

# [MS-ISPAC]: Integration Services Project Deployment File Format Structure Specification

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## Revision Summary

| Date       | Revision History | Revision Class | Comments               |
|------------|------------------|----------------|------------------------|
| 09/03/2010 | 0.1              | New            | Released new document. |

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# 1 Introduction

This document specifies the file format for the Microsoft® SQL Server® Integration Services project deployment file, which is a file type that is used to represent the packaged metadata of a data integration **project**.

## 1.1 Glossary

The following terms are defined in [\[MS-GLOS\]](#):

**globally unique identifier (GUID)  
XML namespace**

The following terms are specific to this document:

**Integration Services (IS) package:** A module of a **project**. The module contains control flow and data flow, as specified in [\[MS-DTSX\]](#).

**Open Packaging Conventions (OPC) package:** A logical entity that holds a collection of **parts**, as specified in [\[ISO/IEC 29500-2:2008\]](#).

**part:** A stream of bytes with a MIME content type and associated common properties, as specified in [\[ISO/IEC 29500-2:2008\]](#).

**project:** A collection of **IS packages** that are developed and deployed as a unit.

**project manifest:** The metadata that describes the properties of a **project** as well as its contents.

**MAY, SHOULD, MUST, SHOULD NOT, MUST NOT:** These terms (in all caps) are used as described in [\[RFC2119\]](#). All statements of optional behavior use either MAY, SHOULD, or SHOULD NOT.

## 1.2 References

### 1.2.1 Normative References

We conduct frequent surveys of the normative references to assure their continued availability. If you have any issue with finding a normative reference, please contact [dochelp@microsoft.com](mailto:dochelp@microsoft.com). We will assist you in finding the relevant information. Please check the archive site, <http://msdn2.microsoft.com/en-us/library/E4BD6494-06AD-4aed-9823-445E921C9624>, as an additional source.

[FIPS46-2] National Institute of Standards and Technology, "Federal Information Processing Standards Publication 46-2: Data Encryption Standard (DES)", December 1993, <http://www.itl.nist.gov/fipspubs/fip46-2.htm>

[ISO/IEC 29500-2:2008] Information technology -- Document description and processing languages -- Office Open XML File Formats -- Part 2: Open Packaging Conventions, [http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_detail.htm?csnumber=51459](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=51459)

[MS-DTSX] Microsoft Corporation, "Integration Services Package File Format Structure Specification", SQL Server Future Resources, <http://go.microsoft.com/fwlink/?LinkId=164595>

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997, <http://www.ietf.org/rfc/rfc2119.txt>

## 1.2.2 Informative References

[MS-GLOS] Microsoft Corporation, "[Windows Protocols Master Glossary](#)", March 2007.

## 1.3 Overview

This document specifies the file format for the Microsoft® SQL Server® Integration Services project deployment file, a file type that is used to represent the packaged metadata of a data integration project.

The project deployment file is an implementation of Open Packaging Conventions (OPC). The project deployment file contains one or more **Integration Services (IS) packages** and one **project manifest**.

Each IS package is represented as one OPC **part**. The part is uniquely identified by a URI formatter part name. The part contains an IS package file in the .dtsx file format that is specified in [\[MS-DTSX\]](#). The content type of the part is text/xml.

The project manifest is an OPC part of content type text/xml. A project deployment file must have a part that contains the project manifest. The project manifest contains metadata that describes the project properties, project parameter, and deployment metadata for each of the contained IS packages.

## 1.4 Relationship to Protocols and Other Structures

The project deployment file format can be used as a payload in protocols that support the transport of binary data.

## 1.5 Applicability Statement

The project deployment file format is applicable for use in a standalone representation of project metadata, for deploying a project from a client to a server, or for extracting a project from a server to a client.

## 1.6 Versioning and Localization

This document describes version 1.0 of the project deployment file format. There are no localization-dependent structures in the project deployment file format.

