

ACES² Application
Programming Interface (API)
REFERENCE GUIDE



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Proprietary and Confidential

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1 Overview

This document is a guide to the ACES² Application Programming Interface (API) that is available to all member law schools. The ACES² API allows you to perform unattended data exchange from ACES² to university systems.

In order to use the ACES² API, the law school or university must agree to the software licensing language on the screen before the software will launch.

Please contact your LSAC regional support manager if you have questions.

2 Requirements for Installation

Your school must satisfy the following requirements before you can implement the API software. Once these requirements are met, LSAC will send the API software using secure email to the university technical support person you have designated.

2.1 Windows Operating System Requirements

The API software is only compatible with Microsoft Windows operating systems—specifically, Windows 7, 8, and 10; Server 2008R2; and Server 2012.

Your Windows environment must also have Microsoft .Net Framework version 4.0 or higher installed. (Please refer to Appendix A for instructions on how to determine if the appropriate .Net software is installed.)


We strongly recommend that you apply all available Microsoft updates to your Windows environment after any required software has been installed.

2.2 Registration for the Target Computer's Request Authentication

To ensure that API requests are made from a trusted source and so that LSAC can authenticate those requests, you must provide LSAC with the following information to complete registration:

- Computer name, including domain name
- Computer IP address
- Computer MAC address
- Full operating system name (including type, such as Enterprise or Standard)

This authentication scheme links the API software to a specific computer in your law school or university's network. Each time the API software runs, it collects the values from the target computer and creates a time-sensitive key that is matched against the key that is generated and authenticated by the LSAC web server. If the API software is moved to another computer that has not been registered (as described above), it will not authenticate. The IP address is not used for authentication but gathered for troubleshooting purposes.



To simplify the process of collecting this system information, LSAC has documented several procedures to gather all the information mentioned above (see Appendix B). We recommend that you send this information back to LSAC through secure email. Please contact the LSAC support team (see section 6, Technical Support) for assistance.

2.3 Exporting Data Using ACES² Export Reports

The ACES² export report feature plays an important role in the data-transfer process. It defines the set of custom data elements that are extracted from ACES² for the API Export Client.

This feature can be independently designed and tested in ACES² before the API Export Client is implemented and can generally be completed by an admission office staff member who is an ACES² user. Your LSAC support team can aid in the design and testing of the export report (see section 6, Technical Support).

Refer to Appendix C for instructions on how to create new or use existing ACES² export reports.

2.4 Importing Data Using ACES² Import Layouts

Applicant and prospect data can be updated through the API using the standard Other Applicant or Other Prospect file layouts, or the Custom Design Import (CDI) layouts. Automating the file import process that an ACES² user performs manually is now as simple as dropping a file into a designated folder on the server running the API software. The API software can also retrieve the file from a location on your network that you designate. File imports are queued for processing after transfer is complete.

Please refer to Appendix E for instructions on how to create new or use existing ACES² import layouts. The individual creating the Custom Design Import layout must have an ACES² user account. The LSAC support team (see section 6, Technical Support) can aid in the design and testing of all the available import layout options.

Other traditional imports in ACES² are not available through API requests.

3 ACES² API Export Client

3.1 General

The ACES² API Export Client allows you to automate the export of applicant and prospect data from your ACES² JD and LLM databases. This data can then be used for other purposes, including

- populating other SIS software (e.g., Banner or CampusVue),
- satisfying custom reporting needs for the law school, and
- providing data to other integration tools, such as SSD's Axiom or Slate.

The next section provides a description of how the API Export Client works. This is followed by detailed instructions for setting up, configuring, and testing the API Export Client for your law school.

3.2 How API Processes the Request for Data

The API Export Client requests data from ACES² and provides secure transfer of the data in the form of a file to a specified local or network destination. Each request includes the ACES² export report parameters. Using a custom security key that is composed, in part, of items mentioned in section 2.2, in combination with law-school-specific keys in the software's configuration file, the API Export Client creates a unique encrypted hashed security key with every API request over HTTPS. If the request is authenticated, the export file is created and returned in the HTTPS web response. Please refer to section 2.2 for more information regarding the security key. Appendix B describes how to obtain the data needed for registering the target computer that will run the API software.

Each law school can create custom export reports in ACES² that meet specific data needs, including

- *the specific data elements to be extracted from ACES²*. For example, if the purpose is to obtain applicant data, then the law school is free to select from the exportable fields of applicant information, such as last name, first name, address, phone number, test scores, and so on.
- *filtering conditions for which data is extracted*. Continuing our example using applicant data, the law school has the option to filter applicants based on many conditions such as year entering, current status, term, decision status, and so on.

The API Export Client can either be run manually, executed from a script or command line, or configured to be run automatically on a predefined schedule using Windows Task Scheduler.

3.3 Installation and Configuration

This section provides a detailed discussion of the steps required to install, configure, and test the API Export Client, assuming the requirements for installation have been met (see section 2).

3.3.1 Copy API Export Client Files to a Local Drive on the Computer in Your Environment

Each law school will receive the API Export Client software via secure email from LSAC. This software is preconfigured specifically for your target computer and consists of five files.

API Export Client Files	
Program:	A2APIClient40.exe
Supporting files:	A2APIClient40.exe.config
	A240HMAC.dll
	System.web.extensions.dll
Sample script:	ScriptSample.cmd

Please copy these files to a folder on a local drive of the computer that will host the API Export Client. A local drive is a nonnetwork drive. The folder should not reside under Windows special folders such as C:\Users\USERNAME or %UserProfile%.

