

# DHIS2 Raw Data Export Using PHP cURL Technology

In this tutorial, I will explain you the Full Featured of Server Site data export from DHIS2 by using PHP cURL Technology:

## Business Scenario:

1. If you want to make an external dashboard by using DHIS2 collected data, you can use this technology
2. If you want to analysis raw data of DHIS2 in External System, you may use this script.
3. You can export Organization Units, Data Sets, Data Element Groups, Data Elements and Data Value Set.
4. You can bridge two different systems by using this script.
5. Schedule Based Data Export from DHIS2

## Necessary Requirements:

1. Apache Server
2. MySQL or any other Database
3. DHIS2 User Authentication, Data Set, Data Elements

**Technology:** PHP, jQuery, DHIS2 Web API, MySQL

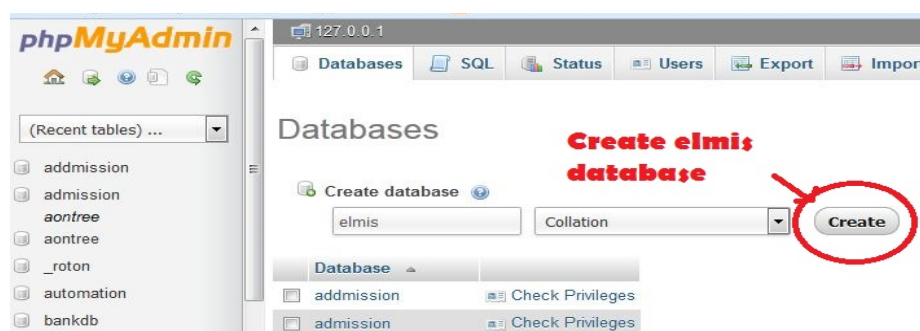
## Solution Steps:

- Step-1: Local Database Configuration
- Step-2, 3: User Interface and jQuery Script
- Step-4: Organization Unit and Elements making as an array
- Step-5: PHP Script by using DHIS2 Web API link
- Step-6: Schedule Writing in Control Panel
- Step-7: Final Result

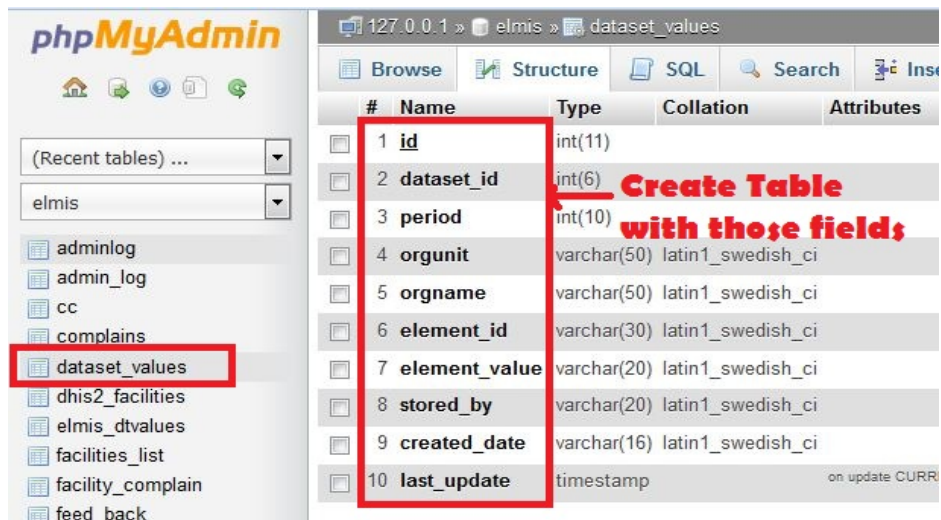
## Step-1: Database, Table and Connection creation

In this step you need to create Local Database, table and ensure your database connection:

**Step-1.1 Database Creation:** Create database in PhpMyadmin as:



**Step-1.2 Table Creation:** Create a table that will store DHIS2 exported data as:



The screenshot shows the phpMyAdmin interface. On the left, the 'dataset\_values' table is selected in the database 'elmis'. On the right, the 'Structure' tab is active, displaying the table's schema. A red box highlights the first six columns: 'id', 'dataset\_id', 'period', 'orgunit', 'orgname', and 'element\_id'. A red arrow points from the text 'Create Table with those field;' to the 'dataset\_id' column.

