Quick Integration Packet

This document provides the required integration steps to make API requests to the Clarity system

Quick Integration Documents

Objective

This document provides the required components to successfully integrate into the Clarity system, run test and production inquiries, and obtain API responses.

This packet includes:

- **Quick Integration Process:**
  The configuration process required prior to running an inquiry. Configuration includes account activation, control file configuration, and test/production API transactions.
- **Minimum Transaction Response:**
  A sample transaction response document displaying minimum transaction elements. Use this document as a guide to format your test and production API transactions.
- **Minimum Transaction Elements (Descriptions):**
  This table describes the expected content and format for the individual transaction elements.

Supplemental Documentation and Support

Interactive web pages have been created that provide all elements, formats, descriptions, and available variables for all of Clarity's products and API transactions.

Please see the following links:

- **Inquiry Request API**
  https://login.clarityservices.com/interactive_xmls/inquiry
- **Inquiry Response API**
  https://login.clarityservices.com/interactive_xmls/inquiry_response

Connecting to Clarity Connect

A. Connecting through a web browser
To be compatible with Clarity Connect, clients must use Windows 7 or newer, and OS X Mountain Lion or newer. Browser version must be at least Internet Explorer 11, Firefox 32, Chrome 38, or Safari 6.2.

B. Connecting through API
Clients must use TLS v1.2 for their HTTPS connection protocol to be compatible with Clarity Connect.

Transaction Elements

A. API Request Structure

1. Using the programming language of choice, construct an API POST with the necessary elements as listed in the **Transaction Elements** table (pages 4 - 6). Alternatively, we also have support for a JSON POST.
2. The **XML** root level node is <inquiry>. For **JSON**, the root level node is “inquiry”
3. Ensure the two HTTP headers, **Accept** and **Content-Type**, are set to **text/xml**. For **JSON, Accept** and **Content-Type** must be set to **application/json**.
4. If you choose **JSON** format, all fields must be underscores instead of dashes.

Authentication Requirements:
(required for connection)

- Group, Account, Location
- Username/Password
- Control File
- Whitelisted IP Address(es)

B. Build a TEST API Request

Replace the highlighted credentials with your own.

Sample.xml

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<inquiry>
<group-id>1</group-id>
<account-id>2</account-id>
<location-id>3</location-id>
<username>yourusername</username>
<password>yourpassword</password>
<control-file-name>my_control_file</control-file-name>
<bank-account-number>1234567890</bank-account-number>
<bank-account-type>CHECKING</bank-account-type>
<bank-routing-number>123456789</bank-routing-number>
<cell-phone>1112223333</cell-phone>
<city>Clearwater</city>
<date-of-birth>1984-01-01</date-of-birth>
<date-of-next-payday>2016-10-01</date-of-next-payday>
<drivers-license-number>2345-5678</drivers-license-number>
<drivers-license-state>FL</drivers-license-state>
<email-address>test@test.test</email-address>
<employer-address>123 Anywhere St</employer-address>
<employer-city>Clearwater</employer-city>
<employer-state>FL</employer-state>
<first-name>First</first-name>
<last-name>Last</last-name>
<generational-code>JR</generational-code>
<home-phone>2223334444</home-phone>
<housing-status>RENT</housing-status>
<inquiry-purpose-type>AR</inquiry-purpose-type>
<inquiry-tradeline-type>C1</inquiry-tradeline-type>
<net-monthly-income>1500</net-monthly-income>
<pay-frequency>WEEKLY</pay-frequency>
<paycheck-direct-deposit>true</paycheck-direct-deposit>
<reference-first-name>Sam</reference-first-name>
<reference-last-name>Plereference</reference-last-name>
<reference-phone>3334445555</reference-phone>
<reference-relationship>EMPLOYER</reference-relationship>
<social-security-number>301001240</social-security-number>
<state>FL</state>
<street-address-1>456 Somewhere St</street-address-1>
<street-address-2>Unit 2</street-address-2>
<months-at-address>12</months-at-address>
<months-at-current-employer>48</months-at-current-employer>
<work-fax-number>5556667777</work-fax-number>
<work-phone>6667778888</work-phone>
<zip-code>33755</zip-code>
</inquiry>
```

Sample.json

