



CSM Integrations

Legal Notices

© 2021 Cherwell Software, LLC. All Rights Reserved.

Cherwell, the Cherwell logo, and mApp are trademarks owned by Cherwell Software, LLC and are registered and/or used in the United States and other countries. ITIL® is a registered trademark of AXELOS Limited. All other product or company names referenced herein are used for identification purposes only and are or may be trademarks or registered trademarks of their respective owners.

Some or all parts of the mApp product are covered by one or more claims of U.S. Patent No. 9, 612, 825.

The information contained in this documentation is proprietary and confidential. Your use of this information and Cherwell Software products is subject to the terms and conditions of the applicable End-User License Agreement and/or Nondisclosure Agreement and the proprietary and restricted rights notices included therein.

You may print, copy, and use the information contained in this documentation for the internal needs of your user base only. Unless otherwise agreed to by Cherwell and you in writing, you may not otherwise distribute this documentation or the information contained here outside of your organization without obtaining Cherwell's prior written consent for each such distribution.

The Cherwell Software product suite includes:

- Cherwell Service Management
- Cherwell Asset Management

[Contact Cherwell Software](#)

Contents

About CSM Integrations.	4
◦ Cherwell Local Integration Agents.	5
◦ Avaya Integration.	6
◦ Atrium Discovery and Dependency Mapping (ADDM) Integration.	8
◦ Cisco Call Manager Integration.	13
◦ Computer Telephony Integration (CTI) Integration.	16
◦ External Database Integration.	18
◦ Footprints Integration.	23
◦ inContact ACD/IVR Integration.	28
◦ MIR3 Intelligent Notification Integrations.	31
◦ KACE Integration.	32
◦ Knowledge Base Integration.	37
◦ Knowledge Brokers Integration.	42
◦ Lansweeper Integration.	47
◦ Lansweeper Integration: View Examples.	52
◦ Lightweight Directory Access Protocol (LDAP) Integration.	56
◦ Microsoft Active Directory Integration.	57
◦ Microsoft Outlook Integration.	58
◦ Microsoft System Center Configuration Manager (SCCM) Integration.	60
◦ Microsoft System Center Operations Manager (SCOM) Integration.	65
◦ Microsoft Windows PowerShell Integration.	70
◦ Oracle Enterprise Resource Planning (ERP) Integration.	71
◦ Salesforce Chatter Integration.	74
◦ SAP Integration.	77
◦ Snow Inventory Integration.	80
◦ SolarWinds Inventory Integration.	85
◦ SpiceWorks Integrations.	90
◦ Log to Splunk.	95
◦ Textlocal Integration.	97
◦ Tripwire Enterprise Integration.	98

About CSM Integrations

CSM integrates with numerous applications and technologies so that data can be safely and efficiently managed in one place.

Manual integrations use CSM's powerful features (example: external table imports, One-Step Actions, etc.) to integrate with numerous third-party applications and technologies. Examples include Salesforce Chatter, Lansweeper, and many more.

Cherwell Local Integration Agents

Cherwell Local Integration Agents are used by customers who:

- Require applications to reside within a firewall.
- Perform integrations under strict regulatory compliance that does not allow data to either travel outside a particular geographical boundary or reside in the cloud.



Note: For information about system requirements and installation instructions for Cherwell Local Integration Agents, see: <https://success.jitterbit.com/display/DOC/Local+Agents>.

Avaya Integration

Overview

Avaya is a global provider of next-generation business collaboration and communications solutions, providing unified communications, real-time video collaboration, contact center, networking and related services. CSM integrates with Avaya to provide additional telephony services, such as:

- Screen pop-ups of CSM Customer Records when an incoming call is received. The telephony client launches CSM and passes matching Automatic Number Identification (ANI) from a command line so that a CSM Customer Record can be opened on the computer screen.
- Click-to-dial for outgoing calls. A CSM One-Step Action passes the Customer phone number from a Customer Record to the telephony client.