## 1.7 Vendor-Extensible Fields

Extensions to the file format that is specified in this document are not allowed. Tools that process this format do not have to preserve unrecognized structures when loading or persisting.

## 2 Structures

### 2.1 Project Deployment File

A project deployment file is an implementation of an Open Packaging Conventions (OPC) package. The file **MUST** contain the following parts:

- One part that contains a project manifest.
- Zero or more parts that contain an IS package.

### 2.2 IS Package

An IS package is stored as one OPC part in the project deployment file. The following rules apply to the package:

- The content type of the part **MUST** be text/xml.
- The part data stream **MUST** contain exactly one instance of a file in .dtsx format [\[MS-DTSX\]](#) representing one IS package.
- The part **MUST** have a unique part name within the **OPC package**.
- The part name URI **MUST NOT** contain the at sign (@).
- The part name URI **MUST** be a root URI; subfolders are not allowed.
- The part name file name extension **MUST** be .dtsx.

### 2.3 Project Manifest

The project manifest specifies the properties, parameters, and deployment information for a project. The project manifest is stored as a data stream in an OPC part of the project deployment file. The following rules apply to the project manifest:

- The part name **MUST** be @Project.manifest.
- The content type of the part **MUST** be text/xml.

#### 2.3.1 XML Namespace

The project manifest part contains an XML structure. The namespace URI for the project manifest XML structure is [www.microsoft.com/sqlserver/ssis](http://www.microsoft.com/sqlserver/ssis).

#### 2.3.2 Properties

The **Properties** element specifies a list of the [Property](#) elements.

The following is the child element of the **Properties** element.

| Child elements           |
|--------------------------|
| <a href="#">Property</a> |

The **Properties** element schema is specified by the **PropertiesType** type. The following is the XML schema definition of the **PropertiesType** type.

```

<xsd:complexType name="PropertiesType">
  <xsd:choice minOccurs="1" maxOccurs="unbounded">
    <xsd:element name="Property" type="PropertyType"/>
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>

```

### 2.3.3 Property

The **Property** element specifies the value of one property of an object such as a project, an IS package, or a parameter.

The **Property** element has a **Name** attribute of type **string** that specifies the name of the property.

The **Property** element schema is defined by the **PropertyType** type. The following is the XML schema definition of the **PropertyType** type.

```

<xsd:complexType name="PropertyType">
  <xsd:simpleContent>
    <xsd:extension base="xsd:string">
      <xsd:attribute name="Name" type="xsd:string" />
    </xsd:extension>
  </xsd:simpleContent>
</xsd:complexType>

```

### 2.3.4 Project

The **Project** element is the root element of the project manifest.

The **Project** element MUST have the following attribute.

| Attribute              | Type   | Description  |
|------------------------|--------|--|
| <b>ProtectionLevel</b> | String | Specifies the protection level of the project. The protection level MUST be one of the following values:<br>EncryptAllWithUserKey<br>EncryptAllWithPassword<br>EncryptSensitiveWithUserKey<br>EncryptSensitiveWithPassword<br>DontSaveSensitive<br>ServerStorage<br>All IS packages in the project MUST be serialized by using the same protection level as specified for the project. |

The following child elements MUST be specified in the **Project** element.

| Child elements             |
|----------------------------|
| <a href="#">Properties</a> |

|                                |
|--------------------------------|
| <b>Child elements</b>          |
| <a href="#">Parameters</a>     |
| <a href="#">Packages</a>       |
| <a href="#">DeploymentInfo</a> |

The following is the XML schema definition of the **Project** element.

```

<xsd:element name="Project">
  <xsd:complexType>
    <xsd:sequence>
      <xsd:element name="Properties" type="PropertiesType"
        minOccurs="1" maxOccurs="1"/>
      <xsd:element name="Parameters" type="ParametersType"
        minOccurs="1" maxOccurs="1"/>
      <xsd:element name="Packages" type="PackagesType"
        minOccurs="1" maxOccurs="1"/>
      <xsd:element name="DeploymentInfo" type="DeploymentInfoType"
        minOccurs="1" maxOccurs="1"/>
    </xsd:sequence>
    <xsd:attribute name="ProtectionLevel" type="xsd:string"/>
    <xsd:anyAttribute namespace="##other" processContents="skip" />
  </xsd:complexType>
</xsd:element>

