



# Getting Started with *xPress Roster*

*"xPress Roster is a great example of what the Access 4 Learning Community can accomplish. By using the RESTful SIF 3 infrastructure and CEDS as the basis for the API, xPress Roster is a community-developed open standard for rostering that is easy to use and implement."*

Jason Wrage,  
Program Manager, RIC One

## The Challenge:

In education, the "roster" is a fundamental building block of instruction, assessment, and administration. Conceptually, a roster specifies the teacher (or teachers) and the list of students in a program, class or section of an organization, enabling teachers to manage and teach students as members of a group. For example, granting privileges based on a roster would allow a learning management system to automatically connect teachers to students, and allow teachers to provide seamless access to course materials and assessments.

Teachers and students increasingly rely on technology for instruction. At the same time, the number of applications, websites and devices is also proliferating. Whether it's IT staff or teachers driving the process, manually managing the exchange of roster data between systems can become a huge time sink. Since the underlying data for rosters is generally maintained in student systems, the potential exists to eliminate manual roster management by teachers. A key challenge up to this point has been the lack of a standard way to exchange and represent roster data across a broad set of instructional and administrative systems.

## Opportunity:

Patterning off of the Application Programming Interfaces (APIs) that are used to weave systems together across the internet, the A4L community developed *xPress* as a new line of open, standard education APIs that are built on the robust SIF 3 infrastructure. *xPress* provides schools and developers with a way to simply and securely exchange data among modern apps, whether they are hosted locally, in the cloud or on mobile devices. Using an open standard is important because it ensures a wide range of adoption across vendors, and reduces the risks associated with platform and product lock-in that are inherent with proprietary APIs.

The *xPress Roster* API embodies simplicity in its design by using contemporary technologies like REST, JSON and OAuth, enabling direct communication among systems (the "broker" is optional) and representing commonly used data in a straightforward manner. Most developers will immediately grasp the concepts and implementation because *xPress* APIs look and act just like other modern APIs. *xPress Roster* simplifies the overall interoperability playing field by offering an open standard that all developers can use. Given the strengths of the SIF 3 infrastructure and the modularity of the data model, *xPress* leaves the door open for extending your existing integrations to an enterprise level solution.



## Success Story:

In New York, the twelve Regional Information Centers (RICs) have successfully implemented *xPress Roster* with their RIC One initiative. RIC One is a family of services that enables districts to more efficiently and effectively utilize student data systems and to improve school operations and classroom instruction, while ensuring the privacy of sensitive student data. In April 2014, the New York State Legislature passed the Common Core Implementation Reform legislation, which strengthened data protection practices and requirements. The law included a provision that recognizes the trust districts place in their BOCES and Regional Information Centers. Technology is a key component of their instructional programs and is integral to district operations. Districts are increasingly communicating their desire to integrate data between systems, implement new solutions with ease, access all solutions via a single sign-on, and continue to add new applications for their users. APIs support the rapid growth in the volume of data moving across the internet. At the same time, prominent K-12 data standards have further simplified connecting products by aligning on USDOE's Common Educational Data Standards (CEDS). RIC One is a web service and data hub which has been built on the CEDS data model and the *xPress Roster* API. It provides interoperability for products that wish to use a standards-based approach to achieving interoperability. Districts are in control of their data while in the custody of their RICs.

RIC One API supports the exchange of data between authorized education solutions via an implementation of *xPress Roster*. There are multiple benefits to using this API, including vendor applications seamlessly connecting to districts using one, standardized interface. With RIC One and *xPress*, the need to maintain separate interfaces for the myriad of student information systems used throughout New York is significantly reduced. Additional benefits of RIC One include improvements to data quality, security, and vendor compliance with the NYS Parents Bill of Rights. Vendors need only supply RIC One with information on their data privacy policies, rather than managing the requests of hundreds of separate districts. Application vendors receive only the data they need in a timely manner, and overall integration services are centralized, reducing the need to work with multiple RICs and BOCES to get an application up and running. Currently there are five RICS and 21,000 students integrated, with a further 19 Lower Hudson Districts and 66,000 students coming online in July 2016.

## How do I start?

If you are an instructional or administrative application software vendor...

1. Play with the sandbox to get a feel for the API
2. Review the *xPress* Developer Guide
3. Evaluate existing *xPress* client libraries for incorporation into your apps
4. Implement an *xPress* client

If you are a student system vendor...

1. Review the SIF 3 infrastructure documentation and *xPress* objects
2. Choose (or reuse) a RESTful framework suited to your product and platform
3. Choose an OAuth library suited to your product and platform
4. Implement *xPress* as a data provider and OAuth as an authentication method

If you are a district, region or state...

1. Encourage your vendors to adopt *xPress*
2. Evaluate third party integration offerings like brokers and data hubs based on your individual needs
3. Run a pilot program with a small number of vendors
4. Expand the scope of your pilot to incorporate more systems over time



## Useful Links:

*xPress* website:

<https://xpressapi.org>

*xPress* API Developer Guide:

<https://xpressapi.org/api-developers/developer-guidance/>

SIF 3 Infrastructure:

[https://www.A4L.org/Specification/Pages/Infrastructure\\_3\\_1.aspx](https://www.A4L.org/Specification/Pages/Infrastructure_3_1.aspx)

*xPress* objects:

<http://specification.sifassociation.org/Implementation/NA/3.3/content.s.html>

RIC One website:

<http://www.ricone.org>

A4L website:

<https://www.A4L.org>

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