

**BYTESCREEN**  
CONNECT • DETECT • PROTECT

# USER MANAGEMENT SOLUTION



# TYPICAL WiFi USE CASES



## HOTELS

A free wireless internet is the most important amenity for the hotel guests followed by free breakfast; whether on business or leisure trip. Help your guests stay connected with BYTESCREEN WiFi, either give it free or add it to hotel bill, BYTESCREEN WiFi offers complete flexibility.



## RETAIL

With 100% coverage, location tracking and social media plug-in create an engaging and intelligent in store Wi-Fi experience with Cnergee Wi-Fi. Track customer's movement, push offers based on location in the store or time of the day. Get shoppers to share their purchases on social networks and create immense possibilities.



## SCHOOL COLLEGE CAMPUS

Make your campus wireless. Create different profiles such as Students, Teachers, Admin, etc. Track student's movement, mark attendance based on the location, serve digital lectures or even collect fees and canteen payments digitally. Embrace technology to create skills.



## RESTAURANT CAFE

Coffee tastes better with the content. Give internet access free or issue vouchers based on their bill amount. Deliver menu on app, take orders and also take payments. Encourage customers to share their reviews with friends.



## PUBLIC PLACES, AIRPORTS, STATIONS ,BUS, TAXI

Help your customers stay connected when in transit. Deliver advertisements on their devices based on customer profiles or destination and offer free Wi-Fi. Monetize these opportunities by pushing offerings and information while giving free Wi-Fi.



## CLINICS, HOSPITALS, LABS

Doctors, paramedics and support staff can stay connected making referencing, paging & communication easy. Quick access to medical information ,products and services proves to be a boon .



## CONFERENCE, EVENTS, CONCERTS, SPORTS

Connect participants on common platform, share agenda and event details . Allow them to take selfies, pictures and videos to share on social network.



## CORPORATES, WAREHOUSE, OFFICES, FACTORY

Keep your office connected and monitor internet usage of your staff and the visitors. Set rules and policies for your employees to get maximum productivity.



## CITY, AREA, TOWNSHIP, SOCIETY

Smart Cities! The country is changing. Make your city, area, township or even society Wi-Fi and deliver citizen services to the people

# BYTESCREEN Wi-Fi Benefits

## Multiple Sessions, Single Tunnel

BYTESCREEN Wi-Fi is easy to implement and can be installed quickly without any additional efforts.

## Multiple Sessions, Single Tunnel

Cnergee Wi-Fi is available on Capex/Opex modules and pay as you go model to Reduce capital investments.

## Multiple Sessions, Single Tunnel

Insights into your customers by the method of forms and location tracking in premises.

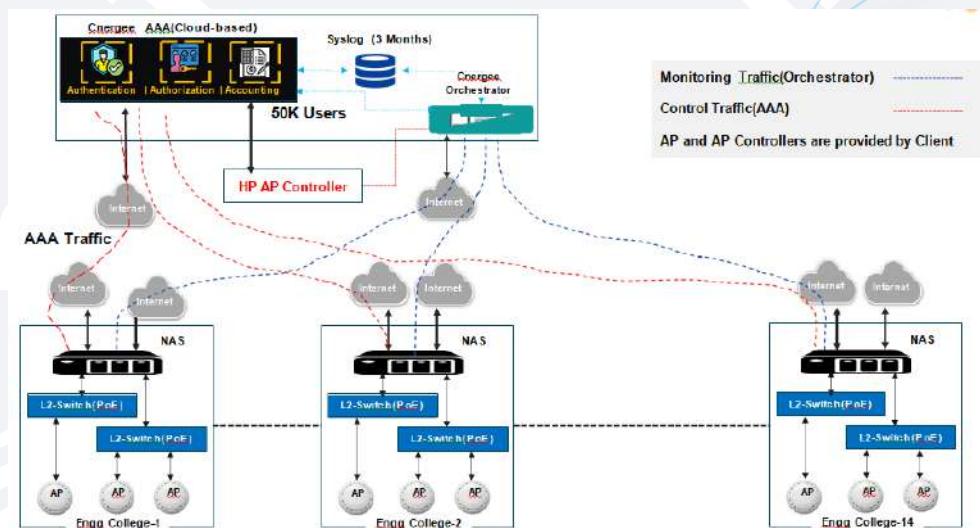
## Multiple Sessions, Single Tunnel

Targeted promotion platform serves location & profile-based advertisements which helps businesses to generate revenues.