```

The **Project** element MUST contain a **Properties** child element. The **Properties** child element, in turn, MUST contain a list of [Property](#) elements for each **Project** property that is listed in the following table.

| Property               | Value            | Description  |
|------------------------|------------------|--|
| <b>ID</b>              | Guid             | Specifies the GUID that is assigned to the project.                                      |
| <b>Name</b>            | String           | Specifies the name of the project.   |
| <b>Description</b>     | String           | Specifies the description of the project.  |
| <b>VersionMajor</b>    | Positive integer | Specifies the major version of the project.  |
| <b>VersionMinor</b>    | Positive integer | Specifies the minor version of the project.  |
| <b>VersionBuild</b>    | Positive integer | Specifies the build version of the project.  |
| <b>VersionComments</b> | String           | Specifies comments for the version of the project.                                       |
| <b>VersionGUID</b>     | Guid             | Specifies the GUID of the version of the project.  |
| <b>CreationDate</b>    | DateTimeOffset   | Specifies the date, time, and time zone offset of the time when the project was created. |

### 2.3.5 Packages

The **Packages** element specifies an ordered list of [Package](#) elements. The **Packages** element MUST contain a child **Package** element for each IS package in the project deployment file.



The following is the child element of the **Packages** element.

| Child elements          |
|-------------------------|
| <a href="#">Package</a> |

The **Packages** element schema is specified by the **PackagesType** type. The following is the XML schema definition of the **PackagesType** type.

```
<xsd:complexType name="PackagesType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Package" type="PackageType" />
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>
```

### 2.3.6 Package

The **Package** element specifies an IS package that is included in the project deployment file.

The **Package** element MUST have the following attributes.

| Attribute         | Type    | Description   |
|-------------------|---------|---|
| <b>EntryPoint</b> | Boolean | Specifies whether the IS package is a project entry point for execution. Possible values are:<br>1 – The IS package is an entry point.<br>0 – The IS package is not an entry point. |
| <b>Name</b>       | String  | Specifies the name of the IS package. This name MUST match the part name of the corresponding OPC part.   |

The **Package** element schema is specified by the **PackageType** type. The following is the XML schema definition of the **PackageType** type.

```
<xsd:complexType name="PackageType">
  <xsd:attribute name="EntryPoint" type="xsd:boolean" />
  <xsd:attribute name="Name" type="xsd:string" />
</xsd:complexType>
```

### 2.3.7 DeploymentInfo

The **DeploymentInfo** element is an ordered list of [PackageInfo](#) elements. A **PackageInfo** element MUST be specified for each IS package that is included in the project.

The following is the child element of the **DeploymentInfo** element.

| Child elements              |
|-----------------------------|
| <a href="#">PackageInfo</a> |

The **DeploymentInfo** element schema is specified by the **DeploymentInfoType** type. The following is the XML schema definition of the **DeploymentInfoType** type.

```
<xsd:complexType name="DeploymentInfoType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded" >
    <xsd:element name="PackageInfo" type="PackageInfoType"/>
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>
```

### 2.3.8 PackageInfo

The **PackageInfo** element contains the metadata for an IS package that is contained in a project. The **PackageInfo** element MUST specify exactly one [PackageMetadata](#) element.

The following is the child element of the **PackageInfo** element.

| Child elements                  |
|---------------------------------|
| <a href="#">PackageMetadata</a> |

The **PackageInfo** element schema is specified by the **PackageInfoType** type. The following is the XML schema definition of the **PackageInfoType** type.

```
<xsd:complexType name="PackageInfoType">
  <xsd:sequence>
    <xsd:element name="PackageMetadata" type="PackageMetadataType"
      minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>
```

### 2.3.9 PackageMetadata

The **PackageMetadata** element contains the metadata for an IS package contained in the project, including the core IS package properties and the IS package parameters.

