

Vision Works API Documentation

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Terms and Conditions of Use

This documentation is being made available to developers regarding communication with the Vision Works API (API) used for querying Protected Health Information (PHI). This documentation is provided as-is with no warranties expressed or implied. Use of this API is governed by the following terms and conditions:

Developers are responsible for any products developed that use the API. This includes compliance with all applicable laws.

Developers may not infringe on the intellectual property rights of Vision Works.

Developer is responsible for the security of any PHI obtained through the API.

Developer agrees to indemnify and hold harmless Vision Works from any legal matter that arises from Developers use of the API.

Introduction

This documentation is written for developers who wish to access PHI via the API. Note that Vision Works does not provide any type of consultation or support for helping developers with their products.

API Requests

The API is a read-only API. All data access requests will be in the following format in which the [base] URL will need to be obtained from the data holder:

```
GET [base]/api.dll?<XML request string>
```

All XML request strings are to be URL encoded.

Server Connection

The server is accessed by clients through an https connection. Only SSL/TLS connections are accepted. All plaintext connections will be refused. Please limit your connection frequency when accessing the API. Connection frequency outside of the bandwidth limits allocated by the data provider is not allowed and may result in your IP being blocked.

Request/Response

Each exchange to the server is initiated by the client by sending an API request. The API will respond with an API response. The general format of an API request is as follows:

```
<request>  
  <command>[command]</command>  
  <token>[token]</token>  
  ...  
</request>
```

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Where [token] is the token retrieved using the Authorization request and [command] is the command to which the API should respond. If the [token] is valid and the [command] is a valid command, the API will return an API response with the general format:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  ...
</response>
```

If an error was encountered in fulfilling the API request, the API will respond with the following message:

```
<?xml version="1.0"?>
<response>
  <status>error</status>
  <token>[error message]</token>
</response>
```

Where [error message] is a description of the error that was encountered.

Authorization

Client authorization must be performed to the API before any PHI can be read from the API. The data provider will establish a username and password for each client. Clients should obtain this information from the data provider from which they wish to access data. The format of the XML request string should be:

```
<request>
  <command>authorize</command>
  <username>[username]</username>
  <password>[password]</password>
</request>
```

Where [username] is the client's username and [password] is the client's password as obtained from the data provider. The API will verify the username and password submitted against that stored in the data provider's system. If the username and password match, the API will respond with the following message:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <token>[token]</token>
</response>
```

Where [token] is the API token to be used in making other API requests.

Data Category

The Data Category API call is used to retrieve a single PHI data field. The format of the XML request string should be:

```
<request>
  <command>data_category</command>
```

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```
<token>[token]</token>
<category>[category]</category>
<begdate>[mm/dd/yyyy]</begdate>
<enddate>[mm/dd/yyyy]</enddate>
</request>
```

Where [token] is the token retrieved using the Authorization request and [category] is the data category to which the API should return data. The [begdate] and [enddate] are used to specify the date range of data to be returned for certain data categories. If [begdate] is specified with no [enddate], data from [enddate] to the current date will be returned. If [enddate] is specified with no [begdate], data from the beginning of the client record to [enddate] will be returned. If neither [begdate] or [enddate] is specified, data for all records will be returned.

Data Category: Name

This API request returns the client's full name. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>name</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <name>[name]</name>
</response>
```

Data Category: Sex

This API request returns the client's sex. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>sex</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <sex>[sex]</sex>
</response>
```

Data Category: Date of Birth

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This API request returns the client's date of birth. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>dob</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <dob>[dob]</dob>
</response>
```

Data Category: Race

This API request returns the client's race. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>race</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <race>[race]</race>
</response>
```

Data Category: Ethnicity

This API request returns the client's ethnicity. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>ethnicity</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <ethnicity>[ethnicity]</ethnicity>
```

```
</response>
```

Data Category: Preferred Language

This API request returns the client's preferred language. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>language</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <language>[language]</language>
</response>
```

Data Category: Smoking Status

This API request returns the client's smoking status. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>smoking_status</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, they represent the date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <enddate>[enddate]</enddate>
      <code>[code]</code>
      <text>[text]</text>
    </entry>
    ...
  </list>
</response>
```

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Where <begdate> is the start date of the record, <enddate> is the end date of the record, <code> is the SNOMED code for the entry and <text> is the SNOMED description for the entry. The <entry> section will repeat for each record in the client file.

Data Category: Problems

This API request returns the client's problems. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>problems</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, they represent the diagnosis date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <enddate>[enddate]</enddate>
      <code>[code]</code>
      <text>[text]</text>
      <status>[status]</status>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the diagnosis date of the record, <enddate> is the resolved date of the record, <code> is the SNOMED code for the entry, <text> is the SNOMED description for the entry and <status> is the status of the record. The <entry> section will repeat for each record in the client file.

Data Category: Medication History

This API request returns the client's medication history. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>medications</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, they represent the start date of the record. The API response will be:

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```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <enddate>[enddate]</enddate>
      <code>[code]</code>
      <text>[text]</text>
      <route>[route]</route>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the start date of the record, <enddate> is the end date of the record, <code> is the RxNorm code for the entry, <text> is the RxNorm description for the entry and <route> is the medication route. The <entry> section will repeat for each record in the client file.

