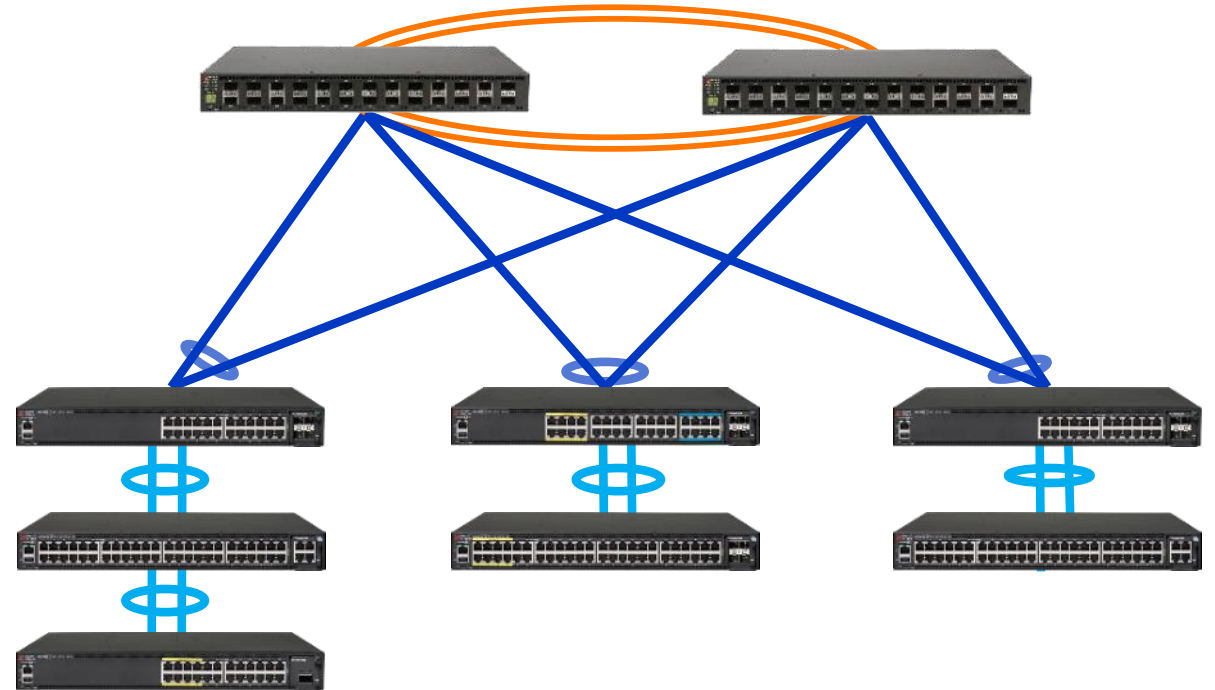
Hitless failover of management

“Built-in” every switch%

- Dual-mode stacking/uplink ports
- No license add-on required

Ruckus Campus Fabric

- Campus Fabric
 - ICX 7750/7650*: “Fabric Controller”
 - ICX 7450/7250/7150: “Port Extenders”
- Scalable
 - Add switches as needed
- Centralized management & control
 - Single logical domain (1 IP address)
- Simplified management
 - Zero Touch Deployment
 - Automatic maintenance
- Policy & feature inheritance