The **PackageMetadata** element MUST specify the following attribute.

| Attribute   | Type   | Description   |
|-------------|--------|---|
| <b>Name</b> | String | Specifies the name of the IS package. This name MUST match the part name of the corresponding OPC part. |

The **PackageMetadata** element MUST specify the following child elements.

| Child elements             |
|----------------------------|
| <a href="#">Properties</a> |
| <a href="#">Parameters</a> |

The **PackageMetadata** element schema is specified by the **PackageMetadataType** type. The following is the XML schema definition of the **PackageMetadataType** type.

```
<xsd:complexType name="PackageMetadataType">
  <xsd:sequence>
    <xsd:element name="Properties" type="PropertiesType"
      minOccurs="1" maxOccurs="1"/>
    <xsd:element name="Parameters" type="ParametersType"
      minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>
```

The **PackageMetadata** element MUST contain a **Properties** child element. The **Properties** child element, in turn, MUST contain a list of [Property](#) elements for each **PackageMetadata** property that is listed in the following table.

| Property               | Value            | Description   |
|------------------------|------------------|---|
| <b>ID</b>              | Guid             | Specifies the GUID that is assigned to the IS package.  |
| <b>Name</b>            | String           | Specifies the name of the IS package.   |
| <b>Description</b>     | String           | Specifies the description of the IS package.  |
| <b>ProtectionLevel</b> | Integer          | Specifies an integer value. The value MUST be one of the following:<br>0 – DontSaveSensitive<br>1 – EncryptAllWithPassword<br>2 – EncryptAllWithUserKey<br>3 – EncryptSensitiveWithPassword<br>4 – EncryptSensitiveWithUserKey<br>5 – ServerStorage |
| <b>VersionMajor</b>    | Positive integer | Specifies the major version of the IS package.  |
| <b>VersionMinor</b>    | Positive integer | Specifies the minor version of the IS package.  |
| <b>VersionBuild</b>    | Positive integer | Specifies the build version of the IS package.  |
| <b>VersionComments</b> | String           | Specifies comments of the version of the IS package.  |
| <b>VersionGUID</b>     | Guid             | Specifies the GUID of the version of the IS package.  |

### 2.3.10 Parameters

The **Parameters** element specifies an ordered list of [Parameter](#) elements that declare the parameters of a project or an IS package.

The following is the child element of the **Parameters** element.

| Child elements            |
|---------------------------|
| <a href="#">Parameter</a> |

The **Parameters** element schema is specified by the **ParametersType** type. The following is the XML schema definition of the **ParametersType** type.

```
<xsd:complexType name="ParametersType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Parameter" type="ParameterType"/>
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>
```

### 2.3.11 Parameter

The **Parameter** element specifies one parameter of a project or an IS package.

The **Parameter** element MUST have the following attribute.

| Attribute   | Type   | Description                          |
|-------------|--------|--------------------------------------|
| <b>Name</b> | String | Specifies the name of the parameter. |

The following is the child element of the **Parameter** element.

| Child elements             |
|----------------------------|
| <a href="#">Properties</a> |

The **Parameter** element schema is specified by the **ParameterType** type. The following is the XML schema definition of the **ParameterType** type.

```
<xsd:complexType name="ParameterType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Properties" type="PropertiesType"/>
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>
```

The **Parameter** element MUST contain a **Properties** child element. The **Properties** child element, in turn, MUST contain a list of [Property](#) elements for each **Parameter** property that is listed in the following table.

