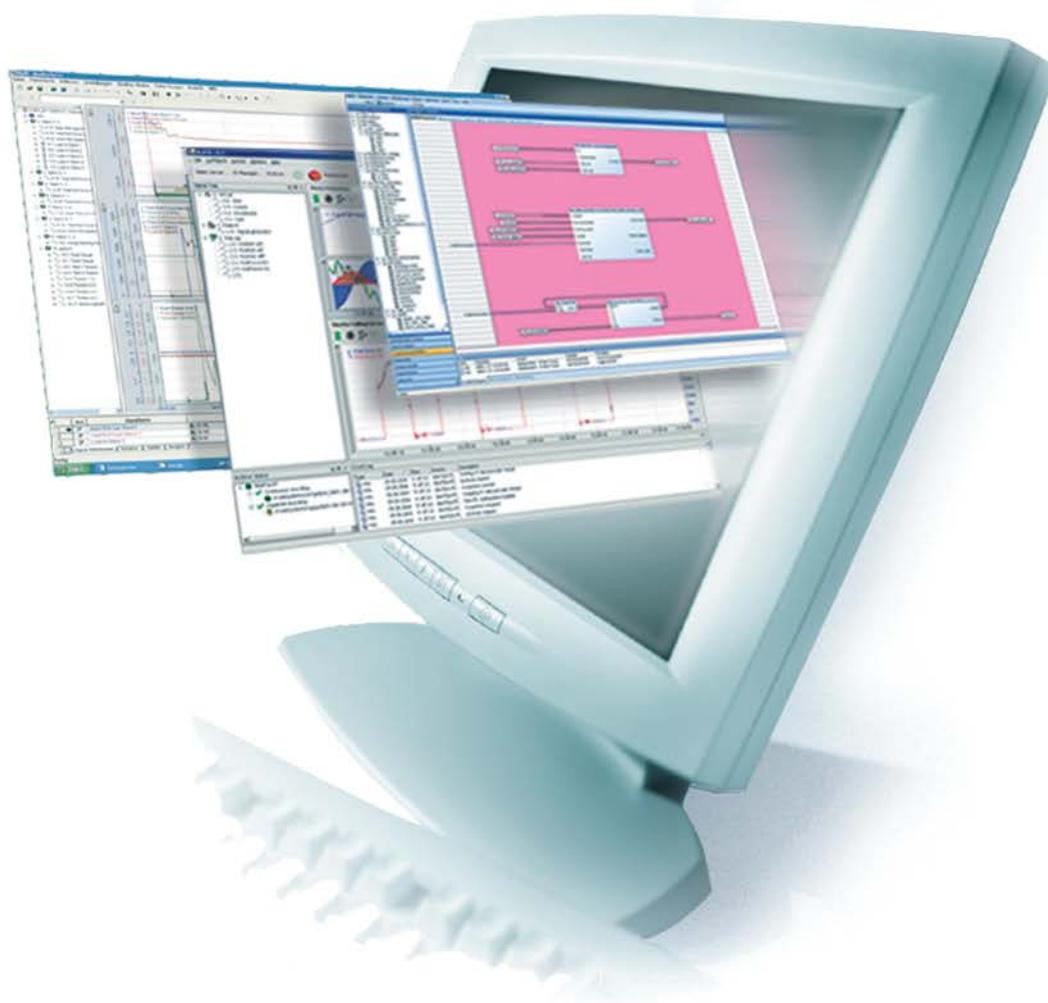# ibaDatCoordinator-Plugin AM OSPC

Data Export to ArcelorMittal OSPC System

Manual

Issue 1.0

Measurement and Automation Systems

iba

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The content of this publication has been checked for compliance with the described hardware and software. Nevertheless, deviations cannot be excluded completely so that the full compliance is not guaranteed. However, the information in this publication is updated regularly. Required corrections are contained in the following issues or can be downloaded on the Internet.