#	Name	Type	Collation	Attributes
1	id	int(11)		
2	dataset_id	int(6)		
3	period	int(10)		
4	orgunit	varchar(50)	latin1_swedish_ci	
5	orgname	varchar(50)	latin1_swedish_ci	
6	element_id	varchar(30)	latin1_swedish_ci	
7	element_value	varchar(20)	latin1_swedish_ci	
8	stored_by	varchar(20)	latin1_swedish_ci	
9	created_date	varchar(16)	latin1_swedish_ci	
10	last_update	timestamp		on update CURR

**Step-1.3 Create Local Database Connection:**

```
<?php
class dbConnect{
    protected $product_details_info = array();
    public $mysqli;
    public $data;
    // Create DB Connection
    public function __construct(){
        $this->mysqli = new mysqli('localhost','root','','elmis');
        if(mysqli_connect_errno()){
            echo "Error: Could not connect to database.";
            exit;
        } else{
            //echo "Your Database successfully connected";
        }
    }
    public function __destruct(){
        $this->mysqli->close();
    }
}
?>
```

## Step-2: Create the User Interface as:

- ❖ DHIS2 Username,
- ❖ Password,
- ❖ Web Link (DHIS2 Application URL),
- ❖ DataSet,
- ❖ Periods,
- ❖ Organization Units(Optional)

```
<select class="form-control" name="uname" id="uname" >
<option name="">User Name</option>
<option name=" Username1">Username1</option>
<option name=" Username2">Username2</option>
<option name=" Username3">Username3</option>
</select>
<input type="password" name="password" class="form-control" id="password">
<select class="form-control" name="webLink" id="webLink" >
<option name="">Select cURL</option>
<option value="Your Server Link">Central Server</option>
<option value=" Your Server Link Development Server"></option>
</select>
<select class="form-control" name="dataset" id="dataset" >
<option name="">Select Data Set</option>
<option value="iFFVg2xgFPL">Monthly eLMIS DataSet-Central</option>
<option value="ACzf2x2bF">Monthly eLMIS DataSet-Development</option>
</select>

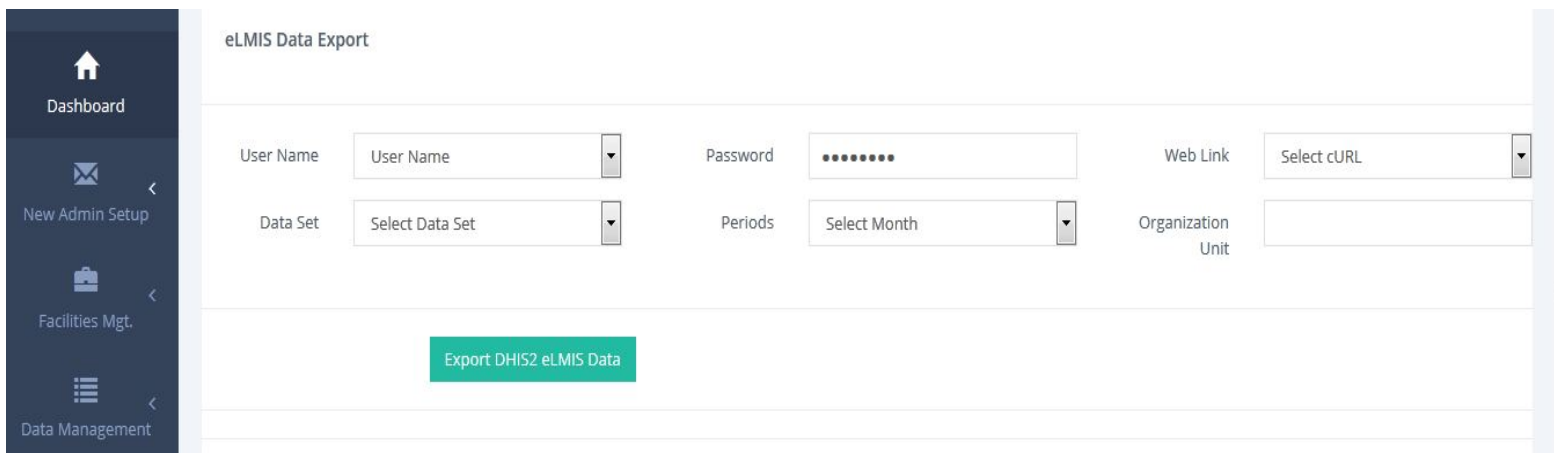
<select class="form-control" name="period" id="period" >
<option name="">Select Month</option>
<option value="201501">January</option>
<option value="201502">February</option>
<option value="201503">March</option>
<option value="201504">April</option>
<option value="201505">May</option>
<option value="201506">June</option>
<option value="201507">July</option>
<option value="201508">August</option>
<option value="201509">September</option>
<option value="201510">October</option>
<option value="201511">November</option>
<option value="201512">December</option>
</select>
<input type="text" name="orgUnit" class="form-control" id="orgUnit">
<button type="submit" class="btn btn-success" id="dataupload_button">Export eLMIS Data</button>
```