| Property           | Value   | Description   |
|--------------------|---------|---|
| <b>ID</b>          | Guid    | Specifies the GUID that is assigned to the parameter. |
| <b>Description</b> | String  | Specifies the description of the parameter.           |
| <b>Required</b>    | Boolean | Specifies whether the value is required.              |

| Property            | Value   | Description  |
|---------------------|---------|--|
|                     |         | <ul style="list-style-type: none"> <li>▪ True specifies that the parameter is required.</li> <li>▪ False specifies that the parameter is not required.</li> </ul>  |
| <b>Sensitive</b>    | Boolean | <p>Specifies whether the value is sensitive.</p> <ul style="list-style-type: none"> <li>▪ True specifies that the parameter is sensitive.</li> <li>▪ False specifies that the parameter is not sensitive.</li> </ul>   |
| <b>DefaultValue</b> | String  | <p>Specifies the serialized value of the parameter.</p> <p>If the project protection level is <code>EncryptSensitiveWithPassword</code> or <code>EncryptSensitiveWithUserKey</code>, the value <b>MUST</b> be encrypted by using a triple Data Encryption Standard (DES) encryption algorithm <a href="#">[FIPS46-2]</a> that uses the corresponding encryption key. The encrypted value then <b>MUST</b> be encoded by using base64 encoding.</p> |
| <b>DataType</b>     | Integer | <p>Specifies that the value <b>MUST</b> be one of the following:</p> <ul style="list-style-type: none"> <li>3 - Boolean</li> <li>5 - SByte</li> <li>6 - Byte</li> <li>9 - Int32</li> <li>10 - UInt32</li> <li>11 - Int64</li> <li>12 - UInt64</li> <li>13 - Single</li> <li>14 - Double</li> <li>16 - DateTime</li> <li>18 - String</li> </ul>   |