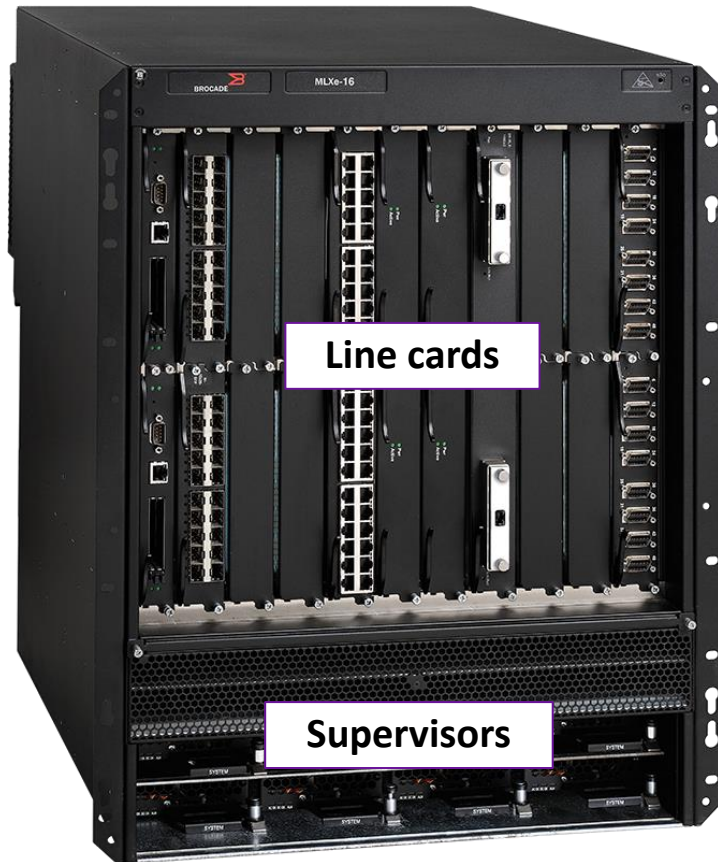


** Campus Fabric will be supported on the ICX 7850 in a future software release*

Distributed Chassis Architecture View

Simple, Scalable, Flexible Deployments with Fixed Form Factor Switches

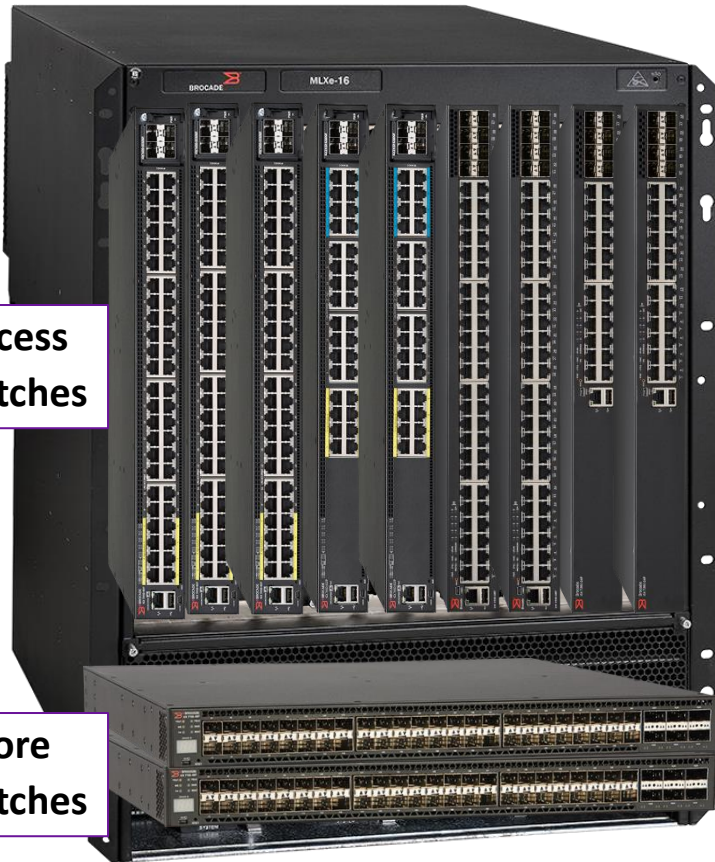
Traditional Campus Chassis



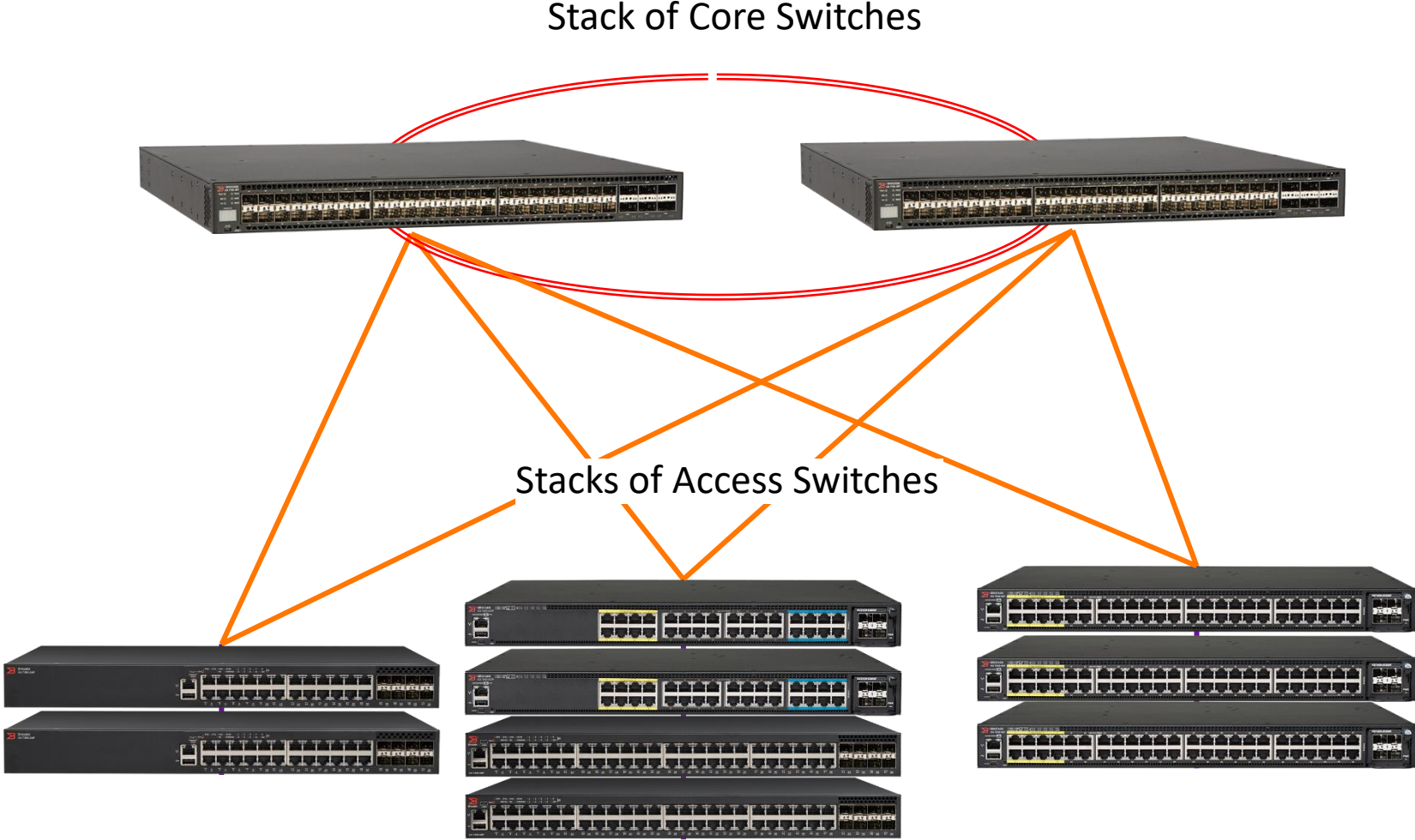
- Single point of management
- High availability
 - Redundant controllers
 - Hitless software upgrades
 - Hot swappable modules
- Easy upgrades
- High scalability
- High performance

