Installation

Contents

nstallation	2
Install .Net	5
Interop Excel Library	5
ervice Accounts	7
ask Scheduler	7
ctive Directory	11
xchange	11
racle	11
ointsec	14
/indows 2008	14
/inlocal	16
/MI	16
alesForce	19
Generate or Reset the Security Token	19

Installation

Download the installation file and run setup. To install and run AMX you must be administrator on the system. Windows security may also block this from installing after it has been downloaded. Open the msi file properties and unblock it on the General tab.

1411	380773wpdm_AMX.msi Properties
General Comp	patibility Security Custom Details
12	1411380773wpdm_AMX.msi
Type of file:	Windows Installer Package (.msi)
Opens with:	Windows® installer Change
Location:	C:\clients\ldM\c#\AMX\archive
Size:	1.21 MB (1,272,320 bytes)
Size on disk:	1.21 MB (1,273,856 bytes)
Created:	27 November 2014, 14:27:25
Modified:	27 November 2014, 14:25:41
Accessed:	27 November 2014, 14:27:25
Attributes:	Read-only Hidden Advanced
Security:	This file came from another computer and might be blocked to help protect this computer.
	OK Cancel Apply

Installation should then continue normally.

谩	AMX		- 🗆 ×
Select Installation Folde	r		
The installer will install AMX to the followin	ıg folder.		
To install in this folder, click "Next". To ins	stall to a different f	older, enter it belo	ow or click "Browse".
Eolder: C:\Program Files (x86)\AXNT\AMX\			B <u>r</u> owse
			<u>D</u> isk Cost
Install AMX for yourself, or for anyone w	ho uses this comp	uter:	
	Cancel	< <u>B</u> ack	Next >

Installing AMX in in the \ProgramFiles directory is not recommended. AMX generates data files and most users will not have write permissions to Program Files. If Program Files is used as the installation folder, change the permissions of the AMX working folders so that the current user has full control.

🚶 Permissions for demo1		×			
Security					
Object name: C:\Program Files	(x86)\AXNT\AMX	\demo1			
Group or user names:					
& CREATOR OWNER					
SYSTEM					
Administrators (AMX3\Administrators)	strators)				
A Philip Nesfield (philn@corp.e)	(ample.com)				
Users (AMX3\Users)					
	A <u>d</u> d	<u>R</u> emove			
Permissions for Philip Nesfield	Allow	Deny			
Full control	V				
Modify					
Read & execute	V				
List folder contents	V				
Read	v				
Learn about access control and permissions					
ок	Cancel	Apply			

Installation creates two new applications AMXUser and AMXRun.

Install .Net



Interop Excel Library

To run the Excel adapter the Microsoft Office Interop Assemblies must be available.

The Assemblies are installed by default by Microsoft Office 2013.

Alternatively install NET Programmability Support for the Microsoft.interop.Excel library from the Microsoft Office distribution media.

Installation Options	
Customize how Microsoft Office programs run	0
🗏 🚍 🔻 Microsoft Office	
🖼 👝 👻 Microsoft Access	
🗏 👝 🔻 Microsoft Excel	
.NET Programmability Support	
🗄 📻 🔻 Add-ins	
Sample Files	=
🗎 👝 👻 Microsoft InfoPath	
🗎 📻 🔻 Microsoft OneNote	
🖽 👝 👻 Microsoft Outlook	
🖽 👝 🔻 Microsoft PowerPoint	
🛎 👝 🔻 Microsoft Publisher	
Microsoft SharePoint Workspace	
Microsoft Visio Viewer	
	Total space required on drive: 2.42 G
	Space available on drive: 38.28 GB

Office Tools and Shared Libraries are not required. This example will install the interop dlls.

Service Accounts

Service accounts are needed to connect to remote systems. If the service account in a resource's property file is blank, the connection to a local Windows system or an Active Directory is made with the account that is currently running the process. To allow updates, service accounts must have the appropriate privileges, ie Account Operator.

Task Scheduler

Schedule identitySync to run at an appropriate time. Configure the identitySync.properties file to send email to an administrator with details of the results of the synchronisation.

Set up to run whether the user is logged in or not and store the password.

