

# Provider Directory Search Interface Spec

## Introduction

The Provider Directory web services allows HIE participants to search for providers or organizations. This allows participants to discover the direct email address of a provider and the certificate to use for encrypting the content or validating the signature. For XDR users once the provider is located the providers organization can be located to find the XDR endpoint URL and the certificate for encrypting the content or validating the signature.

## Web Services Methods

- providerSearch
- organizationSearch
- getOrganizationById
- getSMIMECertificateByDirectEmailAddress
- getOrganizationByOrganizationRelationship
- getProvider
- getCertificateByCertificateReference

### providerSearch

Provider search web service provides following parameters to search a provider.

- First Name
- Last Name
- Middle Name
- Specialty
- Type
- Gender
- Street
- City
- State
- Zip
- Phone
- Email
- Language
- Id

One of the elements in the list below must be provided in order to perform a successful search.

- First Name
- Last Name
- ZIP
- Specialty
- Id
- Street
- Phone

Response from the provider search web service provides a list of providers matching the search criteria. Provider element contains the following information

Parent	Type	Child	Comments
identifier	Identifier	Type	Type of identifier
		Identifier	Provider id
alternateIdentifiers	List of Identifiers	Type	Type of identifier
		Identifier	Provider id
status	String	status	Provider Status
name	Name	firstName	First Name
		middleName	Middle Name
		lastName	Last Name
		prefix	Prefix
		suffix	Suffix
alias	List of Names	firstName	First Name
		middleName	Middle Name
		lastName	Last Name
		prefix	Prefix
		suffix	Suffix
providerTypes	List of provider types	providerTypes	Type of provider
specialties	List of Specialties	specialties	Specialty
gender	String	gender	Gender
address	List of Addresses	usage	Address type

		addressLine1	Address Line 1
		addressLine2	Address Line 2
		city	City
		county	County
		state	State
		zip	Zip
		geoCode	Geo Code
phoneNumbers	List of Phone numbers	usage	Phone number type
		number	Phone Number
languages	List of languages	Languages	Language
unsecureEmail	List of Email Ids	unsecureEmail	Email Id
directEmails	List of Email Ids	directEmails	Email Id
dba	Sring	DbA	Doing Business As
organisations	List of Organization Relationship	relationshipType	Relationship Type
		organizationName	Organization Name
		organizationId	Organization Id

### organizationSearch

Provider search web service provides following parameters to search an organization.

- Name
- Type
- Phone
- Specialty
- street
- city
- state
- zip
- id

One of the elements in the list below must be provided in order to perform a successful search.

- Name
- Type
- Phone
- Specialty
- street

- zip
- id

Response from the organization search web service provides a list of organizations matching the search criteria. Organization elements contain the following information

Parent	Type	Child	Comments
identifier	Identifier	Type	Type of identifier
		Identifier	Organization id
alternateIdentifiers	List of Identifiers	Type	Type of identifier
		Identifier	Organization id
status	String	status	Organization Status
name	String	Name	Organization Name
Alias	List of Names	Name	Organization Name
specialties	List of Specialties	specialties	Specialty
address	List of Addresses	usage	Address type
		addressLine1	Address Line 1
		addressLine2	Address Line 2
		city	City
		county	County
		state	State
		zip	Zip
		geoCode	Geo Code
phoneNumbers	List of Phone numbers	usage	Phone number type
		number	Phone Number
languages	List of languages	Languages	Language
unsecureEmail	List of Email Ids	unsecureEmail	Email Id
types	List of types	Types	Organization type
xdrAddresses	List of xdrAddresses	uri	URI of the Organization
		certificateReference	Reference to the Organization's X509 public certificate.

### **getOrganizationById**

The getOrganizationById web service searches for the organization by organization id and returns the organization details as defined in organizationSearch web service response. Only the organization identifier can be used with this method, in order to search by alternateIdentifiers use the OrganizationSearch method.

### **getProvider**

The getProvider web service searches the provider by provider id and returns the provider details as defined in providerSearch web service response. Only the provider identifier can be used with this method, in order to search by alternateIdentifiers use the ProviderSearch method.

### **getOrganizationByOrganizationRelationship**

The getOrganizationByOrganizationRelationship web service searches the organization by OrganizationRelationship type. The OrganizationRelationship type has three elements

- relationshipType
- organizationName
- organizationId

The web service returns the organization details as defined in organizationSearch web service response.

### **getSMIMECertificateByDirectEmailAddress**

Takes a Direct email address as an input parameter and returns the X509 certificate of the organization as a byte array.

### **getCertificateByCertificateReference**

Takes the certificate reference from the XDRAddress or DirectAddress as an input parameter and returns the X509 certificate as a byte array.

## **Certificate Handling**

The certificate is returned as a byte array in X509 format. An example of recreating the certificate in Java:

```
CertificateFactory cf = CertificateFactory.getInstance("X.509");
X509Certificate x509Certificate = (X509Certificate) cf.generateCertificate(new
ByteArrayInputStream(data));
```

## Code Tables Web Services

The Code Table web services allow the codes and descriptions for the coded elements to be returned.

The following code sets are supported.

- Specialties
- Languages
- OrganizationTypes
- ProviderTypes
- RelationshipType
- State

See CodeTables.wsdl for method details

## Transport

### Protocol

The protocol for the Provider Directory Search and the Code Table web services is SOAP 1.2.

### WS-Security

The connection to the HTTP server will be over HTTPS with client authentication using the Organizations certificate.