Note: CSM integrates only with Telephony Application Programming Interface (TAPI)-compliant telephony clients. (The TAPI is a Microsoft Windows API that provides Computer Telephony Integration (CTI) and enables PCs running Microsoft Windows to use telephone services.)

Related Reading

- [About One-Step Actions](#)
- [About Business Object](#)

Steps to Integrate

1. Connect CSM to Avaya using the command line. In the example, the Customer is the Cherwell Business Object to search and the number is the ANI (caller information) as passed by Avaya.
Ex. "C:\Program Files\Cherwell Service Management\Trebuchet.App.exe"/S customer 3035555555
OR

CherwellClient://commands/search?rectype=Customer&search=searchText 3035555555



Note: The command executed must be able to access and run the Desktop Client application from the application's installed directory.



Note: The Customer phone number without formatting needs to be in a field with Full-Text Search enabled.

2. [Create a Blueprint](#).
3. Edit the Customer Record by adding a new field. The new field should have the following attributes:



Note: This field does not need to be added to the form.



Note: The OOTB content sets up the next steps automatically. If using a CSM version before 5.0, then follow these steps to create a field with the phone number without formatting. The field must also be in the Full-Text Index.

- Name: ShortPhone (This is an example, any name can be used.)
 - Type: Text
 - Length: 15
 - Full Text Search enabled.
4. Edit the field properties and enable the calculated feature and the field is calculated by a text-base Expression. In the example, the ShortPhone field is calculated by the ShortPhone Expression. The short phone field is calculated from the phone field in an Expression.
 5. Add Modifiers to the Expression to **Remove (-)**.
 6. Create a One-Step Action to remove the Phone field, remove and extra text, and populate the field.
 - a. In Desktop Client, go to the Customer menu.
 - b. Select **Contact Manager**.
 - c. Change the Customer Type to show the desired Customer Group.
 - d. Go to the Search tab and click **Go**.
A list of all Customer Records in the Customer Group open.
 - e. Go to the One-Step Action menu and select **One-Step Manager**.
 - f. Click the Customer Type desired and click **New**.
 - g. In the Name field, type the **name** for the new One-Step Action.
 - h. Click **Add** and select **Update a Business Object**.
The Update Business Object Step window opens.
 - i. From the Contact fields list, select the **Short Phone** field.
 - j. Select the **Template** radio button.
 - k. Right-click the **Template** text field.
 - l. Select **Phone**.
 - m. In the Template field, right-click and select **Modifiers**.
 - n. Create a new Modifier for each possible text in the Phone field.
Examples: (,), -, X, *. For spaces, use the Remove white-space Modifier.
 - o. Click **OK** in each window until returned to the One-Step Action Manager.
 7. Right-click the newly created One-Step Action.
 8. Select **Run for Group**. This runs the One-Step Action against the entire Customer Group that was chosen and populates the phone number without text or spaces.
 9. Contact Avaya to ensure commands are working within CSM.

Atrium Discovery and Dependency Mapping (ADDM) Integration

Overview

BMC Atrium Discovery and Dependency Mapping (ADDM) discovers physical and virtual servers, applications, and network devices. ADDM integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, ADDM workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: ADDM utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an ADDM Database, Users will most likely want to:

- Create Views of the ADDM data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the ADDM data.
- Map and Import the ADDM Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link ADDM data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the ADDM database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the ADDM data](#). Data is either in the external ADDM Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the ADDM database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate ADDM View:](#)

Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each ADDM View into the appropriate CSM Business Object.](#)