If your law school has two instances of the ACES² database (i.e., separate ACES² databases for JD and LLM), you will receive two API Export Clients (i.e., two sets of files). For this situation, your law school must create two separate folders, one to house each instance of the API Export Client.

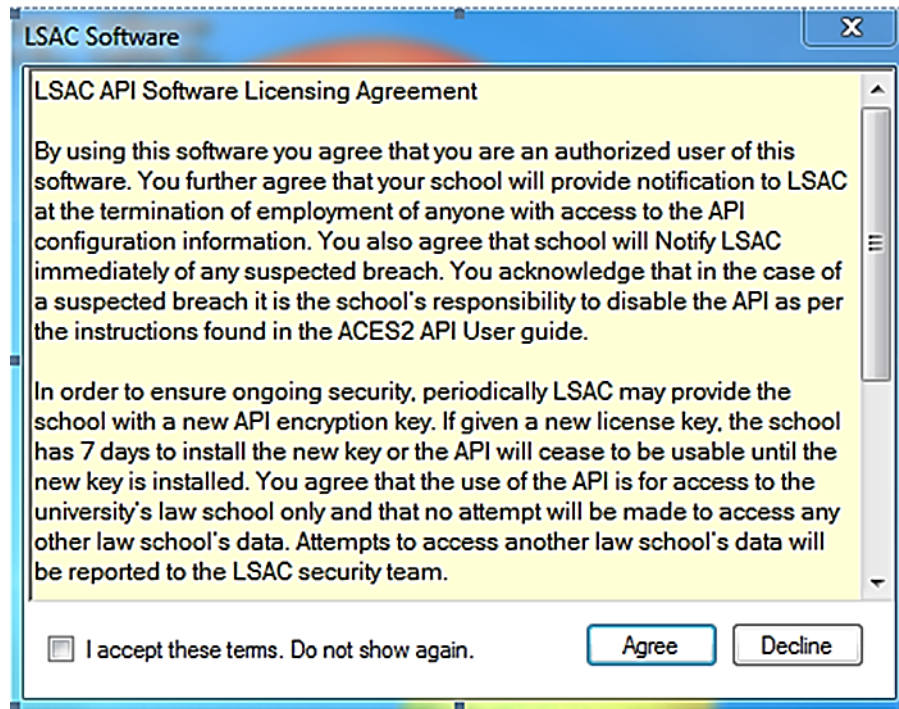
3.3.2 Create and Test the API Definition File

The API definition file allows you to define and manage how the API Export Client requests the ACES² data output. When you create the API definition file (described below), you will configure the API Export Client to request a data file in accordance with your law school or university's requirements. You can

- specify the ACES² Report Id and Condition Id parameters for the export report
- define the format of the output data file (e.g., XML, CSV, Excel)
- specify the destination on your local or network drive where the output file will be delivered
- specify a file naming convention (referred to as "filename add-ons") for the output file. This is optional. For example, the client can be directed to add the current date, or the current date and time, to the file name each time an output file is generated.
- reset the update flags for applicant data in ACES² so that only new or updated applicant records will be processed by the API Export Client. This is optional.

Create the API Definition File

1. To run the software, double-click the **A2APIClient40.exe** file from your installation folder.
 - The licensing agreement will display. If you agree, and want to continue, check the box stating you accept the terms, and select **Agree**.



2. Once you have agreed to the software licensing language, the API Export Client window will display.

3. Enter the values for the Report Id and Condition Id fields to specify the ACES² export report that will be executed by the API Export Client.

Report Id:

Condition Id:

Select the format of the output data file.

Output Type:

- 1 - Fixed Text
- 2 - CSV
- 3 - Excel
- 4 - Quote Comma Delimited
- 5 - PDF (Crystal Report)
- 6 - XML
- 7 - JSON

- The API Export Client will send the final data output file to a local or network location of your choosing. Specify that location in the text box shown below.

Save Output To:

Please provide Full Path and Filename

Be sure to provide the full folder path, file name, and file extension in the text box. Please keep in mind that the file name extension must match the output type you selected. For example, the xml file requires an “.xml” file name extension and an Excel file should have an “.xls” file name extension.

- Filename Add-ons, an optional feature, makes it easy to configure the API Export Client to automatically create unique file names after each execution. For example, you can select from several options to append the date, or date and time, to the file name of the output file. You can choose from two date and time formats and even add a suffix (such as “test”) to the file name.

If you leave the time-stamp option as “None,” the output file will be overwritten each time you use the same output folder. These options are located in the add-on section.

Filename Add-ons:
Applied to output filename

Timestamp:

None ex. c:\export.txt

Date ex. c:\export160509.txt

Date/Time ex. c:\export160509102617.txt

Date/Time ex. c:\export051609102617.txt

File Name Suffix: ex: "_main", "_test", etc.
c:\export_main.txt

6. For an applicant export report using *updateToMainframe* and *dataToMainframe* flags to track when applicant data has been added or updated to be included in your export, you can utilize the **Update Data after Export** option to clear the flags after the export.

These flags are set when applicant records in ACES² are initially created or updated. The flags are often used as conditions when creating ACES² export reports (see Appendix C) to ensure that the export report will select only new or updated applicant data. Unless the flags are reset, the same data will be selected the next time the report is run.

If you have specified the use of the flags in your export report, you can configure the Export Client to automatically reset the flags after it runs by selecting the **Update Data after Export** checkbox shown below.

Update Data after Export: Does not apply when you click Preview Output

The update flag reset should only be used for one ACES² report. Resetting the flags for multiple reports could cause one report to interfere with the other, producing unexpected results.

