



# Network-Powered Wi-Fi Analytics: Sports, Entertainment, and Hospitality

Wi-Fi Analytics Brief

**A SOLUTION WHITE PAPER**

# Network-Powered Wi-Fi Analytics

## RELEVANT ENVIRONMENTS

- Large Public Venues
- Pro and Collegiate Sports Venues
- Theatres and Arenas
- Airports and Public Transportation
- Convention Centers
- Resorts and Casinos
- Hotels
- Amusement Parks
- Residential Communities

## BUSINESS GOALS

- Understand User Activities on the Network
- Dynamic and Effective User Engagement
- Strengthen Relationship Between Brand and User
- Support Critical Event Management Functions
- Establish Multi-Faceted Monetization Strategy
- Deliver an Enhanced Mobile Experience

## SOLUTION HIGHLIGHTS:

- Access to (layer 7) visibility of entire wired and wireless network
- Capture and record every application flow network-wide
- Quickly identify network issues or application performance issues
- Measure mobile engagement patterns of connected users
- Effectively support and validate impact of key business initiatives
- Employ monetization strategies to unlock new revenue streams

## Introduction

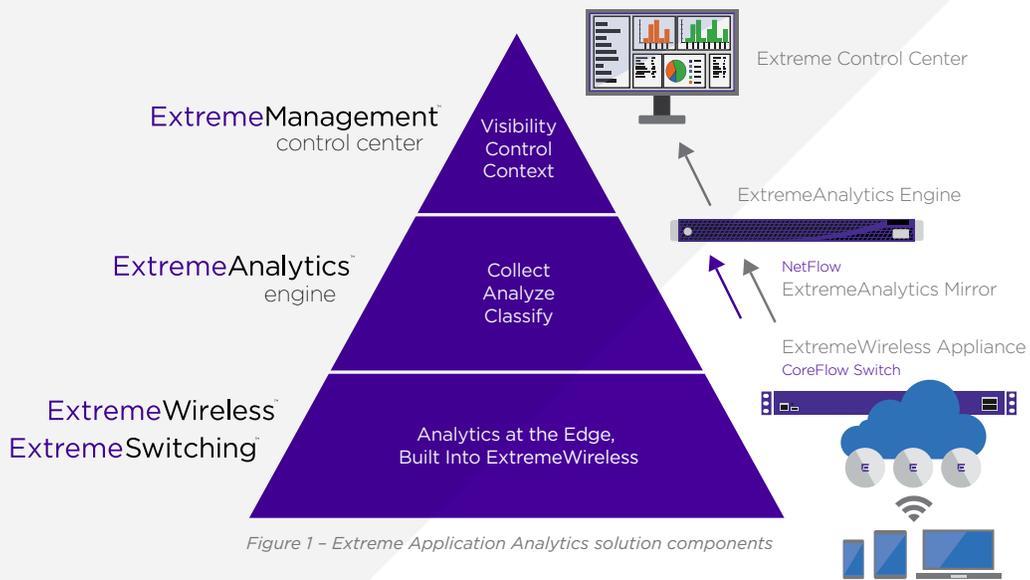
In densely populated hospitality environments, which are comprised of a diverse cross section of Wi-Fi enabled devices (internal and guest) requesting access to the network, it is critical that an installed Wi-Fi solution includes a comprehensive analytics platform. Once a purpose-built Wi-Fi solution is operational, to truly leverage the network as a business asset complete visibility into network performance and an understanding of the mobile engagement patterns of connected users is necessary. The solution? ExtremeAnalytics™.

## Solution Overview

ExtremeAnalytics is a network powered application analytics and optimization solution that captures and analyzes context-based application traffic to deliver meaningful intelligence – about applications, users, locations and devices – to an organization. The solution facilitates the mining of network-based business events and strategic information, enabling business and technology leaders in hospitality to make faster and more effective decisions. It does this from a centralized command and control center that combines network management and business analytics at a substantial scale and scope.

## Business-Specific Benefits

From a business perspective, ExtremeAnalytics supplies data to show how applications are being used, and how those applications are performing. This can be leveraged to better understand customer behavior of connected users on the network, identify the level of user engagement, and assure business application delivery for a seamless and optimized experience onsite. Additionally, ExtremeAnalytics can track application adoption to determine the return on investment associated with application deployments, while also identifying the potential for new ways to use application data from the network – resulting in new revenue generating services. For example, this includes the tracking of existing and emerging social applications, allowing digital marketing teams to determine the ideal time and the best social platform(s) to roll out a new campaign, maximizing its reach and impact. These are just a few examples of the power ExtremeAnalytics delivers to a business; the possibilities are unlimited.