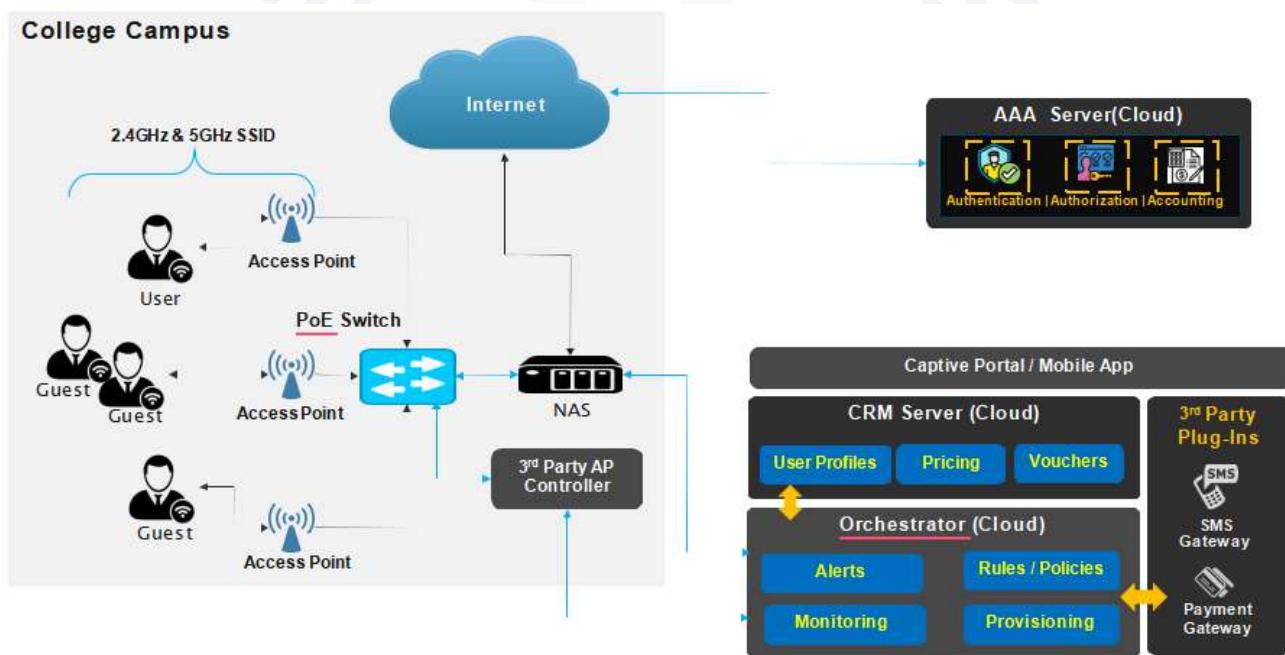
## Multiple Sessions, Single Tunnel

Providing Wi-Fi connectivity helps in acquiring more

# BYTESCREEN Wi-Fi Solution



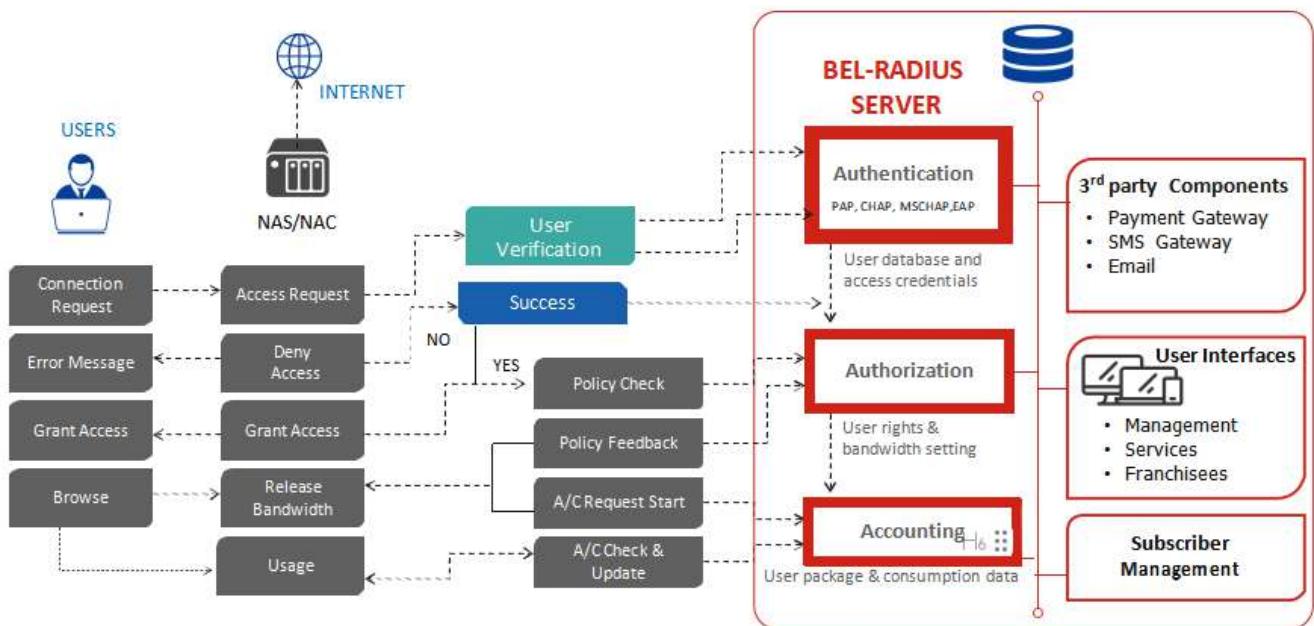
# BYTESCREEN Wi-Fi Architecture



# AAA Features

Sr.No	Requirement	Value	Remarks
1.	No. of Users for AAA	50000	Total users accessing AAA functionality
2.	Bandwidth/User	Yes	Package wise per user BW allocations.
3.	WAN Aggregation	Multiple	Supported to aggregated all type of WAN links i.e. ILL, BB(DHCP, PPPoE)
4.	Authentication Protocols	Yes	All these auth methods are supported as Username, Password, MAC, Voucher, time-based, IP, OTP based, PAP, CHAP, MS CHAP V1, MS CHAP V2 & EAP.
5.	MAC Binding	Yes	User device should be allowed using MAC-binding features both CUST and GUEST SSIDs
6.	Firewall features	Yes	Stateful firewall with domain filtering, IP based filtering, Port forwarding , country filter, content filter, location anomaly detection
7.	Dedicated Guest Wi-Fi	Yes	Orchestrator can manage separate SSID for User and Guest access
8.	Dual-band Wi-Fi required	Yes	Both 2.4GHz & 5GHz can be integrated & managed from Orchestrator portal if AP has the capability
9.	Central management & reporting	Yes	Orchestrator portal access to monitor and reporting WLAN status as User device discovery, bandwidth utilization, active users, etc.
10.	AAA & NAS	Yes	Support for AAA and NAS based protocol for authentication, authorization and accounting
11.	AP control	Yes	AP control includes Wi-Fi AP level control, troubleshoot, reboot AP
12.	DHCP	Yes	DHCP reservation, server and client
13.	Syslog Integration	Yes	Supports 3rd party integration with Syslog, billing, AP controller tools.
14.	Floor plan upload & AP mapping	Yes	Floor plan can be upload and Aps can be mapped as per the actual locations on the plan.
15.	NAS Type	Yes	Static & dynamic NAS supported.
16.	User Authentication types	Yes	Web Based   Pin Based   Automatic   Pin Less   Public ID   Private ID   Device
17.	User Account Security	Yes	Identity Theft & Account Sharing Prevention supported
18.	Captive Portal	Yes	Customised captive portal with landing page & advertisement. IP Pool wise separate Captive portal for login.

