

4.5.1.4 Warnings, Errors and Processing Status

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Overview

This section aims to normalize warnings, errors and processing status to be handled by jobs, programs, functions or class methods into LNRS Brazil solutions.

Target Audience

- IT:** Software Engineers, Data Engineers, QA Engineers, Operations (DevOps/DBMS Administrator) and Architects.
- Analytics:** Data Scientists.
- Business:** Business Analysts.
- Support Areas:** Info Sec and Auditors.

Maintainers

- IT:** Software Engineers.

Definition

- Warnings:** Warning is because something is potentially wrong, but the software still allows it to continue. The prefix used is **"WRN_"**. We agreed that Warnings will have the code range -2000 to -2999.
- Errors:** It is an error situation in which processing must not continue (it must be interrupted) or continue with due exception handling. The prefix used is **"ERR_"** and the code range -1000 to -1999.
- Attention:** Some conventions of errors and warnings are reserved and should not be used with other types of designations which can cause problems of interpretation or behavior. An example of reserved coding is the normalization of errors and status processing refers to **HTTP** operations (Web/Internet). These HTTP normalization are registered and maintained by IANA (Internet Assigned Numbers Authority), they are:

⊖ HTTP Status Codes

Group of Codes	Status Code Category
1XX (100-199)	Informational Response
2XX (200-299)	Sucess
3XX (300-399)	Redirection
4XX (400-499)	Client Errors
5XX (500-599)	Servers Errors

The complete list of status code you can found in <https://www.iana.org/> and https://en.wikipedia.org/wiki/List_of_HTTP_status_codes

Processing Status

Indicates the final result of the a job. The prefix used is **"STA_"** (Status). See below the all possible processing status.

Code	Identifier	Description
0	STA_OK	Processing was a successful.
1	STA_WRN	Processing was a successful. But there are warnings.
-1	STA_NOK	Processing failed.

Result Report Layout

In this section we will explain the result report layout to be generated for all computing jobs.
As standard we adopt JSON format and you can use as results or logging for programs, functions and class methods.

⊖ Overview JSON Sections

General Body

```
{
  "JobName": "<Name of Job>",
  "JobStartedAt": "<DateTime of Starting>",
  "JobEndedAt": "<DateTime of Ending>",
  "JobElapsedTime": "<Total of Seconds>",
  "Parameters": {
    "List": [ ]
  },
  "Warnings": {
```

```
"List":[]
},
"Errors":{
  "List":[]
},
"Summary":{
  "Totals":[]
},
},
"ProcessingStatus": "<STA_OK | STA_WRN | STA_NOK>",
"ReturnedCode": "<0 | 1 | -1>"
}
```

Description

JSON Field	Description	Format	Sample
JobName	Name of the Job / Executable name	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"JobName": "filevalidator" for a Job name or program "JobName": "ClassName::methodName()" for a class method "JobName": "functionName()" for a function Suggestions: Use system Arguments List to fit JobName as argv[0] => in C/C++ sys.argv[0] => in Python
JobStartedAt	Date and time when the Job started	Char (see LNRS Brazil Data Dictionary in Data Formats section , but apply DateTime format suitable internalization - I18N setup)	"JobStartedAt": "19/02/2020 17:06:35" (DateTime EU)
JobEndedAt	Date and time when the Job ended	Char (see LNRS Brazil Data Dictionary in Data Formats section , but apply DateTime format suitable internalization - I18N setup)	"JobEndedAt": "19/02/2020 18:40:07" (DateTime EU)
JobElapsedTime	Elapsed time processing (JobEndedAt - JobStartedAt)	Integer/Decimal (see LNRS Brazil Data Dictionary in Data Formats section). As Suggestion use number of seconds.	"JobElapsedTime": 5612 (seconds)
Parameters	List of parameters or arguments passed to the program or function or class method	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"Parameters": { "List": [{ "argv[1]": "Argument 1", { "argv[2]": "Argument 2", { "argv[n]": "Argument n" } => Number of Parameters is variable] }, Ex. filevalidator arqsource.csv arqdest.csv "Parameters": { "List": [{ "argv[1]": "arqsource.csv", { "argv[2]": "arqdest.csv"] },
Warnings	List of warnings occurred during the processing	see following Warnings Body subsection	see following Warnings Body subsection
Errors	List of errors occurred during the processing	see following Errors Body subsection	see following Errors Body subsection
Summary	It is the summary of the processing results	see following Summary Body subsection	see following Summary Body subsection
ProcessingStatus	Processing Status identifier	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"ProcessingStatus": "STA_OK"
ReturnedCode	It is code returned to caller of the Job. It is numeric code of Processing Status	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	"ReturnedCode": 0

