

rSchoolToday API - HowTo

version 1.1



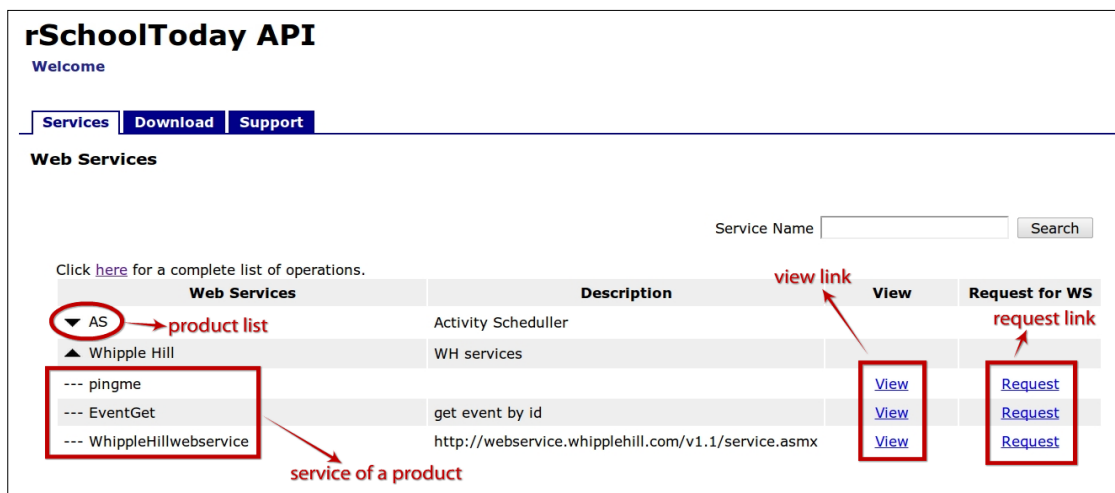
rSchoolToday API 'Public Side' Tutorial

The Public side of API contains the API pages which are accessible by users through the URL: <http://api.rschoolday.com>. Although the site can be accessed by any users, the data in API can only be viewed by those who already have username and password. The username and password are assigned to a client through his email address when his service request is approved by the System Administrator.

1. Service - Main Page

This main page contains the list of services displayed in a table format (please refer to Picture1).

On this screen, a user can view and request for a service.



Picture1. Service – Main page

Also on this screen, you can see that the services are grouped by product. The services here are those that have been set as public by the Administrator. If they are not set as such, then they will not appear on this page.

2. Service - View Detail

To view a service detail, click on its corresponding “View” link. This link would show you a page containing a sample of request and response service as what is shown in the picture below.

Detail Services

pingme

The following is a sample SOAP 1.1 request and response. The placeholders shown need to be replaced with actual values.

```
<soap:Envelope >
  <s:Header>
    <m:transaction xmlns:m="soap-transaction" s:mustUnderstand="true">
      <transactionID>DWCServices</transactionID>
    </m:transaction>
  </s:Header>
  <s:Body>
    <pingme xmlns="http://localhost/api_rSchooltoday/webservice/">
      <auth>
        <UserName>:string</UserName>
        <Password>:string</Password></auth>
        <ping>:int</ping>
      </pingme>
    </s:Body>
  </soap:Envelope>
```

```
<soap:Envelope >
  <s:Header>
    <m:transaction xmlns:m="soap-transaction" s:mustUnderstand="true">
      <transactionID>DWCServices</transactionID>
    </m:transaction>
  </s:Header>
  <s:Body>
    <pingme xmlns="http://localhost/api_rSchooltoday/webservice/">
      <pong>:string</pong>
    </pingme>
  </s:Body>
</soap:Envelope>
```

Picture2. Service – Detail service in xml format

As you can see, this example is using soap envelope. The first block shows the xml request sample that should be created from your file. The second block is the xml response that you will get from the service.