The current version is available for download on our web site http://www.iba-ag.com.

Issue	Date	Revision	Author	Version SW
1.0	05-04-2016	Initial version	mvs	1.0

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Table of Contents

1   About this manual

This manual describes in detail the configuration and use of the software product *ibaDatCoordinator-Plugin AM OSPC*. It serves both as a tutorial and a reference document.

1.1   Target group and previous knowledge

This manual addresses in particular the qualified professionals who are familiar with handling electrical and electronic modules as well as communication and measurement technology. A person is regarded as professional if he/she is capable of assessing safety and recognizing possible consequences and risks on the basis of his/her specialist training, knowledge and experience and knowledge of the standard regulations.

This documentation especially addresses persons who cope with analyzing measurement and process data. As the data are provided and processed using other iba products, the following prior knowledge is required or helpful for working with *ibaDatCoordinator-Plugin AM OSPC*.

❑ Windows operating system

❑ *ibaDatCoordinator*

❑ *ibaAnalyzer*

1.2   Notations

In this manual the following notations are used:

Action	Notation
Menu command	Menu *Logic diagram*
Calling the menu command	*Step 1 – Step 2 – Step 3 – Step x* Example: Select the menu *Logic diagram - Add - New function block.*
Keys	<Key name> Example: <Alt>; <F1>
Press the keys simultaneously	<Key name> + <Key name> Example: <Alt> + <Ctrl>
Buttons	<Key name> Example: <OK>; <Cancel>
File names, paths	"Filename", "Path" Example: "Test.doc"

1.3   Used symbols

If safety instructions or other notes are used in this manual, they mean:

⚠ DANGER

The non-observance of this safety information may result in an imminent risk of death or severe injury:

- ❑ From an electric shock!
- ❑ Due to the improper handling of software products which are coupled to input and output procedures with control function!

⚠ WARNING

The non-observance of this safety information may result in a potential risk of death or severe injury!

⚠ CAUTION

The non-observance of this safety information may result in a potential risk of injury or material damage!

Note

A note specifies special requirements or actions to be observed.

Important note

Note if some special features must be observed, for example exceptions from the rule.

Tip

Tip or example as a helpful note or insider tip to make the work a little bit easier.

Other documentation

Reference to additional documentation or further reading.

Example

Configuration and application examples for a better understanding

2   System pre-requisites

Software

❑ Windows 7

❑ .NET- framework 4.0

❑ *ibaAnalyzer* 6.7.1 or later

❑ *ibaDatCoordinator* 1.23.3 or later

Hardware

❑ PC, multi-core CPU, 2 GHz, 2 GB RAM,145 GB HDD

❑ OSPC server to communicate the data with

❑ On the application PC the possibility to connect to previous OSPC server

❑ iba licensing dongle that has the required licenses set to enable this plugin in *ibaDatCoordinator*

Pre-requisite configuration

❑ The application PC needs to be configured so it can communicate with the OSPC server without Windows security interfering. These requirements are identical as for the ArcelorMittal OSPC Client. Please refer to the internal ArcelorMittal documentation regarding configuration of an ArcelorMittal OSPC Client.

❑ The OSPC Server needs to have the process variables defined that the Plugin needs to send. Please refer to the internal ArcelorMittal documentation regarding configuration of an ArcelorMittal OSPC Server.

3   Introduction

3.1   General description

The *ibaDatCoordinator-Plugin AM OSPC* is an extension for *ibaDatCoordinator* that allows *ibaDatCoordinator* to extract or calculate data from an iba data file (".dat file") and communicate that data with an ArcelorMittal OSPC Server as process variables.

After installing the plugin, an additional task will be available in *ibaDatCoordinator* that will allow one to specify *ibaAnalyzer* expressions along with OSPC process variable names. When running the parent job, these expressions will be evaluated and sent to the OSPC server (which also needs to be specified along with login credentials).

