

Illinois Department of Commerce and Economic Opportunity



Illinois Workforce Development System

Interface Between Illinois Workforce Development
System and Third-Party Services Tracking Systems

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Process Overview

The Illinois Workforce Development System (IWDS) provides local system administrators in a Local Workforce Innovation Area (LWIA) the ability to load information about services that are tracked in a third-party system into IWDS. The process will follow these steps:

1. The Department of Commerce, the LWIA Administrator, and the Third-Party System Administrator will discuss the requirements of the interface between IWDS and the external services tracking software. The LWIA administrator communicates the static values of all data elements necessary for capturing Local Services from a third-party package. The Local Services Request file is described in more detail in the "Description of Request Elements" section.
2. Commerce, the LWIA Administrator, and the Third-Party System Administrator agree on how services that are tracked in the Third-Party System relate to those that are tracked in IWDS for the LWIA. The Third-Party then translates its services to the LWIA's services for use in the service request. If the selected Third-Party System is unable to track the required elements a different method of collection must be chosen.
3. The Third-Party System creates a service request (see SampleRequest.xml) and communicates the xml file to the LWIA administrator. The transfer protocol will need to be defined by the LWIA Administrator and the Third-Party System Administrator.
 - a. Possible Options
 - i. Email to LWIA Administrator
 - ii. FTP to a directory on the LWIA's local server
 - iii. If the Third-Party system resides on the LWIA's local server, write to a specific directory
 - iv. LWIA Administrator can retrieve from a website provided by the Third-Party Administrator that lists request files
4. The LWIA Administrator loads the service request into IWDS via an on-line screen provided from the IWDS Staff Menu.
5. IWDS tries to process the xml file. IWDS first validates that the structure of the file is correct, according to the schema. IWDS then verifies the values in the LWIA-defined data elements. After completing validation, the file is processed and IWDS either:
 - a. Provides the LWIA administrator an "error" message specifying why the processing of the request failed. The LWIA administrator then communicates this information to the Third-Party System administrator so

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that they can correct the problem; or

- b. Provides the LWIA administrator with a "success" message that gives them information regarding the request that was entered (customers loaded, # of services loaded for customer, etc.).

Technical Overview

Third-party services will be entered into IWDS using XML transactions. Additional information about XML documents and schemas is available on the World Wide Web Consortium (W3C) website at <http://www.w3.org/TR/2001/REC-xmlschema-0-20010502>.)

Commerce has created a schema (localServiceRequest.xsd) based on the current W3C standard for building xml files that will allow third-party systems to send requests to add services to IWDS that have been tracked in the third-party system. It includes all information necessary to build the request XML document that IWDS can understand. Step 5 in the Process Overview is where IWDS will perform the validation of the XML document provided by the third-party system against the schema (localServiceRequest.xsd) that has been created by Commerce.

Description of LocalServiceRequest.xsd Schema

All information regarding data types and other requirements are contained in the localServiceRequest.xsd.

A description of each of the elements in the schema is provided in the table below.

NOTE: **Bold** elements are those that are provided by the LWIA. *Italicized* elements are those that are “group headings,” which are used only to provide context. Group headings do not have a specific value (i.e., a service episode represents a logical service which has the attributes of service date and local service ID).

Element	Description	DataType (length)
Local Service Request	The high-level group heading that represents all information needed to enter the information tracked in the third-party system into IWDS.	
Sender ID	A valid user ID from the IWDS database. This ID can be used to identify the office submitting the file. Will be provided by the LWIA.	int
LWIA ID	A unique identifier specifying the LWIA for which services are being loaded. Will be provided by the LWIA.	int
Request Timestamp	Represents the date and time that the request is initiated. The timestamp will be used to keep all of the requests between an LWIA and a Sender unique.	dateTime
Insert	A group heading that represents a set of requests to insert services for one or more customers into IWDS. Only 1 insert element is allowed within a Local Service Request element.	
Customer	A repeating group heading that represents the individual for whom services will be added. At most, 1000 customers can be included in an insert element. Customers 1001 – 1999 will be added in a second XML transaction.	
SSN	The social security number of the customer.	String (9)