Another format given in this product is the Jason form that is built using REST. You can see the example of the response and request form in the picture below.

```
{ "json_name": "tesJson", "json_desc": "tes JSON by REST" }
```

parameter's name parameter's value

Picture3. Service – Detail service in json format

3. Service - Request Service

The Request service feature is used by a user to request for a service. To start the process, from the main page, just click on the corresponding “Request” link of a service. Then, a popup will appear like the picture shown below:

Web Service Request

Old Client :
Username
Password
* Only for existing client

New Client Information :
Client Name *
First Name *
Last Name *
Phone *
Email *
Client Application Name *

request for old client

request from new client

Cancel Proceed

Cancel Send Request

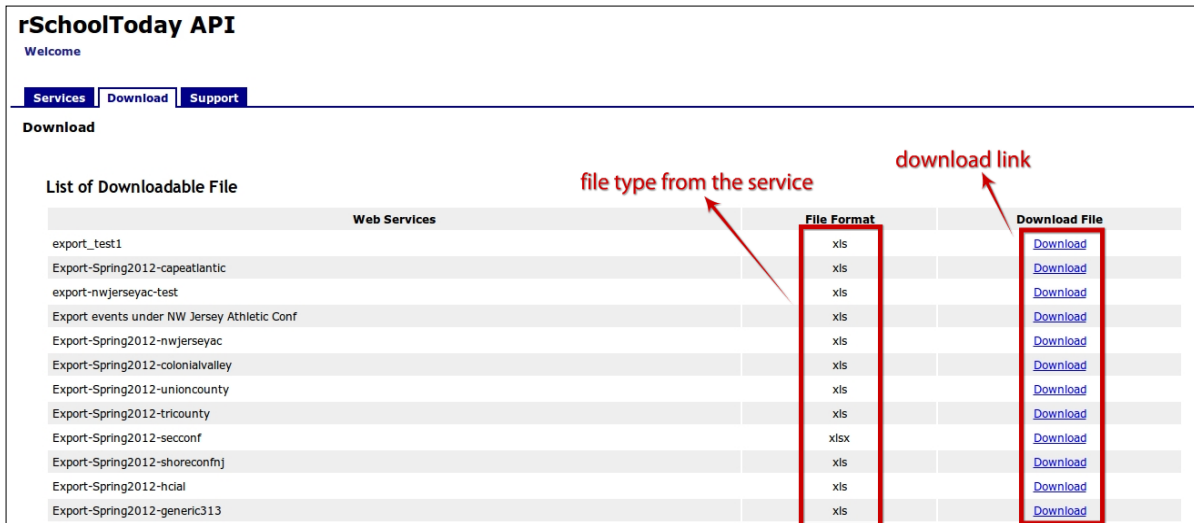
Picture4. Service – Request service

If you already have a username and password from API email, you can use it to populate the old client field. If you do not have a username and password yet, you have to fill out the form for the New Client. After this request, you will have to wait for an approval from the admin before you can access your requested service.

If your request has been approved by the admin, you can already create a request using your username and password as the input parameters.

4. Download - Main Page

On the Download page, you can see some services listed on the export list. A user can only download a service if he has username and password.



rSchoolToday API
Welcome

Services | **Download** | Support

Download

List of Downloadable File

Web Services	File Format	Download File
export_test1	xls	Download
Export-Spring2012-capeatlantic	xls	Download
export-nwjerseyac-test	xls	Download
Export events under NW Jersey Athletic Conf	xls	Download
Export-Spring2012-nwjerseyac	xls	Download
Export-Spring2012-colonialvalley	xls	Download
Export-Spring2012-unioncounty	xls	Download
Export-Spring2012-tricounty	xls	Download
Export-Spring2012-seconf	xlsx	Download
Export-Spring2012-shoreconfnj	xls	Download
Export-Spring2012-hcial	xls	Download
Export-Spring2012-generic313	xls	Download

Picture5. Download – Main page

On the download list, you can see the link on the left side of the screen. If you click on this link, a form will appear as shown in the picture below:



User Confirmation

Username

Password

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Picture6. Download – User confirmation

Before you can download a service, you need to have permissions or access to this feature. To get access, you need to make a request from the API's admin. After the admin approves it, you will be able to use your username and password to download a service.

5. Creating Client Request

These instructions can help you create a small client application using the API services.

Before creating a client application, the initial requirement is for you to have a username and password for your service. If you do not have it yet, you will have to make the request from the API. Once you have it, you can already create a client application.

There are two ways to use the API:

- ✦ Using SOAP-envelope.
- ✦ Using REST.

a. SOAP Client

The SOAP requests are usually made in the form of "envelope" of the XML data which is formatted specifically to post to the URL. In this case, we are using nusoap v.0.6.7 for the web service library. If you want to use the other version of soap or nusoap, you can find out more about it on www.w3.org/TR/soap/.

The following is an example of a request file, using nusoap, to get the list of school info from a conference.