```json
{
 “inquiry”: {
  “group_id”: “1”,
  “account_id”: “2”,
  “location_id”: “3”,
  “username”: “yourusername”,
  “password”: “yourpassword”,
  “control_file_name”: “my_control_file”,
  “bank_account_number”: “1234567890”,
  “bank_account_type”: “CHECKING”,
  “bank_routing_number”: “123456789”,
  “cell_phone”: “1112223333”,
  “city”: “Clearwater”,
  “date_of_birth”: “1984-01-01”,
  “date_of_next_payday”: “2016-10-01”,
  “drivers_license_number”: “2345-5678”,
  “drivers_license_state”: “FL”,
  “email_address”: “test@test.test”,
  “employer_address”: “123 Anywhere St”,
  “employer_city”: “Clearwater”,
  “employer_state”: “FL”,
  “first_name”: “First”,
  “last_name”: “Last”,
  “generational_code”: “JR”,
  “home_phone”: “2223334444”,
  “housing_status”: “RENT”,
  “inquiry_purpose_type”: “AR”,
  “inquiry_tradeline_type”: “C1”,
  “net_monthly_income”: “1500”,
  “pay_frequency”: “WEEKLY”,
  “paycheck_direct_deposit”: “true”,
  “reference_first_name”: “Sam”,
  “reference_last_name”: “Plereference”,
  “reference_phone”: “3334445555”,
  “reference_relationship”: “EMPLOYER”,
  “social_security_number”: “301001240”,
  “state”: “FL”,
  “street_address_1”: “456 Somewhere St”,
  “street_address_2”: “Unit 2”,
  “months_at_address”: “12”,
  “months_at_current_employer”: “48”,
  “work_fax_number”: “5556667777”,
  “work_phone”: “6667778888”,
  “zip_code”: “33755”
 }
}
```

Transaction Elements

C. Submit a TEST API Request

1. Use a test Social Security Number (SSN) to obtain sample API responses.
2. Run the following curl command for **XML**:

```
curl -X POST -d @sample.xml https://test.clarityservices.com/test_inquiries
--header "Content-Type: text/xml" --header "Accept: text/xml"
```

   For **JSON**, run the following curl command:

```
curl -X POST -d @sample.json https://test.clarityservices.com/test_inquiries
--header "Content-Type: application/json" --header "Accept: application/json"
```

3. Use only test data – production data must not be sent to the test system.
4. Submit your test POST to: https://test.clarityservices.com/test_inquiries
5. Review your test API response and confirm your results.

D. Submit a PRODUCTION API Request

1. Submit your POST to: https://secure.clarityservices.com/inquiries
2. Review your API response and confirm your results.
3. Clarity recommends capturing all of the product data fields in addition to the fields listed in the Recommended Elements to Capture table on page 9.

DO NOT SUBMIT TEST DATA INTO PRODUCTION

> **NOTE:** Approval from the production support team is required before sending inquiries to the production system. Once you feel you are ready to go live, contact the production support team so your tests may be checked for accuracy and completeness. See page 11 for ways to contact Production Support.

Fields of Statistical Significance

Clarity strives to produce the best statistically-driven products for its clients. In order to produce optimal results from future and current products, it is imperative that clients submit data for the following fields when available. **Failure to provide these fields may affect product performance.**

- last-name
- first-name
- generational-code
- street-address-1
- street-address-2
- city
- state
- zip-code
- social-security-number
- date-of-birth
- bank-account-number
- bank-routing-number
- email-address
- home-phone
- cell-phone
- work-phone
- occupation-type
- drivers-license-state
- drivers-license-number
- net-monthly-income
- leadgen
- origination-ip-address
- employer-name
- employer-address
- employer-city
- employer-state

Transaction Elements

Element	Description
group-id account-id location-id	ID provided by Clarity Services. (Reference the User Name Notification email).
username	Client username provided by Clarity at the time of contract. This is used to identify the client and provide access to the account.
password	Client password as created by the client. Clarity does not have access to this.
last-name	Last name of the primary consumer. Hyphens, apostrophes, and other non-alphabetic characters are acceptable.
first-name	Consumer's first name.
middle-initial	Consumer's middle initial.
generational-code	Represents the generation of the consumer's name. Format: Single character. **JR** = Junior **SR** = Senior **2** = II **3** = III **4** = IV **5** = V **6** = VI **7** = VII **8** = VIII **9** = IX
street-address-1	Consumer's primary address. If the mailing address is a P.O. Box or Rural Route, include Box or Route followed by the number (e.g., P.O. Box 100). Do not report both a street address and a P.O. Box. If the mailing address is a private mailbox (PMB), the street address should be reported in address1 (e.g., 5678 Main Street). The PMB number should be reported in the address2 (e.g., PMB 1234). As an alternative, the entire address can be reported in address1: for example, 5678 Main Street, PMB 1234.
street-address-2	Consumer's additional address information.
city	Consumer's city.
state	Consumer's state. Format: 2 letter state abbreviation (e.g. FL).
zip-code	Consumer's zip code. Format: 5 or 9 digits.
housing-status	One of the following values (case insensitive): **Rent, Own, Family Friend, Other**
months-at-address	Total months the consumer has lived at the current address.
social-security-number	Consumer's SSN Format: 9 digits, no hyphens (e.g. 123456789).
date-of-birth	Consumer's date of birth. Format: YYYY-MM-DD.
drivers-license-number	Consumer's driver's license number. Format: 2-20 characters.
drivers-license-state	State issuing consumer's driver's license. Format: 2 letter state abbreviation (e.g. FL).
bank-routing-number	Consumer's bank routing number. Format: 9 digits.
bank-account-number	Bank account number. Format: digits with no dashes or spaces.
bank-account-type	Select one of the following values: • **Checking** • **Debit Card** • **Other** • **Savings** • **Money Market**
inquiry-purpose-type	Select one of the following values: **AR** = New Credit **RA** = Update Credit **RP** = Consumer Inquiry **CL** = Skip Trace **PC** = Screen Consumer **MS** = Credit Monitor **LH** = Lease Hard **GS** = GLB Soft **RD** = Reported Denial (Only used in Adverse Action Notification)

Transaction Elements

NOTE: When creating XML, the ampersand "&" is a forbidden character and will cause an error. Therefore, we strongly advise always escaping any fields which may include ampersands, especially employer_name. You can do this by escaping the ampersand as & or by wrapping the contents of the field with a CDATA block.

Example:
```
<![CDATA[
Acme & Associates
]]>
```

Element	Description
inquiry-tradeline-type	Select the appropriate value: (Below are some commonly used tradeline types. If you do not see your tradeline type, please contact your account manager.) **C1** = Internet Payday Loan **C5** = Rent to Own **C6** = Storefront Unsecured Loan **C2** = Storefront Payday Loan **C3** = Internet Unsecured Loan For additional inquiry tradeline types, reference the Inquiry Response XML web page.
