MS Dynamics CRM 365

Introduction to Dynamics 365 Solutions

Capgemini

Lesson Objectives

- Dynamics 365 Solutions Overview

- Including Components in Solutions

- Solution Publishers and Versioning

- Solutions Types

- Working with Multiple Solutions

- Export and Import Solutions

Solutions Overview

- Solutions can be used to create, package, deploy, and maintain Dynamics 365 customizations

  - Work with a selected set of components instead of everything at once in default solution

  - Organize selected components to deploy related changes together

  - Exported solution zip file will be smaller

  - Keep exported solutions for change management

Solution Components

Schema
- Entity
- Fields
- 1:N / N:N Relationship
- Option sets

Templates
- Email
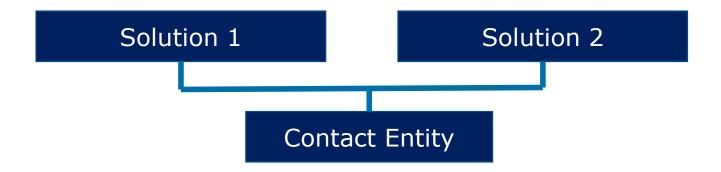- Contact
- KB Article
- Mail Merge

Process/Steps/ Code
- Workflows
- Dialogs
- Business Process Flows
- Business Rules
- Actions
- Web Resources
- Plug ins Assemblies
- SDK Message Processing Steps

User Interface
- Forms
- Views
- Charts
- Dashboards
- SiteMap
- Ribbons

Miscellaneous
- Security Roles
- Field Security Profiles
- Connection Roles
- Reports
- Solution Publisher
- System Settings

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Reference not Copies

- Each solution created contains a reference to the component

- Multiple solutions on the same organization will NOT have it's own copy of component

- When exporting either solution it will export all changes to the component regardless of the solution they were created in

Solution 1	Solution 2

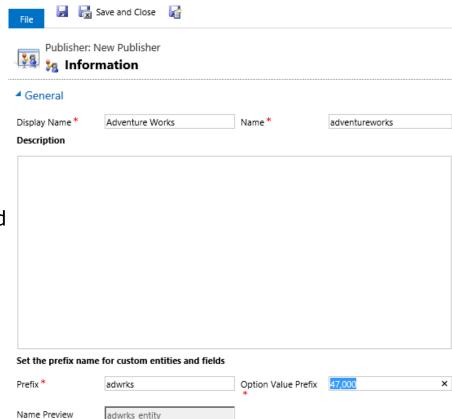**Contact Entity**

Solution Versioning

- Version numbers are compared when solutions are imported

  - Newer versions will replace existing versions of the solution

- Version Number

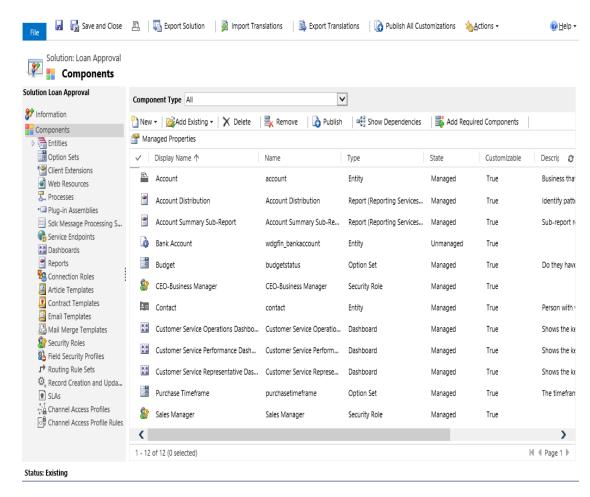 - Major.minor.build.revision format:2.1.12.3

Solution Publishers

- **Solution must have a publisher**
  - Use default publisher or create your own

- **Prefix used for name of some components**
  - Define who is doing the changes, or for which set of requirements
  - No more than eight lower case letters and numbers
  - Managed solutions can only be updated by solutions from the same publisher