Additionally an optional *ibaAnalyzer* analysis can be specified. In the new task one can then refer to the expressions in the specified analysis (both signal table expressions and "logicals"). *ibaDatCoordinator* will load the analysis before evaluating the expressions specified in the plugin, allowing for short and easy *ibaAnalyzer* expressions in the plugin.

4   Installation

4.1   Installing the plugin

Start the installation by executing the file `ibaAM-OSPC-PluginInstaller_v1.0.exe` which you've received by download, by e-mail or on DVD.

On the installation DVD the plugin installer can be found in the directory `01_iba_Software\ibaDatCoordinator\02_Plugins\AM_OSPC`.

Please follow the instructions of the installation wizard.

> **Note**
>
> The *ibaDatCoordinator* needs to be stopped and closed before installing the plugin. If you haven't closed the *ibaDatCoordinator* yourself (and its service when installed as a service), the installer will close *ibaDatCoordinator* for you. Do not install the plugin at a time when shutting down the *ibaDatCoordinator* is inconvenient for you.

You will need to restart *ibaDatCoordinator* after installing the plugin, the client can be started from the windows menu (*Programs – iba – ibaDatCoordinator – ibaDatCoordinator Service Status*) while the service can be started from the client (*Menu – Service – Start* or right click the system tray icon – Start service)
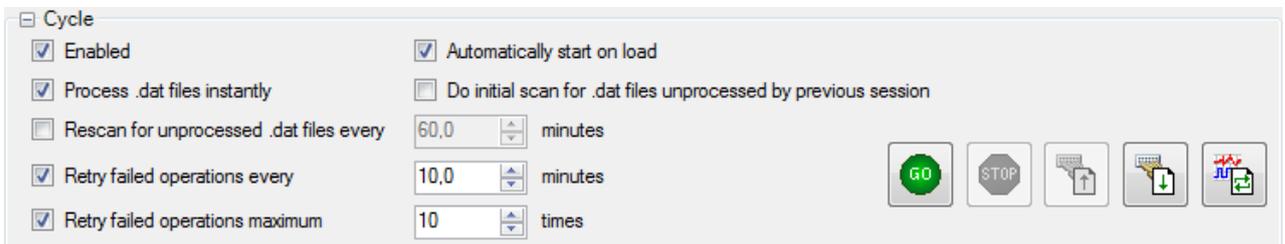
5   Configuring the AM OSPC plugin

5.1   Adding and configuring a job

If no *ibaDatCoordinator* job has been configured yet, we recommend modifying the existing default job. If a new job that runs in parallel with already existing jobs is required the blue "Add job" link can be clicked. We recommend adding or modifying a job under the "Standard jobs" section in the job tree, however "Scheduled Jobs" (for executing the plugin against HD data) or "One time Job" (for executing the plugin against manually selected .dat files) should work also.

Since the A.M. OSPC server works best if its data is provided chronologically we recommend the following options to be set in order to process the .dat files in chronological order:

❏ Enable "Automatically start on load"

❏ Enable "Process .dat files instantly"

❏ Disable "Do initial scan for .dat files unprocessed by previous session"

❏ Disable "Rescan for unprocessed .dat files every …"

Other documentation

For further information on configuring *ibaDatCoordinator* Jobs we recommend consulting the *ibaDatCoordinator* manual.