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Element	Description	DataType (length)
Unique Identifier	This field is not currently being used but is reserved for future use.	String(20)
First Name	The first name of the customer.	String (20)
Last Name	The last name of the customer.	String (40)
Zip Code	The home zip code of the customer.	String (5)
Birth Date	The Date of Birth of the customer.	date
Birth Date No Answer	Indicates the customer chose not to provide their birth date. If the customer gives a birth date, this element should not be entered.	String(0)
Labor Force Status	Indicates the labor force status of the customer. Valid values are E (Employed), N (Not in Labor Force), U (Unemployed), and T (Employed but Received Notice of Termination/Military Separation).	String(1)
Labor Force No Answer	Indicates the customer chose not to provide their labor force status. If the customer gives a labor force status, this element should not be entered.	String(0)
Hispanic	A flag indicating whether the customer is Hispanic or not. Valid values are Y (yes) and N (no).	String(1)
Hispanic No Answer	Indicates the customer chose not to provide an answer to whether or not they are Hispanic. If the customer indicates whether they are Hispanic, this element should not be entered.	String(0)
Gender	The gender of the customer. Valid values are M (male) and F (female).	String(1)
Gender No Answer	Indicates the customer chose not to provide their gender. If the customer gives a gender, this element should not be entered.	String(0)
Races	A repeating group heading that represents the customers race(s). At most, 5 races can be included in a Races element.	
Race ID	A race of a customer. Valid values are WH (white), BL (black), AM (American indian or Alaskan native), AS (Asian), and HA (Hawaiian or Pacific Island).	String(2)

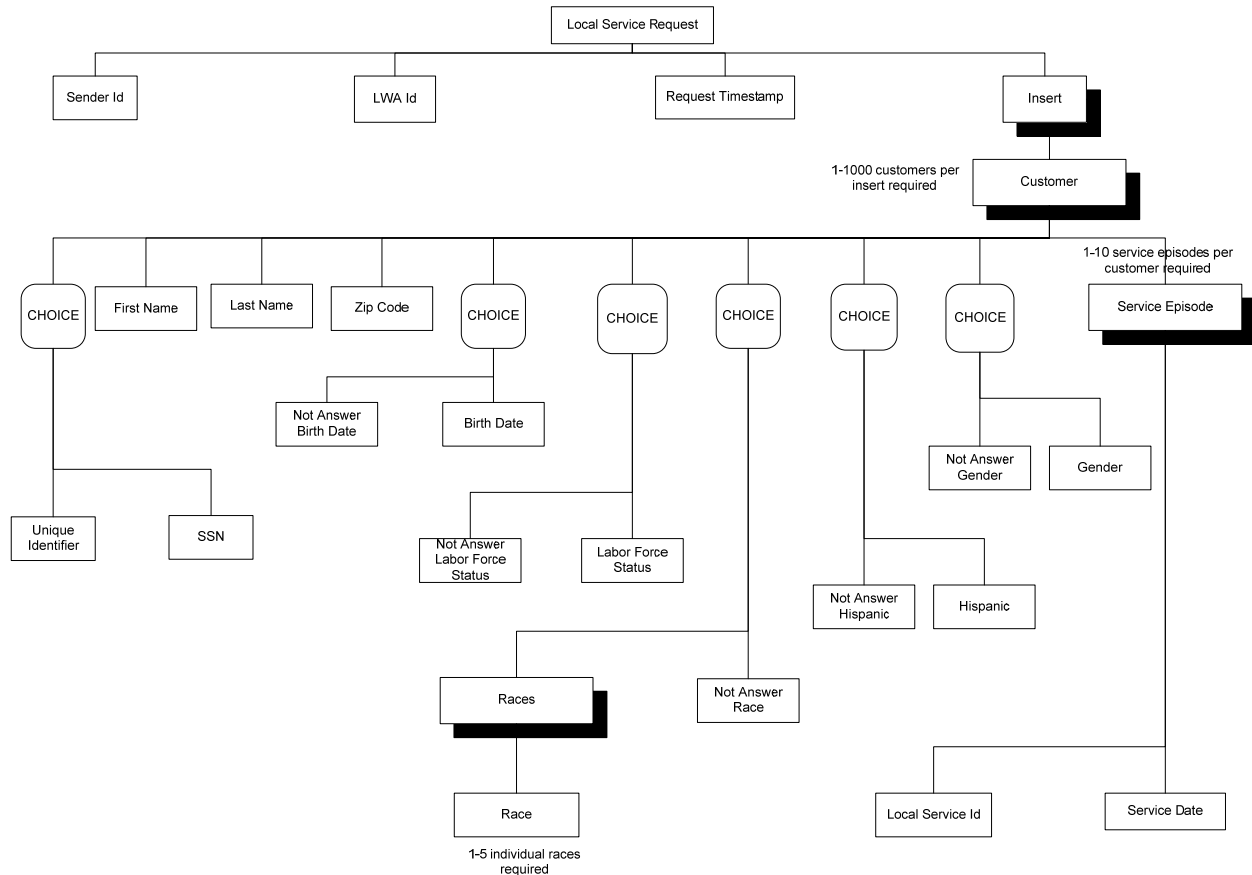
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Element	Description	DataType (length)
Race No Answer	Indicates the customer chose not to provide their race(s). If the customer gives a race, this element should not be entered.	String(0)
Service Episode	A repeating group heading that represents an individual service that is being tracked for the customer. At most, 10 service episodes can be included in a customer element.	
Local Service ID	A unique identifier for a service that has been created in IWDS for a specific LWIA. A set of valid local service IDs will be provided by the LWIA.	Int
Service Date	The date on which the service occurred.	Date

