



HOME

User Manual

DELMIA Process Engineer<sup>®</sup>

## Web Service Installation



# Foreword

This manual provides an introduction to the basic operations and functions of the Web Service Installation.

While developing these functions we have made every effort to create a clearly organized, easy-to-understand program structure.

A user-friendly interface as well as a clear menu guide will enable you to quickly learn how to operate the program and to get familiar with its functions so that you can carry out your planning tasks in a quick and reliable way.

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# 1. Introduction

This IPD Web Services Installation Manual should explain to you in a simple and understandable manner how to install and set up the IPD Web Services so you can use it when working with DELMIA software.

IPD Web Services is a middleware component for the IPD Server. It provides access to the IPD Server for other software components, like Clients or other Servers, which have to synchronize with IPD. IPD web Services is not a standalone product and comes without any user interface except that one for installation and configuration.

The usage of the product only makes sense, if used in scenarios integrated with IPD Server and the clients of IPD Web Services. In such scenarios each software component comes with its own documentation on setup and configuration.

One example of such scenarios is Common Change Management (CCM), in which the LCA Server has to communicate with IPD Server. Therefore it needs IPD Web Services installed on the IPD Server.

## 1.1 How to Use this Manual

This manual enables you to get familiar with the operation and functions of the Process Engineer. This manual briefly describes:

- IPD Web Server Installation



### Note

*When handling the IPD Web Server Installation functions, please also refer to the general introduction to Process Engineer in the General Introduction Manual.*



Click [General Introduction](#) to access the manual.

## 1.2 Documentation Conventions and Symbols

The symbols used in this manual are intended to provide you with keys to the contents in an immediately understandable manner.



This symbol is used to introduce key concepts that are covered in the sections immediately following this symbol. As a result, this symbol most frequently appears at the beginning of chapters or sections.



### Note

*This symbol is used to mark notes, which provide you with additional information you need to have for further work. You will either find the Note sign at the beginning of a chapter or in a particular text passage in the chapter. Texts*

bearing this sign are additionally marked with **Note**. The text is always in italics.



### Caution

*This symbol indicates that the text that follows describes particular circumstances that you must avoid to avoid potential errors with the operation of the program or harm to data. You will either find the Caution sign at the beginning of a chapter or near a particular text passage in the chapter. Texts that are introduced by this sign are additionally marked with **Caution**. The text is always in italics.*

### Example

This symbol marks examples which serve to illustrate a certain situation.

1)

This symbol marks the individual operational steps involved in a particular operating instruction. Operating instructions describe operational steps, for example, how to open a menu or execute a function.



This symbol marks listed subjects. The symbol for listed subjects can be either used to structure a continuous text or to list main subject keywords.



This symbol marks list inside a bulleted or numbered list.



This symbol marks cross reference information that is available in another manual.

## 1.3 New Functions in IPD Web Server Installation

No new functionality has been added for this release.

## 2. Prerequisites

### Manual Installation Steps Required

IPD Web Services comes with an automated installation program based on Install Shield installer. Anyway there are some additional steps to be done manually before and after this installation program is run. For first installation there are some third party software products to be installed. For updating IPD Web Services there has a manual cleanup to be done.

### Environment with other Web Services

IPD Web Services can also be installed along with other DS internal web services, for example SSO web service. Therefore, the configuration of a Service Directory is necessary.

### Troubleshooting and Error Diagnostics

In case of failure of the web services there are ways to investigate for the reasons. Also for the developer team debug flags and trace files are important. It is explained how to activate traces and where to find the output.

This chapter provides you with information necessary to customize the Manufacturing Hub to properly support the Change Management functionality.

The entire customization is done within a plantype set. Furthermore, the paragraph includes additional information about how Default-PRO-DPM-IGRIP\_V5\_CMC has been prepared.

