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| PointSharp SDK  3.5 |
| User’s Guide |
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| **Version 3.5.0** |
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| PointSharp AB – Sweden 2009 |

Contents

[Introduction 3](#_Toc240797554)

[PointSharp ID API 4](#_Toc240797555)

[General 4](#_Toc240797556)

[Build 4](#_Toc240797557)

[Classes 4](#_Toc240797558)

[Authentication Method API 4](#_Toc240797559)

[Notification Method API 4](#_Toc240797560)

[OATH Token Provision API 5](#_Toc240797561)

[PointSharp ID Web Services 6](#_Toc240797562)

[General 6](#_Toc240797563)

[Installation 6](#_Toc240797564)

[Classes 8](#_Toc240797565)

[Authentication Services 9](#_Toc240797566)

[Notification Services 9](#_Toc240797567)

[User Services 9](#_Toc240797568)

[PointSharp ID Web Application 10](#_Toc240797569)

[General 10](#_Toc240797570)

[Installation 10](#_Toc240797571)

# Introduction

PointSharp ID offers a wide range of authentication methods for customers requiring easy-to-use, cost-effective strong identification. With the addition of PointSharp SDK it is now also possible for customers to develop additional functions and integrations with PointSharp ID.

For more information about the PointSharp SDK interface classes and methods, see the PointSharp SDK help file, and consult the PointSharp Forum (<http://support.pointsharp.com>) for questions, feedback or sample code.



Currently PointSharp SDK consists of two components:

* PointSharp ID API: A plugin-based API for authentication, notification and OATH token provisioning.
* PointSharp ID Web Services: A Web Services interface for authentication, notification and user provisioning services.

# PointSharp ID API

PointSharp ID API is a plugin-based API, where a plugin implementation, that is a dll file, is loaded by PointSharp ID and the plugin is deployed in PointSharp ID according to the defined configuration.

## General

The PointSharp ID API classes and interfaces are found in a Microsoft .NET Framework 2.0 called PSIDAPI.dll. The API file is found in the /bin folder in the PointSharp ID install folder and is required when compiling and developing a plugin implementation. When the plugin implementation is built the plugin is deployed by PointSharp ID automatically when added to the /bin/plugins folder.

## Build

*csc /out:MyPlugin.dll /t:library /r:PSIDAPI.dll MyPlugin.cs*

## Classes

Psid.API.Base.IPlugin

Psid.API.Authentication.IAuthenticationPlugin

Psid.API.Notification.INotificationPlugin

Psid.API.Users.IOATHTokenPlugin

The IPlugin interface is the base interface extended by all plugin interfaces, where the mandatory parts to implement is the Name and Description properties. These properties are used in PointSharp ID Admin. The IAuthenticationPlugin interface is implemented for an authentication method plugin, INotificationPlugin for a notification method plugin and IOATHTokenPlugin for an OATH Token provisioning plugin.

The PointSharp ID API comprises three different API’s which are covered in the next sections.

## Authentication Method API

The authentication method API enables developers to implement a plugin that performs actual authentication decisions. E.g. useful when customers have a legacy authentication system and wants to migrate over time to the new PointSharp ID authentication methods.

When an authentication method plugin is loaded by PointSharp ID it is possible to configure the plugin as an authentication method in the PointSharp ID Admin client. See the Authentication tab.

## Notification Method API

The notification method API offers an opportunity to implement the notification service for PointSharp ID to use when for example performing SMS authentication or when distributing OATH token configuration to PointSharp Software Tokens.

When a notification method plugin is loaded by PointSharp ID it is possible to configure the plugin as a notification method in the PointSharp ID Admin client. See the Notification tab.

## OATH Token Provision API

The OATH Token Provision API enables developers to assist PointSharp ID when provisioning OATH tokens on PointSharp ID users. For example when PointSharp ID retrieves an OATH token based on serial number, the plugin will perform the actual fetch for PointSharp ID. This is usable when tokens are delivered in an unknown format for PointSharp ID.

When an OATH token plugin is loaded by PointSharp ID it will be deployed whenever PointSharp ID tries to retrieve an OATH token based on serial number, that is both from the PointSharp ID Admin client when adding a hardware-based OATH token for a user, or when PointSharp ID is configured to perform Live Provisioning based on a user attribute stored on the user in the user storage, for example Active Directory.