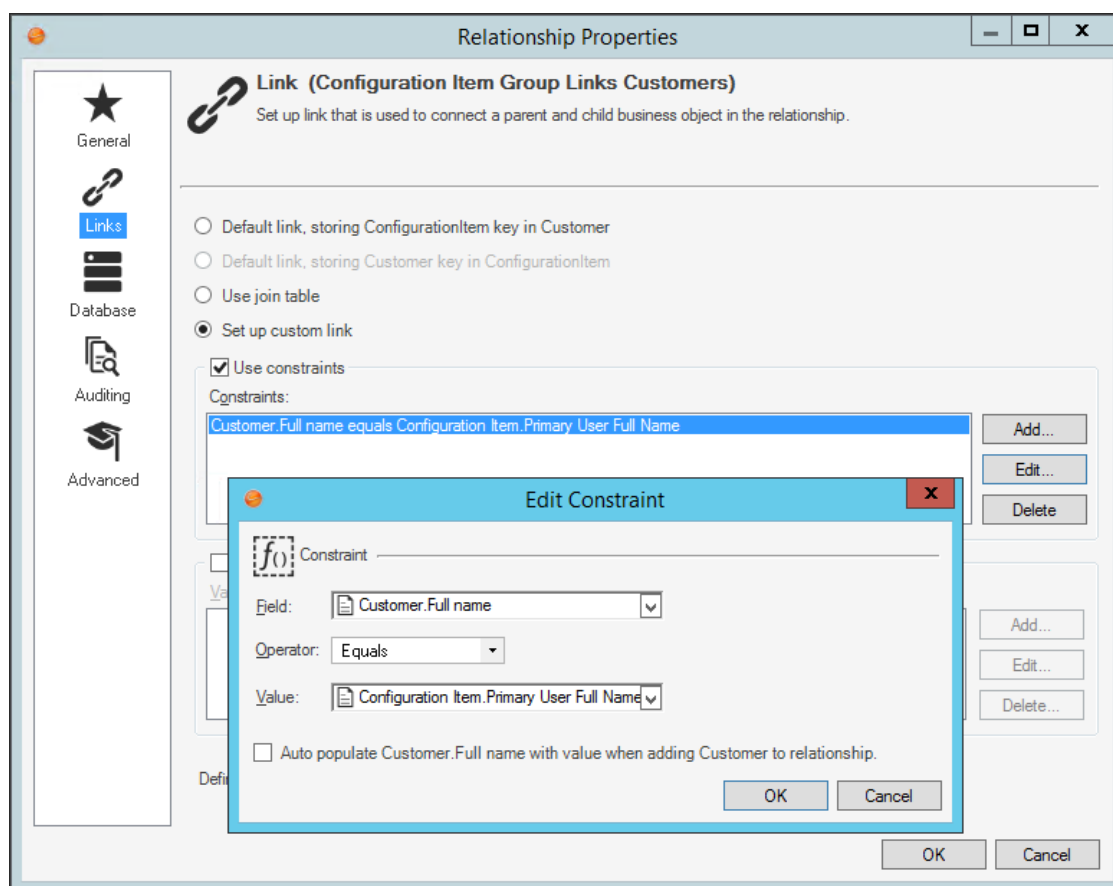
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.