- Vienie IIeli																	
🕒 Create Ta	sk																×
General Tr	iggers	Actions	Condit	tions	Sett	ings											
Name:	ident	titySync															
Location:	X -																
Author:	PHIL	N-LAPTO)P\Adm	ninistra	ator												
Description	n:																
- Security o	ptions-																-
When rur	' nnina the	e task. us	e the fo	llowin	ia use	eraco	count	t:									
PHILN-LA	APTOP\A	dministr	ator		5								Change	User	or Grou	ıp	
O Run o	nly when	user is lo	ogged o	on													
Run w	- hether u	ser is log	ged on	or no	t												
	not sto	re passwo	ord. Th	e task	will c	only ł	nave	acces	s to lo	ocal co	mpu	ter re	sources.				
🖂 Run w	ith hiahe	est privile	aes								-						
			<u> </u>														-1
🗌 Hidden		Configur	re for:	Wind	lows	10										`	1
													ОК		Car	ncel	

Set the start directory to the locations of the AMX properties and schema files

	Edit Acti	on	×
You mu	st specify what action this task will p	erform.	
Act <u>i</u> on: Setting	Start a program s		~
<u>P</u> rogra	am/script:	r	
C:\AM	IX\identitySync.exe		B <u>r</u> owse
<u>A</u> dd a	rguments (optional):	identityS	ync.properties
S <u>t</u> art i	n (optional):	C:\AMX\	work
		ОК	Cancel

٩	Task Scheduler
File Action View Help	
Task Scheduler (Local) Task Scheduler Library	Name Status Triggers CreateChoic Ready When the task is created or modified GoogleUpda Ready Multiple triggers defined GoogleUpda Ready At 09:15 every day - After triggered, repeat every 1 hour identitySync Ready At 07:00 every day Optimize Sta Disabled When computer is idle Optimize Sta Disabled When computer is idle Optimize Sta Disabled When computer is idle Conditions Settings History When you create a task, you must specify the action that will occur when your task actions, open the task property pages using the Properties command. Action Action Details Start a program C:\AMX\identitySync.exe identitySync.properties do

Test it by using the RUN action. It should create a new info file, and send email if configured. Use REFRESH to get an update of the status

Active Directory

Windows Server 2008 and Windows Vista introduced <u>User Account Control</u>, which has issues for applications that use <u>Active Directory Service Interfaces</u> (ADSI) such as AMX. Specifically, these interfaces were designed to be run by a user account with administrator privileges on the local computer.

Use Run As Administrator when managing the Active Directory. AMX will provide a warning when not running as an administrator and in some circumstances may fail.

The Active Directory object schema is cached and this may cause performance issues if many different accounts are used to run AMX. See http://msdn.microsoft.com/en-us/library/windows/desktop/aa772187(v=vs.85).aspx.

Exchange

The adapter works with Exchange 2010 or later. The Exchange server certificate must be trusted by the computer running AMX. If both systems are members of the same domain this is a non-issue. Otherwise, using IIS Manager, save the certificate to a file and import it to the local computer Trusted Root Certificate Authorities.

The Exchange instance must have the Client Access Role. IIS Manager shows a /PowerShell virtual directory.

MySQL

Uses GPL licence

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http://www.gnu.org/licenses/old-licenses/gpl-2.0.html

Oracle

Requires Oracle client software version 8.1.7 or greater.

System Properties ×		Environment Variables	×
Computer Name Hardware Advanced System Protection Remote	User variables fo	r philn	
You must be logged on as an Administrator to make most of these changes.	Variable	Value	
Performance	TEMP	%USERPROFILE%\AppData\Local\Temp	
Visual effects, processor scheduling, memory usage and virtual memory	TMP	%USERPROFILE%\AppData\Local\Temp	
User Profiles		New Edit Delete	
Desktop settings related to your sign-in	System variables		
Settings	Variable	Value	^
Statut and Recovery	OS	Windows_NT	
Sustan start up, and the failure and debugging information	Path	C:\data\Oracle;C:\ProgramData\Oracle	
System startup, system railure and debugging information	PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;	
Settings	PROCESSOR_4	New Edit Delete	
Environment Variables		OK Cance	el
OK Cancel Apply			

The Oracle adapter can load last logon if this has been configured. To do this:

- 1. Turn on Auditing
- SQL > AUDIT SESSION;