# PointSharp ID Web Services

PointSharp ID Web Services are implemented upon the Microsoft .NET Framework version 3.5 SP1 and delivers standards-compliant Web Services to developers aiming to integrate with PointSharp ID in any third party system or application.

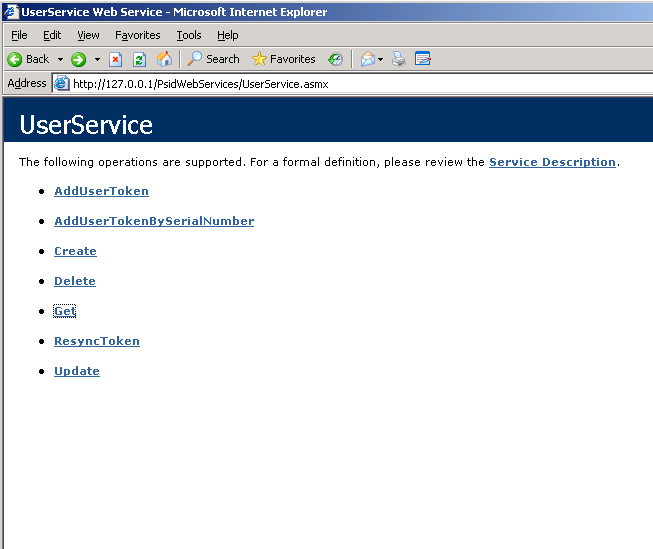
## General

The PointSharp ID Web Services comes as a separate installer, which is to be installed on the same server as PointSharp ID. PointSharp ID Web Services requires an IIS web server (version 6 or above) and having “ASP.NET” enabled as well as the “IIS Metabase And IIS 6 Configuration Compatibility” enabled.

## Installation

To install the PointSharp ID Web Services, follow these steps:

1. Prior installation, verify that the server is fulfilling all requirements.
   1. IIS 6 or above
   2. ASP.NET
   3. IIS 6.0 Management Compatibility feature enabled (in Windows Server 2003 R2: “IIS Metabase And IIS 6 Configuration Compatibility”)
   4. .NET 3.5 SP1
2. Double-click the “PointSharp ID Web Services 3.5.msi”.
3. Click Next.
4. Read the end-user license agreement and thereafter select “I Agree”. If not click Cancel.
5. Click Next.
6. Configure Site, Virtual Directory and Application Pool. It is recommended to use default values.
7. Click Next.
8. Click Next.
9. Click Close.
10. Open the web.config file for the PointSharp ID Web Services.
    1. The web.config file is found at “C:/Inetpub/wwwroot/PsidWebServices” default location.
11. Edit the following configuration (starting at Line 24):
    1. PSID\_BINARY\_FOLDER:   
       Set to the location of the /bin folder in the PointSharp ID installation, default “C:/Program Files/PointSharp/PointSharp ID/bin”. Note that on 64-bit operating systems this path is often: “C:/Program Files (x86)/PointSharp/PointSharp ID/bin”.
    2. PSID\_DEBUG:   
       Set to true if debug logging is wanted.
    3. PSID\_LOG\_FILE:  
       Set to the relative path from the /bin folder where the PointSharp ID Web Services is logging. Default: “../logs/psid-ws.log”.
12. Important! To enable logging and log rotation, which is the default logging behavior, the correct security settings need to be set on the folder containing the log files.
    1. Right-click and select Properties on the C:/Program Files/PointSharp/PointSharp ID/logs folder.
    2. In the security tab, enable the permission Full Control for the user group Authenticated Users.
13. Important! To enable the function to authenticate users in the PointSharp ID Web Services the correct security settings need to be set on the license folder.
    1. Right-click and select Properties on the C:/Program Files/PointSharp/PointSharp ID/license folder.
    2. In the security tab, enable the permission Full Control for the user group Authenticated Users.
14. Restart the IIS in the IIS Manager.
15. Now test the installation by performing the following:
    1. Open an Internet Explorer and browse to: <http://127.0.0.1/PsidWebServices/UserService.asmx>
    2. The following image shows how the browser should display the User Service web service.



* 1. Click the “Get” link and enter a username for a known user, i.e. an user existing in the PointSharp ID.
  2. The user settings are displayed. If not, check the log file psid-ws.log in the log folders.

1. In order to protect the PointSharp ID Web Services from unauthorized access, use the standard means and procedures delivered and built in the IIS.
2. For further information about the PointSharp ID Web Services see the Help file included in the release, PointSharp\_SDK\_31.chm.
3. Finished.