5.2   Adding the OSPC task

If the plugin has been installed successfully; the next time you start *ibaDatCoordinator* you will be able to add an OSPC task to a job. You can add the OSPC task in the job pane. You do this by either clicking the button in the *"New Task"* button collection or by right clicking on the job in the job tree or selecting the task from the context menu under *"Add task"*.
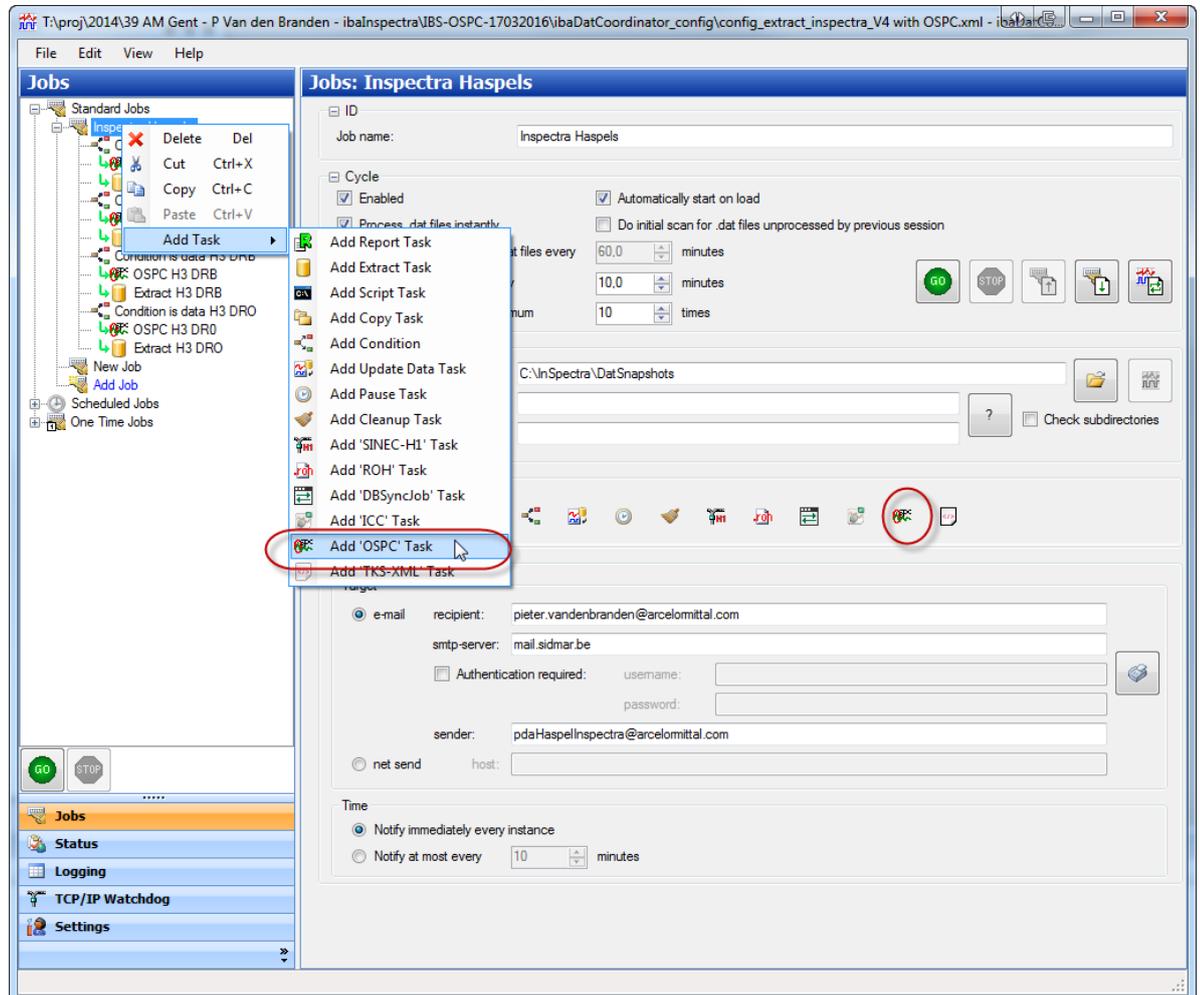
5.3   Configuring the OSPC task

After adding an OSPC task, you can select it in the job tree to open the corresponding task pane where you can configure the task. The task has three groups of options in common with any other task:

❑ ID

Here you can specify another name for the task than the default "OSPC". You can also specify here whether or not that the task is resource critical (you can specify in the global *ibaDatCoordinator* "Settings" how many resource critical tasks can be executed simultaneously.)