email-address	Consumer's email address (e.g. jdoe@internet.com).
home-phone	Consumer's home phone number. Format: 10-digits only, no leading 1s (e.g. 7271231234) .
cell-phone	Consumer's cell phone number. Format: 10-digits only, no leading 1s (e.g. 7271231234) .
work-fax-number	Consumer's work fax number. Format: 10-digits only, no leading 1s (e.g. 7271231234).
work-phone	Consumer's work phone number. Format: 10-digits only, no leading 1s (e.g. 7271231234).
work-phone-extension	Consumer's work phone extension. Format: numbers only (e.g. 1234).
occupation-type	Consumer's occupation code. Use the Bureau of Labor Statistics standard Occupational Classifications.
months-at-current-employer	Total number of months consumer employed at current job. Whole numbers only (e.g. 5).
employer-name	Employer's name.
employer-address	Employer's street address.
employer-city	Employer's city.
employer-state	Employer's state code. Format: 2 letter state abbreviation (e.g. FL).
net-monthly-income	Consumer's **total take-home** ***monthly income***. Format: digits only (e.g. 2000).
date-of-next-payday	Date of next payday. Format: YYYY-MM-DD.
pay-frequency	One of these values: **Daily, Weekly, Biweekly, Semimonthly, Monthly**
paycheck-direct-deposit	Either **0** for false or **1** for true.
reference-first-name	Consumer's reference first name.
reference-last-name	Consumer's reference last name.
reference-phone	Consumer's reference phone number. Format: 10-digits only, no leading 1s (e.g. 7271231234).
reference-relationship	One of the following values: **Employee, Relative, Friend**
control-file-name	Control file name.
control-file-version-number	If not provided, the highest approved version will be utilized. **NOTE:** We recommend leaving this field blank to always use the most recent approved version of the control file specified.

Transaction Elements

Element	Description
leadgen	If using a lead generator, this field is used to display the name of the lead generator from which the lead being inquired on was purchased.
vin	The Vehicle Identification Number (VIN) of the vehicle being used as collateral for a title loan.
origination-ip-address	The IP address collected by the lender when the consumer is on their landing page.
device-string	The string of data that is created by the Iovation JavaScript that runs on the lender's landing page when using Clear PC Fraud.™
initiating-inquiry	The Clarity tracking number from the original inquiry. **NOTE:** See page 8 for more information on how Clarity handles multiple inquiries on the same consumer application.
loan-amount	The amount of the consumer's loan.
new-customer	Identify the customer as a new or returning customer.
payment-type	The type of payment that this transaction is for. Possible Values: **First Payment** Possible Values: **Rollover** Possible Values: **Collection**
xml-response-tracking-number	The tracking number of the original inquiry which was used to fund the current loan for the consumer.
pass-through-X	Used to reflect your agency information. X represents any number from 1 through 5 (i.e. "pass-through-3") and may be used to enter your agency data. Information entered is mirrored back in the Clarity response. May include hyphens or parentheses, no commas.

NOTE: For additional information or instructions on how to submit the required elements, contact the Clarity production support team. See page 11 for ways to contact Production Support.

NOTE: Not all elements are needed to submit an inquiry. If you are unsure if an element is needed, please contact the Clarity production support team. See page 11 for ways to contact Production Support

NOTE: For a full description of every inquiry request element and their corresponding values, please visit:
https://login.clarityservices.com/interactive_xmls/inquiry

Initiating Inquiry

Handling Multiple Inquiries on the Same Consumer Application

Clarity returns a unique tracking number on each inquiry response. In order for Clarity to recognize if an inquiry is a subsequent part of a previous credit inquiry, a lender must insert the tracking number from the first inquiry in the sequence into the "initiating inquiry" field.

The following criteria must be met to process multiple inquires as one:

- The multiple inquiries must come from the same lender's location. The original tracking number must be present in the initiating inquiry field to indicate a transaction is a part of a group. Subsequent inquiries must occur within 30 minutes of original inquiry.
- All data elements on the application must remain the same. Multiple control files can be used.
- An inquiry that does not meet the above criteria will be considered an individual inquiry and not part of a group.

Inquiry Response

Inquiry Responses are the replies that Clarity sends back to a lender once an inquiry has been recieved. A lender will want to capture all of the product data in addition to the fields listed in the Recommended Elements to Capture table.

XML FORMAT

