



Don't touch me I will hack u  
lotusnote000@gmail.com

2018-19

**SRIHARI MADDINENI**  
srihari.maddineni.no1@gmail.com

# Wireless Application Protocol

Read

Discuss

Courses

The Wireless Application Protocol (WAP) is a set of communication protocols and an application programming model based on the World Wide Web (WWW). Its hierarchical structure is quite similar to the TCP/IP protocol stack design.

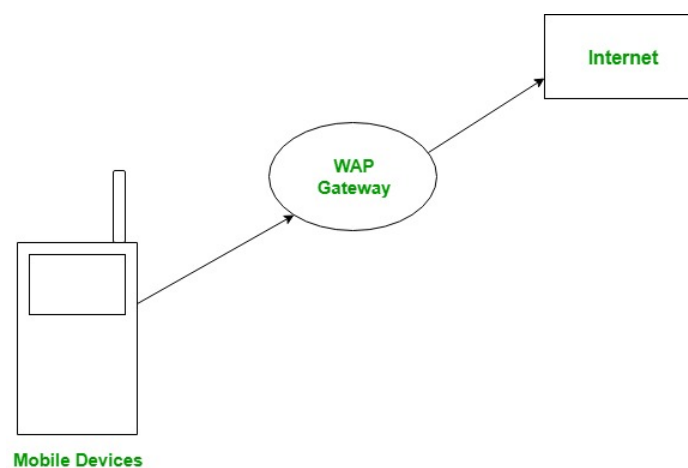
## What is Wireless Application Protocol (WAP)?

WAP stands for Wireless Application Protocol. It is a protocol designed for micro-browsers and it enables access to the [internet](#) in [mobile devices](#). It uses the markup language [WML](#) (Wireless Markup Language and not [HTML](#)), WML is defined as an [XML](#) 1.0 application. It enables the creation of web applications for mobile devices. In 1998,

WAP Forum was founded by Ericson, Motorola, Nokia and Unwired Planet whose aim was to standardize the various wireless technologies via protocols. WAP protocol resulted from the joint efforts of the various members of WAP Forum. In 2002, WAP forum was merged with various other forums in the industry resulting in the formation of

## Open Mobile Alliance (OMA)

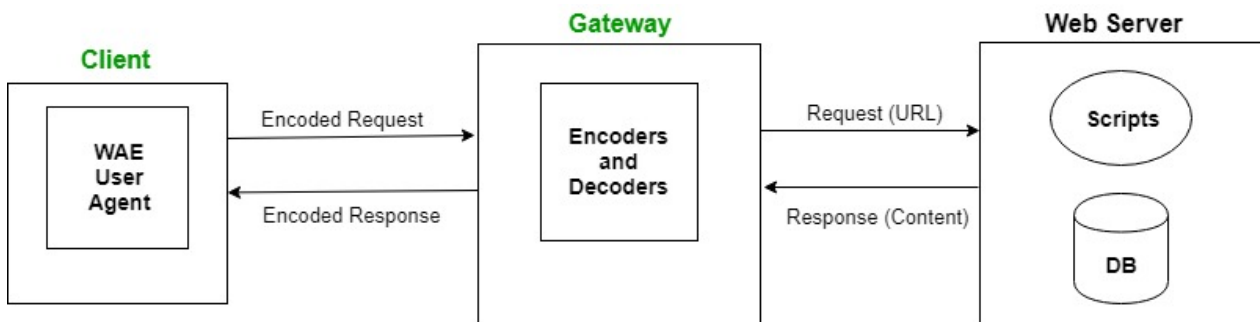
Spotlight



## WAP Model

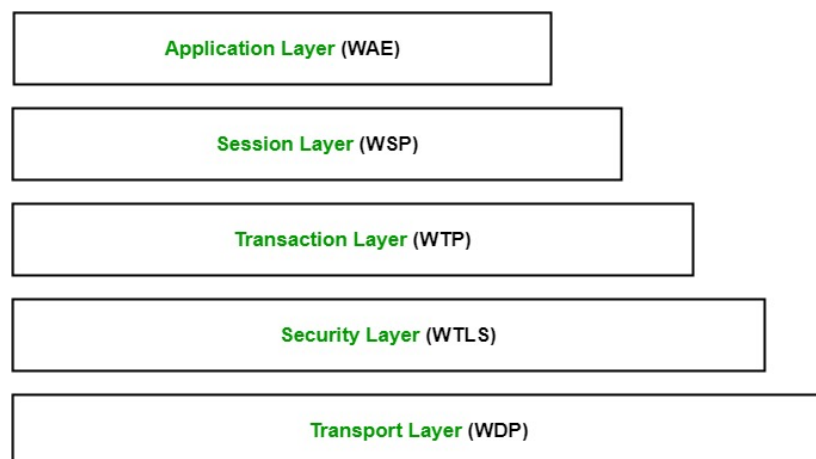


The user opens the mini-browser in a mobile device. He selects [a website](#) that he wants to view. The mobile device sends the [URL](#) encoded request via network to a WAP gateway using WAP protocol.



