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# How Automatic Detection of Captive Portal works

The Automatic Detection of Captive Portal mechanism is based on a simple verification, done by the Operational System (OS) of the client device (smartphone, tablet, laptop).

It simply tries to reach a specific URL and verify that such URL returns a well-known result.

- If a Captive Portal is not in place, the result will match the expected one and the OS will know that there is full access to internet.
- If the URL returns a result other than the expected one, then the OS will
  detect that there is a Captive Portal in place and that it's needed to proceed
  with authentication in order to get full access to internet: in this case the OS
  will open the Splash Page automatically.





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## **Differences between Client devices**

All client devices use the above described strategy to find out if they are behind a captive portal, but the URL might vary depending on the specific model of smartphone, tablet, laptop and depending on the specific OS version.

In the following you can find a list of known domains contacted by each model in order to eventually trigger the captive portal.

#### **Android Captive Portal Detection**

- · clients3.google.com
- connectivitycheck.gstatic.com
- connectivitycheck.android.com

#### Apple iPhone, iPad with iOS 6 Captive Portal Detection

- gsp1.apple.com
- \*.akamaitechnologies.com
- · www.apple.com
- apple.com

#### Apple iPhone, iPad with iOS 7, 8, 9 and recent versions of OS X

- · www.appleiphonecell.com
- \*.apple.com
- · www.itools.info
- · www.ibook.info
- www.airport.us
- www.thinkdifferent.us
- \*.apple.com.edgekey.net
- \*.akamaiedge.net
- \*.akamaitechnologies.com

#### Windows

- ipv6.msftncsi.com
- ipv6.msftncsi.com.edgesuite.net
- www.msftncsi.com
- www.msftncsi.com.edgesuite.net
- teredo.ipv6.microsoft.com
- teredo.ipv6.microsoft.com.nsatc.net

#### NOTE:

Consider that you can disable the Automatic Detection of Captive Portal on specific client devices simply adding all the listed domains for that specific device to the additional <a href="Walled-garden">Walled garden (/s/article/Walled-garden)</a>.

To do so, please check this article:

How to enable/disable the Automatic Detection of Captive Portal and automatic opening of the Splash Page (/s/article/How-to-enable-disable-the-Automatic-Detection-of-Captive-Portal-and-automatic-opening-of-the-Splash-Page)

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