## 3. General Installation Steps

### 3.1 Installation Directories

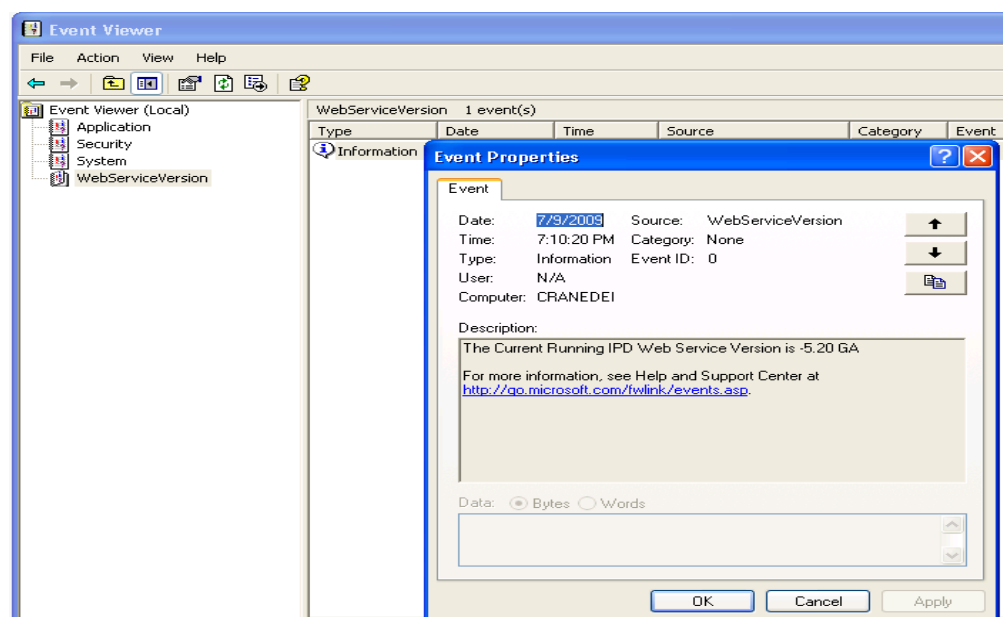
The installation of IPD Web Services installs software to the hard disc and configures the underlying operating system. The most important locations are:

- **wrkspc** ... Directory, which contains the IPD Web Service software. The location of that directory can be chosen during the automated installation software.
- **wrkspc/ logs** ... In that directory there are two important log files: SystemErr.txt for error traces and SystemOut.txt for debug traces.
- **wrkspc/ToolsData** ... This directory contains persistent data, that is necessary for the DS internal web service infrastructure. For example environment variables and list of activated traces is stored inside it.
- **Wkspc**... This directory contains the *WebServiceVersionInfo.txt* file. This read-only file provides Web Service Version information. The Version information can also be seen in an event viewer.

After Web service is invoked, perform the following steps to view version information in event viewer:

- 1) Go to Windows Event Viewer.
- 2) Select **WebServiceVersion**.
- 3) Double click **Information**.

The **Event Properties** dialog box comes which contains the version information.



**Figure 1: WebServiceVersion information in Event Viewer**

- **Virtual directory in IIS** ... IPD Web Services are accessed via HTTP. Therefore the installation routine creates a virtual directory that points to the wrkspc directory.

- **Registered CATJsyTransaction.dll** ... This software component is registered in the COM+ Dll registry of Microsoft Windows.

## 3.2 Installation Steps

For installing IPD Web Services there is an automated installation program based on Installshield software. The usage of this program is described in **'Main installation'**.

Before you start with 'Main installation' you have to check whether it is the first time the software is installed or it is an update. In case of first installation, start with the chapter ['First Installation \(Prerequisites\)'](#). In the latter case start with ['Update an Existing Installation'](#).

If you are not sure, begin with ['First Installation \(Prerequisites\)'](#) and continue with ['Update an Existing Installation'](#) and then do the ['Main Installation'](#).

In all cases you have to check the DCOM configuration of Microsoft Windows. More information you can find in the chapter ['DCOM Configuration'](#).