7. After configuring the API definition file, save the file and run a test to confirm that everything is set up correctly. To save the definition file, press the button shown below.

Save API Definition

After you provide a file name and press **OK**, the API definition file will be saved in the installation folder with an .xml extension.

8. Use **Preview Output** to preview the data extracted from ACES².

Preview Output

If no data is displayed in the preview, check for the following:

- The export report did not find any data that conforms to the report conditions specified.
- One of the export report conditions may contain an “Ask at Runtime” condition. In this case, go back into ACES², navigate to the Reports screen, and create or select another condition that does not contain an “Ask at Runtime” option on any of the entries.

If you encounter any errors or require additional assistance, please contact the LSAC support team (see section 6, Technical Support).

Important: You can repeatedly test the API Export Client using the **Preview Output** button. This preview feature was designed to be run multiple times, so it ignores the update flag.

The update flag is only reset in the applicant records in ACES² (assuming you selected the option and saved it in the API definition file) when an actual ACES² API Export Client extract is run directly from the command line or from a batch file. This is discussed in the next section.

3.4 Running the API Export Client

The API Export Client is designed to be run from a Windows batch file; this is a type of Windows executable file that has a “.bat” or “.cmd” file extension. Batch files can be easily configured to run on a predefined schedule under the Windows Task Manager. Many schools want this capability to automate the data extraction process.

Because of the API interface’s **Preview Output** button, you cannot use the **Update Data After Export** option. If you do not depend on this option, you can select **Preview** to extract your data on an as-needed basis. This would be the equivalent of running the report out of ACES². To have the **Update Data After Export** work with the client, you need to run in command-line style. Typically, the preference is to run the exports unattended and at specific intervals (e.g., daily, hourly, etc.). You need to set up a task in Windows Task Scheduler for the interval you choose and run the software in command-line mode directly, or in conjunction with a script. When the software executes, you will see a command window rather than the user interface on the screen. When execution completes, the command window closes.

A sample script (ScriptSample.cmd) is provided with your API Export Client software. You can use the Windows Notepad text editor to open and edit this batch file. The minimum information required for the file is a single line that specifies the full path to the

API Export Client executable file (A2APIClient40.exe) followed by the name of the API definition file detailed above. A definition file named "APIDefinition1.xml" would contain the following line for the batch file:

```
"C:\API Client Test\A2APIClient40.exe" APIDefinition1.xml
```

Note that this line specifies the full path to the API Export Client, followed by a space, and then the name of the API definition file. Also note that when a path contains spaces, Windows requires that the entire path be enclosed by quotes.

To run the batch file manually, click on its file name from Windows Explorer. The Export Client will run in the background using the API definition file provided. Or, you can execute the API Export Client manually by typing in the line above in a Windows command prompt.

3.5 Running Multiple Reports from a Single Command File

You can configure a single batch file to run multiple reports sequentially. Each API definition file specifies an ACES² export report to be run by the API Export Client, so provide the following lines in your batch file to run multiple export reports:

```
"C:\API Client Test\A2APIClient40.exe" APIDefinition1.xml  
"C:\API Client Test\A2APIClient40.exe" APIDefinition2.xml  
"C:\API Client Test\A2APIClient40.exe" APIDefinition3.xml
```

4 Optional API Export Client Features

Optional features that are available in the API Export Client include

- the ability to preview exported ACES² data files in Excel and Adobe Reader
- the ability to automatically receive email notifications when the API Export Client encounters a critical error during execution

These features are not preconfigured in the API Export Client. To enable either of these features, the configuration must be updated with information that is specific to your law school or university. Please refer to Appendix D for more information.

5 ACES² API Import Client

The Import Client will enable the automatic transfer of data into ACES². For example, if your law school frequently uploads applicant or prospect files into ACES² to add or update data, you can implement an unattended solution that does not require ACES² account access.

5.1 General

The application runs continuously on any MS Windows operating system. We highly recommend that you test the import process with your ACES² training database before proceeding with production use. This will require additional configuration changes which LSAC will provide to you.

5.2 How API Processes the Transfer of Data

When the import file is dropped into the appropriate local folder or designated remote folder, it is transferred to LSAC to be scheduled for import. The data will be processed typically between 5 and 20 minutes after it has been transferred. You can check the status and results of the import by logging into ACES².

5.3 Installation and Configuration

This section provides a detailed discussion of the steps required to install and configure import software, assuming the requirements for installation have been met (see pages 2 and 3, sections 2.1 and 2.2).

5.3.1 Copy API Import Client Files to a Local Drive on the Computer in Your Environment

Each law school will receive the API Import Client software via secure email from LSAC. This software is preconfigured specifically for your law school or university's networking environment and consists of five files:

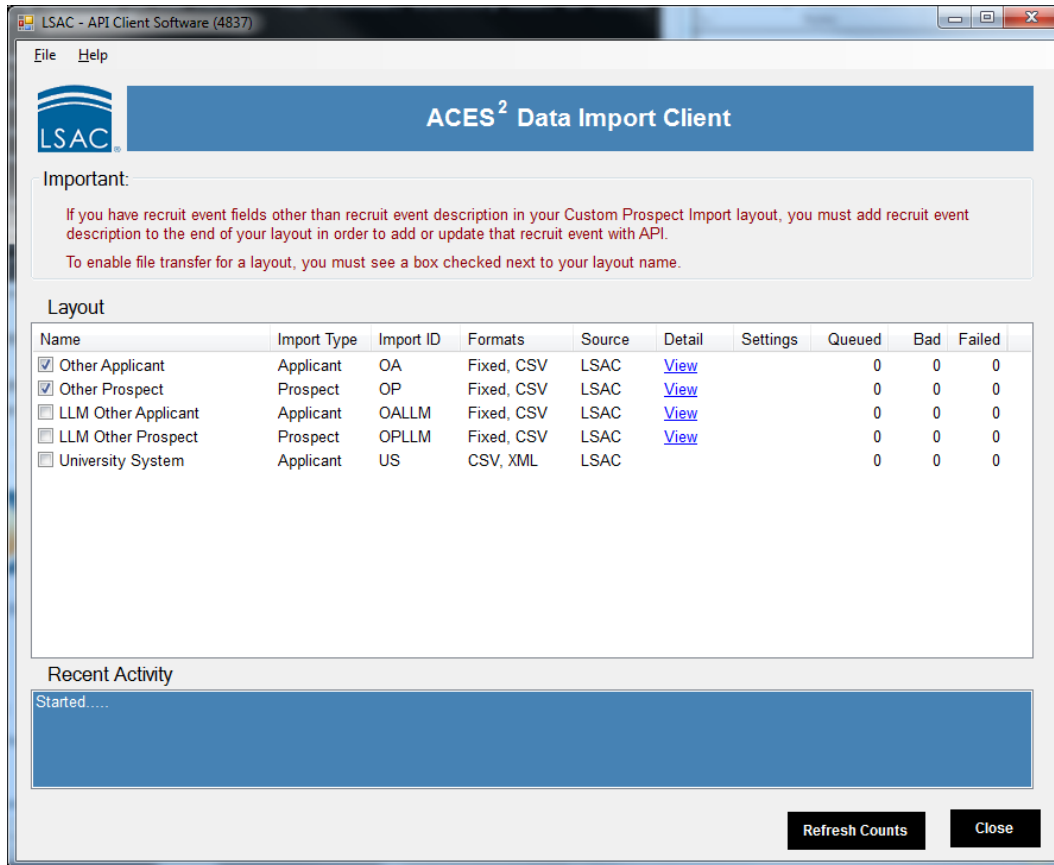
API Import Client Files	
Program:	A2APIImport40.exe
Supporting files:	A2APIImport40.exe.config
	A240HMAC.dll
	CAn_template.config
	Settings.config

Please copy these files to a folder on a local drive of the computer that will host the API Import Client. A local drive is a nonnetwork drive. The folder should not reside under Windows special folders such as C:\Users\USERNAME or %UserProfile%.

If you need to use this software for two or more instances of the ACES² database (e.g., JD and LLM), you will create a folder for each and receive additional files for each instance from LSAC.

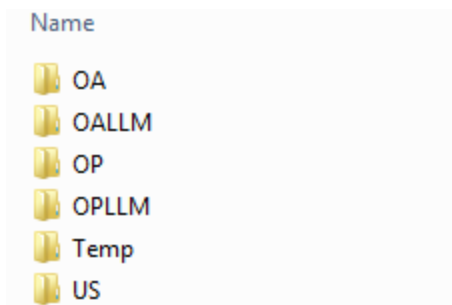
5.3.2 First Time You Run the Software

When you run A2APIImport40.exe, the application will immediately establish connectivity with LSAC and the application will launch the window below.



Note: This screen capture does not show an example of a Custom Design Import (CDI) Layout. If you would like to create a new CDI layout, please refer to Appendix E.

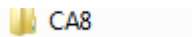
If the application launches successfully, you have completed the setup. The following folders will be automatically created under your installation folder:



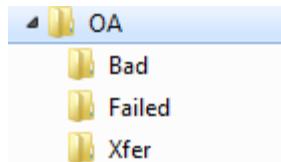
If you are using a CDI layout, you will see an entry like this for each custom applicant and prospect layout:

Name	Import Type	Import ID	Formats	Source	Detail	Settings	Queued	Bad	Failed
<input type="checkbox"/> Notes_Update	Applicant	CA8	CSV	Custom	View	Edit	0	0	0

With the CA8 folder created under the installation folder:



Under each folder created for your import files, another set of subfolders is created:



5.3.3 API Import Client User Interface

Name	Name of standard and custom layouts. University System is a special layout for former USI implementation to update SIS-specific back into ACES ² . If there is interest, please contact LSAC for more details.
Import Type	Applicant or prospect.
Import ID	An abbreviation representing the import layout having a local folder created with the same name for your file imports.
Formats	Standard: Fixed (text) or CSV University System: CSV or XML Custom: Designated when layout created. Options include Fixed or CSV.
Source	LSAC standard layouts or custom-designed layouts.
Detail	URL links to view layout details. The standard layouts links are connected to the Law School Support site. The custom layouts are real-time-generated based on the custom layout data in ACES ² .
Settings	For custom applicant layouts, you are able to update the default import settings.

Queued	Number of files ready for upload.
Bad	Number of files with incorrect file name extension or zero length.
Failed	Number of files that failed to transfer due to communication error.

5.3.4 Perform a File Import

You cannot run a test in production. However, LSAC can provide you with a configuration file that allows you to import a test file into your law school's ACES² training database.

To import a file into ACES², put a file into the appropriate folder located under the installation folder. The Import ID column on the client screen correlates to the folder created for that import layout. Once the file has been transferred, it is automatically moved to the Xfer folder with a time-stamp-generated value appended to the filename.

The box next to the name of your import must be checked for your file to transfer. You can toggle the checkbox value to have control of activating or suspending file transfers. If a file exists in a queued state before you check the box, you can restart the program to push the queued file to transfer.

