



# Etanova Enterprise Solutions

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<http://www.etanova.com/technologies/front-end-development/web-services>

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# Web Services

In order to add more functionality to the front end through scripting languages, effective communication is required between client and server nodes. Web services allow for data interchange between nodes through various methods. The appropriate method for communication depends on the web application scope and complexity.

## REST

Exchange information between server and client nodes with HTTP RESTful data interchange for performance and scalability. REST creates web services based on URIs and HTTP, permitting many different data formats for request communication including XML and JSON. For security, REST web services may use SSL. REST is also cross-browser compatible for modern web browsers.

## SOAP

Expose server side application logic to the web with SOAP for enterprise level features. SOAP offers WS-Security to verify node identities and provides data integrity and privacy services. Moreover, SOAP offers WS-AtomicTransaction for ACID transactions and WS-ReliableMessaging for node communication reliability.

## AJAX

Communicate seamlessly between front end and backend nodes using AJAX. Web applications become more usable with AJAX as web browser users will not have their web page refreshed each time they issue a HTTP request. Avoid negative SEO implications by using AJAX only in the right context and not misusing the technology.

## WebHooks

Accept HTTP requests as a URL route centralized service with web hooks. A web hook will act as a real-time API component for a web application. It will allow an application to trigger certain events, or to act as a service oriented application based on triggers sent as HTTP requests to particular URLs.

## Web Sockets

Open a persistent connection between two nodes with web sockets, and reduce much of the overhead that can incur with AJAX in larger web applications. Full duplex web sockets allow two way messaging between nodes such that front end web clients can receive push notifications from the backend server. Push data to web browsers with various server side technologies such as Java Messaging Service (JMS), Windows Communication Foundation (WCF), Amazon Simple Notification Service (SNS), etc.