CommonWell FHIR Project – Certificate Authority Request for Information

RFI issued by: CommonWell Health Alliance

Date issued: 10/11/2021

Response deadline: 11/5/2021

Overview of CommonWell Health Alliance

CommonWell Health Alliance ("CommonWell") is a 501(c)6 trade alliance comprised of members, which include health IT vendors who serve providers, patients, payers, and other players in the healthcare space. The Alliance was founded in 2013 and began building infrastructure and a network to handle query-based document exchange at scale, initially between EHR companies for provider-to-provider exchange. The network now includes the ability to query for clinical documents for the following purposes of use: Treatment, Payment, Health Care Operations, and Patient Request (Patient Right to Access). The network includes a Master Patient Index (MPI) and Record Locator Service (RLS) to allow connected members ("Service Adopters") the ability to maintain one connection into the network, query from their initiating gateway, and find patient matches to other care locations. The CommonWell Broker then facilitates the responding gateway to collect the documents and return them to the initiating gateway.

In early 2021, the Alliance began drafting its initial FHIR use case to determine how to leverage the existing MPI and RLS to find patients and their care locations but not require the Broker to handle the queries and responses as it does for document-based exchange. The current solution is for requesting clients to use the MPI and RLS to find patient matches and have the CommonWell FHIR Directory return the FHIR endpoint(s) and patient ID(s) back to the requesting client so they can dynamically register their client with the responding FHIR server. Once authenticated and authorized, the FHIR client can then query for data from the FHIR server and get resources back in response.

Proprietary & Confidential Information

The information contained within this RFI is proprietary to CommonWell Health Alliance and is disclosed solely for the purpose of allowing Certificate Authority vendors the opportunity to provide detailed responses to this RFI.

Responses to the RFI will be considered confidential. CommonWell is open to executing a Non-Disclosure Agreement (NDA) with RFI respondents and will include our standard, mutual NDA at respondent's request.
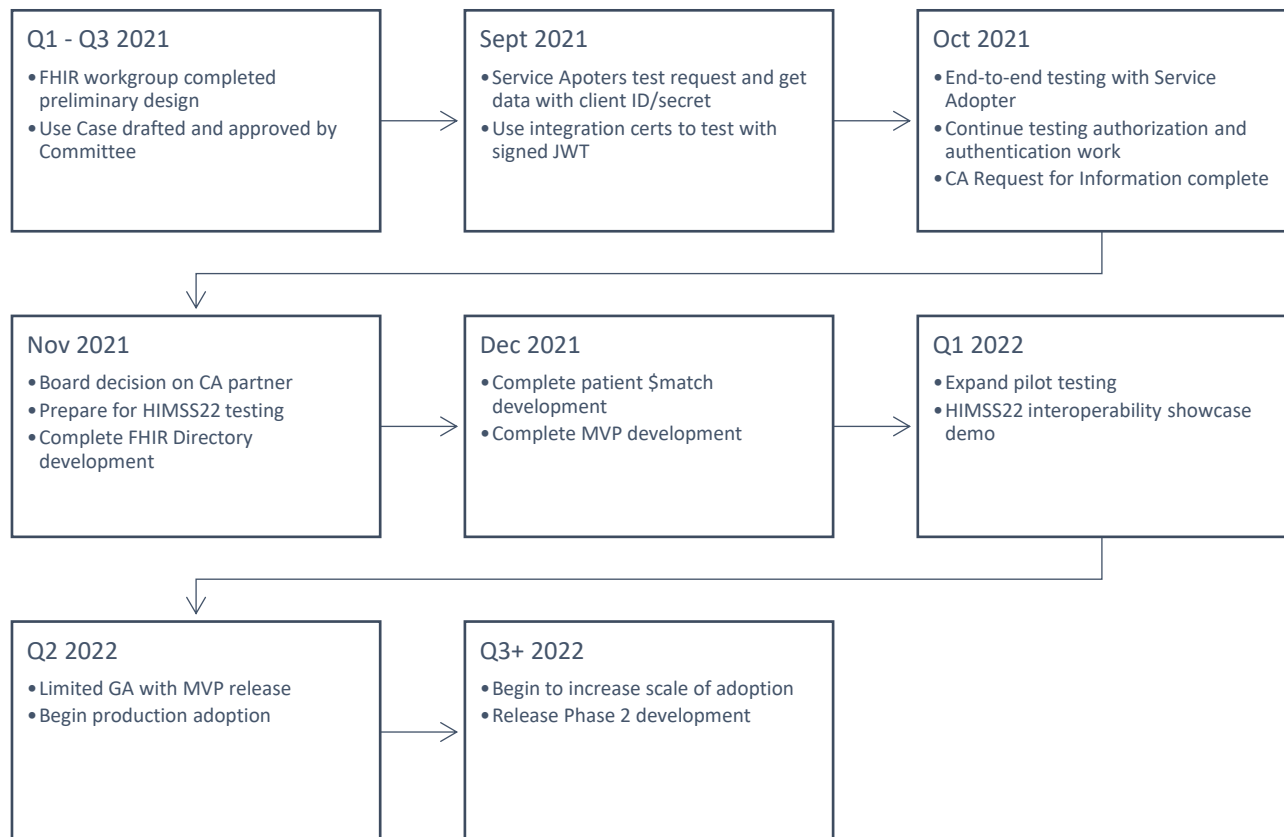
Statement of Need

