Back to My Mac
77th IETF, Anaheim

24th March 2010

Rory McGuire
Stuart Cheshire
Overview

.Mac (Mobile Me)

Cafe

Work

Home
Overview

.Mac (Mobile Me)

Cafe

Work

Home

PowerBook G4
Overview

.Mac (Mobile Me)

Cafe

UDP

UPnP

Work

NAT-PMP

Home
Server Setup

bob.members.mac.com
Server Setup

?  

?  

bob.members.mac.com
Server Setup

bob.members.mac.com
Server Setup

bob.members.mac.com
Server Setup

UDP 4500

bob.members.mac.com
Server Setup

UDP 4500
IPv6 ULA

bob.members.mac.com
Server Setup

UDP 4500
IPv6 ULA
IPSec Policies
racoon config

bob.members.mac.com
Server Setup
Server Setup

.Mac (Mobile Me)

PTR _afpovertcp._tcp.bob.members.mac.com > Bob’s iMac.bob.members.mac.com

TLS
Server Setup

.Mac (Mobile Me)

TLS

PTR _afpovertcp._tcp.bob.members.mac.com > Bob’s iMac.bob.members.mac.com

SRV Bob’s iMac._afpovertcp._tcp.bob.members.mac.com > 548 bobs-imac.bob.members.mac.com
Server Setup

_Mac (Mobile Me)

TLS

PTR _afpovertcp._tcp.bob.members.mac.com > Bob’s iMac.bob.members.mac.com

SRV Bob’s iMac._afpovertcp._tcp.bob.members.mac.com > 548 bobs-imac.bob.members.mac.com

TXT Bob’s iMac._afpovertcp._tcp.bob.members.mac.com > ...

...
Server Setup

.Mac (Mobile Me)

TLS

PTR SRV TXT
Server Setup

.Mac (Mobile Me)

TLS

PTR SRV TXT

IPv6 ULA
Server Setup

.Mac (Mobile Me)

TLS

PTR SRV TXT

AAAA bobs-imac.bob.members.mac.com > ULA

IPv6 ULA
Server Setup

.Mac (Mobile Me)

TLS

PTR SRV TXT

AAAA bobs-imac.bob.members.mac.com > ULA
Server Setup

.Mac (Mobile Me)

IPv6 ULA

PTR SRV TXT

AAAA bobs-imac.bob.members.mac.com > ULA


A AutoTunnel-MAC.bob.members.mac.com. > V4

TLS
Server Setup

 trabalho (Mobile Me)

PTR SRV TXT

AAAA bobs-imac.bob.members.mac.com >
ULA
SRV _autotunnel._udp.bobs-imac.bob.members.mac.com >
port AutoTunnel-MAC.bob.members.mac.com.
A AutoTunnel-MAC.bob.members.mac.com. >
V4
TXT Bob’s iMac._device-info._tcp.bob.members.mac.com >
model=iMac4,1
Server Setup

.Mac (Mobile Me)

IPv6 ULA

TLS

PTR SRV TXT

AAAA bobs-imac.bob.members.mac.com > ULA
A AutoTunnel-MAC.bob.members.mac.com. > V4
TXT Bob's iMac._device-info._tcp.bob.members.mac.com > model=iMac4,1
TXT _kerberos.bobs-imac.bob.members.mac.com > LKDC:SHA1.HASH
Client Connection

.Mac (Mobile Me)

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA

PowerBook G4

IPv6 ULA
Client Connection

.Mac (Mobile Me)

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA

PowerBook G4

PowerBook G4
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com

PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA

TLS

PowerBook G4
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com

PTR SRV TXT AAAA SRV A TXT TXT

TLS

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

TLS

Icon?

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

SRV/TXT?

TLS

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

Hostname?

TLS

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

Hostname?

TLS

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

Hostname?

Magic!

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

TLS

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

Autotunnel (SRV,A)?

TLS

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA

Magic!
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA

Magic!

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

Magic!

IPv6 ULA
IPSec Policies
raccoon config
host route

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAAA SRV A TXT TXT

IPv6 ULA
IPSec Policies
racoons config
host route

IPv6 ULA
Client Connection

*.Mac (Mobile Me)*

Query: AFP, ScreenSharing

bob.members.mac.com

PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA

IPv6 ULA

***IPv6 ULA***

***IPSec Policies***

racoons config

host route
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com

PTR SRV TXT AAAA SRV A TXT TXT

More Magic!

IPv6 ULA
IPSec Policies
raccoon config
host route

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA
ISAKMP (IPSec)

More Magic!

IPv6 ULA
IPSec Policies racoon config host route

IPv6 ULA
Client Connection

.Mac (Mobile Me)

Query: AFP, ScreenSharing

bob.members.mac.com
PTR SRV TXT AAAA SRV A TXT TXT

IPv6 ULA
IPSec Policies
Racoon config
Host route

IPv6 in IPSEC in UDP in IPv4

IPv4 | UDP | ESP header | { IPv6 | protocol | data } | ESP footer