Once your import file is transferred to LSAC, it is queued for processing within ACES². It is not guaranteed that the import will process immediately because there may be imports waiting to process. In ACES², you can see the status of the import under File Manager |File Processing|File Upload and view Import File History.

5.3.5 Reprocess Failed Imports

If the file did not transfer because the API request could not find a connection to LSAC, it will be moved to the Failed folder under your import layout folder. It will also have a time-stamp-generated value appended onto the filename.

To reprocess the file:

- Using Windows Explorer, navigate to the **Failed** folder.
- Rename the file to its original name.
- Using your mouse, drag the file up one level to your import layout folder.

5.3.6 Bad Imports

If your file did transfer, but you notice it did not process and it was moved to the Bad folder, it most likely had a file extension that was not accepted, or the file was empty.

5.3.7 Import Defaults and Limitations

The API Import Client can replace the need for uploading files for import using ACES². However, there are circumstances using the API to import that cannot be replicated. Here are tables describing the expected results using this software to import files into ACES².

a) Other Applicant Import for JD and LLM for Updating Existing Applicant Data

API Import sends the equivalent values:

ACES ² UI Displays...	API Import Value	Comments
File Layout	Standard	
Source of Application	Unchecked (False)	Will not overwrite existing Source of Application. If the applicant does not exist, it will add the applicant and leave Source of Application empty.
For Existing Recruit Event	Update Recruit Event	If the recruit event does not exist, it will add it.
The API Import Value parameter defaults above cannot be changed.		

b) Other Prospect Import for JD and LLM

The screenshot shows the ACES² Law School Admission Council interface for importing 'Other Prospect' files. The form includes the following fields and options:

- Data Type:** Other Prospect (dropdown menu)
- File Layout:** Standard (dropdown menu)
- Recruit Event:** (empty dropdown menu)
- For Existing Recruit Event:**
 - Update Recruit Event
 - Add Recruit Event
- Match to Applicant(s)
- Path\File Name:** Choose File | No file chosen

API Import sends the equivalent values:

ACES ² UI Displays...	API Import Value	Comments
File Layout	Standard	
For Existing Recruit Event	Update Recruit Event	If the recruit event does not exist, it will add it.
Match To Applicant	Checked (True)	

The **API Import Value** parameter defaults above cannot be changed.

c) Custom Design Import (CDI) for Applicants for Updating Existing Applicant Data

The screenshot shows the ACES² Law School Admission Council interface for importing 'Other Applicant - Custom' files. The form includes the following fields and options:

- Data Type:** Other Applicant - Custom (dropdown menu)
- File Layout:** (empty dropdown menu)
- Source of application:** (empty dropdown menu)
- Update All Active Applicants
- Create New Record if No Match
- Header Row Included in File
- Program Year:** (empty dropdown menu)
- Program Term:** (empty dropdown menu)
- Application:** (empty dropdown menu)
- Path\File Name:** Choose File | No file chosen

ACES ² UI Displays...	API Import Value	Comments
File Layout	Numeric ID that corresponds with layout name.	Number from CA#
Source of Application	0	Will not overwrite existing Source of Application.
Update All Active Applicants	Checked (True)	Updates all applicants that match.
Create New Record if No Match	Unchecked (False)	
Header Row in File	Unchecked (False)	Header row not included.
Program Year	Not Selected (value: 0)	Used for filtering on import.
Program Term	Not Selected (value: 0)	Used for filtering on import. Program year must be specified.
Application	Not Selected (value: 0)	Used for filtering on import. Program year and program term must be specified.

The API Import Value parameter defaults above can be altered for the CDI Applicant layouts. All options below the File Layout under ACES² UI Displays... can be updated. Click on the Edit link under the Settings column corresponding to your import. Notepad will load an XML file allowing you to make changes. It starts with the following XML.

Through ACES², you can preview and validate the data before importing the file. This feature is not available through the API Import software.

<?xm

| version="1.0" standalone="yes"?>

<!-- *****

Parameter Defaults for APPLICANT Custom Import files

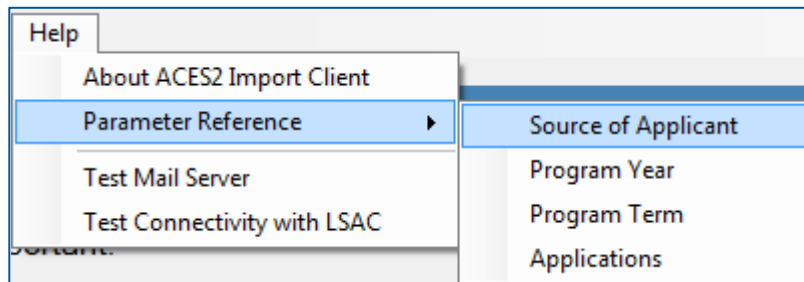
PLEASE DO NOT USE DOUBLE-QUOTES AROUND ParamValue entries

Reference files can be found in your API Application folder

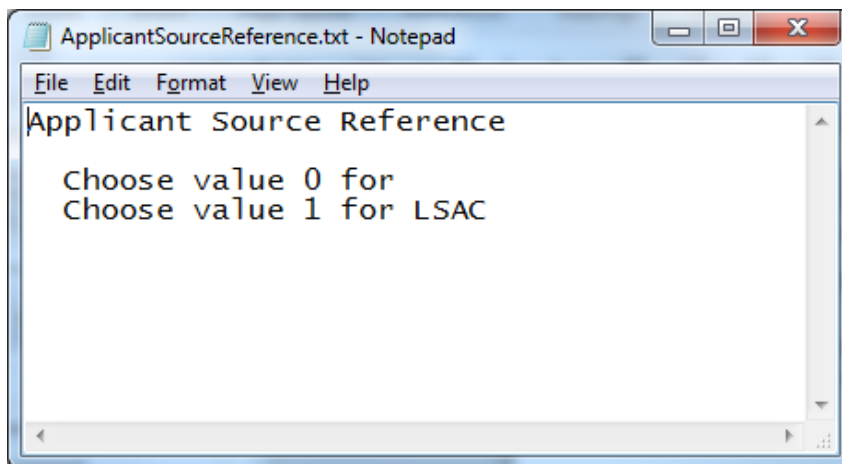
***** -->

<CDIOpt>

For example, if you want to change Source of Application from the default of 0 to something different that has been set up in ACES², you can go to **Help** and display the possible values.



