Triggering the Local Network Privacy Alert

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Currently there is no way to explicitly trigger the local network privacy alert (r. 69157424). However, you can bring it up implicitly by sending dummy traffic to a local network address. The code below shows one way to do this. It finds all IPv4 and IPv6 addresses associated with broadcast-capable network interfaces and sends a UDP datagram to each one. This should trigger the local network privacy alert, assuming the alert hasn't already been displayed for your app.

Oh, and if Objective-C is more your style, use this code instead.

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—
Quinn “The Eskimo!” @ Developer Technical Support @ Apple
`let myEmail = "eskimo" + "1" + "@apple.com"`

```
import Foundation

/// Does a best effort attempt to trigger the local network privacy alert.
///
/// It works by sending a UDP datagram to the discard service (port 9) of every
/// IP address associated with a broadcast-capable interface. This should
/// trigger the local network privacy alert, assuming the alert hasn’t already
/// been displayed for this app.
///
/// This code takes a ‘best effort’. It handles errors by ignoring them. As
/// such, there’s guarantee that it’ll actually trigger the alert.
///
/// - note: iOS devices don’t actually run the discard service. I’m using it
/// here because I need a port to send the UDP datagram to and port 9 is
/// always going to be safe (either the discard service is running, in which
/// case it will discard the datagram, or it’s not, in which case the TCP/IP
/// stack will discard it).
///
/// There should be a proper API for this (r. 69157424).
///
/// For more background on this, see [Triggering the Local Network Privacy Alert](https://developer.apple.com/forums/thread/663768).

func triggerLocalNetworkPrivacyAlert() {
    let sock4 = socket(AF_INET, SOCK_DGRAM, 0)
    guard sock4 >= 0 else { return }
    defer { close(sock4) }
    let sock6 = socket(AF_INET6, SOCK_DGRAM, 0)
    guard sock6 >= 0 else { return }
    defer { close(sock6) }

    let addresses = addressesOfDiscardServiceOnBroadcastCapableInterfaces()
    var message = [UInt8]("!".utf8)
    for address in addresses {
        address.withUnsafeBytes { buf in
            let sa = buf.baseAddress!.assumingMemoryBound(to: sockaddr.self)
            let saLen = socklen_t(buf.count)
            let sock = sa.pointee.sa_family == AF_INET ? sock4 : sock6
            _ = sendto(sock, &message, message.count, MSG_DONTWAIT, sa, saLen)
        }
    }
}

/// Returns the addresses of the discard service (port 9) on every
/// broadcast-capable interface.
///
/// Each array entry is contains either a `sockaddr_in` or `sockaddr_in6`.

private func addressesOfDiscardServiceOnBroadcastCapableInterfaces() -> [Data] {
    var addrList: UnsafeMutablePointer<ifaddrs>? = nil
    let err = getifaddrs(&addrList)
    guard err == 0, let start = addrList else { return [] }
    defer { freeifaddrs(start) }
    return sequence(first: start, next: { $0.pointee.ifa_next })
        .compactMap { i -> Data? in
            guard
                (i.pointee.ifa_flags & UInt32(bitPattern: IFF_BROADCAST)) != 0,
                let sa = i.pointee.ifa_addr
            else { return nil }
            var result = Data(UnsafeRawBufferPointer(start: sa, count: Int(sa.pointee.sa_len)))
            switch CInt(sa.pointee.sa_family) {
            case AF_INET:
                result.withUnsafeMutableBytes { buf in
                    let sin = buf.baseAddress!.assumingMemoryBound(to: sockaddr_in.self)
                    sin.pointee.sin_port = UInt16(9).bigEndian
                }
            case AF_INET6:
                result.withUnsafeMutableBytes { buf in
                    let sin6 = buf.baseAddress!.assumingMemoryBound(to: sockaddr_in6.self)
                    sin6.pointee.sin6_port = UInt16(9).bigEndian
                }
            default:
                return nil
            }
            return result
        }
}
```

CFNetwork Network Bonjour

Asked 4 months ago by eskimo

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