All the actions mentioned above are mandatory for a working IPD Web Services environment. In special scenarios you have to follow the instructions in chapter ['Environments with Multiple Web Services \(Usage of SSO\)'](#). If there are clients, that use other V5 internal web services beside IPD Web Services (like SSO for example), a special set up of the so-called Service Directory must be done.

## 3.3 First Installation (Prerequisites)

Installation of IIS (Internet Information Server) incl. FPSE (FrontPage server extensions). You may need the Windows 2003 Media to perform the following steps.

- 1) Click **Start > Settings > Control Panel > Add/Remove Programs > Add/Remove Windows Components**.
- 2) Check **Application Server**.

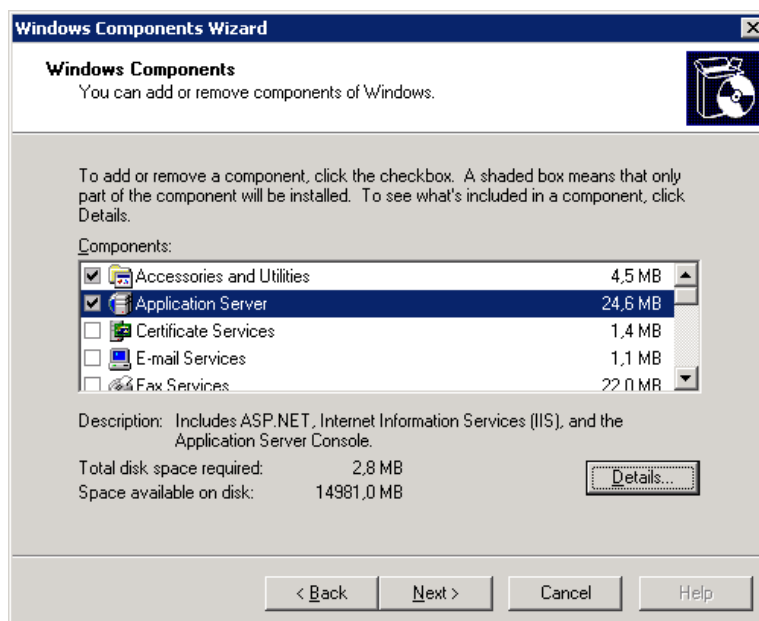
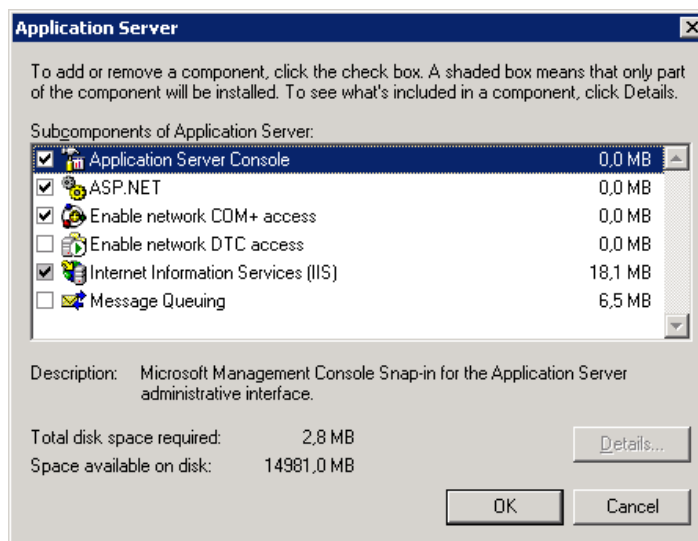


Figure 2: Application Server



- 3) Click **Details** and assure that the following check boxes are selected.
- 4) Click **OK**, '**Next**' and complete the IIS installation.



**Figure 3: Application Server Console**

- 5) Continue with chapter '[Main Installation](#)'.

