LoanConnect

Lender API Integration v1.4.0

Lender Integration Process:

<u>One:</u> Register your Lending company by creating an account on our Lending portal at the links found below.

<u>Two:</u> Your company's account will be reviewed, approved, and activated by LoanConnect. You will receive an email with further information on your account.

<u>Three:</u> Complete company profile on lending partner portal. You will provide a web suitable version of your logo in PNG format with a clear background if possible, your company name, etc.

<u>Four:</u> Definition of Loan Products. You will create a number of loans in our system to help target different market segments with offers that meet your pre-approval criteria.

-=   HINT: most Companies start at <u>Five</u> and we backfill the preceding items =-

<u>Five:</u> An integration planning meeting with our technical leads will provide the direction on the best methods for transferring the applicants deep into your application process. Contact your LoanConnect representative to help you setup that integration meeting.

<u>Six:</u> Integration customizations are built or configured by the Lender and/or LoanConnect to meet the design goals.

<u>Seven:</u> Integration testing and confirmation that the systems are properly configured and all workflows are working as designed.

<u>Eight:</u> Launch! We transfer the configuration from the Sandbox environment into Live Production servers and real borrowers will be sent into your systems.

Integration Details

Lender Account Creation

At both the Live and Test endpoints you must apply to be a Lender in order to gain access to the Lender Dashboard.

- TEST = https://sandbox.loanconnect.ca/our-partners
- LIVE = https://loanconnect.ca/our-partners

After applying online we recommend you email your LoanConnect representative to expedite the account activation. Once your account is approved you will be able to login and update your Company Profile and define your Loan Products.

LoanConnect Application Processing Overview
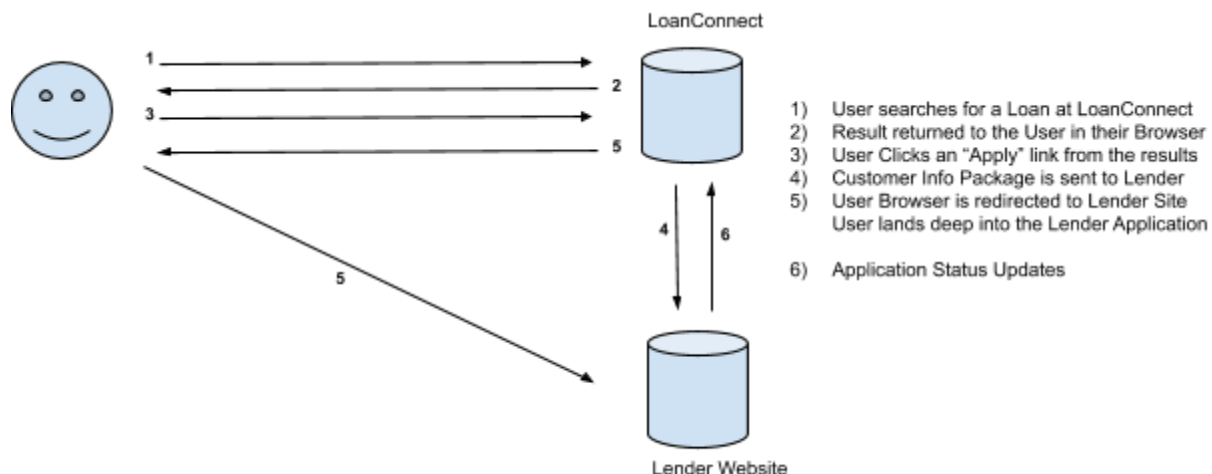
When a User matches your pre-approval criteria and they select your Loan Product from the search results, they will be directed to your website to complete the remaining process on your system. This document describes the various options available for facilitating the transfer of Client Information Package (CIP) to your systems and creating a seamless application process to reduce abandon rates.

LoanConnect has completed many integrations and it is best to begin with the end state in mind and work backward from there. The ultimate goal is that the User arrives at the Lender where all of their information collected by LoanConnect is pre-populated into the Lender's application

form. The effect of seeing their information entered into the form significantly reduces bounce rates and establishes the trust that they are on the correct path to acquiring a loan.

Working backwards we'll start at Step 5.

Landing Page (Step 5):

LoanConnect requires at least one URL to the Lender's System where we will send the User when they Apply to one of your Loan Products. This URL must do three things:

1. Tag this Lead as LoanConnect's for the purpose of commission tracking

2. Ensure the User sees that their information has been accepted or entered into the lender's application form

3. Store LoanConnect's Customer ID for this User for the purpose reporting status later (see Step 6)

The LoanConnect system is able to append the CIP data to this URL so that User data is available to the Lender's system such that the Landing Page can consume and process the User in a single step. Most Lenders choose to digest the CIP via this path as it simplifies the work required. Accepting the CIP on the Landing Page may remove the need to do Step 4.

