- version 1.5.1 or later - for updating the enviroment from a software version previous to 1.5.1 the following steps must be done:

      1) execute the following query in the AUTHDB:

            DELETE FROM AUTH_DB_CONNECTION;

            DELETE FROM AUTH_CONNECTION_STRING;

      2) save the node from the Node - Configuration page

- for updating the enviroment from a software version previous to 1.5.3 the main\files\UpdateScript\DDB_UpdateVers1.5.3.sql script must be executed in the DDB.

  The same script should be executed when using a version previous to 1.5.3 with datasets with not annual frequency referencing year 2021 or later.

- for updating the enviroment from a software version previous to 1.8.0 the main\files\UpdateScript\AUTHDB_UpdateVers1.8.0.sql script must be executed in the AUTHDB.

- version 1.9.0 introduces some breaking changes in configurations and databases. This steps must be followed to update a previous MDM version:

  - scripts DDB_UpdateVers1.9.0.sql, RMDB_UpdateVers1.9.0 and MSDB_UpdateVers1.9.0.sql must be executed in the corrispondent DB

  - file main\app\ws\NODE_API\config\nodesConfigDefault.json must be added

  - in main\app\ws\NODE_API\appsettings.json the following lines must be added at base level:

      "NODES_DEFAULT_CONFIG_PATH": "config/nodesDefaultConfig.json",

      "PasswordRequiredLength": 12,

      "PasswordRequireNonAlphanumeric": true,

      "PasswordRequireNonAlphanumericChars": "$@!%*?&",

      "PasswordRequireLowercase": true,

      "PasswordRequireUppercase": true,

      "PasswordRequireDigit": true,

      "PasswordCheckUserid": true,

      "PasswordCheckPrevious": true

- in main\app\ws\NODE_API\config\appConfig.json the following line must be added in "User Interface" section:

```
"DefaultSidebar2ndLevelMenu": false,
```

- Nodes' configuration should be redefined from scratch deleting all existent nodes.