# AAA PROCESS



## Radius Parameters



### User Creation

Manual & automatic Based on User form, SMS request.



### User Data

Contact details, E-Mail Personal data, Feedback



### User Policies

User types Staff, Guest, etc. Bandwidth, Duration, Content, Access levels



### Pricing, Packages, Payments

Pricing Free, Free to paid, paid vouchers, pin-based, SMS based OTP, digital payments etc.



### Location Tracking

Location Tracking, Access point, user movement, Heat map.



### Captive Portal & App

Customized captive portal / mobile app User creation, access and communication



### Content Delivery

Advertising, Branding content Day, time, duration, frequency & location. Text, banner, audio & video



### Compatibility

3rd Party AP Integration, ISPs, Networking switches & routers



### User Logs

User activity logs Records for MIS purpose.

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## Orchestrator Configuration, Monitoring & Reporting

## Features & Benefits

- Remotely managed service
- MAC filter
- Connected devices monitoring
  - Device uptime/downtime (user-wise/host-wise)
  - Connectivity signal strength
  - Wi-Fi scanning and analysis across locations to mitigate
  - Wi-Fi interference
- Significant cost saving (doesn't need in-house network skills)
- Proactive / Reactive analytics, alert and notification
- Dashboard view

Wifi Scan					Scan Data
S.N.	SSID	Channel	Signal	Type	
1	iPhone	1	91	2.4GHz	
2	ISIRI_Group	1	73	2.4GHz	
3	nan	2	100	2.4GHz	
4	nagarjun	6	23	2.4GHz	
5	PS4_BE923205E4721	6	100	2.4GHz	
6	Madhu	10	53	2.4GHz	
7	Sanchita	11	100	2.4GHz	
8	ACTFIBERNET_5G	36	28	5GHz	
9	ISIRI_Group_5G	36	47	5GHz	

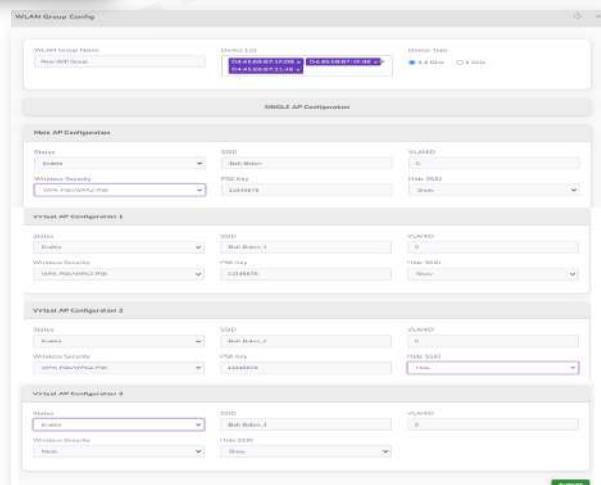
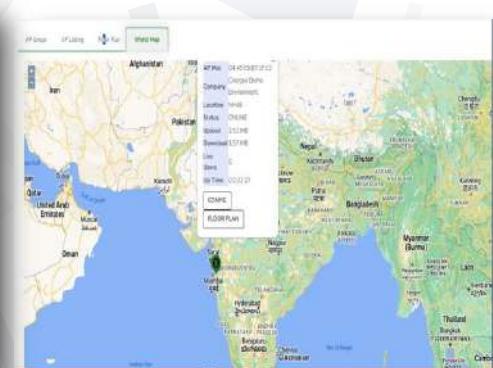
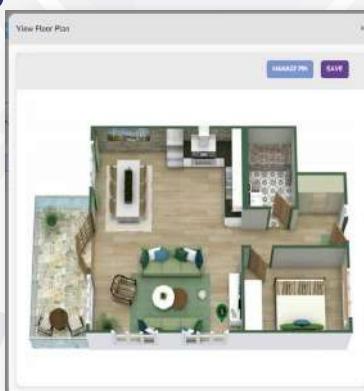
User Details				
Live Users : 5		Upload	Download	
MAC	Signal	Username	MAC Details	Operations
6E:C9:FD:54:99:FB	Excellent	6E:C9:FD:54:99:FB	MI	
00:90:28:01:0C:0D	Good	00:90:28:01:0C:0D	Amazon Technologies Inc.	
12:81:E7:97:E8:EE	Excellent	12:81:E7:97:E8:EE	Samsung	
FB:5E:3C:20:1D:2C	Good	FB:5E:3C:20:1D:2C		
FB:5E:3C:20:1D:34	Good	FB:5E:3C:20:1D:34		