### 3 Structure Examples

The following is an example of a typical project manifest for a project deployment file, including all the mandatory elements and examples of property and parameter declarations.

```
<Project ProtectionLevel="EncryptSensitiveWithUserKey">
  <Properties>
    <Property Name="ID">{dd0733bd-0382-4511-91d3-ed34210d5469}</Property>
    <Property Name="Name">DWLoad</Property>
    <Property Name="VersionMajor">1</Property>
    <Property Name="VersionMinor">0</Property>
    <Property Name="VersionBuild">1</Property>
    <Property Name="VersionComments">
    </Property>
    <Property Name="CreationDate">06/22/2010 01:13:02 -07:00</Property>
    <Property Name="CreatorName">MYDOMAIN\user1</Property>
    <Property Name="CreatorComputerName">MyServer</Property>
    <Property Name="OfflineMode">0</Property>
    <Property Name="Description">
    </Property>
  </Properties>
  <Packages>
    <Package Name="MasterControl.dtsx" EntryPoint="1" />
    <Package Name="LoadCustomerDim.dtsx" EntryPoint="1" />
    <Package Name="LoadProductDim.dtsx" EntryPoint="1" />
    <Package Name="LoadSalesFact.dtsx" EntryPoint="1" />
    <Package Name="Cleanup.dtsx" EntryPoint="1" />
  </Packages>
  <Parameters />
  <DeploymentInfo>
    <PackageInfo>
      <PackageMetaData Name="MasterControl.dtsx">
        <Properties>
          <Property Name="ID">{169F8551-25AA-4D90-B9FD-39C8F1A0E363}</Property>
          <Property Name="Name">MasterControl</Property>
          <Property Name="VersionMajor">1</Property>
          <Property Name="VersionMinor">0</Property>
          <Property Name="VersionBuild">3</Property>
          <Property Name="VersionComments">
          </Property>
          <Property Name="VersionGUID">{D95E1FD4-E1BC-4BD3-84BD-7ECE2C48C2EF}</Property>
          <Property Name="PackageFormatVersion">4</Property>
          <Property Name="Description">
          </Property>
          <Property Name="ProtectionLevel">1</Property>
        </Properties>
        <Parameters>
          <Parameter Name="DWPassword">
            <Properties>
              <Property Name="ID">{21B7E59E-62B5-44E8-AF1C-FF7A8A78B225}</Property>
              <Property Name="CreationName">
              </Property>
              <Property Name="Description">
              </Property>
              <Property Name="IncludeInDebugDump">0</Property>
              <Property Name="Required">1</Property>
            </Properties>
          </Parameter>
        </Parameters>
      </PackageMetaData>
    </PackageInfo>
  </DeploymentInfo>
</Project>
```

```

        <Property Name="Sensitive">1</Property>
        <Property Name="DefaultValue"
Sensitive="1">AQAAANCMnd8BFdERjHoAwE/Cl+sBAAAT1admM5G+EmCVt60OLna+QAAAAACAAAAAADZgAAwAAAAABA
AAACyXjYXsjUrMnUPBsJleDKAAAAAASAAACgAAAAEAAAADZUUCbG8oqLjVx10amH8CJAAAAAmDJujhbCxEtBq6FiRAVz
q3BGVACvLGW3OPkgIDkSv5woRpotOhXZyCKMZsP6kJvt/FKvDIXwF/qDfY//ijG/ahQAAAAimi6gMlFulRSRzUFMK2WSO
dk75w==</Property>
        <Property Name="DataType">18</Property>
    </Properties>
</Parameter>
<Parameter Name="DWServer">
    <Properties>
        <Property Name="ID">{1D86BA36-9FAC-43BA-9784-CCF54C502E8A}</Property>
        <Property Name="CreationName">
</Property>
        <Property Name="Description">
</Property>
        <Property Name="IncludeInDebugDump">0</Property>
        <Property Name="Required">1</Property>
        <Property Name="Sensitive">0</Property>
        <Property Name="DefaultValue">DevDWSRV</Property>
        <Property Name="DataType">18</Property>
    </Properties>
</Parameter>
<Parameter Name="DWUser">
    <Properties>
        <Property Name="ID">{76C82FBC-B4A7-4FE7-9CDA-DAF2446DF85A}</Property>
        <Property Name="CreationName">
</Property>
        <Property Name="Description">
</Property>
        <Property Name="IncludeInDebugDump">0</Property>
        <Property Name="Required">1</Property>
        <Property Name="Sensitive">0</Property>
        <Property Name="DefaultValue">DevAcct</Property>
        <Property Name="DataType">18</Property>
    </Properties>
</Parameter>
<Parameter Name="RunCleanup">
    <Properties>
        <Property Name="ID">{9E54B3C5-F3CF-42A6-8427-994D15C5B6E8}</Property>
        <Property Name="CreationName">
</Property>
        <Property Name="Description">
</Property>
        <Property Name="IncludeInDebugDump">0</Property>
        <Property Name="Required">0</Property>
        <Property Name="Sensitive">0</Property>
        <Property Name="DefaultValue">0</Property>
        <Property Name="DataType">9</Property>
    </Properties>
</Parameter>
</Parameters>
</PackageMetaData>
<PackageMetaData Name="LoadCustomerDim.dtsx">
    <Properties>
        <Property Name="ID">{7CDBB704-93D6-43B8-B2BD-EBEA57862072}</Property>
        <Property Name="Name">LoadCustomerDim</Property>
        <Property Name="VersionMajor">1</Property>
        <Property Name="VersionMinor">0</Property>

