Background:

Web Services is a messaging and technology standard that provides the ability for systems to communicate across enterprise boundaries in a language neutral manner. NESIIS now has a web-service interface that allows providers to send and receive HL7 messages in real-time. With real-time data exchange, up-to-date health information is immediately available to health care providers using NESIIS, improving the information used in making clinical decisions.

To use web services you must have a URL to a web server and the knowledge of what messages can be received at that server. Some servers will require a username and password; additional parameters may also be required. Some software requires a wsdl this can be obtained by using the URL and concatenating “?wsdl” to the end.

When an HL7 message is created and sent to the Web-Service server, it will be processed and a message will be returned. These messages are Simple Object Access Protocol (SOAP) messages and are constructed and decoded by third party software. Each message will include a command or response. A response will typically include an optional piece called a “payload” of information.

NESIIS Web-service Information:

NESIIS has 2 message types that can be used:
• connectivityTest
• submitSingleMessage

The connectivityTest consists of one required parameter:
• echoBack – Will contain the message to be returned if the message was successfully received, validating the connection was successful.

The submitSingleMessage consists of 4 required parameters:
• username – Supplied by NESIIS staff after manual testing is complete.
• password – Supplied by NESIIS staff after manual testing is complete.
• facilityID – Supplied by NESIIS staff.
• hl7Message – Sender supplies this information. This is an HL7 message using versions v2.3.1, v2.4, or v2.5.1. (Note: web-services does not accept batch files.)

The URLs used by NESIIS are:
• UAT region: https://testnesiis-dhhs-testwebservice.ne.gov/uat-webservices/cdc
• Production region: https://nesiis-dhhs-webservice.ne.gov/prd-webservices/cdc

Contact Info: dhhs.nesiis@nebraska.gov or 1-888-433-2510
In order for a provider/vendor to utilize NESIIS Web-services, they will need to contact the NESIIS Help Desk. The NESIIS staff will then provide the appropriate WS User Name, WS Password, facilityID, and the URL to the Web-service server. Organizations must have a program that can make web service requests. In most cases, providers will be able to utilize their current immunization software.

**Note:**

NESIIS cannot configure the providers’ software as it is nearly impossible to have all of the knowledge needed to configure every piece of web service software made.

An example SOAP request (This is an HL7 2.4 example; please refer to NESIIS HL7 specifications for actual examples of either 2.4 or 2.5.1 HL7 message content):

```xml
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
               xmlns:urn="urn:cdc:iisb:2011">
  <soap:Header/>
  <soap:Body>
    <urn:submitSingleMessage>
      <!--Optional:-->
      <urn:username>IRPH</urn:username>
      <!--Optional:-->
      <urn:password>Help1</urn:password>
      <!--Optional:-->
      <urn:facilityID>IRPH</urn:facilityID>
      <urn:hl7Message><![CDATA[MSH|^~\&\|IRPH|IRPH|||20110322|TEST|VXQ^V01|52|P|2.4QRD|20110322|R||52||0^RD|^test^test^^^^^^^^|VXI|SIISQRF|MA0000|||~20000101~~~~~]]>    
    </urn:submitSingleMessage>
  </soap:Body>
</soap:Envelope>
```
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An example Response message (does not match submission example above):

```
<S:Envelope xmlns:S="http://www.w3.org/2003/05/soap-envelope">
  <S:Body>
    <submitSingleMessageResponse xmlns="urn:cdc:iisb:2011">
      <return><![CDATA[MSH|^&|NESIIS|NESIIS||IRPH|20130311||VXR^V03|52|P|2.4
MSA|AA|52||0||0^Message Accepted^HL70357
PID|1||7122956^^^^SR~1^^^^PI||ERDOS^HEATHER^OLGA^VII|RICHARDS^ZORA|19990123|F||
1002-5|123 madison^^^^NE^^^^PA|| || || || |2186-5||N|0
PD1| | | | | | | |02|Y|||A
NK1|1|ERDOS^HEATHER^OLGA|SEL|6899 OAK^^JAL^NM^87417^^RP
ORC|RE||41199494|| | | | | | |Hilleman^Mari^^^^^^^^^OEI
RXA|0|777|20130301|20130301|54^Adeno T4^CVX^90476^Adeno
T4^CPT|1.0||00|^Allenbough^Dee^J^^^^^^^^^VEI|^IR Physicians|||jons_adeno||WAL
RXR|PO|BN
ORC|RE||41199495
RXA|0|1|20120101|20120101|24^Anthrax^CVX^90581^Anthrax^CPT|1.0||01|^Li
Org| | | | |Li Test Org]]>
      </submitSingleMessageResponse>
    </S:Body>
  </S:Envelope>
```

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