If your website is multilingual then we require a unique url for each of your supported languages. This will ensure that the User's language preference gathered by LoanConnect is maintained when they arrive on your site. The default in the absence of a matching language is always English.

If your system has additional constraints in the workflow that requires pre-processing (account creation) or rejecting certain leads then a Pre-Processing integration is required; See Step 4.

NOTE: The LoanConnect Lender Portal includes an interface where you may transform the CIP property names to match your systems to reduce the development costs associated with this integration step. Ex: "province" may be changed to "state", or "firstname" changed to "fname", etc.

Pre-Processing the CIP (Step 4):

If your system requires notification prior to the User arriving for the purpose of pre-screen, or account creation, then we must implement a CIP transfer process.

LoanConnect requires a HTTPS encrypted URL to execute CIP pre-processing. We will use this URL to configure the CIP transfer as one of these modes as chosen by your team:

● HTTPS GET where all CIP fields are appended to the URL

● HTTPS POST where the CIP fields are transmitted as POST parameters

● HTTPS POST where the CIP is transmitted as a JSON payload

Upon successful transmission we will move on to Step 5 and redirect the User to your Landing Page.

On error, we return the User to their search results to select a different Loan Product. It is imperative that your system respond quickly to this request as it is blocking the User's browser and delays in CIP transfer will directly affect the abandon rate. We budget 2 seconds for this transfer and delays beyond this may cause LoanConnect to treat the CIP transfer as a failure.

This is a Machine to Machine (M2M) interface and together we can report the CIP transfer status to automate handling failures or instant rejections. Please have the system receiving this request respond with the following JSON object on success or failure:

{ "status":"success" }

      Or:

{"status": "failure"}

To help support the Verdict Callback webhook in Step 6, it is possible to track application status using the Lender's tracking IDs instead of LoanConnect's "client_id". In this situation the Response JSON object must be extended with additional parameters that LoanConnect will record as a reference to this user and application and facilitate status tracking later:

{

"status":"success",

"user_id": "unique_for_each_user_assigned_by_lender",

"application_id": "unique_for_each_application_assigned_by_lender"

"redirect_url": "unique_landing_page_to_send_the_borrower_to"

}

Verdict Reporting (Step 6):

During the full processing of an Applicant in your system we request status updates be sent back to LoanConnect daily. These updates allow us to report and track payments and commissions earned by our Affiliate Partners and various marketing campaigns. Timely reporting is essential in Affiliate Networking so that traffic providers have immediate feedback on their efforts so they may adjust and improve without significant risk to their operations.

NOTE: Lenders who do not provide dynamic updates and instead chooses to reconcile commissions manually will be excluded from lead sources with real-time reporting requirements.

We have two methods for Verdict Reporting but you need only implement one of these.

Option #1: WebHook Integration

On every state change to a loan application we request that you make a callback to our WebHook address to inform our system that an event has occurred.

Our webhook endpoints:

- TEST = https://sandbox.loanconnect.ca/api/loanCallBackStatus
- LIVE = https://loanconnect.ca/api/loanCallBackStatus

The following variables may be transmitted from your server to LoanConnect via HTTPS POST or HTTPS GET. Parameters not marked as "[REQUIRED]" are optional.

Variable Name	Data Type	Description
client_id	String	[REQUIRED] [1] LoanConnect's Unique ID for the user and transmitted to Lender in both Step 4 and Step 5.
company_id_code	String	[REQUIRED] Unique ID that identifies the Lender in LoanConnect's systems. You can find your unique code in the LoanConnect Lender Portal, or request it from your LoanConnect representative, or extract it from the CIP in Step 4.
key	String	[REQUIRED] Secret access key linked to your account. You can find your unique code in the LoanConnect Lender Portal, or request it from your LoanConnect representative
status	String	[REQUIRED] This represents the current event state of the application within the Lender's systems. On every important state change a Webhook API call to LoanConnect should be made. This is a free form string field and any description of status