```

```

    <Property Name="VersionBuild">1</Property>
    <Property Name="VersionComments">
</Property>
    <Property Name="VersionGUID">{7962C979-1C76-4EE1-BD90-B33A12687A67}</Property>
    <Property Name="PackageFormatVersion">4</Property>
    <Property Name="Description">
</Property>
    <Property Name="ProtectionLevel">1</Property>
</Properties>
<Parameters />
</PackageMetaData>
<PackageMetaData Name="LoadProductDim.dtsx">
    <Properties>
        <Property Name="ID">{A502C05C-A08A-4A76-A960-15F37F070DA5}</Property>
        <Property Name="Name">LoadProductDim</Property>
        <Property Name="VersionMajor">1</Property>
        <Property Name="VersionMinor">0</Property>
        <Property Name="VersionBuild">1</Property>
        <Property Name="VersionComments">
</Property>
        <Property Name="VersionGUID">{B3DF69C4-309F-400B-8850-87FFE481AD95}</Property>
        <Property Name="PackageFormatVersion">4</Property>
        <Property Name="Description">
</Property>
        <Property Name="ProtectionLevel">1</Property>
    </Properties>
    <Parameters />
</PackageMetaData>
<PackageMetaData Name="LoadSalesFact.dtsx">
    <Properties>
        <Property Name="ID">{D6794D56-2A03-43C0-B47E-69F43DA13C42}</Property>
        <Property Name="Name">LoadSalesFact</Property>
        <Property Name="VersionMajor">1</Property>
        <Property Name="VersionMinor">0</Property>
        <Property Name="VersionBuild">1</Property>
        <Property Name="VersionComments">
</Property>
        <Property Name="VersionGUID">{9E2587D4-765C-44D5-B9FD-1C0BD4C3E2CC}</Property>
        <Property Name="PackageFormatVersion">4</Property>
        <Property Name="Description">
</Property>
        <Property Name="ProtectionLevel">1</Property>
    </Properties>
    <Parameters />
</PackageMetaData>
<PackageMetaData Name="Cleanup.dtsx">
    <Properties>
        <Property Name="ID">{D30FBC74-FD46-4918-8908-D33707426F30}</Property>
        <Property Name="Name">Cleanup</Property>
        <Property Name="VersionMajor">1</Property>
        <Property Name="VersionMinor">0</Property>
        <Property Name="VersionBuild">2</Property>
        <Property Name="VersionComments">
</Property>
        <Property Name="VersionGUID">{A18DA090-0A36-4289-85F8-FD5E5C6B3E66}</Property>
        <Property Name="PackageFormatVersion">4</Property>
        <Property Name="Description">
</Property>
        <Property Name="ProtectionLevel">1</Property>
    </Properties>
    <Parameters />
</PackageMetaData>

```



```

</Properties>
<Parameters>
  <Parameter Name="Date">
    <Properties>
      <Property Name="ID">{A4A0E563-A0F3-4C82-8378-5785E9F142E6}</Property>
      <Property Name="CreationName">
        </Property>
      <Property Name="Description">
        </Property>
      <Property Name="IncludeInDebugDump">0</Property>
      <Property Name="Required">0</Property>
      <Property Name="Sensitive">0</Property>
      <Property Name="DefaultValue">1899-12-30T00:00:00-08:00</Property>
      <Property Name="DataType">16</Property>
    </Properties>
  </Parameter>
  <Parameter Name="FullCleanup">
    <Properties>
      <Property Name="ID">{65E8AE90-50EB-495F-BED3-67CF648372BC}</Property>
      <Property Name="CreationName">
        </Property>
      <Property Name="Description">
        </Property>
      <Property Name="IncludeInDebugDump">0</Property>
      <Property Name="Required">0</Property>
      <Property Name="Sensitive">0</Property>
      <Property Name="DefaultValue">false</Property>
      <Property Name="DataType">3</Property>
    </Properties>
  </Parameter>
</Parameters>
</PackageMetaData>
</PackageInfo>
</DeploymentInfo>
</Project>

```

## 4 Security

### 4.1 Security Considerations for Implementers

The project deployment file can contain sensitive information, such as deployment configurations that define user names and passwords that are used to access data sources.

When sensitive values are present in a project or its IS packages, the user should use the appropriate protection level for serialization, as described in this document and in [\[MS-DTSX\]](#).

### 4.2 Index of Security Fields

None.