- **Option value prefix for Option Sets**

File

Save and Close

Publisher: New Publisher
Information

▲ General

| Display Name * | Adventure Works | Name * | adventureworks |

Description

Set the prefix name for custom entities and fields

| Prefix * | adwrks | Option Value Prefix * | 47,000 |

| Name Preview | adwrks_entity |

Creating Solutions

- **Default solution contains all components of the system (organization)**

- **Solution Properties**

  - Display Name

  - Name
    - Cannot be changed
    - Used for file name of exported solution package

  - Version Number

Creating Solutions

- New and existing components can be created/added directly to the solution

  - New components will use the publisher prefix associated with the solution publisher

  - Existing components will retain their original name

- Required Components

  - Prompt to include dependent items
    - Ignored for system components

- The required items must be included in the solution or already exist in the target organization
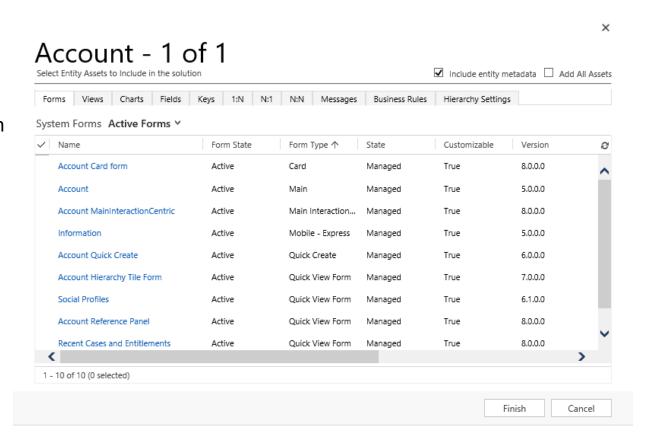 - The solution import will fail if not already present or included

Creating Solutions

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Entity Assets

- Specify exactly what should be included in solution

- Includes tabs to select specific, forms, views, charts, fields, relationships, messages, Business rules and Hierarchy Settings

- Assets can be added later

- Must be defined for every entity added to the solution

Types of Solutions

- **System solution**: Defines the default application behavior

- **Unmanaged solutions**: Container for unmanaged customizations. All solutions start as unmanaged. When deleted all components in the solution remain.(Must be removed individually)

- **Managed solutions:** Installed on top of system solution, cannot be modified directly, when deleted all components in the solution are removed unless they are used by other managed solutions

  - Managed solution are created by exporting an unmanaged and selecting to package it as a managed solution

- **Managed Patches:** Updated and fixes that can be pushed out to Managed solutions that allow updated specific components and not having to overwrite the entire contents of an existing solution

Unmanaged Solutions

- Every Dynamics 365 has a default solution which is unmanaged

- Unmanaged solutions can be modified

  - All solutions start as unmanaged

  - You can create multiple unmanaged solutions

- Removing an unmanaged solution only removes the container

  - All included components will remain

Managed Solutions

- An unmanaged solution becomes managed after being exported (as managed) and installed into another organization

- Managed solutions can NOT be modified directly

- Managed solutions cannot be exported

- When removed all components items included are removed

Package Type

Multiple Solutions

- Any solution you create is unmanaged and can be modified

- Solutions contain references to existing or new components in the default solution

- Any changes made in one solution are also visible in other solutions in same organization

- More than one customizer can work in their own solution on the same system

Exporting Solutions

- Export solution and all the components in it as a compressed file in .zip format

  - Filename is Solution Name + Version by default

  - Contains XML, XAML, .DLL, images and other files

  - Warning if dependent components are missing

  - Only Published customizations are exported

- Default solution can be exported (unmanaged)

  - Internal developments usually use unmanaged

  - Managed solutions are for distributing customizations, such as ISV add-ons

Importing Solutions

- Upon Import
  - Updates components already in the system
  - Adds any new components not in the system
  - Dependent components must be in the target system, or be included in the solution
    - Solution import will fail if dependent items are missing

- Unmanaged solution cannot be "uninstalled"
  - Writes changes into the default solution
  - Container can be removed, but changes remain in the system

- Managed solution keeps components
  - Solution can be removed to delete all components

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Module Review

- Solution can be used to create, package, deploy, and maintain Dynamics 365 customizations

- Solution contain references not copies of each component included

- All solutions start as unmanaged, they don't become managed unless specified during solution export

- Importing a solution will fail if any required components are missing (not included or already present in the target)

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