## IT-Specific Benefits

From an IT perspective, ExtremeAnalytics provides visibility into network and application performance, allowing IT teams to pinpoint and resolve issues in the infrastructure, whether they are caused by the network, application, or server. This saves both time and money for the business, and ensures critical applications are running at the best possible performance. By eliminating unnecessary application delay and prioritizing applications, IT teams are equipped with the tools and network flexibility to meet the day to day needs of the business or for a particular event (whether it's a sports venue, hotel, convention center, concert, resort, casino, etc.) This is especially useful for environments that need to provision the network on an event-by-event basis. This guarantees users have the best possible network experience and enables businesses to operate more efficiently.

In troubleshooting cases, where users report problems or there's an unidentified network disruption, ExtremeAnalytics eliminates potential finger pointing between the network, application, and server teams by providing actionable information and insights. Active investments are better understood as well. For example, IT has the ability to hold cloud application vendors to an SLA: the number of licenses used and the performance of this application. The solution's intelligence provides visibility and control of applications pervasively across the entire network infrastructure, from the wired or wireless edge all the way to the core and datacenter. This massively scalable solution works in mobile, public cloud and traditional network environments, meaning a business is able to choose what makes the most sense for their organization and their customers.

In terms of the technology itself, ExtremeAnalytics uses deep packet inspection (DPI) technology with a rich set of application fingerprint techniques to detect internally hosted applications (SAP, SOA traffic, Exchange, SQL, etc.), public cloud applications (Salesforce, Google, Email, YouTube, P2P, file sharing, etc.), and social media applications (Facebook, Twitter, Snapchat, etc.) at Layer 7 of the OSI model. This functionality assures a quality user experience for business critical applications and a quality guest experience for those accessing a public network in a transient setting — characteristic of hospitality environments.

The solution is enabled by the flow data it receives from either the ExtremeWireless solution from the CoreFlow2 ASIC in the Application Sensor Engine, or the S-Series and K-Series switches. New flows are identified and packets are sent to the ExtremeAnalytics engine, where the application fingerprinting takes place. This application information is then combined with non-sampled NetFlow data collected from the wired and wireless devices for the duration of the flow, allowing the Extreme Application Analytics engine to process traffic at unprecedented scale with no performance degradation to the network itself.

ExtremeAnalytics determines the application and extracts application context information such as URL, certificate information, browser version, device hardware and OS. ExtremeAnalytics also measures response times, aggregates the data, adds additional context derived from identity and access control (optional) like user, role, device type and identity, location, and then sends it to the Extreme Control Center for storage and reporting. This set of contextual data provides a full understanding of the applications running on the network, who's using the application, the devices being used, and where they are located within the network.

## Customer Use Case and Benefits

ExtremeAnalytics is installed in a variety of hospitality environments around the world. As the Official Wi-Fi Provider and Wi-Fi Analytics Provider of the NFL, ExtremeAnalytics is currently installed in 10 NFL stadiums that also employ our ExtremeWireless solution, but because the software is vendor agnostic - having the ability to integrate with third party solutions - an additional 9 NFL stadiums only have ExtremeAnalytics installed and running over their existing infrastructure. With the goal of continuing to deliver an exceptional and consistent fan experience across the League's stadiums, and to ensure baseline Wi-Fi connectivity standards are met, the NFL sees (Wi-Fi analytics) as a critical part of their technology strategy moving forward.



Professional and collegiate sports venues are just one example of where this technology is a valuable asset: whether it is a convention center, hotel/resort, casino, or any other public venue, ExtremeAnalytics empowers organizations with the necessary tools to leverage the network as a business asset. As previously cited, granular visibility into the entire wired and wireless network, and the applications running over it, not only help organizations with performance benchmarks it also delivers compelling intelligence around mobile engagement patterns of connected users. This intelligence may fuel digital marketing and social campaigns with more tactical knowledge in terms of what platform to invest in and when; equally important, it helps measure the impact of such campaigns once they are launched.

Furthermore, understanding how users are engaging with applications lays the foundation for new ways of activation through contextual mobile engagement. Application insights from the network allows hospitality environments to remove the guesswork out of marketing, helping them determine the 'who, what, and where' of customer behavior, assess buying propensity, and the development of new revenue sources for the business.

This data insight becomes even more valuable when mapped in context to additional identity-specific information about the mobile user. Demographic information, brand affinities, social network information, buying behaviors and tendencies provide important details about the connected customer. When providing contextual data about the customer combined with network access conditions and their real-time mobile usage data, a tailored customer profile and personalized experience can be established – providing customers with the best possible mobile experience, and the business with the best tools to succeed.



## Specifications

The ExtremeAnalytics engine is available as a hardware-based appliance or a virtual appliance. Virtual appliances operate on VMware and are included with Extreme Control Center Advanced providing additional deployment flexibility while providing cost savings from using existing hardware

For more information please visit our Sports, Entertainment, and Hospitality landing page at [www.extremenetworks.com/sports-and-entertainment](http://www.extremenetworks.com/sports-and-entertainment).

For additional questions or to schedule a demo of ExtremeAnalytics please contact [hospitality@extremenetworks.com](mailto:hospitality@extremenetworks.com).



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