Ruckus ICX Switches Deliver Comparable Features

- Single point of management
- High availability
 - Redundant controllers
 - Hitless software upgrades
 - Hot swappable modules
- Easy upgrades
- High scalability
- High performance

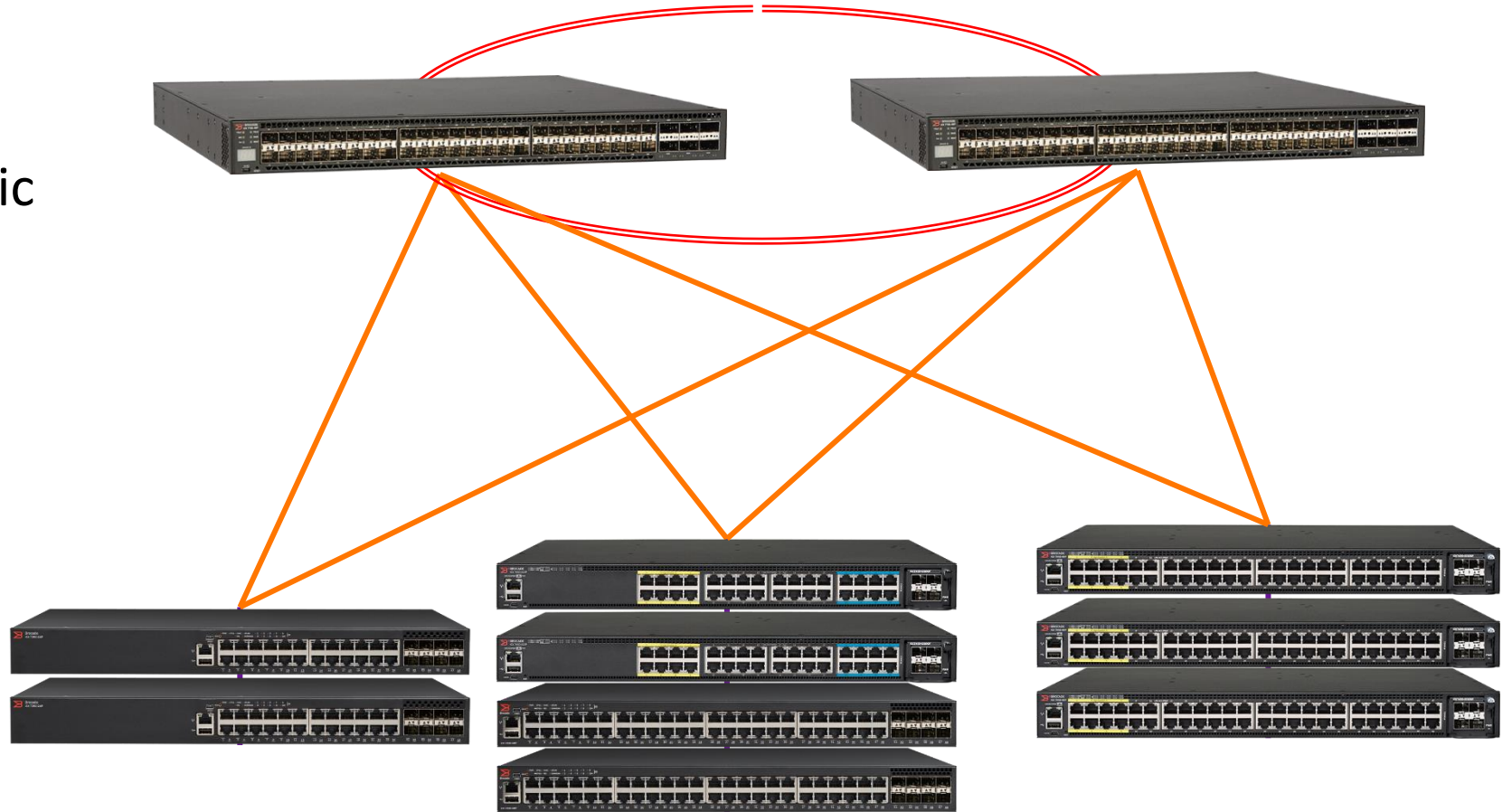


