**⚙️ Data Management in Salesforce**

**Data Management** in Salesforce involves **importing and exporting** data to and from your Salesforce org.

**📥 Data Import**

Data Import allows users to **add**, **update**, or **Upsert** records into Salesforce using CSV files or database connections.

**🔁 Data Import Operations**

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| --- | --- |
| **Operation** | **Description** |
| **Insert** | Creates new records in Salesforce. |
| **Update** | Modifies existing records using Record ID or External ID. |
| **Upsert** | Combination of Insert and Update. Updates existing records; if not found, creates new ones. |

**🛠️ Data Import Tools**

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| **Tool** | **Description** | **Key Features** | **Limits** |
| **Data Import Wizard** | Web-based tool accessible via Setup. | • Simple UI • Supports standard & custom objects • Field mapping supported | Up to **50,000** records |
| **Data Loader** | Client application for large-scale imports. | • Supports command line automation • Can use API for integration • Works with any object | Up to **5 million** records |

**🧩 Key Import Rules & Behaviours**

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| **Category** | **Rule/Behavior** |
| **Picklists** | If a new value not found in picklist → Wizard warns you. If ignored, value is added to record. |
| **Multi-Select Picklists** | Separate values by a **semicolon (;)**. |
| **Checkbox Fields** | Use **1 for checked**, **0 for unchecked**. |
| **Default Values** | If unmapped, default field values are inserted automatically. |
| **Date/Time Format** | Must match user’s locale settings. |
| **Formula Fields** | Cannot be imported (read-only). |
| **Validation Rules** | Are enforced during import. Deactivate if needed. |
| **Universally Required Fields** | Must be present in import file; otherwise, records fail. |

**🧠 Important Notes**

* **Data Import Wizard** supports *Accounts, Contacts, Leads, Solutions,* and *Custom Objects* only.
* **Data Loader** supports **all standard and custom objects**.
* Import limits depend on **user permissions**, **object type**, and **org data storage**.

**📤 Data Export**

Data Export enables users to **extract Salesforce data** as **CSV files**, either manually or on a scheduled basis.  
Commonly used for **data backup**, **migration**, or **external system integration**.

**🧰 Data Export Tools**

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| **Tool** | **Description** | **Key Features** |
| **Data Export Wizard** | Web-based export option from Setup. | • Manual or scheduled (weekly/monthly) • Exports all data as ZIP of CSV files • Email notification sent when ready |
| **Data Loader** | Client-based tool for exporting data. | • Supports UI & command line • Useful for automation using APIs • Can export any object data |

**⚙️ Additional Notes**

* Exports are delivered as **ZIP files** containing CSVs.
* Download link expires **48 hours** after email notification.
* Large exports are split into multiple files.
* Schedule frequency:

Weekly exports: Once every **6 days**

Monthly exports: Once every **28 days**

**🔗 External ID**

An **External ID** is a custom field used to **store a unique identifier** from an **external system** (like ERP or legacy database).  
It helps in matching and integrating external records with Salesforce records.

**⚙️ Key Features**

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| **Feature** | **Description** |
| **Purpose** | Used during **Upsert** to identify and match external records. |
| **Uniqueness** | Case-insensitive by default. Case-sensitive if marked as **Unique**. |
| **Supported Field Types** | Number, Text, Email, or Auto-number. |
| **Limit per Object** | Maximum of **7 External ID fields** per object. |
| **Integration Use** | Prevents duplicate records during data migration or API integration. |

**🧾 Record ID**

Each Salesforce record has a **unique system-generated ID** used to identify it internally.  
It is automatically created when a record is inserted and cannot be changed.

**⚙️ Key Features**

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| **Type** | **Description** |
| **15-digit ID** | Case-sensitive; used in **UI**. |
| **18-digit ID** | Case-insensitive; used in **APIs and integrations**. |
| **Prefix** | First 3 characters identify the object type (e.g., 001 for Account, 003 for Contact). |
| **Conversion** | CASESAFEID() converts 15 → 18 digits; removing last 3 digits converts back. |
| **Environment** | Record IDs are **identical only** between **Production and Full Copy Sandbox**. |

**🧠 Example**

* **Account ID**: starts with 001
* **Contact ID**: starts with 003
* **Lead ID**: starts with 00Q

**🔐 Security Token**

A **Security Token** is a case-sensitive alphanumeric key that adds an **extra layer of authentication** when accessing Salesforce from **outside trusted IP ranges**.

**⚙️ Key Features**

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| **Feature** | **Description** |
| **Purpose** | Required when connecting Salesforce through APIs, Data Loader, or third-party apps. |
| **Usage** | Appended to the user’s password during login (e.g., PasswordSecurityToken). |
| **Reset Behavior** | Automatically reset every time the **password is changed**. |
| **Location** | Sent to user’s registered email after reset or accessible via *Setup → My Personal Information → Reset My Security Token*. |

**✅ Summary Table**

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| --- | --- | --- | --- |
| **Category** | **Tool/Feature** | **Max Limit** | **Key Purpose** |
| **Data Import** | Data Import Wizard | 50,000 records | Simple web-based import |
|  | Data Loader | 5 million records | API & bulk data import |
| **Data Export** | Data Export Wizard | Weekly/Monthly | Backup or migration |
|  | Data Loader | Unlimited | Automated export |
| **External ID** | Custom Field | 7 per object | Identify external records |
| **Record ID** | System Field | N/A | Unique identifier for each record |
| **Security Token** | User Credential | N/A | External login authentication |