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Diagram of LocalServiceRequest.xsd Schema

Local Service Request Schema Layout



Text of LocalServiceRequest.xsd Schema

The following shows the schema (also included as an attachment <localServiceRequest.xsd> to represent how IWDS will provide it). Please see the W3C website at <http://www.w3.org/TR/2001/REC-xmlschema-0-20010502> for information regarding the layout of this document.

```
<?xml version="1.0" encoding="UTF-8"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema"
  elementFormDefault="qualified">
  <xs:element name="customer">
    <xs:complexType>
      <xs:sequence>
        <xs:choice>
          <xs:element ref="ssn"/>
          <xs:element ref="uniqueIdentifier"/>
        </xs:choice>
        <xs:element ref="firstName"/>
        <xs:element ref="lastName"/>
        <xs:element ref="zipcode"/>
        <xs:choice>
          <xs:element ref="birthDate"/>
          <xs:element ref="birthDateNotAnswer"/>
        </xs:choice>
        <xs:choice>
          <xs:element ref="laborForceId"/>
          <xs:element ref="laborForceNotAnswer"/>
        </xs:choice>
        <xs:choice>
          <xs:element ref="races"/>
          <xs:element ref="raceNotAnswer"/>
        </xs:choice>
        <xs:choice>
          <xs:element ref="hispanic"/>
          <xs:element ref="hispanicNotAnswer"/>
        </xs:choice>
        <xs:choice>
          <xs:element ref="genderId"/>
          <xs:element ref="genderNotAnswer"/>
        </xs:choice>
        <xs:sequence maxOccurs="10">
          <xs:element ref="serviceEpisode"/>
        </xs:sequence>
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:schema>
```

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```

    </xs:complexType>
</xs:element>
<xs:element name="races">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="raceId" maxOccurs="5"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="birthDate" type="xs:date"/>
<xs:element name="firstName">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="insert">
    <xs:complexType>
        <xs:sequence maxOccurs="1000">
            <xs:element ref="customer"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="lastName">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="40"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="hispanic">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="1"/>
            <xs:enumeration value="Y"/>
            <xs:enumeration value="N"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="uniqueIdentifier">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:maxLength value="20"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>

```

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```
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="birthDateNotAnswer">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="0"/>
          <xs:minLength value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="hispanicNotAnswer">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="0"/>
          <xs:minLength value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="raceNotAnswer">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="0"/>
          <xs:minLength value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="genderNotAnswer">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="0"/>
          <xs:minLength value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="laborForceNotAnswer">
      <xs:simpleType>
        <xs:restriction base="xs:string">
          <xs:maxLength value="0"/>
          <xs:minLength value="0"/>
        </xs:restriction>
      </xs:simpleType>
    </xs:element>
    <xs:element name="laborForceId">
      <xs:simpleType>
```

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```

        <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="1"/>
            <xs:enumeration value="E"/>
            <xs:enumeration value="N"/>
            <xs:enumeration value="U"/>
            <xs:enumeration value="T"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="localServiceRequest">
    <xs:complexType>
        <xs:sequence>
            <xs:element ref="senderId"/>
            <xs:element ref="LWIAId"/>
            <xs:element ref="requestTimestamp"/>
            <xs:element ref="insert"/>
        </xs:sequence>
    </xs:complexType>
</xs:element>
<xs:element name="LWIAId" type="xs:int"/>
<xs:element name="raceId">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:minLength value="2"/>
            <xs:maxLength value="2"/>
            <xs:enumeration value="WH"/>
            <xs:enumeration value="BL"/>
            <xs:enumeration value="AM"/>
            <xs:enumeration value="AS"/>
            <xs:enumeration value="HA"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="genderId">
    <xs:simpleType>
        <xs:restriction base="xs:string">
            <xs:minLength value="1"/>
            <xs:maxLength value="1"/>
            <xs:enumeration value="M"/>
            <xs:enumeration value="F"/>
        </xs:restriction>
    </xs:simpleType>
</xs:element>
<xs:element name="requestTimestamp" type="xs:dateTime"/>

```

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```
<xs:element name="senderId" type="xs:int"/>
<xs:element name="serviceDate" type="xs:date"/>
<xs:element name="serviceEpisode">
  <xs:complexType>
    <xs:sequence>
      <xs:element ref="localServiceId"/>
      <xs:element ref="serviceDate"/>
    </xs:sequence>
  </xs:complexType>
</xs:element>
<xs:element name="localServiceId" type="xs:int"/>
<xs:element name="ssn">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="9"/>
      <xs:pattern value="\d{9}"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
<xs:element name="zipcode">
  <xs:simpleType>
    <xs:restriction base="xs:string">
      <xs:length value="5"/>
      <xs:whiteSpace value="collapse"/>
      <xs:pattern value="\d{5}"/>
    </xs:restriction>
  </xs:simpleType>
</xs:element>
</xs:schema>
```