Distributed Chassis Comprised of Stacked ICX Switches

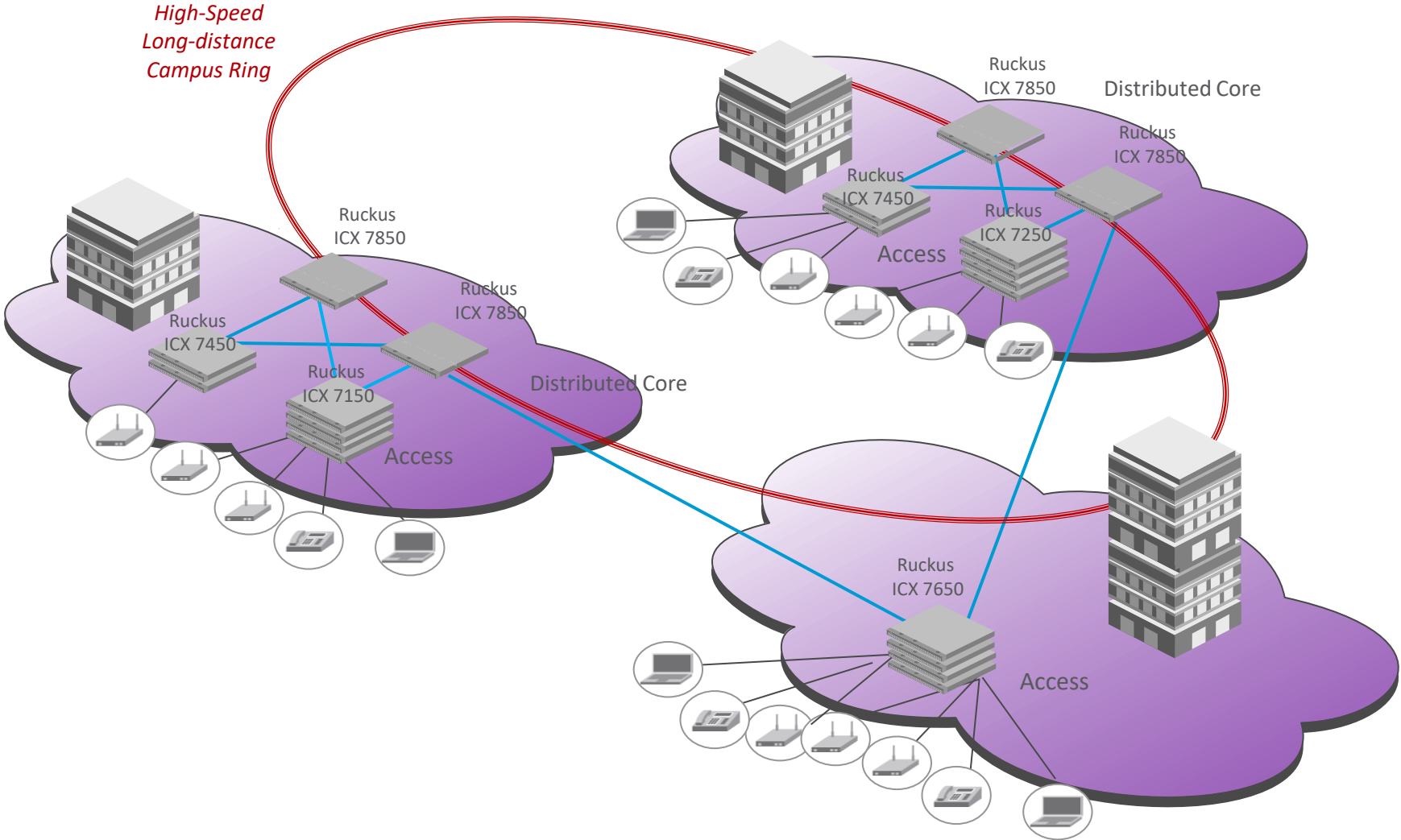


Distributed Chassis – Flexibility of Fixed Form Factor

- Reduced up-front investment
- Pay-as-you-Grow
- Flexible deployment:
 - Stand-alone, Stack, Fabric
- Distributed configuration
- Reduced power and cooling