❑ Execute

Here you can specify when to execute the task.

❑ Notify

Here you can specify when *ibaDatCoordinator* should send notifications about the status of the task.

Near the bottom another groupbox is present that is common with *ibaDatCoordinator* tasks that require ibaAnalyzer:

❑ Monitor ibaAnalyzer

Here you can limit the amount of memory an *ibaAnalyzer* operation can take and/or the amount of time an individual *ibaAnalyzer* operation can take. If these limits are exceeded, the operations will be halted and the .dat file will be marked as failed for the OSPC task.

Other documentation

These options are entirely identical to the same options in other tasks; we advise to consult the *ibaDatCoordinator* manual for additional information on how to configure them.

5.3.1   Specifying OSPC server parameters

Here you must specify the hostname of the OSPC server and the credentials (username and password) to log on to it. If the user is in a domain, you must specify the domain name first, than a slash ('\') followed by the username.

Host:	OSPCWWA
Username:	DOSIM000\wwa.pda
Password:	••••••••
Optional analysis:	F:\InSpectra\ibaAnalyzer_config\CI_Amp_kurt_H1_DRB.pdo

5.3.2   Specifying an optional analysis

Optionally, you can specify an *ibaAnalyzer* analysis file (.pdo file). When processing a .dat file, the OSPC plugin will first load this analysis before evaluating the expressions that need to be sent to the OSPC server as process variables. This way you can define more complex expressions in the analysis and you can refer to these expressions (both signal table expressions and logicals) in the expressions for the process variables. This allows for simpler expressions for the process variables, often merely referring directly to the expressions in the analysis. This option is identical as the optional analysis you can specify for an *ibaDatCoordinator* conditional task.

Optional analysis:	F:\InSpectra\ibaAnalyzer_config\CI_Amp_kurt_H1_DRB.pdo		
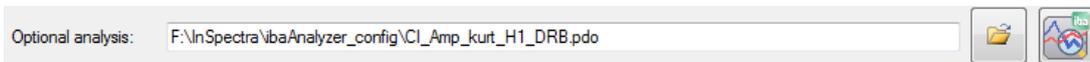
Next to the textbox where you can type the name of the analysis, there is a button to browse for an analysis. Next to it is another button which is grayed if the typed analysis file does not exist. If it does exist and is accessible, you'll be able to click the button to open an *ibaAnalyzer* session with the selected analysis file loaded.

5.3.3   Specifying the OSPC process variables

Next is a grid where you can specify up to 20 OSPC process variables.

The grid contains the following columns:

❑ ibaAnalyzer Expression:
Here you should type in a valid ibaAnalyzer expression. This expression will be evaluated when the job runs and the result will be passed as a value for the process variable. Preferably, you should type an expression that evaluates to a constant value. However if the result of the expression is a varying signal, the signal will be averaged first before being used as process variable value.

❑ OSPC Process Name
Type in the name of the process the process variable belongs to.
This must match with the name of the process as it is defined on the OSPC server.

❑ OSPC Variable Name
Type in the name of the process variable itself. This must match with the name of the variable as it is defined on the OSPC server.

❑ Test Value
This column is not editable, it is used to show the values of the expressions when evaluated against a test .dat file (see subchapter 5.3.4)

	ibaAnalyzer Expression	OSPC Process Name	OSPC Variable Name	Test Value
01	convertbase([CI_TorsionMode],2,0)	WARMWALSERIJ 1	H3DRBCI	0,005906568374...
02	[CI_Kurtosis]	WARMWALSERIJ 1	H3DRBKT	2,511162963797...
03						
04				
05				
06				
07				
08				
09				
10				

You can copy and paste texts in the grid, e.g. from ibaAnalyzer.