From the menu above, Notepad will display a document of the possible range of values you may choose from.



Now you can update your XML file with a new ParamValue:

```
<!-- *****
Source of Application
    Applies if new applicant records are created.

Will not overwrite existing value on applicant's file.
    Valid values can be found in ApplicantSourceReference.txt.
***** -->

<Param>
  <ParamName>Source_Of_Application</ParamName>
  <ParamValue>1</ParamValue>
</Param>
```

Repeat the process if you need to change the other parameters listed in the table above.

d) Custom Design Import (CDI) for Prospects

ACES²
LAW SCHOOL ADMISSION COUNCIL

Select the File Layout and Recruiting Event for your Custom Prospect file.

Data Type:

File Layout: KEYSTONE

Recruit Event:

For Existing Recruit Event: Update Recruit Event Add Recruit Event

Specify Prospect Matching for this import: Always Match - all are either updated or added
 Never Match - adds all as new prospects

Match to Applicant(s)
 Header Row Included in File

Path\File Name: No file chosen

ACES ² UI Displays...	API Import Value	Comments
File Layout	Numeric ID that corresponds with layout name.	Number from CP#
Recruit Event		Add Recruit event to Layout.
For Existing Recruit Event	Update Recruit Event	UPDATE or ADD if valued. NULL will act like UPDATE if recruit event is valued in the file.
Prospect Matching	Always Match	
Match to Applicant	Checked (True)	Will attempt to match to an applicant.
Header Row in File	Unchecked (False)	Header row not included.
<p>The API Import Value parameter defaults above cannot be changed.</p> <p>Through ACES², you can preview and validate the data before importing the file. This feature is not available through the API Import software.</p>		

5.3.8 Additional Setup Options

Remote Folder for Import

Whenever this import client starts, it will create any new folders locally in which you can drop your files for import (as described in 5.2). You can override the folder to drop your files for import by setting up additional keys in the A2APIImport40.exe.config. This file is an xml file.

First, you open the file in a text editor. Go to the section marked

```
<!-- Optional - Pick Up folders -->
```

The first key will enable or disable the search for import files in folders outside of this application folder structure.

```
<add key="RemoteFolderSearch" value="False"/> <!-- True | False -->
```

Once you set it to **True**, you can add a key for each import file type.

e.g., `<add key="CA2" value="\<server>\<share>\aces2_uploads\API\" />`

You can have only one remote folder for each import file type. In this example, the file that was dropped into the remote folder is then transferred to the same CA2 folder under the application folder structure and processed. If you are using remote folders, please make sure permissions are granted accordingly. "Fetching files from a remote folder" runs every few minutes by the import client.

Email Notifications

Please see Appendix D, item 2 for set-up instructions.

6 Technical Support

For technical support, call Law School Support Services API Support at 855.384.2253 between the hours of 8:30 AM and 4:45 PM ET, or send an email to your regional support team. One of our technical and software specialists will be happy to assist you.

Northeast: NEastTeam@LSAC.org

Southeast: SEastTeam@LSAC.org

Midwest: MWestTeam@LSAC.org

West: WesternTeam@LSAC.org

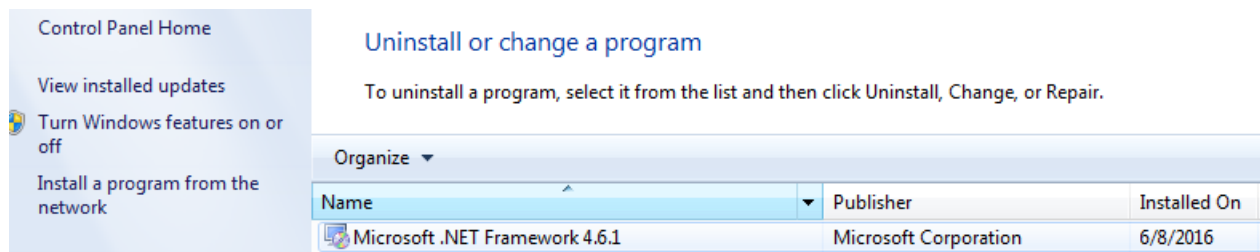
Appendix A

How to Determine if Microsoft.Net Framework Is Installed on Your Computer

To use the API Export Client, Microsoft.Net Framework software, version 4.0 or higher, must be installed on the host computer. To determine if the correct version of the framework software is installed on the host computer, go to the Windows Control Panel and check the installed software listing in Programs and Features.

The screenshot below illustrates how to do this on a Windows 7 computer. The process will be similar on other versions of Windows.