Distributed Chassis Deployment Across The Campus



Unified Security and Policy Management

Ruckus Cloudpath

Unified Security and Policy Management

Software/SaaS that delivers secure network access for any user, and any device, on any network

Increases Security For Network, Devices and Users



Streamlines On-Boarding and Network Authentication



Policy-based Control Over Resources Users Can Address



Visibility and Control over Devices on the Network



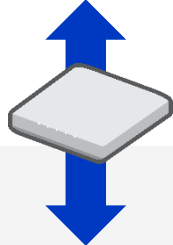

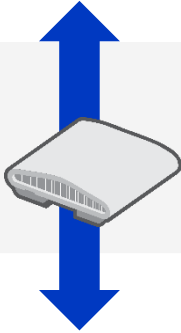
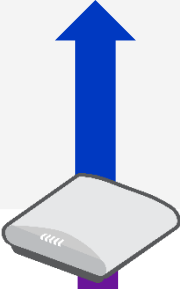

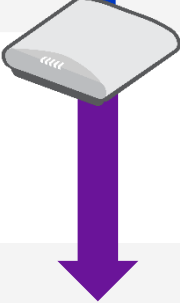



Reduces Helpdesk Tickets









Power

Power-over-Ethernet Technologies

High-Performance Devices Are High-Powered

Standard	Power at Switch	802.11a/n	802.11ac	Wi-Fi 6 (802.11ax) and beyond	Other Powered Devices
PoE 802.3af	15W				
PoE+ 802.3at	30W				
PoE++ 802.3bt	60W (4-pair)				
High-Power 802.3bt	90W (4-pair)				 

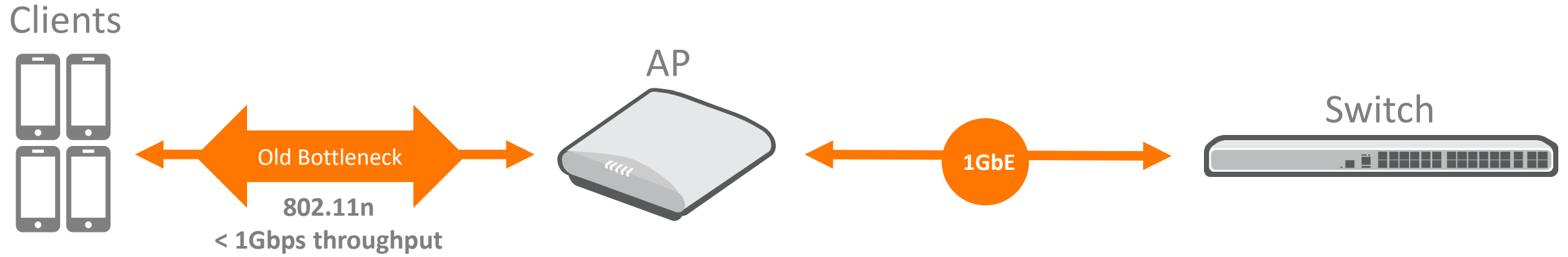
Only Ruckus Delivers Power To Spare

Standard	Power at Switch	Other Vendors	Ruckus	
PoE 802.3af	15W			
PoE+ 802.3at	30W			
PoE++ 802.3bt	60W (4-pair)	 Max 60W		
High-Power 802.3bt	90W* (4-pair)		<div style="text-align: center;">  Max 90W </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  ICX 7150 Compact </div> <div style="text-align: center;">  ICX 7150 </div> <div style="text-align: center;">  ICX 7450 </div> <div style="text-align: center;">  ICX 7650 </div> </div>	