This audits to an internal table

SQL> ALTER SYSTEM SET AUDIT TRAIL=DB SCOPE=SPFILE;

SQL> show parameter audit

NAME	TYPE	VALUE
audit_file_dest	string	<pre>/export/oracle/oracle/product/ 10.2.0/db_1/admin/XE/adump</pre>
audit_sys_operations	boolean	FALSE
audit_syslog_level	string	
audit_trail	string	NONE
SQL>		

2. Restart

SQL> shutdown immediate; Database closed. Database dismounted. ORACLE instance shut down. SQL> CONNECT system/manager AS SYSDBA Connected to an idle instance. SQL> startup ORACLE instance started.

```
Total System Global Area167772160 bytesFixed Size1279120 bytesVariable Size104860528 bytesDatabase Buffers58720256 bytesRedo Buffers2912256 bytesDatabase mounted.Database opened.
```

3. Check

SQL> show parameter audit

NAME	TYPE	VALUE
audit_file_dest	string	<pre>/export/oracle/oracle/product/ 10.2.0/db_1/admin/XE/adump</pre>
audit_sys_operations	boolean	FALSE
audit_syslog_level	string	
audit_trail	string	DB

SQL>select userID, ntimestamp# from sys.aud\$ a where (a.userID,a.ntimestamp#) in (select b.userID,max(b.ntimestamp#) from sys.aud\$ b group by b.userID)

USERID	NTIMESTAMP#	ŧ
SYSTEM	2011-04-15	20:14:04.608247
PHILN	2011-04-15	16:50:13.334463
GLANG	2011-04-15	20:16:13.232371

Pointsec

If Pointsec is installed add this registry entry:

Windows Registry Editor Version 5.00

[HKEY LOCAL MACHINE\SOFTWARE\Pointsec Mobile Tech\Pointsec for PC]

"UsersLocation"="C:\\ProgramData\\Pointsec\\Pointsec for PC\\"

"Location"="C:\\Program Files (x86)\\Pointsec\\Pointsec for PC\\"

Unix

Uses Tamir.SharpSSL which is redistributed under the following licence

JSch 0.0.* was released under the GNU LGPL license. Later, we have switched over to a BSD-style license.

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Windows 2008

Windows 2008 Server x64

Make this folder:

C:\Windows\SysWOW64\config\systemprofile\Desktop

On Windows 2008 Server x86

Make this folder:

C:\Windows\System32\config\systemprofile\Desktop

Failure to do this will create an Excel file open error when the application is run in Task Scheduler as a job run when the user is logged on or not. See Task Scheduler. Debug will show this error as:

Excel load opening C:\data\personData.xls no password Error: Excel load Exception Microsoft Excel cannot access the file ' C:\data\personData.xls '. There are several possible reasons:

- The file name or path does not exist.
- The file is being used by another program.
- The workbook you are trying to save has the same name as a currently open workbook. 0

at Microsoft.Office.Interop.Excel.Workbooks.Open(String Filename, Object UpdateLinks, Object ReadOnly, Object Format, Object Password, Object WriteResPassword, Object IgnoreReadOnlyRecommended, Object Origin, Object Delimiter, Object Editable, Object Notify, Object Converter, Object AddToMru, Object Local, Object CorruptLoad)

at AMX.Excel.load(String sResourceName, String strPathExcel, String strPasswdFile, String sSchemaFile, DataTable dt) in C:\clients\IdM\C#\AMX\Excel.cs:line 354

Error: Excel Exception of type 'AMX.Excel+CustomException' was thrown.

AMX.Excel+CustomException: Exception of type 'AMX.Excel+CustomException' was thrown.

at AMX.Excel.load(String sResourceName, String strPathExcel, String strPasswdFile, String sSchemaFile, DataTable dt) in C:\clients\IdM\C#\AMX\Excel.cs:line 422

at AMX.identitySync.Main(String[] args) in C:\clients\IdM\C#\identitySync\identitySync.cs:line 121

Test this with Run when user is logged in where even without the folder the task will run successfully.

Use the UNC of the location in the properties file

ExcelFile1 = \\emea\uk\internal\Departmental directories\Admin\Employee Data\Contractors.xls

Winlocal

Error: Windows Local Load Unknown error (0x80005000) for 192.168.121.53

Error: Winlocal Exception of type 'AMX.WinLocal+CustomException' was thrown.