Select **Windows Control Panel** from the Start menu, then click on the **Programs and Features** link. This will display a window containing a list of all the software installed. If the .Net Framework software is installed, you should see an entry similar to the following:



Appendix B

How to Gather Network Information for API Software Registration

Registration of your computer or server is required to run LSAC API software. Please provide the following pieces of information to LSAC:

1. Computer name, including domain name
2. IP address
3. MAC Address
4. Operating system name

Method 1: Open a command console and type the following command at the prompt:

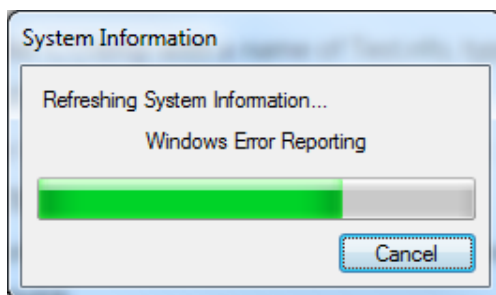
For items 1–3: `ipconfig/all`

For item 4: `Regedit...` then navigate to `HKEY_Local_Machine\Software\Microsoft\Windows NT\Current Version` and find the key called "ProductName"

Method 2: Open a command console and type the following command at the prompt:

```
msinfo32 /nfo C:\%computername%.%userdnsdomain%.NFO
```

Immediately after this command is executed, the dialog box shown below will be displayed. It shows the progress of the process that is collecting the Windows system information into a file.



When the process is completed, the box will disappear. A file with the extension `.NFO` will be created in the root folder of the `C:` drive.

Note: We are not dependent on IP Address being static. This is used for diagnostic purposes only.

Appendix C

How to Design an ACES² Export Report for Use by the API Export Client

An ACES² user account is required for accessing the reports section in ACES².

The following steps are required to design new, or reuse existing, ACES² export reports. (These instructions are for users who are familiar with the ACES² software and are experienced in creating and running reports.)

1. Log in to ACES² and navigate to the **Reports** screen using the Reports menu.
2. Select the appropriate option for designing a new report or using an existing report—one that already contains the fields that you want to export.
3. **Important:** Set the report style to **Export Report**.
4. To design a new report, select the desired report fields, for example, those data elements that will be transferred to the API Export Client, as shown below.

The screenshot shows the 'Report Profile' and 'Report Fields' configuration interface. The 'Report Profile' section includes fields for Style, Description, Report Type, Subject, and Field Name. The 'Report Fields' section shows a list of available fields and a table of selected fields.

Report Profile	
Style:	Export/Reports
Description:	API export report
Report Type:	USER
Subject:	Applicant
Field Name:	

Report Fields	
admissions visit	<input checked="" type="checkbox"/>
age of applicant	<input checked="" type="checkbox"/>
alcs application type	<input checked="" type="checkbox"/>
app stat last logon	<input checked="" type="checkbox"/>
app stat logons	<input checked="" type="checkbox"/>
app stat password	<input checked="" type="checkbox"/>
app stat user name	<input checked="" type="checkbox"/>
applic fee recvd date	<input checked="" type="checkbox"/>
applicant fee check no	<input checked="" type="checkbox"/>
applicant id	<input checked="" type="checkbox"/>

Pos	Selected Fields	Sort	Desc	Size	
1	first name applicant (applicant)	0	<input type="checkbox"/>	15	<input checked="" type="checkbox"/>
2	last name applicant (applicant)	0	<input type="checkbox"/>	25	<input checked="" type="checkbox"/>

5. Create a new condition, or reuse an existing condition, to define how the records will be selected from the ACES² database.

Many users want to filter the data so that only new or updated ACES² records will be passed to the API Export Client. To filter ACES² records in this manner, include the following two conditional statements in your report condition.

- Field (Data Sent University), Sign (=), Value (No), (Join) OR
- Field (Data Updated) Sign(=) Value (Yes)

The Condition Profile will look similar to the illustration below:

Condition Profile

Condition Name:

Field Name:

Condition Fields

Available Fields	(	Field	Sign	Value	)	Join	Ask	X
applicant		applicant status long (applicant)	Empty			AND	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2098		ethnicity 1 long (applicant)	=			AND	<input type="checkbox"/>	<input checked="" type="checkbox"/>
address modified user		ethnicity 2 long (applicant)	=			AND	<input type="checkbox"/>	<input checked="" type="checkbox"/>
age of applicant		data sent university (applicant)	=	No		OR	<input type="checkbox"/>	<input checked="" type="checkbox"/>
app stat last logon		data updated (applicant)	=	Yes		OR	<input type="checkbox"/>	<input checked="" type="checkbox"/>
app stat logons								
app stat password								
app stat user name								
applic fee recvd date								
applicant fee check no								
applicant id								
applicant middle name								

Buttons: Cancel Save

If you are using an existing condition, be sure to clear any “Ask at Runtime” entries. If the condition is associated with other reports, create a new condition without the “Ask at Runtime” entries.

Condition Fields

Clear any “Ask at Runtime” conditions

Available Fields	(	Field	Sign	Value	)	Join	Ask	X
applicant		current status long (applicant)	=	ADMETH Admi		OR	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3457		current status long (applicant)	=	ADMETW Adm		OR	<input type="checkbox"/>	<input checked="" type="checkbox"/>
acceptance depo		current status long (applicant)	=	ADMT Admit		AND	<input type="checkbox"/>	<input checked="" type="checkbox"/>
address modified user								

6. Save your export report.

7. To produce this export report, the API Export Client requires its Report ID and Condition ID values.

To determine these values, run the export report by selecting **API Template** as the output Type, as shown in the figure below.