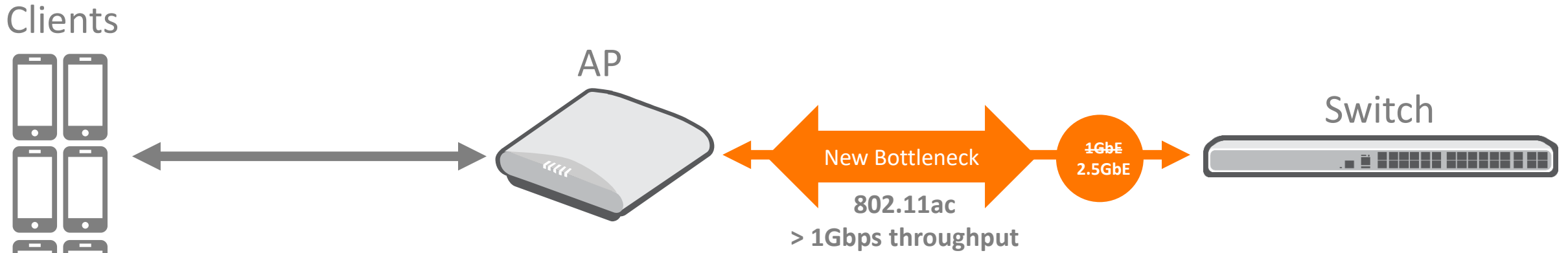
* Up to 45W/port over 2-pair exclusively for Ruckus AP's

Multigigabit Technologies

'Bottleneck' Has Shifted in the Access Layer

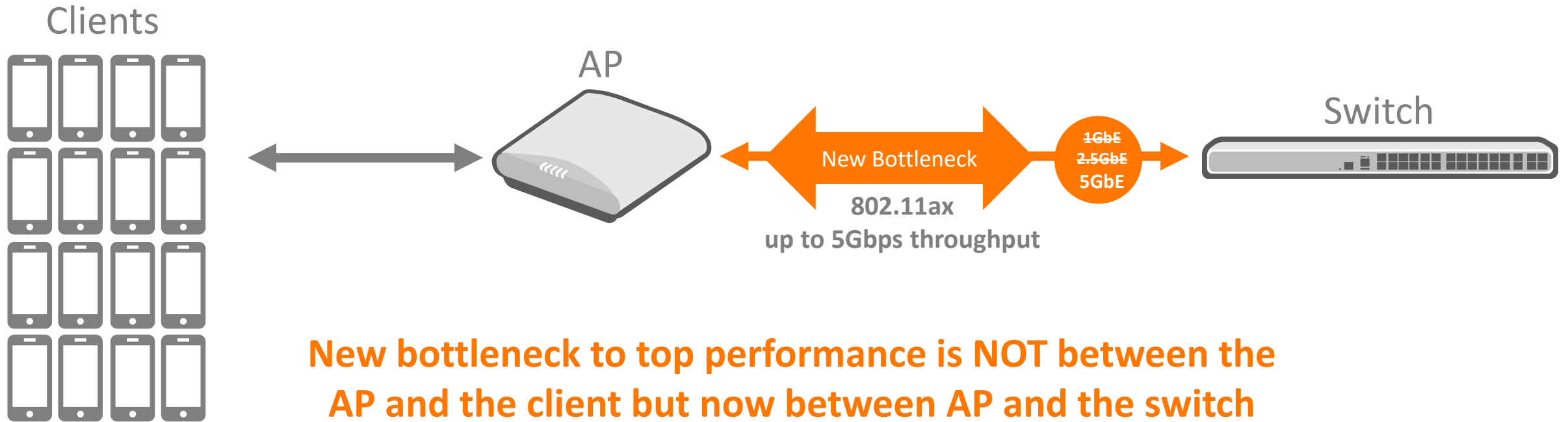


'Bottleneck' Has Shifted in the Access Layer



New bottleneck to top performance is NOT between the AP and the client but now between AP and the switch

'Bottleneck' Has Shifted in the Access Layer



New bottleneck to top performance is NOT between the AP and the client but now between AP and the switch

It's time to upgrade beyond 1Gbps connections

Note:

- 802.11ac Wave 2 comprised nearly 100% of AP shipments in 2018 - Dell 'Oro
- Dual 1GbE can solve this problem but at the expense of two cable runs, and two switch ports