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[1] If "USER_ID" field is present, then "CLIENT_ID" is optional

		is accepted and stored. If we detect key phrases in your status we will update the LoanConnect status accordingly
		Reserved "status" phrases include: ● "accepted" - user information received by lender ● "started" - user reached first page of application ● "completed" - user reached last page of application ● "approved" - final approval for the loan ● "funded" - user has received their loan ● "declined" - declined A lender must report: "accepted", "started", "completed", "approved", "funded", and "declined" events along with any other events that trigger commission payments according to your agreement with LoanConnect. The additional non-commission related states are used to improve the matching algorithms at LoanConnect so that over time we may optimize the best leads for your company.
commission	float	The earned commission value in dollars associated with this status event. For most lenders this is always the same value, however if your commission schedule varies based on the size of the loan amount then this field is how you indicate the actual LoanConnect commission. NOTE: when present we will automatically pay commissions to the Affiliate Partner who landed the lead. A value here is a binding commitment to pay LoanConnect this amount.
user_id	String	This is the same tracking identifier for the user as assigned by the Lender in Step 4. This allows a Lender to indicate which user this verdict report is for.
application_id	String	This is the same tracking identifier for the application as assigned by the Lender in Step 4. This allows a Lender to have multiple different applications with a single user and to specify the status for each.
email	String	This is the user's email attached to the account. Used to reconcile if other identifiers are missing.
phone	String	This is the user's phone number attached to the account. Used to reconcile if other identifiers are missing.

amount	Float	[REQUESTED[2]] Dollar amount of the loan. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender approves a smaller loan than was requested.
apr	Float	[REQUESTED] The APR for the loan. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender's Loan Product has a range for APR in LoanConnect and a final APR within the range was determined.
term	Float	[REQUESTED] The duration of the Loan in Months. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender's Loan Product has a different duration than the issued loan.
type	String	[REQUESTED] Free form field that describes the Loan Product associated with this event. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender upsells from unsecured loan to a secured product.

Option #2: SFTP Batch Reporting

A Lender may elect to utilize existing reporting mechanisms within their organization to produce a daily batch report. These daily reports may be placed on LoanConnect's SFTP site or on the Lender's SFTP. The CSV report should contain the current status of all LoanConnect applications for the past 60 days in a rolling window along with the any available data from the fields listed below.

Variable Name	Data Type	Description
client_id	String	[REQUIRED] LoanConnect's Unique ID for the user and transmitted to Lender in both Step 4 and Step 5.
status	String	[REQUIRED] This represents the current event state of the application

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[2] REQUESTED fields are required for any Lender to be approved for some Affiliate traffic sources. These fields along with completing the Lender Certification Documentation establish the required trust in end to end protection of customer data.

		within the Lender's systems. On every important state change a Webhook API call to LoanConnect should be made.
		This is a free form string field and any description of status is accepted and stored. If we detect key phrases in your status we will update the LoanConnect status accordingly
		Reserved "status" phrases include: ● "accepted" - user information received by lender ● "started" - user reached first page of application ● "completed" - user reached last page of application ● "approved" - final approval for the loan ● "funded" - user has received their loan ● "declined" - declined
		A lender must report: "accepted", "started", "completed", "approved", "funded", and "declined" events along with any other events that trigger commission payments according to your agreement with LoanConnect.
		The additional non-commission related states are used to improve the matching algorithms at LoanConnect so that over time we may optimize the best leads for your company.
commission	float	The earned commission value in dollars associated with this status event. For most lenders this is always the same value, however if your commission schedule varies based on the size of the loan amount then this field is how you indicate the actual LoanConnect commission. NOTE: when present we will automatically pay commissions to the Affiliate Partner who landed the lead. A value here is a binding commitment to pay LoanConnect this amount.
user_id	String	This is the same tracking identifier for the user as assigned by the Lender in Step 4. This allows a Lender to indicate which user this verdict report is for.
application_id	String	This is the same tracking identifier for the application as assigned by the Lender in Step 4. This allows a Lender to have multiple different applications with a single user and to specify the status for each.
email	String	This is the user's email attached to the account. Used to reconcile if other identifiers are missing.

phone	String	This is the user's phone number attached to the account. Used to reconcile if other identifiers are missing.
amount	Float	[REQUESTED] Dollar amount of the loan. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender approves a smaller loan than was requested.
apr	Float	[REQUESTED] The APR for the loan. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender's Loan Product has a range for APR in LoanConnect and a final APR within the range was determined.
term	Float	[REQUESTED] The duration of the Loan in Months. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender's Loan Product has a different duration than the issued loan.
type	String	[REQUESTED] Free form field that describes the Loan Product associated with this event. The purpose is to inform LoanConnect on a change in the product that may affect commissions. ex: Lender upsells from unsecured loan to a secured product.

Contact your LoanConnect account manager to have your SFTP credentials created and begin the integration testing for reporting your verdicts as a daily batch.

Custom Integrations

We recognize a Lender's internal environments make changing backend systems to integrate with the LoanConnect API a significant challenge. Our development team is here to help and we will engage in building custom solutions for each of the critical integration steps 4, 5, and 6, if the Lender has existing integration points that should be used instead of the proposed LoanConnect design.