The grid can have empty lines. When the empty lines are at the bottom of the grid, the data structure sent to the OSPC server will have fewer entries. When the empty lines are followed by a non-empty line, the data structure will contain empty entries. The number of entries in the data structure (empty or not) will equal the index of the last non-empty line (index starting from one). For your convenience, the index number of each expression is displayed in the row header of the grid.

5.3.4   Testing the ibaAnalyzer expressions

One can test the *ibaAnalyzer* expressions in the OSPC process variable grid by providing a test iba data file (.dat file). You can specify the path to the data file in a text box, also a browse button is available to search for a .dat file in a "file open" dialog. If the specified .dat file exists and is accessible, you'll be able to click on the test button, otherwise the button is grayed.

Example .dat file   C:\InSpectra\DatSnapshots\SVWWA083_InSpectra_110_InSpectra H1 DRO_Time_2016-03-17_17.17.08.dat

After clicking the test button, the "Test Value" column in the grid will be filled in for the valid expressions; for the invalid expressions, the "Test Value" column will be blank. A message box will appear with one of the following messages:

❏ *"Analysis file not found"*, this means the specified analysis file (.pdo file) does not exist or is not accessible. The task would also fail when executed. Note that you are not required to specify an analysis, you can leave the textbox blank and then this error does not happen.

❏ *"Class not registered"*, this means no *ibaAnalyzer* is installed or only a very old version (earlier than 5.0.0). The task would also fail when executed.

❏ *"ibaAnalyzer version could not be determined"*, this means you are using an *ibaAnalyzer* version that the Plugin does not recognize, hence it does not know if the installed *ibaAnalyzer* has the required functionality implemented to execute the requests from it. The task would also fail when executed.

❏ "*You have version x.y.z of ibaAnalyzer installed. The minimum required version is 6.5.0, 6.7.0 or later is recommended.*" with *x.y.z* replaced by your actual *ibaAnalyzer* version. This message is reported when the *ibaAnalyzer* version is lower than 6.7.0. If the version is lower than 6.5.0 this means the task would fail when executed. If the version is higher or equal than 6.5.0 but lower than 6.7.0 it means the task

could be successfully executed but with possible loss of precision (only single precision floating numbers are used).

❑ "*Could not evaluate expression for variable X*" where X is a process variable name. This means that the *ibaAnalyzer* expression is invalid or the signals used by the expression have no data or are empty. This does not necessarily cause the task to fail when executed as long as other process variables with expressions that can be evaluated are present. This message will be repeated for each process variable for which the corresponding *ibaAnalyzer* expression could not be evaluated.

❑ *"No valid fields are specified for the OSPC message".* This means that none of the process variables have an *ibaAnalyzer* expression that can be evaluated (or no process variables are specified at all). The task would also fail when executed.

Tip

When you have specified both an analysis file and test data file and both files exist and are accessible, starting an *ibaAnalyzer* session with the button next to the analysis file textbox will also load the test data file along with the analysis.

---

6   Executing the OSPC plugin

Some additional notes on what happens when the task is executed:

❑   Besides a value, each process variable entry in OSPC also has a timestamp. For this timestamp the start time of the data file (.dat file) is used. This is a local time that is converted to UTC before sending to the OSPC server, however any OSPC client should display again local time (UTC is only used internally by the OSPC server).

❑   If none of the *ibaAnalyzer* expressions for the process variables can be evaluated, nothing will be sent to the OSPC server. If however some of the expressions can be evaluated while others cannot (either by not being a valid expression or because of missing signals), Not a Number (Nan) will be sent to the OSPC server for that process variable when a .dat file is processed, also the "valid" flag for that entry will be set to false. In the latter case, the processing of the .dat file will be considered successful for the OSPC task, no error message or warning will be reported.

7 Support and contact

Support

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Note

If you require support, indicate the serial number (iba-S/N) of the product.

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