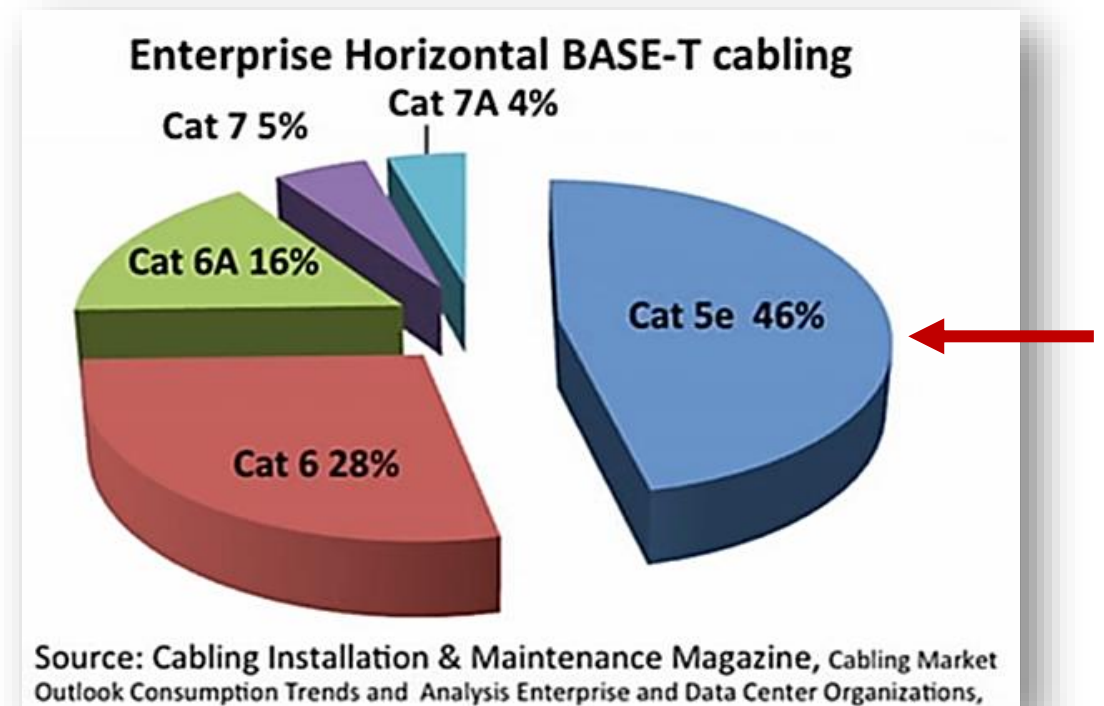
Multi-gigabit Ethernet Over Copper Wiring

New IEEE 802.3bz (2016) standard

- 2.5GbE and 5GbE Ethernet
- Better performance over twisted pair

Standard	Transfer speed	Cable req. 100 m
1000BASE-T	1 Gbps	Cat 5e
2.5GBASE-T	2.5 Gbps	Cat 5e
5GBASE-T	5 Gbps	Cat 6
10GBASE-T	10 Gbps	Cat 6A