The screenshot shows a web interface titled "Condition Search". It has several input fields: "Condition Name" (with a search icon), "Last User" (a dropdown menu), "Created By" (a dropdown menu), and "Contains Field" (a dropdown menu). A "Reset" button is located to the right of the "Contains Field" dropdown. Below these fields is a "Type:" dropdown menu. This menu is open, displaying a list of options: "Report Preview", "Quick Count Preview", "Microsoft Excel File", "Fixed Text File", "Comma Delimited File", "Quote Comma Delimited File", "Schedule", "Save for Batch Update", "Data Edit Grid", "Tab Delimited File", and "API Template". The "API Template" option is highlighted with a red border. To the right of the "Type:" dropdown is a "Run Report" button.

Please note: If the API Template does not appear in the drop-down Type menu, it means the report contains one or more “Ask At Runtime” values, which are not currently supported by the API. It is necessary to create or select a condition that does not require “Ask at Runtime” values.

When the report runs, it will display a window containing the values of the IDs that were assigned to the export report.

The screenshot shows a window with a blue header bar containing the text "API Template: Applicants by Status". Below the header, the window displays two lines of text: "Report ID: 47" and "Condition ID: 24".

Please record these values for future use. During set-up of the API Export Client, these IDs are required as configuration parameters for the API definition file.

Appendix D

How to Configure Optional Features: Preview Tools and Email Notifications

The API Export Client software consists of five files, as discussed in section 3.3 of this document. These files are installed in the API home folder. To enable preview tools or email notifications, it is necessary to modify the API Export Client configuration file titled “A2APIClient40.exe.config.”

Using the Windows Notepad application (or any XML editor), open the “A2APIClient40.exe.config” file.

1. Preview Tools

The computer hosting the API Export Client must have Microsoft Excel and/or Adobe Reader installed in order to use preview tools.

Open the configuration file in the editor of choice, then scroll down to the Preview Tools section as shown below:

```

<!--                               -->
<!-- Optional Keys configured by User -->
<!--                               -->

<!-- Preview Tools

To view .xls output, set the ExcelPathExe to your version of MS Excel or comparable tool
e.g. C:\Program Files (x86)\Microsoft Office\Office14\EXCEL.EXE

To view .pdf output, set the AdobeReaderPathExe to your version of Adobe Reader or comparable
tool
e.g. C:\Program Files\Adobe\Reader 11.0\Reader\AcroRd32.exe

If not set, the output files will reside in your output folder
-->
<add key="ExcelPathExe" value="[Provided by User here]" />
<add key="AdobeReaderPathExe" value="[Provided by User here]" />

```

Notice that the comments in the above file provide instructions and examples for modifying the values for the software keys. To enable a key, replace the phrase “[Provided by User here]” with the full path for your software. Be sure to enclose the path in quotation marks.

2. Email Notifications

To enable email notifications, scroll down to the Mail Server Settings section .

```
<!--Mail Server Settings
```

```
MailServer key - can be an IP address or FQDN
```

```
MailTo Key - Email Address. For more than one recipient, create the list using a comma delimiter
```

```
Result:
```

```
FROM - First Email address in the list from MailTo Key
```

```
TO - All Email addresses in the comma separated list
```

```
If either keys are left blank, no attempt will be made to send an email
```

```
-->
```

```
<add key="MailServer" value="[Provided by User here]"/>
```

```
<add key="MailTo" value="[Provided by User here]"/>
```

```
</appSettings>
```

The values for both keys must be provided. For the "MailServer" key, provide the fully qualified domain name (or IP address) for your law school or university's mail server. For the "MailTo" key, provide a comma-delimited list of email addresses for those individuals who are to receive email notifications from the Export Client. In both cases, replace the phrase "[Provided by User here]" with your school-specific information within quotation marks.

Appendix E

How to Implement Applicant or Prospect Layouts

Existing ACES² Applicant or Prospect Layouts for Use by the API Import Client

The current Applicant and Prospect layouts for JD and LLM are available from the law school support site.

<http://www.lsac.org/lawschoolservices/aces2/reference-guides/file-layouts>

Design an ACES² Custom Design Import (CDI) Layout for Use by the API Import Client

An ACES² user account is required for accessing the Custom Layouts module in ACES².

The following steps are required to design new Custom Design Import Layouts:

1. Log in to ACES² and navigate to the Custom Layouts screen from the File Manager menu.
2. Select the appropriate Import Data Type from the drop-down menu and select **Add**.



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SEARCH REPORTS FILE MANAGER UTILITIES INFO CENTER

ACES²
LAW SCHOOL ADMISSION COUNCIL

Select Fields For Custom Import Layout

Import Data Type: Other Applicant- Custom

Description:

Import Type: Fixed Length CSV

Match Criteria:

Field:

Available Fields	Selected Fields
First Name (50)	
Last Name (50)	
LS Tracking Number (15)	
LSAC Account No. (9)	
Social Security Number(Unformatted) (9)	
USI ID (20)	
Date of Birth (10)	
Primary Email (60)	
Secondary Email (60)	
Applicant Status (40)	
Application Fee Received (1)	
Application Signed (1)	
Birth City (30)	

Field sizes in red exceed the ACES² stored field size.

3. Enter Description and Import Type, and then select **Match Criteria**.
4. Add fields to your layout.
5. Click **Save** and you will return to the Custom Import Layout screen.

SEARCH REPORTS FILE MANAGER UTILITIES INFO CENTER

ACES²
LAW SCHOOL ADMISSION COUNCIL

Custom Import Layout

Import Data Type: Other Applicant - Custom

Description	Match Criteria	Import Count	Type	Last Import Date	Created By	Created Date	Edited By	Edited Date	
First CDI Layout	LS Tracking Number	0	Other Applicant - Custom	never	***Isac514	02/22/2017	***Isac514	02/22/2017	Edit Copy Delete

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