Warnings Section

Warnings Body

```
"Warnings": {
  "List": [
    {
      "WarningID": "<Warning Identifier>",
      "WarningCD": "<Warning Code>",
      "WarningDS": "<Warning Description>",
      "WarningOccurs": "<Number of occurrences>",
      "WarningItens": []
    }
  ]
},
```

Description

JSON Field	Description	Format	Sample
WarningID	Warning identifier (<i>See following section - List of Warnings</i>)	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"WarningID": "WRN_FILE_NOT_KNOWN"
WarningCD	Warning numerical code (<i>See following section - List of Warnings</i>)	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	"WarningCD": -2000
WarningDS	Warning description (<i>See following section - List of Warnings</i>)	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"WarningDS": "File(s) not known."
WarningOccurs	Number of occurs this warning found during the processing	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	"WarningOccurs": 2
WarningItens	List of complementary data of the warning (<i>See following section - List of Warnings</i>)	<i>See following section - List of Warnings</i>	<pre>"WarningItens": [{ "FilePack": "eDNE_Basico_1909.zip", "FileName": "arqsource.csv", "FilePath": "br-bliss-work-area/correios", "FileSize": 8192, "FileDate": "19/02/2020 21:43:35" }, { "FilePack": "eDNE_Basico_1909.zip", "FileName": "arqdest.csv", "FilePath": "br-bliss-work-area/correios", "FileSize": 4536, "FileDate": "19/02/2020 21:54:20" }]</pre> <p>OBS: This sample shows that the arqsource.csv and arqdest.csv files of the eDNE_Basico_1909.zip package are not recognized by the system and they were ignored.</p>

Errors Section

Errors Body

```
"Errors": {
  "List": [
    {
      "ErrorID": "<Error Identifier>",
      "ErrorCD": "<Error Code>",
      "ErrorDS": "<Error Description>",
      "ErrorOccurs": "<Number of occurrences>",
      "ErrorItens": []
    }
  ]
},
```

Description

JSON Field	Description	Format	Sample
ErrorID	Error identifier (<i>See following section - List of Errors</i>)	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"ErrorID": "ERR_FILE_NOT_FOUND"
ErrorCD	Error numerical code (<i>See following section - List of Errors</i>)	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	"ErrorCD": -1001
ErrorDS	Error description (<i>See following section - List of Errors</i>)	Char (see LNRS Brazil Data Dictionary in Data Formats section)	"ErrorDS": "No such file(s) or directory(ies)."
ErrorOccurs	Number of occurs this error found during the processing	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	"ErrorOccurs": 2
ErrorItens	List of complementary data of the warning (<i>See following section - List of Errors</i>)	<i>See following section - List of Errors</i>	<pre>"ErrorItens": [{ "FilePack": "eDNE_Basico_1909.zip", "FileName": "arqsource.csv", "FilePath": "br-bliss-work-area/correios", "FileSize": 8192, "FileDate": "19/02/2020 21:43:35" }, { "FilePack": "eDNE_Basico_1909.zip", "FileName": "arqdest.csv", "FilePath": "br-bliss-work-area/correios", "FileSize": 4536, "FileDate": "19/02/2020 21:54:20" }]</pre>

JSON Field	Description	Format	Sample
			OBS: This sample shows that the <i>arqsource.csv</i> and <i>arqdest.csv</i> files were not found in the <i>eDNE_Basico_1909.zip</i> package and the processing failed.