Existing cabling may limit performance

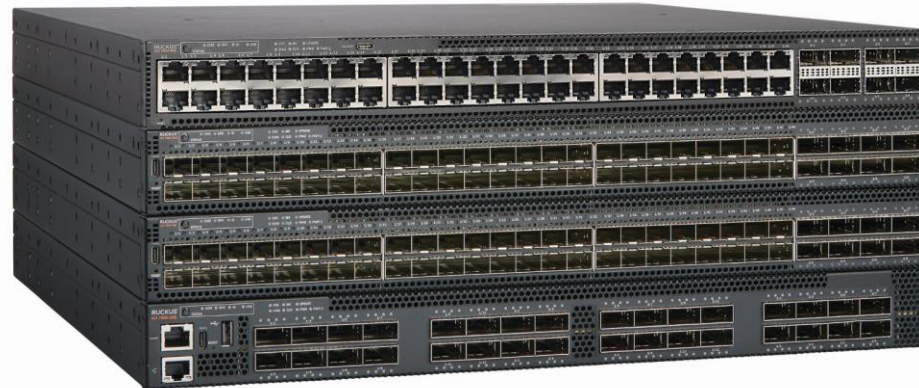


ICX 7850 Core/Aggregation Switch

Delivers 100GbE Edge-to-Core Solution for the Multi-gigabit Campus Network

Ruckus ICX 7850 Switch Family

High-density aggregation switch for 100 GbE Edge-to-Core Networks



Scalability

- High density 100 GbE
- Stack up to 76.8 Tbps switching capacity





Security

- Link level encryption
- Data confidentiality & Integrity

Flexibility

- Virtual chassis
- Multiple deployment models

ICX 7850 Switch Family

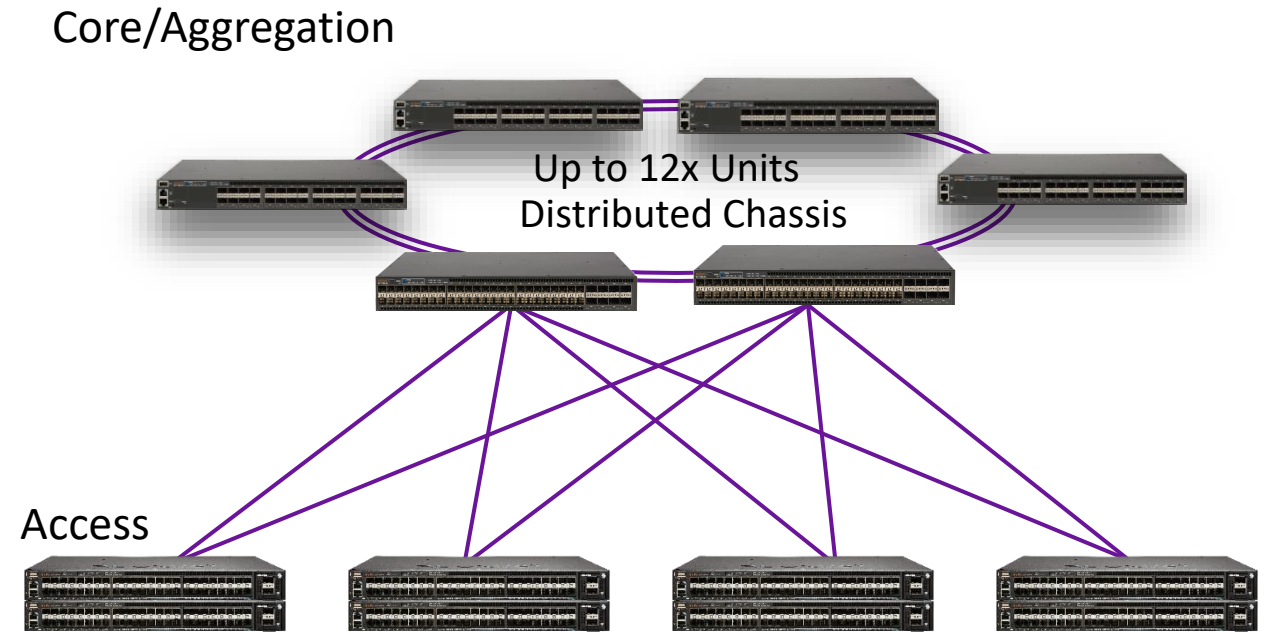
	ICX 7850-32Q	ICX 7850-48FS	ICX 7850-48F	ICX 7850-48C
				
Positioning	High Density 40/100GbE Premier Core	1/10GbE Aggregation MACsec 256, LRM Optics	1/10/25GbE Aggregation	1/10 GbE Copper TOR
Use Case(s)	Large Core Data Center Spine	Secure Aggregation Legacy Fiber OM1/OM2	Medium Core, Agg Data Center Leaf	Data Center Leaf 10Gbps Copper Agg Workstation Interconnect
Audience/ Target Market	Enterprise Traditional Ruckus Verticals* Small/Medium datacenter	Enterprise Traditional Ruckus Verticals* Federal, MSO/CSP	Enterprise Traditional Ruckus Verticals* Small/Medium datacenter TOR	Enterprise Traditional Ruckus Verticals* Small/Medium datacenter TOR

** Education, Hospitality/MDU, Federal-State-Local Govt, Public Venues, Retail*

Don't forget optics and support!

Enterprise Network Simplification With Fixed Switches

- Collapsed core/aggregation
 - 3-Tier → 2-Tier
 - Campus like Datacenter Spine & Leaf
- Cost-effective
 - No need to over-buy
 - Linear scaling
 - Re-use existing fiber



“Ruckus’ ICX 7850 switch outperformed our existing network core chassis with an easy installation and much smaller footprint.”

Matt Mercer, Director of Network Services, Troy University

ICX 7850 For Enterprise Core

Campus Core

Use Case(s)

- Core for 100GbE Campus network
- Underlay for Multi-gigabit (11ax/LTE/IoT)

Audience/ Target Market

- Enterprise, Higher Ed, Federal, Large K-12 districts

Why do I care? Why I need it?

- Support growth (Wi-Fi, LTE, IoT)
- Next Gen (802.11ax) underlay
- Secure L2 infrastructure

Key attributes

- 32x 40/100GbE
- 8x 40/100GbE Stacking/Uplink
- -48FS supports [OM1/OM2] fiber (LRM)
- MACsec (Federal)



ICX 7850 For Enterprise Data Centers

Enterprise Data Center

Use Case(s)	<ul style="list-style-type: none">• Leaf/Spine datacenter architecture• Complement Campus Network deployments
Audience/ Target Market	<ul style="list-style-type: none">• Small/Medium datacenter (up to 12 racks)• SME/Higher Ed
Why do I care? Why I need it?	<ul style="list-style-type: none">• Performance/Scalability/Futureproofing• TCO
Key attributes	<ul style="list-style-type: none">• 48x 1/10/25GbE(Server connections)• 8x 40/100GbE Stacking/Uplink• MACSec (Federal)



ICX 7850 For Service Providers

Service Provider

Use Case(s)

- Managed services

Audience/ Target Market

- Managed Service Providers (MSPs)

Why do I care? Why I need it?

- Support growth (Wi-Fi, LTE, IoT)
- Next Gen (802.11ax) underlay
- Secure L2 infrastructure

Key attributes

- 48x 1/10GbE
- 8x 40/100GbE Stacking/Uplink
- MACSec

