- 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",
      "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",
      "Id": "DEFAULT",
      "Type": "DEFAULT"
    },
    "ConceptSchemesOrder": {
      "Id": "ORDER",
```

```json
      "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"
    },
    "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"
```

```json
    },
    "LayoutReferenceMetadata": {
      "Id": "LAYOUT_REFERENCE_METADATA",
      "Type": "LAYOUT_REFERENCE_METADATA"
    },
    "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",
      "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"
         },
         "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"
         }
        },
```