The WAP gateway translates this WAP request into a conventional [HTTP](#) URL request and sends it over the internet. The request reaches to a specified [web server](#) and it processes the request just as it would have processed any other request and sends the response back to the mobile device through WAP gateway in WML file which can be seen in the micro-browser.

## WAP Protocol stack



1. **Application Layer:** This layer contains the Wireless Application Environment (WAE). It contains mobile device specifications and content development programming languages like WML.
2. **Session Layer:** This layer contains Wireless Session Protocol (WSP). It provides fast connection suspension and reconnection.
3. **Transaction Layer:** This layer contains Wireless Transaction Protocol (WTP). It runs on top of [UDP](#) (User Datagram Protocol) and is a part of [TCP/IP](#) and offers transaction support.
4. **Security Layer:** This layer contains Wireless [Transport Layer Security](#) (WTLS). It offers data integrity, privacy and authentication.
5. **Transport Layer:** This layer contains Wireless Datagram Protocol. It presents consistent data format to higher layers of WAP protocol stack.

## Why Use WAP?

The following advantages for wireless network operators, content producers, and end users were

**Operators of wireless networks and mobile phones:** WAP was created with the intention of enhancing already-existing wireless data services, such as voicemail, and facilitating the creation of new mobile applications. Without making any further infrastructure adjustments or phone modifications, these applications might be created.

**Content Provider:** For third-party application developers, WAP opened up a market for extra applications and mobile phone features. It was suggested that developers use the WML programming language to write applications for mobile devices.

**End users:** Access to online services like banking, entertainment, messaging, and other information on mobile devices should be simple and safe for users of mobile phones. WAP could also permit access.

## Advantages of Wireless Application Protocol

The benefits of Wireless Application Protocol, or WAP, are listed below:

- WAP is a rapidly evolving technology.
- Wireless Application Protocol is an [open source](#) that is totally free of cost.
- WAP can be used over multiple platforms.
- Neither it nor network standards are affected.
- Higher controlling possibilities are offered.
- It follows a model that is similar to the Internet.
- You can send and receive real-time data with WAP.
- WAP is supported by the majority of current mobile phones and devices.

## Disadvantages of Wireless Application Protocol

The following is a list of various Wireless Application Protocol, or WAP, drawbacks:

- WAP connection speed is slow and number of connections are less.
- At some places it is very difficult to access the Internet, and also at some places it is totally impossible.
- Less secure.
- WAP provides a small [User interface \(UI\)](#).

## Wireless Application Protocol – FAQs

### 1. Why do we need WAP?

*Internet access was only accessible from your computer until the release of the first WAP devices. With WAP, you may now use your mobile phone to use the Internet to interact with other people. large global communication and data sharing are therefore expanded.*

### 2. What is a Micro WAP Browser?

There is a WAP browser available as well, just like your personal internet browser. Micro WAP Browser is the name of the browser used to access websites using a WAP device. What makes it unique is that it uses less [hardware](#), [memory](#), and [CPU](#) resources and presents the data in WML, a constrained mark-up language.

### 3. What is WAP 2.0?

WAP 2.0, which was introduced in 2002, is only a combination of end-to-end HTTP and XHTML. The gateway and custom protocol suite that were used to communicate with have been removed.

Unlock the Power of Placement Preparation!

Feeling lost in OS, DBMS, CN, SQL, and DSA chaos? Our [Complete Interview Preparation](#) Course is the ultimate guide to conquer placements. Trusted by over 100,000+ geeks, this course is your roadmap to interview triumph.

Ready to dive in? Explore our Free Demo Content and join our [Complete Interview Preparation](#) course.

Last Updated : 28 Aug, 2023

37

[Previous](#)

[Next](#)

[Overview of Near-me Area Network \(NAN\)](#)

[Information Security and Cyber Laws](#)

### Similar Reads

[Differences between Wireless Adhoc Network and Wireless Sensor Network](#)

[MAC Protocol Used in Wireless Sensor Networks](#)

[Hot Standby Router Protocol \(HSRP\) and Virtual Router Redundancy Protocol \(VRRP\)](#)

[Difference between Stop and Wait protocol and Sliding Window protocol](#)

[Difference between File Transfer Protocol \(FTP\) and Secure File Transfer Protocol \(SFTP\)](#)

[Difference between Serial Line Internet Protocol \(SLIP\) and Point-to-Point Protocol \(PPP\)](#)

[Cisco Discovery Protocol \(CDP\) and Link Layer Discovery Protocol \(LLDP\) in Data Link Layer](#)