## 3.4 Update an Existing Installation

If IPD Web Services have already been installed on the machine you have to remove the previous installation before in the following way. This approach could differ dependent on the OS language:

- 1) Restart IIS.
- 2) You can do this via the batch file 00\_iisrestart.bat in the IPD Web Service installation folder or with the Internet Services Manager.
- 3) Delete the workspace of the old installation.  
The workspace directory of IPD Web Services have to be deleted. It's the directory which is referred by the virtual directory in IIS (see next step).
- 4) Remove the virtual directory in IIS.
- 5) **Start->Control Panel->Administrative Tools->Internet Information Services Expand to 'Default Web Site'** Delete the existing web project 'IPDWebService'.

### 3.4.1 Unregister the Transaction DLL

- 1) On Windows 2003: **Start->Control Panel->Administrative Tools->Component Services Expand to Computers->My Computer->COM+ Applications Delete the existing 'PPR Components' entry.**
- 2) Continue with chapter '[Main Installation](#)'.

## 3.5 Main Installation

The main installation consists of an automated part that is done by an installation program on the media and of a manual part. Additional steps may

be required for granting access permissions to the local ASPNET user which is created during the .NET installation.

### 3.5.1 Automated Part of Installation

Execute setup.exe and follow the instructions of the installation software.

During the installation procedure the installer may ask you to confirm the installation of two prerequisite products:

- **Microsoft .NET 2.0** Redistributable Package
- **Microsoft J# Runtime** Redistributable Package



#### Note

In release R16 or later there is no need any more to specify a host name during the setup process as compared to R15.

### 3.5.2 Manual Part of Installation

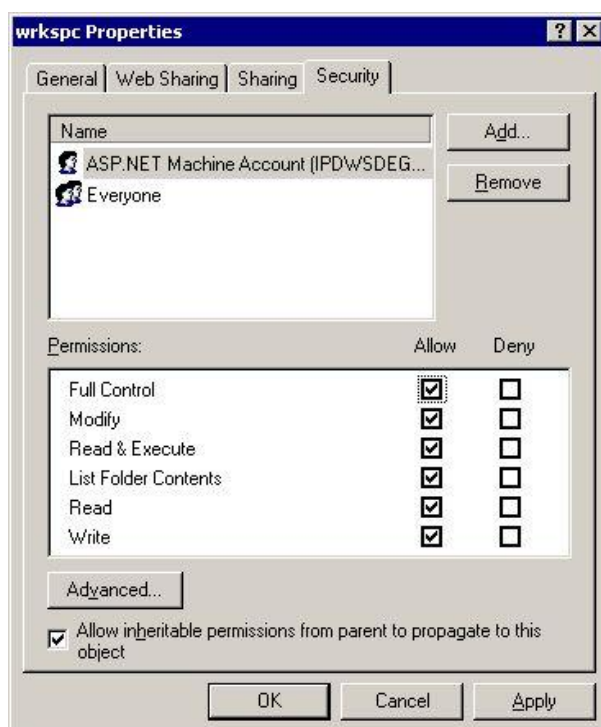
After the automated installation procedure the following Software updates must be installed manually:

- Microsoft .NET Framework 2.0

### 3.5.3 Permissions

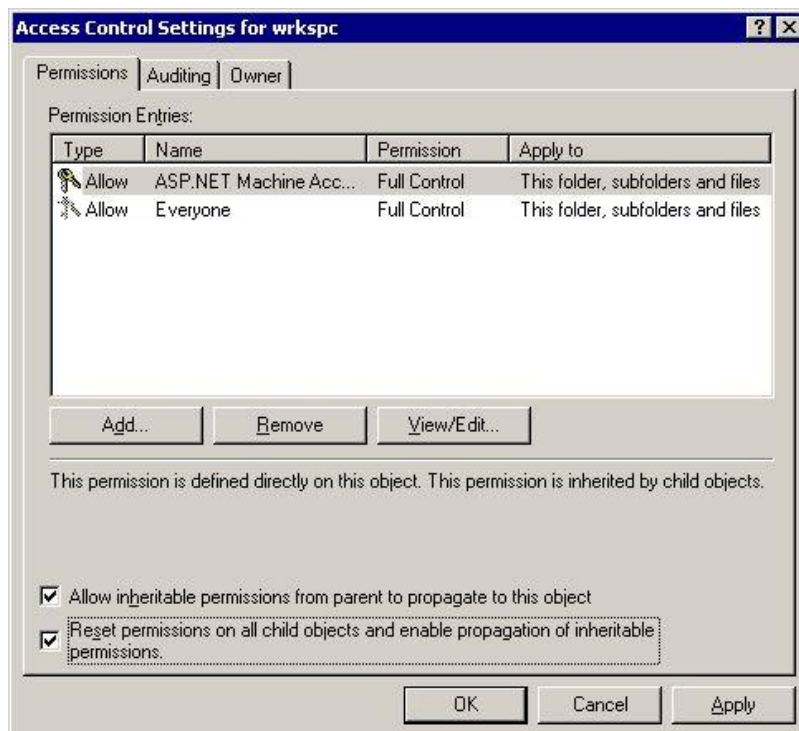
You have to make sure the local user ASPNET has full access to the IPD Web Service installation directory and all its subdirectories. This can be done by following these steps:

- 1) Navigate to the directory where IPD Web Services are installed. It is the directory, which was specified during the automated installation process.
- 2) For subdirectory 'wrkspc' open the properties.
- 3) On the upcoming dialog box switch to the security tab page.
- 4) Click **Add** button.
- 5) Add the machine user 'ASPNET' and confirm with **OK**. Make sure, that you really add the machine user and not the domain user.
- 6) Give this user full control, as shown in the [Figure 4](#).



**Figure 4: WrKSPC Properties**

Also give the user access to all subdirectories by clicking on the **Advanced** button and selecting the lower check box on the upcoming dialog boxes.



**Figure 5: Access Control Settings**

7) Close all dialog boxes by clicking the **OK** button.

In addition, the local ASPNET user must have "Read & Execute" permission for the complete PPR Server installation directory (e.g. ...\\Delmia\\PPRServer); the same requirement accounts for the PPR Client directory if a DPE Client is

installed on this machine. This is necessary because the ASPNET user needs to launch/access certain IPD server processes (DPE pooling server).

## 3.6 DCOM Configuration

- 1) Run DCOM config tool (Start – Run... - „dcomcnfg“)
- 2) On Windows 2003: Expand to Computers->My Computer->DCOM Config  
ble click on each ,DPE ...' entity.
  - Tab 'Identity': Select ,this user' – type in a valid domain user in the following form <windows-domain>\<windows-user>Also type in the valid password twice.
  - Tab 'Security'. In the frames 'access permissions' and 'launch permissions' select “user defined...” and click '**Edit**'.
- 4) Click '**Add...**' and add the local user 'ASPNET'
- 5) Close all boxes with **OK**.

## 3.7 Environments with Multiple Web Services (Usage of SSO)

If the IPD Web Service clients shall consume also other V5 web services it is necessary to use a V5 Service Directory which coordinates all the web services taking part in the scenario.

Therefore, each server participating in the multiple server scenarios needs to be configured manually after installation. This can be done in two steps.

### 3.7.1 Service Directory URL

Choose one of the web service hosts to act as Service Directory. Find out the web services URI of this host. This looks like

`http://<server>:<port>/<contextPath>`



#### Note

*That <server> is the fully qualified domain name under which the server is reachable. This URI must be used in the next step for all web service hosts.*

### 3.7.2 Publish All Services into the Service Directory

Begin with the web service host, that acts as Service Directory and repeat it on each of all web service hosts participating in the scenario.

- In a web browser open the configuration URL for the Service Directory.
- `http://<server>:<port>/<contextPath>/html/ServiceDirectory`



### Note

*Be careful, that you do not confuse URLs here: This URL is associated to the web service server and is different for each of those.*

- Enter the value of “Service Directory URI”.



### Note

*If the service directory server is secured you have to enter the authentication settings also. If the service directory host can be accessed only via a proxy server, which uses authentication then also the proxy authentication data has to be entered.*

- 1) Click **Save settings**.