Caused by bad username or password

Firewall issues, see http://msdn.microsoft.com/en-us/library/aa389286.aspx

Windows Local System 1 dexch Error: WinLocal.RemoteService The RPC server is unavailable. (Exception from HRESULT: 0x800706BA) for dexch

Error: Winlocal Exception of type 'AMX.WinLocal+CustomException' was thrown.

Caused by wrong hostname

WMI

Systems with corrupted WMI may show the following problem :

WMI	
Error signature	
szAppName ; wmiprvse.exe szAppVer : 5.2.3790.1830 szModName : msvort.dll	mipiprt.dll
szModver: 7.0.3730,1830 offset: 00038era	mipjobj.dll
Reporting details	miprov.dll
This error report includes: information regarding the condition of WMI when the problem occurred, the operating system version and computer hardware in use, and the Internet Protocol (IP) address of your	miprvsd.dll
computer.	mipsess.dll
We do not intentionally collect your name, address, email address or any other form of personally identifiable information. However, the error report may contain customer specific information in the	misvc.dll
collected data files. While this information could potentially be used to determine your identity, if present, it will not be used.	mitimep.dll
The data that we collect will only be used to fiv the problem. If more information is available, we will tell	miutils.dll
you when you report the problem. This error report will be sent using a secure connection to a database with limited access and will not be used for marketing purposes.	dStatus\trustmon.
To view technical information about the error report, <u>click here.</u>	ml\wmi2xml.dll
To see our data collection policy on the web, <u>click here</u>	11
G - NETRIJOVS NSUS LERISZ NUDER /	WMI encountered a problem and needed to close.
	This error occurred on 29/03/2011 at 21:21:09.
	Discussion in the state of the
	We have created an error report that you can send to help us improve WMI, We will treat this report as confidential and anonymous.
	To see what data this error report contains, click here,
	Send Error Report Don't Send

This is described in http://support.microsoft.com/kb/932460

The fix is to run FixWMI.bat

net stop winmgmt
pause
c:
cd c:\windows\system32\wbem
rd /S /Q repository

```
regsvr32 /s %systemroot%\system32\scecli.dll
regsvr32 /s %systemroot%\system32\userenv.dll
mofcomp cimwin32.mof
mofcomp rsop.mof
mofcomp rsop.mfl
for /f %%s in ('dir /b /s *.dll') do regsvr32 /s %%s
for /f %%s in ('dir /b *.mof') do mofcomp %%s
for /f %%s in ('dir /b *.mfl') do mofcomp %%s
mofcomp exwmi.mof
mofcomp -n:root\cimv2\applications\exchange wbemcons.mof
mofcomp -n:root\cimv2\applications\exchange smtpcons.mof
mofcomp exmgmt.mof
```

SalesForce

Rebuild SForceService.dll

The SForceService.dll may need to be re-created if you have modified attributes that you want to manage, in which case download the Enterprise wsdl for your organisation. <u>https://help.salesforce.com/apex/HTViewSolution?id=000004760&language=en_US</u>

Follow the instructions here to get the wsdl and generate the SForceService.dll. <u>https://developer.salesforce.com/docs/atlas.en-us.api_meta.meta/api_meta/meta_quickstart_get_WSDLs.htm</u>

Generate or Reset the Security Token



An email will be sent containing the token. This must be appended to the password in the AMX Password file for SalesForce. The security token is not required when logging in to the web application.

Setting Up OAuth 2.0

Setting up OAuth 2.0 requires that you take some steps within Salesforce and in other locations. If any of the steps are unfamiliar, see Understanding Authentication or the Salesforce online help. The following example uses the Web server OAuth flow. In Salesforce, from Setup, enter Apps in the Quick Find box, then select Apps, and under Connected Apps click New to create a new connected app if you have not already done so. The Callback URL you supply here is the same as your Web application's callback URL. Usually it is a servlet if you work with Java. It must be secure: http:// does not work, only https://. For development environments, the callback URL is similar to https://localhost:8443/RestTest/oauth/_callback. When you click Save, the Consumer Key is created and displayed, and a Consumer Secret is created (click the link to reveal it).