Data Category: Medication Allergies

This API request returns the client's medication allergies. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>allergies</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the onset date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <code>[code]</code>
      <text>[text]</text>
      <reaction>[reaction]</reaction>
      <severity>[severity]</severity>
      <status>[status]</status>
    </entry>
    ...
  </list>
</response>
```


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Where <begdate> is the onset date of the record, <code> is the RxNorm code for the entry, <text> is the RxNorm description for the entry, <reaction> is the reaction to the medication, <severity> is the severity of the reaction and <status> is the status of the record. The <entry> section will repeat for each record in the client file.

Data Category: Laboratory Orders

This API request returns the client's Laboratory Orders. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>lab_orders</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the lab test date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <code>[code]</code>
      <text>[text]</text>
      <status>[status]</status>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the test date of the record, <code> is the LOINC code for the entry, <text> is the LOINC description for the entry and <status> is the status of the record. The <entry> section will repeat for each record in the client file.

Data Category: Laboratory Results

This API request returns the client's Laboratory Results. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>lab_results</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the lab test date of the record. The API response will be:

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```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <code>[code]</code>
      <text>[text]</text>
      <status>[status]</status>
      <list>
        <entry>
          <code>[code]</code>
          <text>[text]</text>
          <result>[result]</result>
          <uom>[uom]</uom>
        <entry>
          ...
        </list>
      </entry>
      ...
    </list>
  </response>
```

Where <begdate> is the test date of the record, <code> is the LOINC code for the entry, <text> is the LOINC description for the entry and <status> is the status of the record. The <entry> section will repeat for each record in the client file.

Data Category: Vital Signs

This API request returns the client's Vital Signs. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>vitals</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the observation date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <height>[height]</height>
      <heightunits>[heightunits]</heightunits>
      <weight>[weight]</weight>
```

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```
<weightunits>[weightunits]</weightunits>
<systolic>[systolic]</systolic>
<diastolic>[diastolic]</diastolic>
<temperature>[temperature]</temperature>
<tempunits>[tempunits]</tempunits>
<pulse>[pulse]</pulse>
<respiratory>[respiratory]</respiratory>
<pulseox>[pulseox]</pulseox>
<inhaledox>[inhaledox]</inhaledox>
</entry>
...
</list>
</response>
```

Where <begdate> is the observation date of the record. The <entry> section will repeat for each record in the client file.

Data Category: Procedures

This API request returns the client's Procedures. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>procedures</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the procedure date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <code>[code]</code>
      <text>[text]</text>
      <status>[status]</status>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the procedure date of the record, <code> is the SNOMED code for the entry, <text> is the SNOMED description for the entry and <status> is the status of the record. The <entry> section will repeat for each record in the client file.

Data Category: Care Team Members

This API request returns the client's Care Team Members. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>care_team</category>
</request>
```

The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <agency>[agency]</agency>
      <prefix>[prefix]</prefix>
      <firstname>[firstname]</firstname>
      <middlename>[middlename]</middlename>
      <lastname>[lastname]</lastname>
      <suffix>[suffix]</suffix>
      <address1>[address1]</address1>
      <address2>[address2]</address2>
      <city>[city]</city>
      <state>[state]</state>
      <zipcode>[zipcode]</zipcode>
      <phone>[phone]</phone>
    </entry>
    ...
  </list>
</response>
```

The <entry> section will repeat for each record in the client file.

Data Category: Immunizations

This API request returns the client's Procedures. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>immunizations</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the immunizations date of the record. The API response will be:

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```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <code>[code]</code>
      <text>[text]</text>
      <status>[status]</status>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the immunization date of the record, <code> is the CVX code for the entry, <text> is the CVX description for the entry and <status> is the status of the record. The <entry> section will repeat for each record in the client file.

Data Category: Implantable Devices

This API request returns the client's Implantable Devices. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>implants</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the implant date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <udi>[udi]</udi>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the implant date of the record. The <entry> section will repeat for each record in the client file.

Data Category: Assessments

This API request returns the client's Assessments. The format of the XML request should be:

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```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>assessment</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <text>[text]</text>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the date of the record. The <entry> section will repeat for each record in the client file.

Data Category: Plan of Care

This API request returns the client's Plan of Care. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>plan_of_care</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <type>[type]</type>
      <event>[event]</event>
    </entry>
    ...
  </list>
</response>
```

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Where <begdate> is the date of the record. The <entry> section will repeat for each record in the client file.

Data Category: Goals

This API request returns the client's Goals. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>goals</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the encounter goal date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <entry>
      <begdate>[begdate]</begdate>
      <goal>[goal]</goal>
    </entry>
    ...
  </list>
</response>
```

Where <begdate> is the encounter goal date of the record. The <entry> section will repeat for each record in the client file.

Data Category: Health Concerns

This API request returns the client's Health Concerns. The format of the XML request should be:

```
<request>
  <command>data_category</command>
  <token>[token]</token>
  <category>health_concerns</category>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] or [enddate] are specified, it represents the date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
```

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```
<entry>
  <begdate>[begdate]</begdate>
  <type>[type]</type>
  <code>[code]</code>
  <text>[text]</text>
  <status>[status]</status>
</entry>
...
</list>
</response>
```

Where <begdate> is the encounter date of the record. The <entry> section will repeat for each record in the client file.

All Data

This API request returns a CDA file or files for the client. The format of the XML request should be:

```
<request>
  <command>all_data</command>
  <token>[token]</token>
  <begdate>[mm/dd/yyyy]</begdate>
  <enddate>[mm/dd/yyyy]</enddate>
</request>
```

If [begdate] and [enddate] are specified, they represent the encounter date of the record. The API response will be:

```
<?xml version="1.0"?>
<response>
  <status>ok</status>
  <list>
    <file>[file]</file>
    ...
  </list>
</response>
```

Where <file> is a Base 64 encoded CDA Continuity of Care file.