**Figure 6: Security Directory**

## Publish the Web Service



### Note

*For the SSO host please skip this step and continue – Please refer to the [Publishing of SSO Web Services is a Special Case](#)*

- Open the page ‘Publish web services’ ([Figure 7](#)).
- Click **Publish all**.
- A message at the bottom of the page shows, whether the publishing was successful or not.

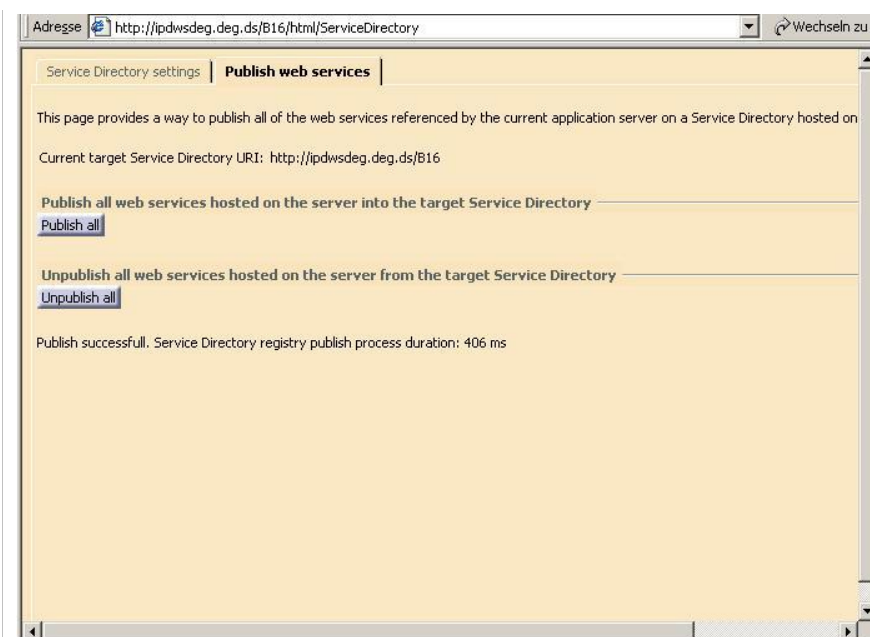


Figure 7: Publish Web Service

### 3.7.3 Publishing of SSO Web Services is a Special Case

To have an SSO server integrated in a multiple server scenario, you have to use the SSOAdminConsole for publishing.

`http://<server>:<port>/<contextPath>/html/SSOAdminConsole`

After the Servicedirectory URI is defined as described in chapter '[Publish All Services into the Service Directory](#)

' until 'Save settings', the SSO administration application displays two extra buttons: "Publish SSO services" and "Unpublish SSO services". These buttons control the publication/unpublication of the SSO services.

- Click **Publish SSO services**.