Apps 🛨 Bookmarks 🦳 Philn 😹	Virgin Media Sign i	G Google 💰 iCl	oud BBC News - Hon	ppperan.apexprappi ie		211002110111y=0	deald-ocleooooooryin	レンマー L
6	,			* 1	~		THERIA	
Quick Find / Search 🗿 🔍	Connected App Nar	ne						Help for this Page 🥝
Expand All Collapse All	« Back to List: Cust	vm Apps	Edit	Delete Manage				
Salesforce1 Quick Start	Allow from 2-10 min	utes for your changes to	take effect on the server t	efore using the connected	app.			
Force.com Home			Version API Name	1.0 AMX				
System Overview			Created Date	08/11/2015 19:24 By: Philip Nesfield				
Personal Setup			Contact Phone Last Modified Date	08/11/2015 19:30				
My Personal Information Email			Description	By: Philip Nesfield				
Import Desktop Integration			Info URL					
 My Chatter Settings My Social Accounts and Contacts My Connected Data 	ings unts and Contacts Data		ECm1_OmkTPARXRJHS	j_JW5QCnzWMof5 <mark>u</mark> dnaD	JCLmK91JL7TPxJH0bPWT1eJu\	WaC Consumer Secret	6984467848525636553	t/oouth/ collback
App Setup	OAuth Scopes	access (iuii)				URL	https:///ocamost.8443/Restries	svoautn_canback.
 Customize Create 	▼ Custom Conne	ected App Handler						
Apps	04	Run As						

System Overview				
Personal Setup My Personal Information Email Import Desktop Integration My Chatter Settings My Social Accounts and Contacts My Connected Data App Setup Customize Create Develop Deploy Schema Builder	System Info Installed By Last Modified By	Philip Nesfield Philip Nesfield	Installed Date Last Modified Date	08/11/2015 19:24 08/11/2015 21:40
	Basic Information Info URL		Start URL Mobile Start URL	
	OAuth policies Permitted Users Usage This application has permission to:	All users may self-authorize <u>View OAuth Usage</u> Full access	IP Relaxation Refresh Token Policy:	Relax IP restrictions with second factor Immediately expire refresh token
	Session Policies Timeout Value			

Obtaining a Token in an Autonomous Client (Username and Password Flow)



An autonomous client can obtain an access token by simply providing username, password and (depending on configuration) security token in an access token request. Again the request is POSTed (1) to https://login.salesforce.com/services/oauth2/token, but the payload now has the form

grant_type=password&client_id=<your_client_id>&client_secret=<your_client_secret>&username=<your_username>&password=<your_password>

The following parameters are required:

- grant_type Set this to password.
- client_id Your application's client identifier.
- client_secret Your application's client secret.
- username The API user's Salesforce.com username, of the form user@example.com.

password The API user's Salesforce.com password. If the client's IP address has not been whitelisted in your org, you must concatenate the security token with the password.

You will receive a similar response to the authorization code case:

1 {

- 2 "id": "https://login.salesforce.com/id/00D50000000IZ3ZEAW/00550000001fg5OAAQ",
- 3 "issued at":"1296509381665",
- 4 "instance url": "<u>https://nal.salesforce.com</u>",
- 5 "signature":"+Nbl5EOl/DlsvUZ4NbGDno6vn935XsWGVbwoKyXHayo=",

```
"access_token":"00D50000001Z3Z!AQgAQH0Yd9M51BU_rayzAdmZ6NmT3pXZBgzkc3JTwDOGB18BP2AREOiZzL_A2zg7etH81kTuuQPljJ
6VsX4CPt3naL7qustlb"
```

7}

You will notice that there is no refresh token in the response. Since the user is not redirected to login at Salesforce, there is no opportunity for the user to authorize the application. Such an authorization is required for a refresh token to be issued. If your application requires a refresh token, you should carefully consider moving to a different flow if at all possible.

https://developer.salesforce.com/page/Digging_Deeper_into_OAuth_2.0_on_Force.com#Obtaining_a_Token_in_an_Autonomous_Client_.28Username_an_d_Password_Flow.29

