



# mDNS for ICE

Youenn Fablet  
Justin Uberti



# Problem Statement

WebRTC need: direct connections without the privacy issues associated with exposing private IP addresses

```
candidate:1 1 udp 2113929471 192.168.1.7 10000 typ host
```



# Solution

Register temporary mDNS hostnames and use them in candidates instead of private IP addresses. When receiving such a candidate, the browser will look up the hostname to get the IP address for ICE.

```
candidate:1 1 udp 2113929471 B55ACF61-E9D1-4CD2-BA5C-22621A1F2F14.local 10000 typ host
```

instead of

```
candidate:1 1 udp 2113929471 192.168.1.7 10000 typ host
```



# Changes Needed

Section 4.1 of ice-sip-sdp already details how FQDN resolution should be performed; it simply needs to be extended to support mDNS name resolution.

<connection-address>: is taken from RFC 4566 [RFC4566]. It is the IP address of the candidate. When parsing this field, an agent can differentiate an IPv4 address and an IPv6 address by presence of a colon in its value -- the presence of a colon indicates IPv6. An agent MUST ignore candidate lines that include candidates with IP address versions that are not supported or recognized. An IP address SHOULD be used, but an FQDN (including a mDNS [RFC6762] name) MAY be used in place of an IP address.

In the case of receiving a candidate containing a wide-area unicast DNS hostname (i.e. not a ".local" name), the hostname is looked up via DNS, preferring an AAAA record where possible. Otherwise, the hostname is resolved as defined in [RFC6762].

The rules from Section 6 of [RFC6724] are followed...