AGGREGATED SERVICE DISCOVERY

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THE PROBLEM #1

- Clients supporting Internet standard protocols (email, calendaring, contacts, instance messaging) require configuration of service information (protocol, host, port, security etc).

- Current ways to do this include DNS SRV, guessing host names based on user supplied email id, hard coded configurations for populate services. Often each service type has its own way of doing things.

- Proprietary systems offer an auto-discovery mechanism that can configure multiple services simultaneously with minimal network requests.

THE PROBLEM #2

- Vendors providing servers that offer both Internet standard and proprietary protocols in one suite of products, often find that users or system admins will pick the proprietary protocol solution simply because it is easier to setup.

- We need to do a better job at service discovery to promote use of Internet standard protocols.

REQUIREMENTS #1

- A simple to implement protocol that can return service information for multiple services in one go.

- Use a well defined schema to avoid ambiguities, but maintain extensibility.

- Minimize number of network round trips.

- Minimize the amount of information a user has to provide to "bootstrap" discovery (i.e just account identifier - typically an email address - and password).

REQUIREMENTS #2

- Allow services to be grouped, prioritized, alternatives to be suggested (e.g. Prefer IMAP over POP3).

- Allow site specific or device specific information to be included.

- Might want it to be independent of transport protocol (e.g. Allow the information to be delivered via arbitrary over-the-air provisioning systems).

PROPOSED SOLUTION

- draft-daboo-aggregated-service-discovery

- _servicediscovery._tcp SRV lookup to determine an HTTP server to connect to.

- An HTTP well-known resource from which an XML document can be retrieved.

- The XML document contains the aggregated service information provided by the domain hosting the well-known resource.

XML DOCUMENT FORMAT

- One element encapsulates information about the service provider (name, contacts details, logo, etc).

- Set of elements describes each service: type, name, connectivity details (host, port), security setup (user TLS, certificates).

- Each service also contains an "application" element to group a bunch of services together (IMAP and POP3), and a "priority" element to indicate the preferred choice of protocols when more than one alternative exists.

OTHER SOLUTIONS?

- webfinger has been suggested as a similar solution - need to discuss this more to see whether it can fit the requirements. However, there is a fundamental difference between providing information about a user to other users vs providing information about services available to one user.

- DNS-SD exists as a local area service discovery mechanism - could this be adapted to provide aggregate information, wide-area etc? See mdnsext BOF later this week.

- Other approaches?

NEXT STEPS

- Who is interested in working on this problem?

- How should we proceed?