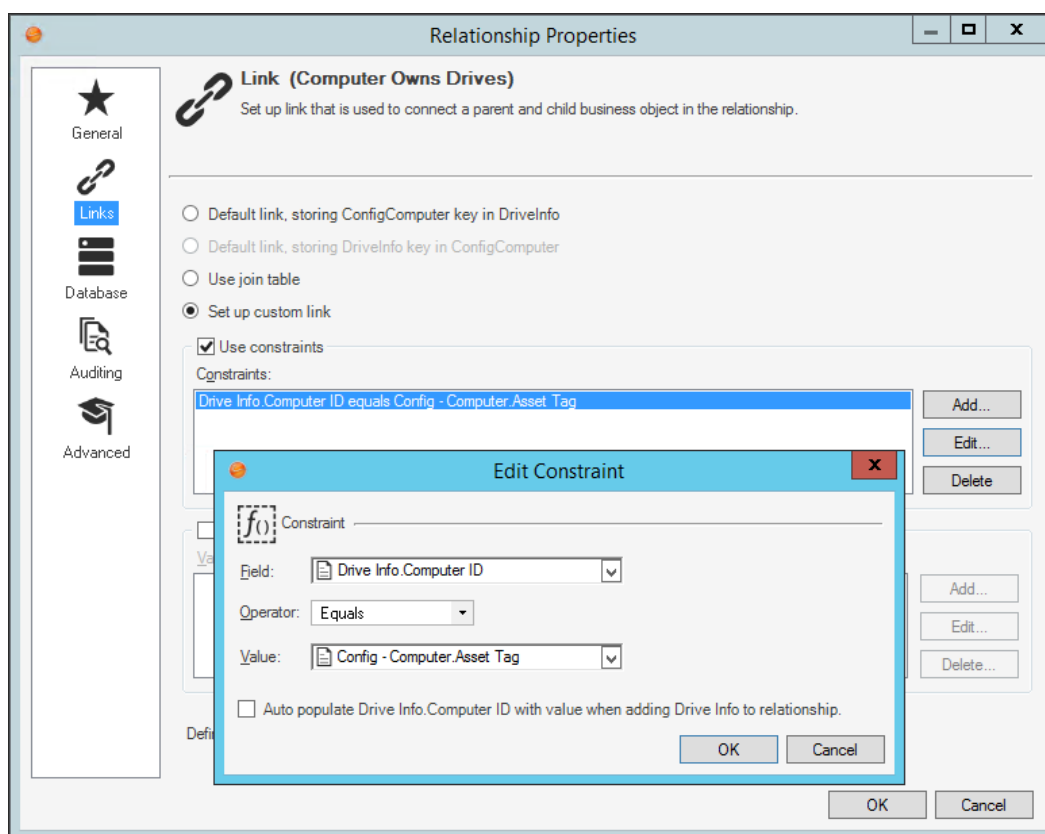
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint.](#)

Cisco Call Manager Integration

Overview

Cisco Call Manager provides services such as session management, voice, video, messaging, mobility, and web conferencing. CSM integrates with Cisco Call Manager to provide additional telephony services, such as:

- Screen pop-ups of CSM Customer Records when an incoming call is received. The telephony client launches CSM and passes matching Automatic Number Identification (ANI) from a command line so that a CSM Customer Record can be opened on the computer screen.
- Click-to-dial for outgoing calls. A CSM One-Step Action passes the Customer phone number from a Customer Record to the telephony client.



Note: CSM integrates only with Telephony Application Programming Interface (TAPI)-compliant telephony clients. (The TAPI is a Microsoft Windows API that provides Computer Telephony Integration (CTI) and enables PCs running Microsoft Windows to use telephone services.)

Related Reading

- [About One-Step Actions](#)
- [About Business Object](#)

Steps to Integrate

1. Connect CSM to Cisco Call Manager using the command line. In the example, the Customer is the Cherwell Business Object to search and the number is the ANI (caller information) as passed by Cisco Call Manager.
Ex. "C:\Program Files (x86)\CherwellSoftware\CherwellService Management\Trebuchet.App.exe"/S customer 3035555555 OR

CherwellClient://commands/search?rectype=Customer&search=3035555555



Note: The command executed must be able to access and run the Desktop Client application from the application's installed directory.



Note: The Customer phone number without formatting needs to be in a field with Full-Text Search enabled.

2. [Create a Blueprint](#).
3. Edit the Customer Record by adding a new field. The new field should have the following attributes:



Note: This field does not need to be added to the form.



Note: The OOTB content sets up the next steps automatically. If using a CSM version before 5.0, then follow these steps to create a field with the phone number without formatting. The field must also be in the Full-Text Index.