Guiding Principles of Courtesy

During development of your, ours, and other software we will of course need to make use of the sandbox servers to conduct various forms of testing. Please take note that following the Lender Apply links in LoanConnect Search Results may transmit information to our Lending or Affiliate partners. We ask for you to consider this before making test automation systems or performing excessive use of the API.

Lenders who have integrated with LoanConnect may receive test applications and task call center operators to adjudicate or otherwise engage in activities associated with these phantom applications. We don't want to burden our Lenders with additional costs associated with servicing our API testing.

So as a helpful indicator to our Lenders we advise that the majority of your test case personas carry some combination of TEST indicators in the payloads:

- firstname / lastname: Consider adding "_TEST" or some form of visual cue that this record is not a real application
- phone: using area code "555" or exchange of "555" will most often cause auto-dialers in call centers reject the number and move on to the next account
- pc: "X0X 0X0" is handy to indicate a fake address
- email: All "@example.com" emails will be excluded from our mailing lists

Also, if you can simply avoid clicking on the Lender's Apply link then there is no problem and your testing at LoanConnect will not affect the Lenders' systems.

Caveats

The LoanConnect v1.0 system is designed to reduce all friction for the Applicant. In pursuit of this goal LoanConnect does not enforce strong association or ownership of accounts within the system. The result of this design decision is that two key indicators of Identity emerge within the system:

- Phone Number
- Email Address

If either of these fields match an existing record in the LoanConnect v1.0 system then we make the assumption that this is a returning customer and update the existing record with the new data supplied in the API call.

It is important that you avoid using your Partner or Lender login account as test data in the API or on the LoanConnect website. Do not use your real phone number or email address as test data. And of course you won't be the first to think about using "test@example.com" or "555-555-5555" either…

Appendix A: Client Information Package

Variable Name	Format / Data Type	Description
client_id	String	Unique ID for this client application
salutation	String	One of [mr | mrs | ms]
firstname	String	Ex: "John"
lastname	String	Ex: "Smith"
email	String	Ex: "john.smith@example.com"
street_address	String	Ex: "123 Example Road"
city	String	Ex: "Toronto"
province	String	One of [AB | BC | MB | NB | NL | NS | NT | NU | ON | PE | QC | SK | YT]
phone	String	Ex: "555-321-9876"
postal_code	String	Ex: "M4A0H0"
credit_score	String	Self reported credit rating. One of [excellent | good | fair | poor | no_credit]
past_bankruptcy	String	One of [true | false]
past_consumer_proposal	String	One of [true | false]
income	String	Annual income in dollars
housing_costs	String	Monthly housing expense in dollars
other_costs	String	Other monthly expenses in dollars
type	String	Purpose of the loan
amount	String	Dollar amount requested for the loan
employment_status	String	One of [full_time | part_time | self_employed | unemployed | other]
residence_type	String	One of [canadian_citizen | permanent_resident |

		work_permit | student | visitor | other]
housing_status	String	One of [rent | own | neither]
dob	Date "YYYY-MM-DD"	Date of Birth
company_id_code	String	This is your Lender Id at LoanConnect and is used for Verdict Reporting
sin	String	* Deprecated *
partner_name	String	* Deprecated *
partner_email	String	* Deprecated *
partner_phone	String	* Deprecated *
partner_company	String	* Deprecated *

Appendix B: Sample CIP as JSON

{

  "client_id": "DTVG_0hY3_p4U6wUJKP44gMGzrj8vNo9jL47Xj72bLU",

  "firstname": "Sally-Sample-2684",

  "lastname": "Mike-Testmiester-2584",

  "email": "6b6fa2338482d4f2e92da5a9f81672d9@example.com",

  "street_address": "1 somewhere over the rainbow",

  "city": "London",

  "province": "PE",

  "phone": "555-580-6867",

  "postal_code": "M0M0M0",

  "credit_score": "good",

  "past_consumer_proposal": "false",

  "other_costs": "2229",

  "amount": "5466",

  "housing_status": "own",

  "residence_type": "canadian_citizen",

  "employment_status": "full_time",

  "income": "20612",

  "sin": "null",

  "housing_costs": "540",

  "dob": "1965-03-22",

  "past_bankruptcy": "false",

  "salutation": "Mr",

  "type": "Buy a Car",

  "partner_name": "null",

  "partner_email": "null",

  "partner_phone": "null",

  "partner_company": "null",

  "company_id_code": "e8Rnfg37lgDrowsR0paHsu0_2sBWNM1bJZWYXQHmE4k"

}