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## Third Party AP Integration

## Features & Benefits

- Remotely managed service
- Improved User Experience
- Deployment
  - Pre-configured Aps
  - Reduced deployment time
- Centralized Management:
  - Single cloud-based interface
  - Simplified network management
- Easy Visibility
  - Status check (Online / Offline)
  - Users Connected Count
  - MAC Model & IP details
- Self-diagnosis service
- Multi-Brand AP Controller
  - Supports ~2000 brands of models



# Monitoring Centralized and Simplifies

## Features & Benefits

- P wise user management
- Rate limit
- Application wise QoS
- Application wise priority
- Priority over another user
- DHCP reservation
- MAC filter
- Connected devices monitoring
  - Device uptime/downtime (userwise/host-wise)
  - Connectivity mode
- Significant cost saving (doesn't need in-house network skills)
- Proactive / Reactive analytics, alert and notification
- Dashboard view

User Details													
Sr.No	MAC Address	Vendor Name	IP Address	User Name	Type	Status	Signal	Up-Time/Down-Time	Device Type	Send Alert	Operation		
1	00:17:01:10:19:a6	Private	172.16.140.105		Wired	UP	-	15-Dec-2023 16:13:00	Official/Personal				
2	4e:08:77:62:e8:77	CHONGMING FU...	172.16.140.118		WiFi (2.4G)	UP		30-Dec-2023 12:44:08	Official/Personal				
3	14:02:23:81:08:11	PAK Computer Te...	172.16.140.173		WiFi (2.4G)	UP		20-Dec-2023 11:59:05	Official/Personal				
4	4e:05:77:7b:d5:31	CHONGMING FU...	172.16.140.211		WiFi (2.4G)	UP		30-Dec-2023 10:04:03	Official/Personal				
5	0e:72:02:49:cb:02		172.16.140.104		—NA—	DOWN	-	20-Dec-2023 10:02:02	Official/Personal				
6	4e:05:77:62:e7:31	CHONGMING FU...	169.254.52.28		—NA—	DOWN	-	20-Dec-2023 09:27:07	Official/Personal				
7	00:17:09:09:bc:b4	EVOCERA Disp...	172.16.140.201		—NA—	DOWN	-	20-Dec-2023 09:37:59	Official/Personal				
8	12:04:14:08:0a:2b		172.16.140.117		—NA—	DOWN	-	10-Dec-2023 20:05:05	Official/Personal				
9	66:67:09:09:07:6b		172.16.140.141		—NA—	DOWN	-	14-Dec-2023 14:14:09	Official/Personal				
10	00:09:42:7d:54:9c	Intel Corporate	172.16.140.214		—NA—	DOWN	-	13-Dec-2023 18:20:07	Official/Personal				
11	0e:83:15:81:04:9e		172.16.140.221		—NA—	DOWN	-	15-Dec-2023 17:12:09	Official/Personal				

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BYTESCREEN Tech Pvt Ltd stands firm in our mission to redefine the landscape of networking solutions through innovation, reliability, and customer-centricity. We are committed to pushing the boundaries of technology to deliver products and services that not only meet but exceed the evolving needs of our clients. As we continue to evolve & grow, our dedication to excellence remains unwavering. We invite you to explore our comprehensive range of networking solutions, tailored to empower businesses of all sizes and industries to thrive in the digital era. Whether you're seeking robust security measures, seamless connectivity, or advanced management tools, BYTESCREEN Tech is here to support your journey towards success.

## Contact Details:

For inquiries, collaboration opportunities, or to learn more about how BYTESCREEN Tech can elevate your network infrastructure, please don't hesitate to reach out to us.

www.bytescreentech.com