Summary Section

Summary Body

```
"Summary": {
  "Totals": [
    { "TotalOfWarnings": "<Total of Warnings>" },
    { "TotalOfErrors": "<Total of Errors>" },
    { "<Other Totalizator>": "<Total of Other kind>" }
  ]
},
```

Description

JSON Field	Description	Format	Sample	Remarks
TotalOfWarnings	Total of Warnings found during the processing	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	{"TotalOfWarnings":2},	This is a required Totalizator
TotalOfErrors	Total of Errors found during the processing	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	{"TotalOfErrors":2},	This is a required Totalizator
<Other Totalizator>	You can add other totalizators that may be important in the report.	Integer (see LNRS Brazil Data Dictionary in Data Formats section)	{"TotalReadLines":5554}, {"LinesAccepted":5420}, {"LinesRefused":134}	

Warnings and Errors

Below we have the catalog of warnings and errors from our Insurance Score platform.

List of Warnings

Description

Code	Identifier	Description	"WarningItns" JSON Body	Format	Remarks
-2000	WRN_FILE_NOT_KNOWN	File(s) not known.	"FilePack": "<Package Name>", "FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>"	Char, Char, Char, Integer, Char(DateTime EU) (see LNRS Brazil Data Dictionary in Data Formats section)	"FilePack" is not a required item, you put it whether it belongs to a file package the other are required for this warning.
-2001	WRN_MISSING_FILE	Missing file(s).	"FilePack": "<Package Name>", "FileName": "<Name of File>"	Char, Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-2002	WRN_NUMBER_OF_COLUMNS	Number of columns in the file is different.	"FileName": "<Name of File>", "Expected Columns": "<Number of Expected Columns>", "Read Columns": "<Number of Read Columns>", "Line": "<Number of Line>"	Char, Integer, Integer, Integer (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-2003	WRN_MISSING_CONTENT	Missing content.	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>", "Expected Content": "<Expected Content>"	Char, Char, Integer, Char(DateTime EU), Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-2004	WRN_EMPTY_CONTENT	Column or field is empty.	"FileName": "<Name of File>", "Field": "<Name of Field>", "Column": "<Number of Column>", "Line": "<Number of Line>"	Char, Char, Integer, Integer (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.

Code	Identifier	Description	"WarningItem" JSON Body	Format	Remarks
-2005	WRN_DATA_TRUNCATION	<i>Content has been truncated. Size exceeded limit.</i>	"FileName": "<Name of File>", "Field": "<Name of Field>", "Column": "<Number of Column>", "Line": "<Number of Line>", "Size": "<Length of the read content>", "Limit": "<Limit of the field>"	Char, Char, Integer, Integer, Integer, Integer (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-2006	WRN_DUPLICATE_KEY	<i>Duplicate Key. Record was ignored.</i>	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>", "Read Bytes": "<Number of read bytes>", "Line": "<Number of Line where occurred the fail>", "Key Label": "<Label Key Field>", "Key Value": "<Key Value>"	Char, Char, Integer, Char(DateTime EU), Integer, Integer, Char, Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.

○ List of Errors

Description

Code	Identifier	Description	"ErrorItem" JSON Body	Format	Remarks
-1001	ERR_FILE_NOT_FOUND	<i>No such file(s) or directory(ies).</i>	"FileName": "<Name of File>"	Char (see LNRS Brazil Data Dictionary in Data Formats section)	
-1002	ERR_COPY_FAILED	<i>Copying file(s) operation failed.</i>	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Size>", "FileDate": "<Modified Date>"	Char, Char, Integer, Char(DateTime EU) (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1003	ERR_UNZIP_FAILED	<i>Unzip (unfold) file(s) failed.</i>	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>"	Char, Char, Integer, Char(DateTime EU) (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1004	ERR_CONV_DSV_FAILED	<i>DSV conversion failed.</i>	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>"	Char, Char, Integer, Char(DateTime EU) (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1005	ERR_EMPTY_FILE	<i>Empty File</i>	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>"	Char, Char, Integer, Char(DateTime EU) (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1006	ERR_INVALID_CONTENT	<i>Content is invalid</i>	"FileName": "<Name of File>", "Field": "<Name of Field>", "Column": "<Number of Column>", "Line": "<Number of Line>", "Content": "<Content>"	Char, Char, Char, Integer, Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1007	ERR_NUMBER_OF_COLUMNS	<i>Number of columns in the file is different.</i>	"FileName": "<Name of File>", "Expected Columns": "<Number of Expected Columns>"	Char, Integer, Integer, Integer	All are required.