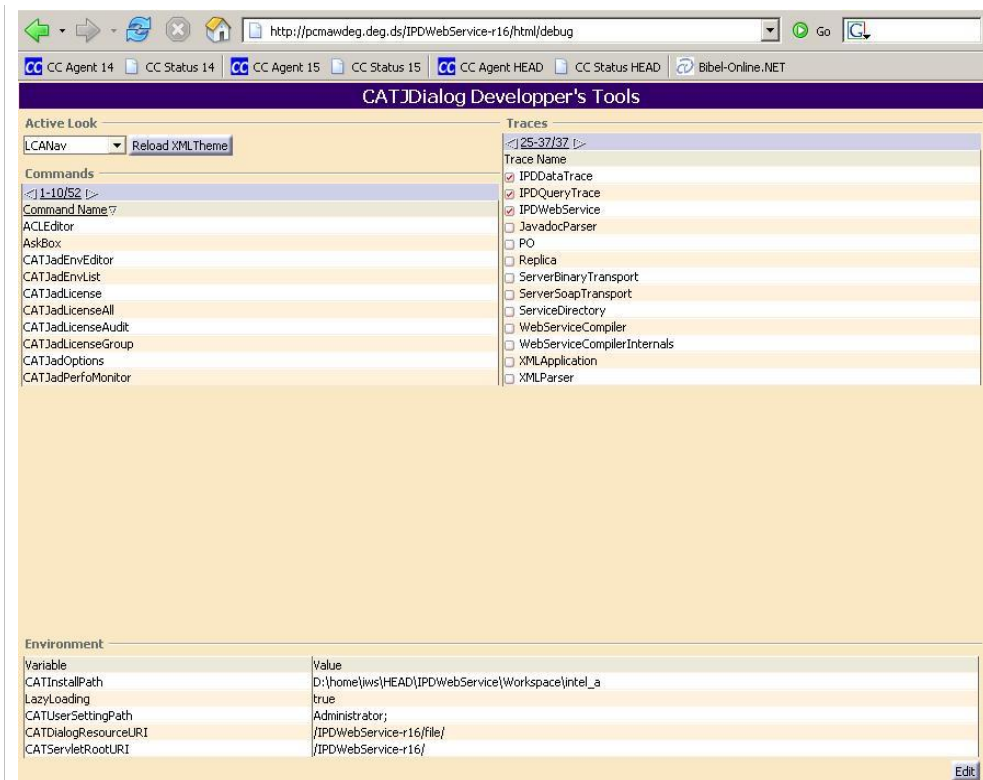


Figure 8: Administrative Console

### 3.7.4 Localization

The language of the setup can be selected in the beginning of the installation routine. Configuration pages for the Service Directory are in English only. There is no language dependent functionality during the use of IPD Web Services. Error traces are always in English.

## 3.8 Log Files of IPD Web Services

In this section it is explained, what an administrator can do in order to find out, whether web services work properly or not.

There are two log files in the directory wrkspc/logs. The file SystemErr.txt shows all errors that come from web service infrastructure. Thereby there are two kinds of error tracing. IPD Web Services attach the system date and time to the output and also the original error message.