### Step-3: Paste the jQuery POST script bellow your HTML for Data Request submit as:

```
<script src="https://ajax.googleapis.com/ajax/libs/jquery/1.11.3/jquery.min.js"></script>
<script>
$(document).ready(function(){
  $("#dataupload_button").click(function(){
    $('#dataupload_form').submit(function (e) {
      e.preventDefault();
    });
    var uname = $('#uname').val();
    var password=$('#password').val();
    var webLink=$('#webLink').val();
    var dataset = $('#dataset').val();
    var period = $('#period').val();

    $('#dataupload_button').after('<div class="loader" style="position: fixed;left: 50%;top: 40%;width:
100%;height: 100%;z-index: 9999;"></div>');
    jQuery.post("data-upload-code.php",
{uname:uname,password:password,webLink:webLink,dataset:dataset,period:period },
function(data){
  alert(data);
  $('#loader').slideUp(200,function(){
  $('#loader').remove();});
  $(".loader").fadeOut("slow");
  window().location();
});
});
});
</script>
```

### Design of Step-1 and Step-2:



The screenshot shows a web interface for "eLMIS Data Export". On the left is a dark sidebar with navigation links: "Dashboard" (with a home icon), "New Admin Setup" (with an envelope icon), "Facilities Mgt." (with a briefcase icon), and "Data Management" (with a list icon). The main content area has a title "eLMIS Data Export" and contains several input fields: "User Name" (text input), "Password" (password input with masked characters), "Web Link" (text input with a dropdown arrow), "Data Set" (dropdown menu), "Periods" (dropdown menu), and "Organization Unit" (text input). Below these fields is a prominent green button labeled "Export DHIS2 eLMIS Data".

#### Step-4: Organization Unit and Data Elements:

##### Step-4.1 Create Organization Unit as an array:

```
<?php
$org=array(
    'Gazipur District Hospital, Gazipur'=>'gWWPtZ3ea8b',
    'Gazipur Civil Surgeons Office, Gazipur'=>'dkBQYOr7tYN',
    'Gazipur Sadar UHC'=>'ZycDiLBirIF',
    'Kaliakair UHC'=>'hkl28MU5Qv5',
    'Kaliganj GZ UHC'=>'zRBzPCrNByW',
);
```

##### Step-4.2 Create Exported Data Elements as an Array:

```
<?php
$resultDataElements=array(
    'ta8v9gj6aQC' => 'Inj.Ampicillin2_OpeningBalance',
    'yQfHlwvxvCmb' => 'Inj.Ampicillin2_ReceiptsThisMonth',
    'CRueZPFX52M' => 'Inj.Ampicillin2_AdjustmentPlus',
    'jsXI01cQX6S' => 'Inj.Ampicillin2_AdjustmentMinus',
    'O2Nu7efJ5CB' => 'Inj.Ampicillin2_Consumption',
    'GuO5I4Vusdk' => 'Inj.Ampicillin2_ClosingBalance',
    'VsS1R8DztGn' => 'Inj.Ampicillin2_NumofDaysStockOut',
    'pnBJrRFysDY' => 'Inj.Ampicillin2_Comments',
);
```

#### Step-5: Write PHP Script using DHIS2 Web API

```
<?php
// Include Your database
include'database.php';
class dataValueLoad extends dbConnect{
    public function elmisDataSetValues($username,$password,$webLink,$dataset,$period){
// Include your expected organization units and data elements
        include 'org-unit.php';
        include 'medicins_name.php';
        foreach($org as $orgUnitName=>$orgId){
// DHIS2 Web API setting
            $url =$webLink."/api/dataValueSets?dataSet=$dataset&period=$period&orgUnit=$orgId";
// cURL Initialization and execution

            $ch = curl_init($url);
            curl_setopt($ch, CURLOPT_RETURNTRANSFER,1);
            curl_setopt($ch, CURLOPT_USERPWD, "$username:$password");
            $status_code = curl_getinfo($ch, CURLINFO_HTTP_CODE); //get status code
            $result=curl_exec($ch);
            curl_close ($ch);
            $data['resultData']=json_decode($result, true);
            $i=0;
```

```

global $element_value;
$dataset_id=1001;
if($i<=7){
foreach($data as $val){
foreach($resultDataElements as $element_idArray=>$element_name){
$orgUnitServer=$data['resultData']['dataValues'][$i]['orgUnit'];
$element_idServer=$data['resultData']['dataValues'][$i]['dataElement'];

// if($element_idArray==$element_idServer && $orgId=$orgUnitServer){
// Exported Elements value storing
$element_value=$data['resultData']['dataValues'][$i]['value'];
if(isset($element_value) && $element_value!=0){
$storedBy=$data['resultData']['dataValues'][$i]['storedBy'];
$created=$data['resultData']['dataValues'][$i]['created'];
$lastUpdated=$data['resultData']['dataValues'][$i]['lastUpdated'];
// Insert exported Data in Local Database
$query="INSERT INTO dataset_values SET
dataset_id='$dataset_id',period='$period',orgunit='$orgId',orgname='$orgUnitName',element_id='$element_idServer',element_value='$element_value',stored_by='$storedBy',created_date='$created',last_update='$lastUpdated'";
$result=$this->mysqli->query($query) or die(mysqli_connect_errno()."Data cannot inserted.DB Installation data already existed. ");
if($result){
//echo 'Data Successfully Inserted.';
}
//}
}
$dataset_id++;$i++;
}
}
}else{
die();
}
}
}
$username=$_POST['uname'];
$password=$_POST['password'];
$webLink=$_POST['webLink'];
$dataset=$_POST['dataset'];
$period=$_POST['period'];//$period="201507"; //07 for July// $period=$_POST['period'];
$objAccess=new dataValueLoad();
$objAccess->elmisDataSetValues($username,$password,$webLink,$dataset,$period);
?>