CommonWell is requesting the following information from interested Certificate Authorities that would be able to provide the following:

1. Issue and assist with the management of certificates for FHIR-based exchange between CommonWell Service Adopters
2. Offer guidance throughout the FHIR project design and testing phase regarding certificate management and troubleshooting issues
3. Offer level 2 and greater technical support to CommonWell Service Adopters as needed

Project Details & Timeline

The CommonWell FHIR project will complete the following tasks to become a Minimum Viable Product (MVP) by January 2022, with the initial goal to demonstrate the MVP at HIMSS22 Interoperability Showcase and release to production shortly thereafter.

Q1 - Q3 2021
- FHIR workgroup completed preliminary design
- Use Case drafted and approved by Committee

Sept 2021
- Service Apoters test request and get data with client ID/secret
- Use integration certs to test with signed JWT

Oct 2021
- End-to-end testing with Service Adopter
- Continue testing authorization and authentication work
- CA Request for Information complete

Nov 2021
- Board decision on CA partner
- Prepare for HIMSS22 testing
- Complete FHIR Directory development

Dec 2021
- Complete patient $match development
- Complete MVP development

Q1 2022
- Expand pilot testing
- HIMSS22 interoperability showcase demo

Q2 2022
- Limited GA with MVP release
- Begin production adoption

Q3+ 2022
- Begin to increase scale of adoption
- Release Phase 2 development

High-Level FHIR Non-Brokered Workflow

CommonWell will be building a FHIR Directory and using patient $match to locate patients within the enterprise Master Patient Index (eMPI). The CommonWell Record Locator Service (RLS) will return FHIR endpoints to the client (requesting user) for any care location where a patient match has been found.

In order to facilitate a streamlined authorization and authentication process, CommonWell will require the use of a CommonWell-issued certificate, by a partner Certificate Authority, for the authorization and authentication workflows. CommonWell intends to use the UDAP Security Implementation Guide to articulate the secure dynamic registration workflows that will be required to authorize and authenticate FHIR clients so that they can query for data within the CommonWell network.

The current design assumes that the authorization server lives on the FHIR server (endpoint) and is handled by the Service Adapter. CommonWell will be the manager of the X.509 certificate and issuer to the Service Adapter. The client will use the certificate to sign the JWT, complete required claims, and post to the authorization server to register their client. Authorization will use the client ID and JWT, not a secret.