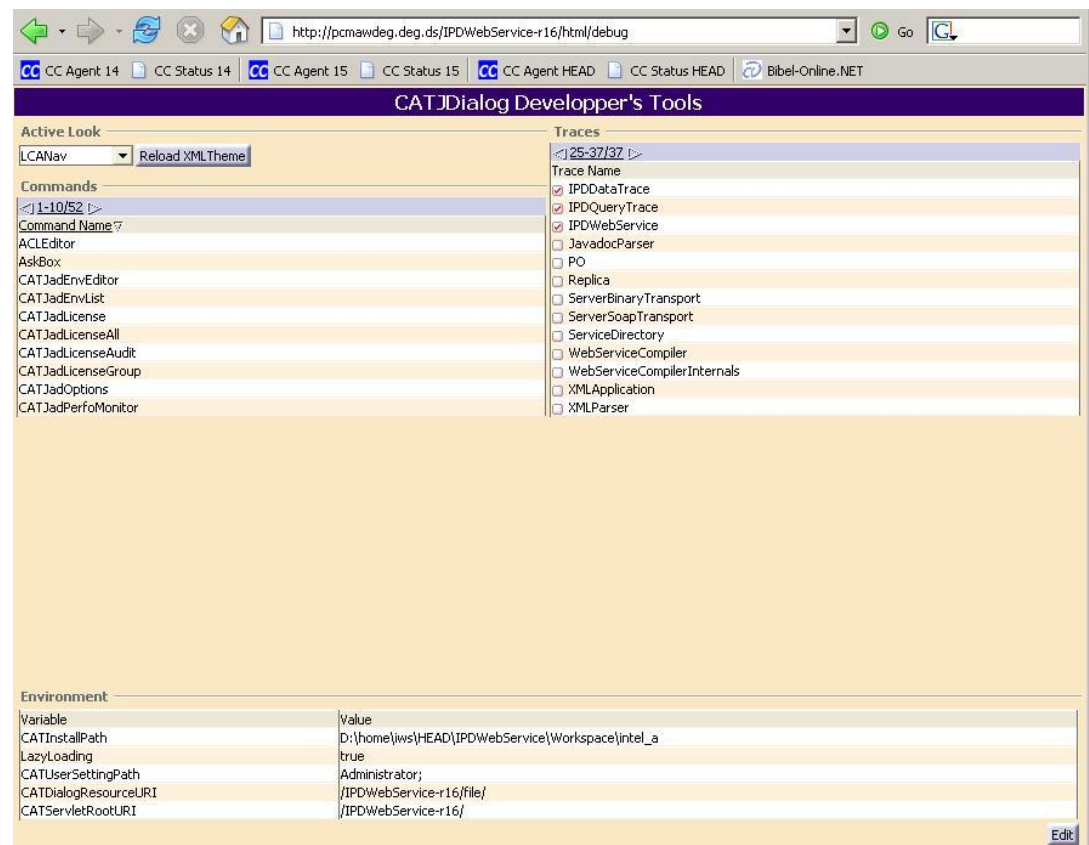
### 3.8.1 Activating Debug Traces

If there are errors expected in V5 web services, it is helpful to activate traces to have more detailed information in the mentioned SystemOut.txt:

The traces can be activated with the server application 'html/debug'. Open in a browser the URL:

```
http://<machine>:<port>/IPDWebService/html/Debug
```





**Figure 9: V5 Web Services**

In the upper right area there is a list of traces, which are available in the web service software. These traces appear once the code was invoked.



### Note

*That if there are traces missing, it means that the code is not entered at that time. On the other hand all traces that were previously activated are displayed anyway.*

- To activate a trace, simply click on it.  
All Traces related to IPD Web Services begin with IPD.

### IPDWebService

For each Web Service that is called, the precise date and time is printed out to SystemOut.txt. It is also printed, if the call was successful or not.

### IPDDataTrace

Additional data is printed out to SystemOut.txt. For example the invocation parameters of the web services are logged.

### IPDQueryTrace

The parameters and results of queries are printed out. This information may help the developer for investigating on errors.

### Compatibility

IPD Web Services are compatible with IPD Server from the same build level. Only those IPD Web Services must be used, that are delivered on the DPE Server and Client media. Also all V5 client software, that shall access IPD Web Services must be based on the same codelevel. Don't mix up Releases and also Service Packs.



**Limitation 1**

Only one IPD Web Service installation per IPD Server

IPD Web Services can be installed only once for an IPD Server and must be updated as described in this documentation. On the other hand it makes no sense to have multiple IPD Web Service installations on an IPD Server machine. Clients can only use one IPD Web Service location at one time. It is not possible to switch the IPD Web Service location during the usage of the client.

**Limitation 2**

Only one instance of IPD Web Services in one Service Directory

It is not possible to publish more than one location of IPD Web Services into a Service Directory. As a result, there is no way to handle things like load balancing.

## 3.9 Testing the Installation

To verify that the installation was successful, enter the following URL in a web browser:

<http://localhost/IPDWebService/servicerouter>



**Figure 10: Web Browser**

If the site appears as shown above, the installation was successful.

## 4. Glossary

Terms	Description
ASP	The software component of IIS, that runs applications (for example IPD Web Services).
J#	A programming language of NET framework IPD web services is based on J#. Therefore J# run-time has to be installed on the target machine of IPD Web Services
IIS	Microsoft Internet Information Service – the application server from MS Corporation, which is needed for IPD Web Services.
Internal web services	DS software infrastructure for client/server applications that are pure V5 products.
.NET	Multi language featured software development architecture from Microsoft Corporation. Software that is developed within .NET needs the .NET run-time to be installed on the target machine
Service Directory	Software component within DS web services that coordinate multiple web services installed on different locations.
SSO	Single sign on Software provides the enhancement to need to log in only once and be able to use different components of the software without logging in each time. This is based also on web services and used especially in Common Change Management.

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