```
<xml-response>
  <tracking-number></tracking-number>
  <action></action>
  <filter-codes></filter-codes>
  <filter-descriptions></filter-descriptions>
  <exception-descriptions></exception-descriptions>
  <identity-theft-prevention></identity-theft-prevention>
  <clear-products-request>
    <account-name></account-name>
    <action></action>
    <control-file-name></control-file-name>
    <control-file-substituted></control-file-substituted>
    <control-file-version-number>
    </control-file-version-number>
    <filter-codes></filter-codes>
    <filter-descriptions></filter-descriptions>
    <exception-descriptions></exception-descriptions>
    <group-name></group-name>
    <location-name></location-name>
    <username></username>
  </clear-products-request>
  <inquiry>
    <action></action>
    <filter-codes></filter-codes>
    <filter-descriptions></filter-descriptions>
    <exception-descriptions></exception-descriptions>
    ...
  </inquiry>
  ...
</xml-response>
```

JSON FORMAT

```
{
   “xml_response”: {
      “tracking_number”: “”,
      “action”: “”,
      “filter_codes”: “”,
      “filter_descriptions”: “”,
      “exception_descriptions”: “”,
      “identity_theft_prevention”: “”,
      “clear_products_request”: {
         “action”: “”,
         “control_file_name”: “”,
         “control_file_substituted”: “”,
         “control_file_version_number”: “”,
         “filter_codes”: “”,
         “filter_descriptions”: “”,
         “group_name”: “”,
         “account_name”: “”,
         “location_name”: “”,
         “username”: “”
      },
      “inquiry”: {
         “action”: “”,
         “filter_codes”: “”,
         “filter_descriptions”: “”,
         “exception_descriptions”: “”,
         ...
      }
   }
}
```

Recommended Elements to Capture	
tracking-number	This field must always be captured as it is what identifies the transaction for support and study purposes.
action	This is the main decision of the transaction. This field will return “approve“, “deny”, “exception”, “positive approve” or “review”.
filter-codes	This field should only be captured if the action field returns “deny”, “positive approve” or “review”.
filter-descriptions	This field should only be captured if the action field returns “deny”, “positive approve” or “review”.
exception-descriptions	This field should only be captured if the action field returns “exception”.
identity-theft-prevention	This will only be generated when there is an identity theft fraud alert.

NOTE: The “identity-theft-prevention” field is only populated when a consumer’s SSN has a match in the Clarity or third party data provider’s database for identity theft fraud alerts.

NOTE: For a full description of every Inquiry Response element and their corresponding values, please visit:
https://login.clarityservices.com/interactive_xmls/inquiry_response

Test SSNs

To test results, you need to use a test SSN in your API request.

Test SSNs are created upon request and are customized to your needs. Any combination of products can be selected with simple or complex responses.

Clarity's production support team will work with you and your Clarity account manager to help you determine the list of products that will be called for each test SSN. The production support team will also work with you to select the responses needed for your tests.

We also offer canned test SSNs for simple testing of the request and response model.

NOTE: "Non-FCRA" products cannot be used as the basis of an Adverse Action, and therefore cannot be used to return a "deny" response. In cases where a positive determination cannot be made, a "review" response will be returned.

NOTE: Use a test SSN to obtain the proper response from the test system. SSNs control the products that are run in the test system. The use of any other SSN will return a different response and format.

NOTE: Clarity has interactive API guides available on Clarity Connect with interactive links that will display all of the XML being sent and received. The interactive API guides also contain descriptions and possible values for each field.

Client Services and Escalation

For Support During Regular Business Hours

(Monday - Friday 8 a.m. - 5 p.m. EST)

Client Services
(727) 400-4678
Email: clarityclientservices@experian.com
Client services provides assistance with issues relating to your account, control files, contact details, our extranet, system issues, etc.

Production Support
(727) 470-6018
Email: clarityproductionsupport@experian.com
The production support team addresses issues relating to integration tests, loan reporting, FTP login, batch uploads, etc.

For After-Hours Production Issues

You will be prompted to leave a voicemail when contacting the on-call engineer. Upon leaving a voicemail, our system will prompt the after-hours team and the first available team member will contact you. Please ensure your voicemail includes your name, contact information, Clarity Group name, and the reason for your call.

Production Support
On-Call Engineer:
(813) 230-7728

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