## Classes

The Web Services classes are defined in WSDL files, describing the web services. The WSDL files can be found from the installation IIS:

http://<IIS>/PsidWebServices/AuthenticationService.asmx?WSDL

http://<IIS>/PsidWebServices/NotificationService.asmx?WSDL

http://<IIS>/PsidWebServices/UserService.asmx?WSDL

## Authentication Services

The authentication Web Service delivers all the defined and configured PointSharp ID authentication methods over Web Service.

## Notification Services

The notification Web Service delivers all the defined and configured PointSharp ID notification methods over Web Service.

## User Services

The user Web Services delivers means to create, read, update and delete users in PointSharp ID. Also, this service offers the ability to provision OATH tokens on the PointSharp ID users.

# PointSharp ID Web Application

PointSharp ID Web Application is an ASP.NET web application powered by the PointSharp ID Web Services and offers a web-based interface to a multitude of the day-to-day administrative activities in PointSharp ID.

## General

The PointSharp ID Web Application comes as a separate installer, which can be installed on a separate server than PointSharp ID and PointSharp ID Web Services.

## Installation

To install the PointSharp ID Web Services, follow these steps:

1. Prior installation, verify that the server is fulfilling all requirements.
   1. IIS 6 or above
   2. ASP.NET
   3. IIS 6.0 Management Compatibility feature enabled (in Windows Server 2003 R2: “IIS Metabase And IIS 6 Configuration Compatibility”)
   4. .NET 3.5 SP1
2. Double-click the “PointSharp ID Web Application 3.5.msi”.
3. Click Next.
4. Read the end-user license agreement and thereafter select “I Agree”. If not click Cancel.
5. Click Next.
6. Configure Site, Virtual Directory and Application Pool. It is recommended to use default values.
7. Click Next.
8. Click Next.
9. Click Close.
10. Open the web.config file for the PointSharp ID Web Services.
    1. The web.config file location is default found at “C:/Inetpub/wwwroot/PsidWebApplication”.
11. Edit the following configuration (starting at line 28):
    1. PSID\_BINARY\_FOLDER:   
       Set to the location of the /bin folder in the PointSharp ID installation, default “C:/Program Files/PointSharp/PointSharp ID/bin”. Note that on 64-bit operating systems this path is often: “C:/Program Files (x86)/PointSharp/PointSharp ID/bin”.
    2. PSID\_DEBUG:   
       Set to true if debug logging is wanted.
    3. PSID\_LOG\_FILE:  
       Set to the relative path from the /bin folder where the PointSharp ID Web Services is logging. Default: “../logs/psid-ws.log”.
    4. PSID\_WS\_USERNAME:

Set to the user that the Web Application is using when calling the web services in PointSharp ID Web Services.

* 1. PSID\_WS\_PASSWORD:

Set to the password that the Web Application is using when calling the web services in PointSharp ID Web Services.

* 1. PSID\_WS\_DOMAIN:

Set to the domain that the Web Application is using when calling the web services in PointSharp ID Web Services.

1. Edit the following configuration in the web.config (starting at line 152):
   1. PsidWebApplication\_PsidUserService\_UserService:  
      Set this to the URL for the UserService.asmx in the PointSharp ID Web Services.
   2. PsidWebApplication\_PSIDAuthenticationService\_AuthenticationService:  
      Set this to the URL for the AuthenticationService.asmx in the PointSharp ID Web Services.
   3. PsidWebApplication\_PSIDNotificationService\_NotificationService:  
      Set this to the URL for the NotificationService.asmx in the PointSharp ID Web Services.
2. Important! To enable charting and log file viewing, the correct security settings need to be set on the folder containing the temporary log files.
   1. Right-click and select Properties on the “C:/Inetpub/wwwroot/PsidWebApplication/temp” folder.
   2. In the security tab, enable the permission Full Control for the user group Authenticated Users.
3. Restart the IIS in the IIS Manager.
4. Now test the installation by performing the following:
   1. Open an Internet Explorer and browse to: <http://127.0.0.1/PsidWebApplication/>
   2. Try to click Manage User and search for an existing user. If user is not found, check the log file psid-web.log in the log folders.
5. In order to protect the PointSharp ID Web Application from unauthorized access, use the standard means and procedures delivered and built in the IIS.
6. Finished.