We also anticipate requiring the need of a trust anchor between CommonWell and Carequality to facilitate FHIR exchange between CommonWell organizations and Carequality implementers' sites.
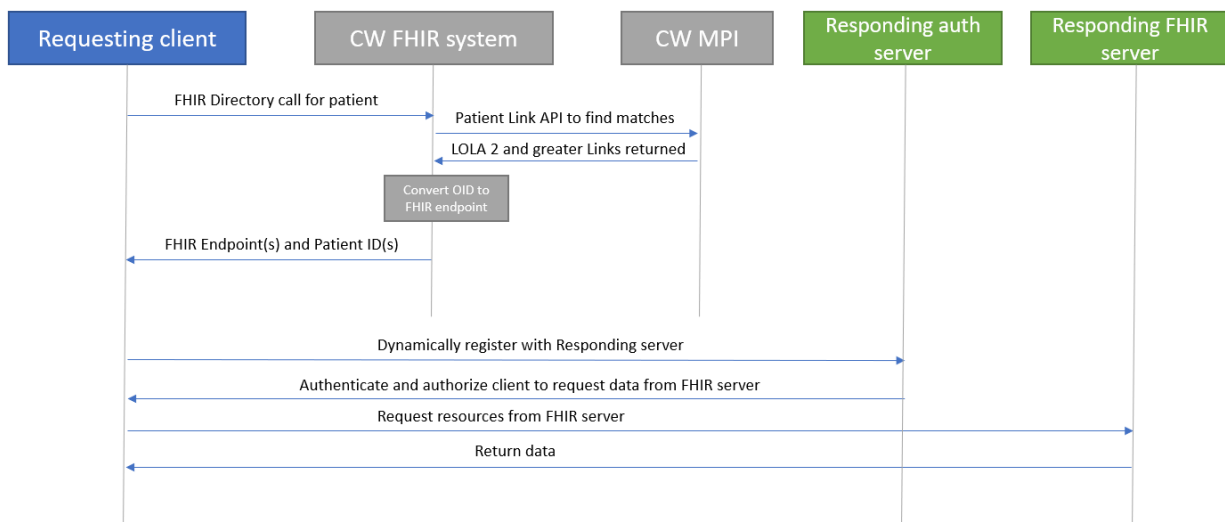
CommonWell Membership and Anticipated Adoption

CommonWell currently has 80 members across 20+ care settings. Twenty-seven of those members are Service Adopters, meaning that they are connected to or are in the process of connecting to the network to do query-based document exchange for one or more live use cases (e.g., Treatment, Patient Access, Payment, and/or Operations). More than 24,000 provider organizations are connected to the network under the live Service Adopter members. The FHIR pilot effort currently involves three Service Adopter members, with the opportunity to add more along the way as the design and testing have incremental milestones met.

In a survey conducted with CommonWell Service Adopters in September 2021, 87% of respondents indicated that they would support the FHIR use case when CommonWell deployed it in 2022, although many recognized there are still technical components to be determined which plays a role in committing development resources to the effort.

We expect that certificates will need to be issued at the provider organization/endpoint level and not at the vendor level. Therefore, assuming 10% adoption by provider organizations in 2022, CommonWell will need to issue approximately 2,500 certificates.

Vendor Responses

CommonWell requests that interested Certificate Authority vendors respond with a detailed proposal that includes an explanation of the following:

1. Certificate issuance process, including any details relevant to how to handle certificate issuance at scale as CommonWell FHIR use case grows
2. Organization's expertise in certificate issuance and management processes
3. Process for identity verification of organizations and what options exists to streamline this process
4. Organization's support team and processes for engagement and receiving timely support for certificate issues at Level 2 and above
5. Cost breakdown for certificate issuance based on
   a. Time-basis (per month, per quarter, etc.)
   b. Number of certificates issued (tiered 500, 1000, 2500, etc.)
6. (Optional) Any additional value-add services that may be applicable to the issuing, managing, and revoking of certificates at scale

Selection Criteria

CommonWell will evaluate the criteria above and rank based on a scale of 1-5, with 5 being the most desirable outcome and 1 being the least desirable outcome. CommonWell may request additional clarifications from the vendor respondent prior to completing the evaluation.

Timeline

Written questions to this RFI may be sent via email to liz@commonwellalliance.org. Questions must be received by 11:59pm ET on October 15, 2021. Please note that the answer to all questions submitted will be sent to all respondents. Answers will be provided by October 22, 2021, to all respondents.

Final responses must be submitted by 11:59pm ET on November 5, 2021, to Liz Buckle, Director of Product, at liz@commonwellalliance.org for consideration.