- 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",

```json
    "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",
    "Type": "ORDER"
  },
```

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

```json
    "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
        },
```