- First you need to download nusoap library from the official website, then make a file named test.php in the same folder with your nusoap.php in your localhost.
- Then you have to initialize the URL for the web service. You can copy the syntax below:

```
require_once('lib/nusoap.php');  
$wsdl = "http://api.rschooltoday.com/wsdl\_gen/wsdl\_xml";
```

Please note that you should not change the wsdl url as it is the valid url for the xml web service of rSchoolToday API.

Now, you need to initialize an array with the elements as the input parameters. As you see from the service below, the service's name to get the list of school info by conference is schoolinfoGetListByConfId. This service needs Username, Password and SchoolUrl as input

parameters.

Detail Web Service	
Service Name	<i>schoolinfoGetListByConfId</i>
Input Parameter	<i>UserName, Password, SchoolUrl</i>
Output	<i>SchoolInfoID, SchoolName, Address, City1, State</i>
Type of WS	<i>SOAP</i>
Description	<i>Get list of School Info by Conference Id</i>
Product Releted	<i>AS</i>
<div style="text-align: right;"><input type="button" value="Back"/></div>	

Picture7. Service Detail

Username and password given by the admin system are input parameters that must be added to access all the services. SchoolUrl is also an input parameter that is needed to the service. You should add all of the input parameters as an array with this code:

```
$param = array('auth'=>array('UserName'=>'yourusername', 'Password'=>'yourpassword'),  
              'SchoolUrl' => 'http://as.rschooltoday.com' );
```

Now, you can create a nusoap object like the code below:

```
$client = new nusoap_client($wsdl);  
$response = $client->call('schoolinfoGetListByConfId', $param);
```

'schoolinfoGetListByConfId' is the name of the service that you want to call. This function will follow your array as the input parameter for this service.

Actually, this is the end of the service process. If the response attribute gets a success value, you will get the output service as an array to use in your application. If you want to know the specific data, you can add the code below:

```
if ($client->fault) {  
    echo '<h3>Fault</h3><pre>';  
    print_r($response);  
    echo '</pre>';  
}else {  
    echo '<h3>Result</h3><pre>';  
    print_r($response);  
    echo '</pre>';  
}  
  
// Display the request and response  
echo '<h2>SOAP query</h2>';
```

```

echo '<pre>' . htmlspecialchars($client->request, ENT_QUOTES) . '</pre>';
echo '<h2>SOAP response</h2>';
echo '<pre>' . htmlspecialchars($client->response, ENT_QUOTES) . '</pre>';

// Display the debug messages
echo '<h2>Debug</h2>';
echo '<pre>' . htmlspecialchars($client->debug_str, ENT_QUOTES) . '</pre>';

```

Below is the full code of nusoap client file on test.php:

```

<?php
require_once('lib/nusoap.php');
$wsdl = "http://api.rschooltoday.com/wsdl_gen/wsdl_xml";
$params = array('auth'=>array('UserName'=>'yourusername', 'Password'=>'yourpassword'),
                'SchoolUrl' => 'http://as.rschooltoday.com' );
$client = new nusoap_client($wsdl);
$response = $client->call('schoolinfoGetListByConfId', $params);

if ($client->fault) {
    echo '<h3>Fault</h3><pre>';
    print_r($response);
    echo '</pre>';
}else {
    echo '<h3>Result</h3><pre>';
    print_r($response);
    echo '</pre>';
}

// Display the request and response
echo '<h2>SOAP query</h2>';
echo '<pre>' . htmlspecialchars($client->request, ENT_QUOTES) . '</pre>';
echo '<h2>SOAP response</h2>';
echo '<pre>' . htmlspecialchars($client->response, ENT_QUOTES) . '</pre>';

// Display the debug messages
echo '<h2>Debug</h2>';
echo '<pre>' . htmlspecialchars($client->debug_str, ENT_QUOTES) . '</pre>';
?>

```

To check whether the service is a success or not, you should check from the browser by calling a file like <http://localhost/nusoapclient/test.php>. If nusoap is returning a successful service, you will see an array on the result block, in which each element contains the output parameter of the service.