Testing with curl

Testing with Chrome curl plugin

Advanced Rest Client	JSON	SalesForce1		Save	Ope	en			
	https://login.	salesforce.com							
Request	/services/oauth	/services/oauth2/token							
Socket Projects	Query parame	ters Add							
JSON	grant_type		password		enc	dec			
Saved	client_id		3MVG9y6x0357HlefCLE.oECm1_OmkTPARXRJHSTj_JW5QCnzWMof5udnaDJCLmK91JL7TPxJH0bPWT1eJuWaC	x	enc	dec			
History	client_secret		6984467848525636553		enc	dec			
Settings	username		admin@test.com		enc	dec			
About	password		mypasswordBbtpHZVKSMsXSLTZm2TeS9wh		enc	dec			
Rate this application ♥ Donate	HASH								
	© GET ● POST ● PUT ● PATCH ● DELETE ● HEAD ● OPTIONS ● Other								
	Raw	Form	Headers						
						- /-			

Must be a POST, PUT gives error

{"error":"invalid_request","error_description":"must use HTTP POST"}

Adding parameters as a Payload or Headers

{"error":"unsupported_grant_type","error_description":"grant type not supported"}

application/x-www-torm-uriencoded
Set Content-Type neader to overwrite this value. Clear Send Status 200 OK 🔮 Loading time: 803 ms Scroll to top User-Agent: Mozilla/5.0 (Windows NT 6.3; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/46.0.2490.80 Safari/537.36 Request Origin: chrome-extension://hgmloofddffdnphfgcellkdfbfbjeloo headers Content-Type: application/x-www-form-urlencoded Accept: */* Accept-Encoding: gzip, deflate Accept-Language: en-GB,en-US;q=0.8,en;q=0.6 Cookie: BrowserId=FdEgXw9aR7GWpXPEC3zdhA; __cfduid=d6728ae6d8eb131b7b4a5efa3166db6b81447079657; rememberUn=true; login=philip@nesfield.org; com.salesforce.LocaleInfo=uk; oinfo=""" disco=E:00DE0000000a9ZU:005E0000000f3ZI:0; autocomplete=1; inst=APPE; webact=%7B%22I_vdays%22%3A-1%2C%22I_visit%22%3A0%2C%22session%22%3A1447184592871%2C%22I_search%22%3A%22%2C%22I_dtype%22%3A%22%2C%22I_page%22%3A%22HELP%3Aus%3Aunauth%3/ s_vi=[CS]v1]2B212469053112C6-40000108C0000115[CE] Response Date: Tue, 10 Nov 2015 20:14:38 GMT headers Pragma: no-cache Cache-Control: no-cache, no-store Content-Type: application/json;charset=UTF-8 Content-Encoding: gzip Transfer-Encoding: chunked **JSON** Raw Response Copy to clipboard Save as file access token: "00DE0000000a9ZU!ARUAQAzN30Ei69J xb3Hf2H5xtybdcFJ5DJ6fV68gpewyCBsdAfso6Sph0VebEDKa 26SgSu.ncMTfdUENeQt1gUcQ gjIBQ" instance_url: "https://na9.salesforce.com" id: "https://login.salesforce.com/id/00DE000000a9ZUMAY/005E00000063Z1IAI" token_type: "Bearer" issued at: "1447186479405" signature: "jGJ9KyHqV3zrSLLQu9ir7Mjht50Mau95TqszEm2L2c0="