Alternatively in main\app\ws\NODE_API\config\nodesConfig.json nodes' annotation configuration section must be changed with the following lines:

```
"Annotations": {
"HaveMetadata": {
  "Id": "HAVE_METADATA",
  "Type": "HAVE_METADATA"
},
"DDBDataflow": {
  "Id": "DDBDataflow",
  "Type": "DDBDataflow"
},
"Metadataset": {
  "Id": "AssociatedMetadataSet",
  "Type": "AssociatedMetadataSet"
},
"AssociatedCube": {
  "Id": "AssociatedCube",
  "Type": "AssociatedCube"
},
"CustomDSD": {
  "Id": "CustomDSD",
  "Type": "CustomDSD"
},
"Changed": {
  "Id": "CHANGED",
```

```json
      "Type": "CHANGED"
    },
    "LayoutRow": {
      "Id": "LAYOUT_ROW",
      "Type": "LAYOUT_ROW"
    },
    "LayoutColumn": {
      "Id": "LAYOUT_COLUMN",
      "Type": "LAYOUT_COLUMN"
    },
    "LayoutRowSection": {
      "Id": "LAYOUT_ROW_SECTION",
      "Type": "LAYOUT_ROW_SECTION"
    },
    "LayoutFilter": {
      "Id": "LAYOUT_FILTER",
      "Type": "LAYOUT_FILTER"
    },
    "NotDisplayed": {
      "Id": "NOT_DISPLAYED",
      "Type": "NOT_DISPLAYED"
    },
    "FullName": {
      "Id": "FULL_NAME",
      "Type": "FULL_NAME"
    },
    "Default": {
      "TimePeriodStart": "TIME_PERIOD_START",
      "TimePeriodEnd": "TIME_PERIOD_END",
      "LastNObservation": "LASTNOBSERVATION",
      "LastNPeriod": "LASTNPERIOD",
```

```json
    "Id": "DEFAULT",
    "Type": "DEFAULT"
  },
  "ConceptSchemesOrder": {
    "Id": "ORDER",
    "Type": "ORDER"
  },
  "CategorySchemesOrder": {
    "Id": "ORDER",
    "Type": "ORDER"
  },
  "CodelistsOrder": {
    "Id": "ORDER",
    "Type": "ORDER"
  },
  "CategorisationsOrder": {
    "Id": "ORDER",
    "Type": "ORDER"
  },
  "AttachedFilePath": {
    "Id": "ATTACHED_FILE_PATH",
    "Type": "ATTACHED_FILE_PATH"
  },
  "RestrictedForPublication": {
    "Id": "RESTRICTED_FOR_PUBLICATION",
    "Type": "RESTRICTED_FOR_PUBLICATION"
  },
  "DCAT_IsMultilingual": {
    "Id": "SDMX21_IsMultilingual",
    "Type": "SDMX21_IsMultilingual"
  },
```

```json
"CustomIsPresentational": {
  "Id": "CUSTOM_IS_PRESENTATIONAL",
  "Type": "CUSTOM_IS_PRESENTATIONAL"
},
"LayoutDataflowKeywords": {
  "Id": "LAYOUT_DATAFLOW_KEYWORDS",
  "Type": "LAYOUT_DATAFLOW_KEYWORDS"
},
"LayoutCriteriaSelection": {
  "Id": "LAYOUT_CRITERIA_SELECTION",
  "Type": "LAYOUT_CRITERIA_SELECTION"
},
"LayoutAttachedDataFiles": {
  "Id": "LAYOUT_ATTACHED_DATA_FILES",
  "Type": "LAYOUT_ATTACHED_DATA_FILES"
},
"LayoutDefaultPresentation": {
  "Id": "LAYOUT_DEFAULT_PRESENTATION",
  "Type": "LAYOUT_DEFAULT_PRESENTATION"
},
"LayoutDecimalSeparator": {
  "Id": "LAYOUT_DECIMAL_SEPARATOR",
  "Type": "LAYOUT_DECIMAL_SEPARATOR"
},
"LayoutNumberOfDecimals": {
  "Id": "LAYOUT_NUMBER_OF_DECIMALS",
  "Type": "LAYOUT_NUMBER_OF_DECIMALS"
},
"LayoutReferenceMetadata": {
  "Id": "LAYOUT_REFERENCE_METADATA",
  "Type": "LAYOUT_REFERENCE_METADATA"
```

```json
    },
    "LayoutEmptyCellPlaceholder": {
      "Id": "LAYOUT_EMPTY_CELL_PLACEHOLDER",
      "Type": "LAYOUT_EMPTY_CELL_PLACEHOLDER"
    },
    "LayoutDataflowNotes": {
      "Id": "LAYOUT_DATAFLOW_NOTES",
      "Type": "LAYOUT_DATAFLOW_NOTES"
    },
    "LayoutMaxTableCells": {
      "Id": "LAYOUT_MAX_TABLE_CELLS",
      "Type": "LAYOUT_MAX_TABLE_CELLS"
    },
    "LayoutTerritorialDimensionIds": {
      "Id": "LAYOUT_TERRITORIAL_DIMENSION_IDS",
      "Type": "LAYOUT_TERRITORIAL_DIMENSION_IDS"
    },
    "LayoutDataflowSource": {
      "Id": "LAYOUT_DATAFLOW_SOURCE",
      "Type": "LAYOUT_DATAFLOW_SOURCE"
    },
    "LastUpdate": {
      "Id": "LAST_UPDATE",
      "Type": "LAST_UPDATE"
    },
    "LinkedDataflowNode": {
      "Id": "LINKEDDATAFLOWNODE",
      "Type": "LINKEDDATAFLOWNODE"
    },
    "DataflowCatalogType": {
      "Id": "DataflowCatalogType",
```

```json
    "Type": "DataflowCatalogType"
  },
  "LayoutChartPrimaryDim": {
    "Id": "LAYOUTCHARTPRIMARYDIM",
    "Type": "LAYOUTCHARTPRIMARYDIM"
  },
  "LayoutChartSecondaryDim": {
    "Id": "LAYOUTCHARTSECONDARYDIM",
    "Type": "LAYOUTCHARTSECONDARYDIM"
  },
  "LayoutChartFilter": {
    "Id": "LAYOUTCHARTFILTER",
    "Type": "LAYOUTCHARTFILTER"
  },
  "LayoutDataflowHidden": {
    "Id": "DATAFLOW_HIDDEN",
    "Type": "DATAFLOW_HIDDEN"
  },
  "TemporalDimOrder": {
    "Id": "TEMPORAL_DIM_ORDER",
    "Type": "TEMPORAL_DIM_ORDER"
  },
  "DisabledViewers": {
    "Id": "DISABLED_VIEWERS",
    "Type": "DISABLED_VIEWERS"
  },
  "TableLockedDims": {
    "Id": "TABLE_LOCKED_DIMS",
    "Type": "TABLE_LOCKED_DIMS"
  },
  "GraphLockedDims": {
```

```
    "Id": "GRAPH_LOCKED_DIMS",

    "Type": "GRAPH_LOCKED_DIMS"

  },

  "HCLReference": {

   "Id": "@SDMX",

   "Type": "HIER_CONTEXT"

  }

 },
```