Code	Identifier	Description	"Error tens" JSON Body	Format	Remarks
			Columns>, "Read Columns": <Number of Read Columns>, "Line":<Number of Line>	(see LNRS Brazil Data Dictionary in Data Formats section)	
-1008	ERR_FILE_CANNOT_BE_READ	<i>File can not be read. Check permissions.</i>	"FileName":<Name of File>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>"	Char, Integer, Char(DateTime EU) (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1009	ERR_READING_FAILED	<i>Failed to read the file.</i>	"FileName":<Name of File>," "FilePath":<Full Path>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>," "Read Bytes":<Number of read bytes>," "Line":<Number of Line where occurred the fail>	Char, Char, Integer, Char(DateTime EU), Integer, Integer (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1010	ERR_MISSING_CONTENT	<i>Missing content.</i>	"FileName":<Name of File>," "FilePath":<Full Path>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>," "Expected Content":<Expected Content>"	Char, Char, Integer, Char(DateTime EU), Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1011	ERR_REGISTER_NOT_FOUND	<i>Register not found.</i>	"FileName":<Name of File>," "FilePath":<Full Path>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>," "Read Bytes":<Number of read bytes>," "Line":<Number of Line where occurred the fail>," "Key Label":<Label Key Field>," "Key Value":<Key Value>"	Char, Char, Integer, Char(DateTime EU), Integer, Integer, Char, Char (see LNRS Brazil Data Dictionary in Data Formats section)	Put the the used queries.
-1012	ERR_DUPLICATE_KEY	<i>Duplicate Key.</i>	"FileName":<Name of File>," "FilePath":<Full Path>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>," "Read Bytes":<Number of read bytes>," "Line":<Number of Line where occurred the fail>," "Key Label":<Label Key Field>," "Key Value":<Key Value>"	Char, Char, Integer, Char(DateTime EU), Integer, Integer, Char, Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1013	ERR_UPDATE_FAILED	<i>Updating operation failed.</i>	"FileName":<Name of File>," "FilePath":<Full Path>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>," "Read Bytes":<Number of read bytes>," "Line":<Number of Line where occurred the fail>," "Key Label":<Label Key Field>," "Key Value":<Key Value>"	Char, Char, Integer, Char(DateTime EU), Integer, Integer, Char, Char (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.
-1014	ERR_INSERT_FAILED	<i>Inserting operation failed.</i>	"FileName":<Name of File>," "FilePath":<Full Path>," "FileSize":<Bytes Size>," "FileDate":<Modified Date>," "Read Bytes":<Number of read bytes>," "Line":<Number of Line where occurred the fail>," "Key Label":<Label Key Field>,"	Char, Char, Integer, Char(DateTime EU), Integer, Integer, Char, Char (see LNRS Brazil Data Dictionary in Data Formats section)	Put the the used queries.

Code	Identifier	Description	"Error tens" JSON Body	Format	Remarks
			"Key Value": "<Key Value>"		
-1015	ERR_WRITING_FAILED	Failed to write the file.	"FileName": "<Name of File>", "FilePath": "<Full Path>", "FileSize": "<Bytes Size>", "FileDate": "<Modified Date>", "Written Bytes": "<Number of read bytes>", "Line": "<Number of Line where occurred the fail>"	Char, Char, Integer, Char(DateTime EU), Integer, Integer (see LNRS Brazil Data Dictionary in Data Formats section)	All are required.

Sem rótulos