Get a List of Users

Advanced Rest Client	salesForce	GetUsers1		🝐 Save	Open
	https://na9.	salesforce.com			
Request	/services/data	a/v20.0/query/			
Socket Projects	Query param	eters Add			
JSON	q		SELECT+email+,+name+from+User	x	enc dec
Saved	HASH				
Settings	● GET 0 F	POST OPUT	○ PATCH ○ DELETE ○ HEAD ○ OPTIONS ○ Other		
About	Raw	Form	Headers		
Rate this application ♥ Donate	Authorizati	on: Bearer 00	DE0000000a9ZU!ARUAQC8nSJEuuz6.zEfdJVpuB3fOANUb3szw7lUf6sTrQqLaU8Yi5ojtNjPgzPUaqsuL9ILLwFQGj5.9h4OEVsJKujQVrPAr		
				Clear	Send
	Status	200 OK 🔞	Loading time: 354 ms		
	Request headers	User-Agent: N Authorization: Accept: */* Accept-Encod Accept-Langu Cookie: Brows oid=00DE0000	lozilla/5.0 (Windows NT 6.3; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/46.0.2490.86 Safari/537.36 Bearer 00DE0000000a9ZUIARUAQC8nSJEuuz6.zEfdJVpuB3f0ANUb3szw7IUf6sTrQqLaU8Yi5ojtNjPgzPUaqsuL9ILLwFQGj5.9h4OEVsJKujQVrPAr ling: gzip, deflate, sdch age: en-GB,en-US;q=0.8,en;q=0.6 verld=FdEgXw9aR7GWpXPEC3zdhA;cfduid=d6728ae6d8eb131b7b4a5efa3166db6b81447079657; rememberUn=true; login=philip@nesfield.org; com.sta 0000a9ZU; umps_clientId=; webact=%7B%22L vdays%22%3A- ist%23W2604/26W23PW26V2404/26W24PW2604/26U covreb%23PW26W23W26W23W26W24W26W23W26W26W26W26W26W26W26W26W26W26W26W26W26W	alesforce.Loca	ileInfo=uk; oinfo="

Google Apps

https://console.developers.google.com/apis/credentials?project=axntinteractive

	Google Developers Co	nsole Q		API Project 👻
API	API Manager	Credentials		
¢	Overview	Credentials OAuth consent screen Doma	in verification	
Or	Credentials	Add credentials Delete API key Identifies your project using a simple API key to For APIs like Google Translate. OAuth 2.0 client ID Requests user consent so your app can access For APIs like Google Calendar. Service account Enables server-to-server, app-level authentication For use with Google Cloud APIs.	o check quota and access. the user's data. on using robot accounts.	or details. Key AlzaSyCqy5eS-MpibuYsrVUEzd1oDfM_5cGHo7I
		OAuth 2.0 client IDs	Туре	Client ID
		AMX Nov 10, 2015	Web application	821468230503-sfovnptccho63p2sggchru7r7viea1rp.apps.googleusercon

Service Account

Download key pair API Project-fad9a65e2abb.json

📀 🍃 Certificate Import Wizard

Private key protection

To maintain security, the private key was protected with a password.

Type the password for the private key.

	-	0	-	IA.	5	•	а	
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APIcorl tyt

notasecret

✓ Display Password

Import options:	
Enable strong private key protection. You will be promp private key is used by an application if you enable this of	ted every time the option.

✓ Mark this key as exportable. This will allow you to back up or transport your keys at a later time.

✓ Include all extended properties.

IXI File

2071172015 15:20

Next

Cancel

1 KR

 \mathbf{x}

ĨÌ	Sign up for a free trial and you'll get \$	LEARN MORE		
	Google Developers Co	insole	Q	API Project 🔻
API	API Manager	Credentials		
\$ •	Overview Credentials	Download JS Client ID for Web a Client ID Client secret Creation date Name AMX Authorized JavaScript Enter JavaScript origins Cannot contain a wildce http://www.exampl Authorized redirect UF Must have a protocol. 0 http://www.exampl	SON Reset secret Delete application 821468230503-sfovnptccho63p2sggchru7r7viea1rp.apps.googleusercontent.com 99TuZ7hRYn_NgVaFXXL5R-21 Nov 10, 2015, 11:28:40 PM origins shere or redirect URIs below (or both) ard (http://*.example.com) or a path (http://example.com/subdir). e.com No No e.com Ris cannot contain URL fragments or relative paths. Cannot be a public IP address. e.com/_callback	
43				

Concur

Base64 your Concur login and password from this format - <login>:<password> . Add this to the Authorization header as Basic <Base64'd login:password>

Get Token

Advanced Rest Client	ConcurAuth1				
	https://www.concursolutions.com				
Request	/net2/oauth2/a	ccesstoken.ashx			
Socket					
Projects					
JSON	HASH				
Saved					
History	● GET ○ P	OST OPUT	PATCH DELETE HEAD OPTIONS Other		
Settings	Raw	Form	Headers		
About	Add new header				
Rate this application ♥ Donate	authorization		Basic cGhpbGlwQG5lc2ZpZWxkLm9yZzpjaWFvO?????=		
	x-consumerk	еу	4oOK21vXTY5oha8TCWGoRE		
	accept		application/json		