[Difference between Border Gateway Protocol \(BGP\) and Routing Information Protocol \(RIP\)](#)

[Difference between Spanning Tree Protocol \(STP\) and Rapid Spanning Tree Protocol \(RSTP\)](#)

[File Transfer Protocol \(FTP\) in Application Layer](#)

## Article Contributed By :



**raman\_257**

raman\_257

[Follow](#)

## Vote for difficulty

Current difficulty : [Basic](#)

Easy

Normal

Medium

Hard

Expert

Improved By : [divyageeksijqh](#), [thirumal2109](#)

Article Tags : [Computer Networks](#)

[Improve Article](#)

[Report Issue](#)



A-143, 9th Floor, Sovereign Corporate Tower, Sector-136, Noida, Uttar Pradesh - 201305



## Company

[About Us](#)

[Legal](#)

[Careers](#)

[In Media](#)

[Contact Us](#)

[Advertise with us](#)

[GFG Corporate Solution](#)

[Placement Training Program](#)

## Explore

[Job-A-Thon Hiring Challenge](#)

[Hack-A-Thon](#)

[GfG Weekly Contest](#)

[Offline Classes \(Delhi/NCR\)](#)

[DSA in JAVA/C++](#)

[Master System Design](#)

[Master CP](#)

[GeeksforGeeks Videos](#)

## Languages

Python  
Java  
C++  
PHP  
GoLang  
SQL  
R Language  
Android Tutorial

## Data Science & ML

Data Science With Python  
Data Science For Beginner  
Machine Learning Tutorial  
ML Maths  
Data Visualisation Tutorial  
Pandas Tutorial  
NumPy Tutorial  
NLP Tutorial  
Deep Learning Tutorial

## Python

Python Programming Examples  
Django Tutorial  
Python Projects  
Python Tkinter  
Web Scraping  
OpenCV Python Tutorial  
Python Interview Question

## DevOps

Git  
AWS  
Docker  
Kubernetes  
Azure  
GCP  
DevOps Roadmap

## System Design

What is System Design  
Monolithic and Distributed SD  
High Level Design or HLD  
Low Level Design or LLD

## DSA

Data Structures  
Algorithms  
DSA for Beginners  
Basic DSA Problems  
DSA Roadmap  
Top 100 DSA Interview Problems  
DSA Roadmap by Sandeep Jain  
All Cheat Sheets

## HTML & CSS

HTML  
CSS  
Bootstrap  
Tailwind CSS  
SASS  
LESS  
Web Design

## Computer Science

GATE CS Notes  
Operating Systems  
Computer Network  
Database Management System  
Software Engineering  
Digital Logic Design  
Engineering Maths

## Competitive Programming

Top DS or Algo for CP  
Top 50 Tree  
Top 50 Graph  
Top 50 Array  
Top 50 String  
Top 50 DP  
Top 15 Websites for CP

## JavaScript

TypeScript  
ReactJS  
NextJS  
AngularJS

System Design Interview Questions

Grokking Modern System Design

Express.js

Lodash

Web Browser

## NCERT Solutions

Class 12

Class 11

Class 10

Class 9

Class 8

Complete Study Material

## Commerce

Accountancy

Business Studies

Indian Economics

Macroeconomics

Microeconomics

Statistics for Economics

## UPSC Study Material

Polity Notes

Geography Notes

History Notes

Science and Technology Notes

Economy Notes

Ethics Notes

Previous Year Papers

## Colleges

Indian Colleges Admission & Campus Experiences

Top Engineering Colleges

Top BCA Colleges

Top MBA Colleges

Top Architecture College

Choose College For Graduation

## Preparation Corner

Company Wise Preparation

Preparation for SDE

Experienced Interviews

Internship Interviews

Competitive Programming

Antitude Preparation

## School Subjects

Mathematics

Physics

Chemistry

Biology

Social Science

English Grammar

## Management & Finance

Management

HR Management

Income Tax

Finance

Economics

## SSC/ BANKING

SSC CGL Syllabus

SBI PO Syllabus

SBI Clerk Syllabus

IBPS PO Syllabus

IBPS Clerk Syllabus

SSC CGL Practice Papers

## Companies

IT Companies

Software Development Companies

Artificial Intelligence(AI) Companies

CyberSecurity Companies

Service Based Companies

Product Based Companies

PSUs for CS Engineers

## Exams

JEE Mains

JEE Advanced

GATE CS

NEET

UGC NET

## More Tutorials

Software Development

Software Testing

Product Management

SAP

SEO

Linux

Excel

## Write & Earn

Write an Article

Improve an Article

Pick Topics to Write

Share your Experiences

Internships

@GeeksforGeeks, Sanchhaya Education Private Limited, All rights reserved