Sample Request

In this hypothetical example, LWIA 2 (McHenry County Job Training) has decided to track its locally defined services (Fax Machine and Copier) with a third-party system such as G*Stars by American Government Systems, Agency Referral Network (ARN) by Woodfield Media, or AttendTrack by Mitra International. In this hypothetical example, LWIA 2 uses G*Stars.

The service Fax Machine is defined in G*Stars as A34 and the Copier is defined as B93 in the G*Stars database.

LWIA 2 is represented in IWDS's database as 7858. LWIA 2 creates a staff user in IWDS that has the user ID of 43643. This is the "user ID" for G*Stars. IWDS defines the services for LWIA 2 as follows: Fax Machine = 4523 and Copier = 3235.

Commerce and the LWIA 2 IWDS system administrator communicates the LWIA ID (7858), the ID representing G*Stars (43643) and the IDs representing Fax Machine (4523) and Copier (3235) to the G*Stars administrator.

The G*Stars administrator sets up a translation between G*Stars' identifiers for Fax Machine(A34) and Copier(B93) and IWDS's identifiers for Fax Machine(4523) and Copier(3235).

LWIA 2 has two users come in to use their resource room, Allen Albertson and Bill Brackman. Their SSN, first name, last name, zip code, birth date, labor force status, gender, race and Hispanic indicator are loaded into G*Stars. Allen uses the Fax Machine. Bill uses both the Fax Machine and the Copier. Allen has been in the resource room previously and has been registered in IWDS. Today is Bill's first visit to LWIA's resource room.

Per an arrangement between the G*Stars administrator, the LWIA 2 administrator, and Commerce, G*Stars creates a request at the end of the week and automatically e-mails it to the LWIA 2 administrator. The LWIA 2 system administrator copies the attached request to her local file system.

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The following shows the request (also included as an attachment
<SampleRequest.xml> to represent how IWDS will expect to receive it):

```
<?xml version="1.0" encoding="UTF-8"?>
<localServiceRequest xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:noNamespaceSchemaLocation="localServiceRequest.xsd">
  <senderId>43643</senderId>
  <LWIAId>7858</LWIAId>
  <requestTimestamp>2003-08-17T09:30:47-05:00</requestTimestamp>
  <insert>
    <customer>
      <ssn>111111111</ssn>
      <firstName>Allen</firstName>
      <lastName>Albertson</lastName>
      <zipcode>11111</zipcode>
      <birthDate>1967-08-13</birthDate>
      <laborForceId>E</laborForceId>
      <racess>
        <raceId>BL</raceId>
        <raceId>AM</raceId>
      </racess>
      <hispanic>N</hispanic>
      <genderId>M</genderId>
      <serviceEpisode>
        <localServiceId>4523</localServiceId>
        <serviceDate>2003-08-13</serviceDate>
      </serviceEpisode>
    </customer>
    <customer>
      <ssn>222222222</ssn>
      <firstName>Bill</firstName>
      <lastName>Brackman</lastName>
      <zipcode>22222</zipcode>
      <birthDate>1967-08-13</birthDate>
      <laborForceId>E</laborForceId>
      <racess>
        <raceId>WH</raceId>
      </racess>
      <hispanic>Y</hispanic>
      <genderId>M</genderId>
      <serviceEpisode>
        <localServiceId>4523</localServiceId>
        <serviceDate>2003-08-13</serviceDate>
      </serviceEpisode>
      <serviceEpisode>
        <localServiceId>3235</localServiceId>
        <serviceDate>2003-08-13</serviceDate>
      </serviceEpisode>
    </customer>
  </insert>
</localServiceRequest>
```


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The LWIA 2 system administrator logs into IWDS and uses the “Load External Local Services” screen to find the file on her local file system and perform the validation and processing of the request. After the request has been validated successfully and processed, the LWIA 2 administrator sees a screen that shows that both Allen (who was already registered in IWDS) and Bill (who gets automatically registered in IWDS) have had their services added to the IWDS system successfully.