Personalization of the configuration must be reported properly. Please note that annotation's type for LinkedataflowNode is now LINKEDDATAFLOWNODE.

- version 2.0.0 introduces a new technological upgrade (.NET 6.0), new features and plugin management. To update MDM version, follow these steps:

  - install .NET Core Runtime and the ASP.NET Core Module 6.0 in order to allow ASP.NET Core app to run with IIS. Download and execute Hosting Bundle 6.0.20 from:

https://dotnet.microsoft.com/en-us/download/dotnet/thank-you/runtime-aspnetcore-6.0.20-windows-hosting-bundle-installer

  - run scripts AUTHDB_UpdateVers2.0.0.sql in AUTHDB

  - run scripts DDB_UpdateVers2.1.4.sql in DDB

- Nodes' configuration should be redefined from scratch deleting all existent nodes.

  Otherwise, in main\app\ws\NODE_API\config\nodesConfig.json:

- add the following lines at the end of the "Annotations" section of each node:

```
     "Annotations": {

  "DDBContentConstraint": {
   "Id": "DDB_CONTENT_CONSTRAINT",
   "Type": "DDB_CONTENT_CONSTRAINT"
  },
```

```
  "AnticipationExceedingMaxNumRecords": {

   "Id": "ANITICIP_EXCEEDING_MAX_NUM_REC",

   "Type": "ANITICIP_EXCEEDING_MAX_NUM_REC"

  },

  "LayoutMapFilter": {

   "Id": "LAYOUTMAPFILTER",

   "Type": "LAYOUTMAPFILTER"

  }

 },
```

- for updating the enviroment from the software version 2.0.0 to 2.1.10

the main\files\UpdateScript\AUTHDB_UpdateVers2.1.0.sql and main\files\UpdateScript\AUTHDB_UpdateVers2.1.8.sql scripts must be executed in the AUTHDB.

the main\files\UpdateScript\DDB_UpdateVers2.1.4.sql and main\files\UpdateScript\DDB_UpdateVers2.1.6.sql scripts must be executed in the DDB.

- Nodes' configuration should be redefined from scratch deleting all existent nodes.

Otherwise, in main\app\ws\NODE_API\config\nodesConfig.json:

- add the following lines at the end of the "Annotations" section of each node:

```
  "Annotations": {

 "NonReadyForProduction": {

  "Id": "NON_READY_FOR_PRODUCTION",

  "Type": "NON_READY_FOR_PRODUCTION"

 },

 "ReadyForProduction": {

  "Id": "READY_FOR_PRODUCTION",

  "Type": "READY_FOR_PRODUCTION"

 },

 "DataFlowHeaderCustom": {

  "Id": "DATAFLOW_HEADER_CUSTOM",
```

```
    "Type": "DATAFLOW_HEADER_CUSTOM"

  }
 },
```

    - add the following lines at the end of the "DataManagement" section in main\app\ws\NODE_API\config\appConfig.json:

```
    "DataManagement": {

      "DatasetPrefix": "DS_",
      "StruvalFormat": "structurespecificdata",
      "LimitPagingMa":  500,
      "MaxRowsErrorMappingValidation":  100
      },
```

- for updating the enviroment from the software version 2.1.10 to 2.1.11

    the main\files\UpdateScript\DDB_UpdateVers2.1.11.sql script must be executed in the DDB.