For example, schoolinfoGetListByConfId has 5 output parameters named SchoolInfoID, SchoolName, Address, City1 and State. So, the output of the service must be like this:

```

Array
(
    [0] => Array
        (
            [SchoolInfoID] => 1554
            [SchoolName] => A Conference

```



```

        [Address] =>
        [City1] =>
    )
    [State] =>
)
[1] => Array
(
    [SchoolInfoID] => 1508
    [SchoolName] => Abraham Lincoln High School
    [Address] => 2309 Nicollet Ave. South
    [City1] => Minneapolis
    [State] => MN
)
[2] => Array
(
    [SchoolInfoID] => 1518
    [SchoolName] => Albany
    [Address] => 30 Forest Avenue, PO Box: PO Box 330
    [City1] => Albany
    [State] => MN
)
[3] => Array
(
    [SchoolInfoID] => 202255
    [SchoolName] => Andover
    [Address] => 2115 Andover Blvd.
    [City1] => Andover High School
    [State] => MN
)
[4] => Array
(
    [SchoolInfoID] => 202256
    [SchoolName] => Anoka High School
    [Address] => 3939 7th Avenue N
    [City1] => Anoka
    [State] => MN
)
[5] => Array
(
    [SchoolInfoID] => 202179
    [SchoolName] => apple high school
    [Address] =>
    [City1] =>
    [State] =>
)
)

```

If nusoap is returning a failed result, you will see the fault like the picture shown below:

```
Fault

Array
(
    [faultcode] => soap:Server
    [faultactor] =>
    [faultstring] => unable to serialize result
    [detail] =>
)

SOAP query

POST /wsdl_gen/wsdl_xml HTTP/1.0
Host: beta.api.rschooltoday.com
User-Agent: NuSOAP/0.9.5 (1.123)
Content-Type: text/xml; charset=ISO-8859-1
SOAPAction: ""
```

Picture 8. Result – Fail

If you get this kind of result, then you have to check your parameter array and the xml shown on query block. This will help you check where the error is coming from.

b. REST Client

REST is the simplest request format to use – it is a simple HTTP GET or POST action. When you want to use REST, you must have Json library and create a json array for the request. Here is an example of json file using Code Igniter. For other json library version, please check here <http://php.net/manual/en/book.json.php>.

First, you need to initialize an API's site URL to get an access into rSchoolToday API, your user authentication, and the service name which accessed. Here is the code:

```
include ('lib/jsonAPI.php');
$jsonAPI      = new jsonAPI;
$auth        = 'yourusername:yourpassword';
$service_name = 'serviceName';
$url         = 'http://api.rschooltoday.com/json_gen/json_page/index';
```

Again, please note not to change the URL because this is the valid url for json web service of rSchoolToday API.

Json application needs a main arrays contains the name of the service and the input parameters. You must set the name of the service as the 'resource' element value (ie: the name of the service is 'serviceName'), then, you must set the input value (ie: input name for this service is 'testing_id'). You can create the main array like the code shown below:

```

$json_params = array(
    'resource'      => 'serviceName',
    'params'       => array(
        'testing_id' => '31'
    )
);

```

To get the result of the service, you need to call the service using some code like the one below:

```

$data_post      = json_encode($json_params);
$data           = $jsonAPI->exec_curl($auth,$url,'POST',$data_post);
$status        = $jsonAPI->status;

```

To view the result of your service, you can add this code:

```

echo "<pre>";print_r($jsonAPI->jsonPre($data));

```

Here, you can see the full code for the sample:

```

<?php
include ('lib/jsonAPI.php');
$jsonAPI      = new jsonAPI;
$auth        = 'yourusername:yourpassword';
$service_name = 'serviceName';
$url         = 'http://api.rschooltoday.com/json_gen/json_page/index'

$json_params = array(
    'resource'      => $service_name,
    'params'       => array(
        'testing_id' => '31'
    )
);

$data_post      = json_encode($json_params);
$data           = $jsonAPI->exec_curl($auth,$url,'POST',$data_post);
$status        = $jsonAPI->status;

echo "HTTP Status : $status <br/>";
echo "<pre>";print_r($jsonAPI->jsonPre($data));
?>

```

You can call the service in your browser like http://localhost/testjsonAPI/json_client/. If your service is showing a successful result with HTTP code 200, you will see a json array like this:

```

{"testing_name":"api_test_rest","testing_desc":"API public client testing with REST method"}

```

If you mistyped your username and password or you trying to access service that you are not allowed, the response will return HTTP code 401, and json array like this :

```

{"Client":"You are not allowed to access this service, please check your username and password."}

```

If the service you request is not exist in rSchoolToday API, then the response will return HTTP code 400 and json array like this :

```

{"Client":"Service not found"}

```