 Response headers
 status: 200 cache-control: private content-length: 238 content-type: application/json; charset=utf-8 date: Tue, 17 Nov 2015 17:17:46 GMT set-cookie: ADRUM_BTa=R:0|g:f0ca8e09-f259-4388-a04a-4518904c2295; expires=Tue, 17-Nov-2015 17:18:16 GMT; path=/ set-cookie: ADRUM_BT1=R:0|i:886732|e:151; expires=Tue, 17-Nov-2015 17:18:16 GMT; path=/ webserver: SEAPR1_I035

Raw	JSON	Response			
Copy to clipb	oard Save as	file			
{ -Access_To Insta Token Expin Refre } }	oken: { nce_Url: "h : "0_v197fu ation_date: sh_Token: "	ttps://www.concursol Wm/o+TsvOvorFnTxy34= "11/17/2016 5:17:46 0_bviNiXnPEOxOjlTmy3	lutions.com/" =" 6 PM" 3Zl1adnEV6VW"		

Get Users

Advanced Rest Client	ConcurAuth1				
	https://www.concursolutions.	com/api/v3.0/common/users			
Request	PATH				
Socket Projects	Query parameters Add				
JSON	HASH				
Saved					
History	● GET ○ POST ○ PUT	PATCH DELETE HEAD OPTIONS Other			
Settings	Raw Form	Raw Form Headers			
About	Add new header				
Rate this	authorization	OAuth 0_TjTmZ89m10gX5t+bFuUSz????=			
Donate	accept	application/json			
	Status 200 OK 😗 Lo	pading time: 356 ms			

pragma: no-cache set-cookie: ADRUM_BTa=R:0|g:293b3899-aad9-46ec-a737-6356589818e8; expires=Tue, 17-Nov-2015 17:40:04 GMT; path=/ webserver: SEAPR1_1001

```
Raw
              JSON
                        Response
Copy to clipboard Save as file
-Items: [5]
    -0: {
        LoginID: "ConcurAdmin@d0010302cmsd"
        EmployeeID: "Concur Administrator"
        FirstName: "Concur"
        LastName: "Administrator"
        MiddleName: ""
        PrimaryEmail: "ConcurAdmin@d0010302cmsd"
        Active: true
        CellPhoneNumber: ""
        OrganizationUnit: null
        ID: null
        URI: null
     }
    -1: {
        LoginID: "ConcurConsultant@d0010302cmsd"
        EmployeeID: "Concur Consultant"
        FirstName: "ConcurConsultant"
        LastName: "ConcurConsultant"
        MiddleName: ""
        PrimaryEmail: "ConcurConsultant@d0010302cmsd"
        Active: true
        CellPhoneNumber: ""
        OrganizationUnit: null
```

Microsoft Live



Philip | Sign out Microsoft account Developer Center Home My apps Docs Downloads Support My applications > axnt > App Settings axnt Settings To protect your app's security, Windows Push Notification Services (WNS) and services using Microsoft account use client secrets to Basic Information authenticate the communications from your server. **API** Settings Client ID: App Settings 000000004017688F This is a unique identifier for your application. Localisation Client secret (v1): ApDUJQlu98n3qD01PqeekxJPfAlrWlyW For security purposes, don't share your client secret with anyone. If your client secret has been compromised or your organisation requires that you periodically change client secrets, create a new client secret here. After you've created a new client secret, both the old and the new client secrets will be accepted until you activate the new secret. Create a new client secret Note: Please wait 24 hours before you activate your new client secret, because the old client secret won't work after you've activated the new one.

Twitter

Create an app at https://apps.twitter.com/app/new

axnt

Details Settings

Keys and Access Tokens

Permissions

Application Settings

Keep the "Consumer Secret" a secret. This key should never be human-readable in your application.

Consumer Key (API Key)	VOju∖	/WNN7T9HjxhPveKYxuSMB	
Consumer Secret (API Se	cret)	XW3MF60swJPwHSxgc516WXTPgh3fCmljF	PicuhHhQ85c1Ai4qU
Access Level	Read	and write (modify app permissions)	
Owner	sweatyGarden		
Owner ID	21679	906829	

Application Actions

Regenerate Consumer Key and Secret

Change App Permissions