## 5 Appendix A: XML Schema Definition

The following is the complete XML schema definition for the project deployment file format.

```
<?xml version="1.0" encoding="utf-8"?>
<xsd:schema targetNamespace="www.microsoft.com/SqlServer/SSIS"
  elementFormDefault="qualified"
  xmlns="www.microsoft.com/SqlServer/SSIS"
  xmlns:xsd="http://www.w3.org/2001/XMLSchema"
  >
  <xsd:element name="Project">
    <xsd:complexType>
      <xsd:sequence>
        <xsd:element name="Properties" type="PropertiesType"
          minOccurs="1" maxOccurs="1"/>
        <xsd:element name="Parameters" type="ParametersType"
          minOccurs="1" maxOccurs="1"/>
        <xsd:element name="Packages" type="PackagesType"
          minOccurs="1" maxOccurs="1"/>
        <xsd:element name="DeploymentInfo" type="DeploymentInfoType"
          minOccurs="1" maxOccurs="1"/>
      </xsd:sequence>
      <xsd:attribute name="ProtectionLevel" type="xsd:string"/>
      <xsd:anyAttribute namespace="##other" processContents="skip" />
    </xsd:complexType>
  </xsd:element>

  <xsd:complexType name="PropertyType">
    <xsd:simpleContent>
      <xsd:extension base="xsd:string">
        <xsd:attribute name="Name" type="xsd:string" />
      </xsd:extension>
    </xsd:simpleContent>
  </xsd:complexType>

  <xsd:complexType name="PropertiesType">
    <xsd:choice minOccurs="1" maxOccurs="unbounded">
      <xsd:element name="Property" type="PropertyType"/>
    </xsd:choice>
    <xsd:anyAttribute namespace="##other" processContents="skip" />
  </xsd:complexType>

  <xsd:complexType name="PackageType">
    <xsd:attribute name="EntryPoint" type="xsd:boolean" />
    <xsd:attribute name="Name" type="xsd:string" />
  </xsd:complexType>

  <xsd:complexType name="PackagesType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Package" type="PackageType" />
    </xsd:choice>
    <xsd:anyAttribute namespace="##other" processContents="skip" />
  </xsd:complexType>

  <xsd:complexType name="ParameterType">
    <xsd:choice minOccurs="0" maxOccurs="unbounded">
      <xsd:element name="Properties" type="PropertiesType"/>
    </xsd:choice>
  </xsd:complexType>
```

```

    </xsd:choice>
    <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>

<xsd:complexType name="ParametersType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded">
    <xsd:element name="Parameter" type="ParameterType"/>
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>

<xsd:complexType name="PackageMetadataType">
  <xsd:sequence>
    <xsd:element name="Properties" type="PropertiesType"
      minOccurs="1" maxOccurs="1"/>
    <xsd:element name="Parameters" type="ParametersType"
      minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>

<xsd:complexType name="PackageInfoType">
  <xsd:sequence>
    <xsd:element name="PackageMetadata" type="PackageMetadataType"
      minOccurs="1" maxOccurs="1"/>
  </xsd:sequence>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>

<xsd:complexType name="DeploymentInfoType">
  <xsd:choice minOccurs="0" maxOccurs="unbounded" >
    <xsd:element name="PackageInfo" type="PackageInfoType"/>
  </xsd:choice>
  <xsd:anyAttribute namespace="##other" processContents="skip" />
</xsd:complexType>

</xsd:schema>

```

## 6 Appendix B: Product Behavior

The information in this specification is applicable to the following Microsoft products:

- Microsoft® SQL Server® code-named Denali Community Technology Preview 1 (CTP1)

Exceptions, if any, are noted below. If a service pack number appears with the product version, behavior changed in that service pack. The new behavior also applies to subsequent service packs of the product unless otherwise specified.

Unless otherwise specified, any statement of optional behavior in this specification prescribed using the terms SHOULD or SHOULD NOT implies product behavior in accordance with the SHOULD or SHOULD NOT prescription. Unless otherwise specified, the term MAY implies that product does not follow the prescription.

## 7 Change Tracking

No table of changes is available. The document is either new or has had no changes since its last release.

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