```

**Step-6: Host this script in control panel and add schedule as:**

#### Current Cron Jobs

MINUTE	HOUR	DAY	MONTH	WEEKDAY	COMMAND	ACTIONS
5	13	1	11	0	<code>/usr/local/bin/php /home/msgbd/public_html/dashboard/schedule-dataup.php</code>	<a href="#">Edit</a> <a href="#">Delete</a>

Step-7: Run this Script by using your DHIS2 Credentials and check the local database.

## Final Output:

**Run and Submit as:**

eLMIS Data Export

User Name	<input type="text" value="julhas"/>	Password	<input type="password" value="....."/>	Web Link	<input type="text" value="Development Server"/>
Data Set	<input type="text" value="Monthly eLMIS DataSet-Develo"/>	Periods	<input type="text" value="August"/>	Organization Unit	<input type="text"/>

## Data Storing in MySQL Database:

phpMyAdmin interface showing the structure and data of the 'dataset\_values' table. The table has columns: id, dataset\_id, period, orgunit, orgname, element\_id, element\_value, stored\_by, created\_date, and last\_update. The 'element\_value' column is highlighted with a red box.

id	dataset_id	period	orgunit	orgname	element_id	element_value	stored_by	created_date	last_update
1	1001	201508	yAkJFLuVKEa	Argariya CC,Gazipur Sadar	VLBjsBQhTJ	280	cc10005252	2015-09-07T05:32	2015-09-07 05:32:50
2	1002	201508	yAkJFLuVKEa	Argariya CC,Gazipur Sadar	iVnqBUyhn0T	253	julhas	2015-09-07T05:33	2015-09-29 02:58:23
3	1003	201508	yAkJFLuVKEa	Argariya CC,Gazipur Sadar	dWZZv6bnWt6	2080.0	julhas	2015-09-29T08:24	2015-11-23 07:50:23
4	1004	201508	yAkJFLuVKEa	Argariya CC,Gazipur Sadar	V0JeHU1j1na	1623.0	julhas	2015-09-29T08:24	2015-11-23 07:50:23
5	1005	201508	yAkJFLuVKEa	Argariya CC,Gazipur Sadar	IEB0fsvqt1R	1343	julhas	2015-09-30T10:11	2015-11-23 07:50:23
6	1006	201508	yAkJFLuVKEa	Argariya CC,Gazipur Sadar	sck4macHLRr	1827	julhas	2015-09-30T10:00	2015-11-23 07:50:23

## Exported Raw data as table:

eLMIS LHMIS Reports - eLMIS Uploaded Data. Month: August-2015, Display Limit: 10. Total Number of Organization: 193, Display Limit: 10, Total Number of Entries: 1238.

S/N	Period	Organization Unit	Organization Name	Product ID	Product Name	Value	Stored_by	Created Date	Last Update
1	201508	ddTZZY0GhLW	Abdar CC,Sreepur	iVnqBUyhn0T	Zinc_Consumption	220	cc10005436	2015-09-02T00:38	2015-09-02 00:38:36
2	201508	ddTZZY0GhLW	Abdar CC,Sreepur	V0JeHU1j1na	ORS_OpeningBalance	681	cc10005436	2015-09-02T00:37	2015-09-02 00:37:41
3	201508	ddTZZY0GhLW	Abdar CC,Sreepur	sck4macHLRr	Zinc_ClosingBalance	1040	julhas	2015-10-01T03:58	2015-10-01 03:58:04
4	201508	ddTZZY0GhLW	Abdar CC,Sreepur	VLBjsBQhTJ	ORS_Consumption	237	cc10005436	2015-09-02T00:38	2015-09-02 00:38:24

**Any Support knock me:**

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