    - Nodes' configuration should be redefined from scratch deleting all existent nodes.
Otherwise, in main\app\ws\NODE_API\config\nodesConfig.json:

- add the following lines at the end of the "Annotations" section of each node:

```
    "Annotations": {

  "AttributeAsDim": {
    "Id": "ATTRIBUTE_AS_DIM",
    "Type": "ATTRIBUTE_AS_DIM"
  },
  "LayoutAggregateCells": {
    "Id": "LAYOUT_AGGREGATE_CELLS",
    "Type": "LAYOUT_AGGREGATE_CELLS"
```

```json
    },
    "LayoutChartPrimaryDimCartesian": {
      "Id": "LAYOUT_CHART_PRIMARY_DIM_CARTESIAN",
      "Type": "LAYOUT_CHART_PRIMARY_DIM_CARTESIAN"
    },
    "LayoutChartSecondaryDimCartesian": {
      "Id": "LAYOUT_CHART_SECONDARY_DIM_CARTESIAN",
      "Type": "LAYOUT_CHART_SECONDARY_DIM_CARTESIAN"
    },
    "LayoutChartFilterCartesian": {
      "Id": "LAYOUT_CHART_FILTER_CARTESIAN",
      "Type": "LAYOUT_CHART_FILTER_CARTESIAN"
    },
    "GraphLockedDimsCartesian": {
      "Id": "GRAPH_LOCKED_DIMS_CARTESIAN",
      "Type": "GRAPH_LOCKED_DIMS_CARTESIAN"
    },
    "LayoutChartPrimaryDimRadial": {
      "Id": "LAYOUT_CHART_PRIMARY_DIM_RADIAL",
      "Type": "LAYOUTCHARTPRIMARYDIM_RADIAL"
    },
    "LayoutChartSecondaryDimRadial": {
      "Id": "LAYOUT_CHART_SECONDARY_DIM_RADIAL",
      "Type": "LAYOUT_CHART_SECONDARY_DIM_RADIAL"
    },
    "LayoutChartFilterRadial": {
      "Id": "LAYOUT_CHART_FILTER_RADIAL",
      "Type": "LAYOUT_CHART_FILTER_RADIAL"
    },
    "GraphLockedDimsRadial": {
      "Id": "GRAPH_LOCKED_DIMS_RADIAL",
```

```
   "Type": "GRAPH_LOCKED_DIMS_RADIAL"
  },
  "LayoutCategorySchemesOrder": {
   "Id": "LAYOUT_CATEGORY_SCHEMES_ORDER",
   "Type": "LAYOUT_CATEGORY_SCHEMES_ORDER"
  }
 },
```

- add the following line at the end of the "DataManagement" section in main\app\ws\NODE_API\config\appConfig.json:

```
 "DataManagement": {

  "BlackListQueryWord": "INDICATOR|TIME|VALUES|VALUE"
 },
```

- for updating the enviroment from the software version 2.1.11 to 2.1.12
  - rename the following annotations:

```
  "Annotations": {
 "GraphLockedDimsCartesian": {
  "Id": "GRAPH_LOCKED_DIMS_CARTESIAN",
  "Type": "GRAPH_LOCKED_DIMS_CARTESIAN"
 },
 "GraphLockedDimsRadial": {
  "Id": "GRAPH_LOCKED_DIMS_RADIAL",
  "Type": "GRAPH_LOCKED_DIMS_RADIAL"
 },
 "LayoutCategorySchemesOrder": {
  "Id": "LAYOUT_CATEGORY_SCHEMES_ORDER",
  "Type": "LAYOUT_CATEGORY_SCHEMES_ORDER"
 }
```

```
        },


     in:


            "Annotations": {
      "LayoutGraphLockedDimsCartesian": {
        "Id": "LAYOUT_GRAPH_LOCKED_DIMS_CARTESIAN",
        "Type": "LAYOUT_GRAPH_LOCKED_DIMS_CARTESIAN"
      },
      "LayoutGraphLockedDimsRadial": {
        "Id": "LAYOUT_GRAPH_LOCKED_DIMS_RADIAL",
        "Type": "LAYOUT_GRAPH_LOCKED_DIMS_RADIAL"
      },
      "LayoutCategorySchemesOrder": {
        "Id": "ORDER",
        "Type": "ORDER"
      }
    },
```

- for updating the enviroment from the software version 2.1.18 to 2.1.19

    - run scripts DDB_UpdateVers2.1.19.sql in DDB