- Name: ShortPhone (This is an example, any name can be used.)
 - Type: Text
 - Length: 15
 - Full Text Search enabled.
4. Edit the field properties and enable the calculated feature and the field is calculated by a text-base Expression. In the example, the ShortPhone field is calculated by the ShortPhone Expression. The short phone field is calculated from the phone field in an Expression.
 5. Add Modifiers to the Expression to **Remove (-)**.
 6. Create a One-Step Action to remove the Phone field, remove and extra text, and populate the field.
 - a. In Desktop Client, go to the Customer menu.
 - b. Select **Contact Manager**.
 - c. Change the Customer Type to show the desired Customer Group.
 - d. Go to the Search tab and click **Go**.
A list of all Customer Records in the Customer Group open.
 - e. Go to the One-Step Action menu and select **One-Step Manager**.
 - f. Click the Customer Type desired and click **New**.
 - g. In the Name field, type the **name** for the new One-Step Action.
 - h. Click **Add** and select **Update a Business Object**.
The Update Business Object Step window opens.
 - i. From the Contact fields list, select the **Short Phone** field.
 - j. Select the **Template** radio button.
 - k. Right-click the **Template** text field.
 - l. Select **Phone**.
 - m. In the Template field, right-click and select **Modifiers**.
 - n. Create a new Modifier for each possible text in the Phone field.
Examples: (,), -, X, *. For spaces, use the Remove white-space Modifier.
 - o. Click **OK** in each window until returned to the One-Step Action Manager.
 7. Right-click the newly created One-Step Action.
 8. Select **Run for Group**. This runs the One-Step Action against the entire Customer Group that was chosen and populates the phone number without text or spaces.
 9. Contact Cisco Call Manager to ensure commands are working within CSM.

Computer Telephony Integration (CTI) Integration

Overview

Computer Telephony Integration (CTI) is a technology solution that offers fully integrated, turnkey IT solutions including IT infrastructure design, implementation and support, security and compliance solutions, and data center integration. CSM integrates with a CTI company to provide additional telephony services, such as:

- Screen pop-ups of CSM Customer Records when an incoming call is received. The telephony client launches CSM and passes matching Automatic Number Identification (ANI) from a command line so that a CSM Customer Record can be opened on the computer screen.
- Click-to-dial for outgoing calls. A CSM One-Step Action passes the Customer phone number from a Customer Record to the telephony client.

Note: CSM integrates only with Telephony Application Programming Interface (TAPI)-compliant telephony clients. (The TAPI is a Microsoft Windows API that provides Computer Telephony Integration (CTI) and enables PCs running Microsoft Windows to use telephone services.)

Related Reading

- [About One-Step Actions](#)
- [About Business Objects](#)

Steps to Integrate

1. Connect CSM to a CTI company using the command line. In the example, the Customer is the Cherwell Business Object to search and the number is the ANI (caller information) as passed by a CTI company.

Ex. "C:\Program Files\Cherwell Service Management\Trebuchet.App.exe"/S customer 3035555555
OR

CherwellClient://commands/search?rectype=Customer&search=searchText 3035555555



Note: The command executed must be able to access and run the Desktop Client application from the application's installed directory.



Note: The Customer phone number without formatting needs to be in a field with Full-Text Search enabled.

2. [Create a Blueprint](#).
3. Edit the Customer Record by adding a new field. The new field should have the following attributes:



Note: This field does not need to be added to the form.



Note: The OOTB content sets up the next steps automatically. If using a CSM version before 5.0, then follow these steps to create a field with the phone number without formatting. The field must also be in the Full-Text Index.

- Name: ShortPhone (This is an example, any name can be used.)
 - Type: Text
 - Length: 15
 - Full Text Search enabled.
4. Edit the field properties and enable the calculated feature and the field is calculated by a text-base Expression. In the example, the ShortPhone field is calculated by the ShortPhone Expression. The short phone field is calculated from the phone field in an Expression.
 5. Add Modifiers to the Expression to **Remove (-)**.
 6. Create a One-Step Action to remove the Phone field, remove and extra text, and populate the field.
 - a. In Desktop Client, go to the Customer menu.
 - b. Select **Contact Manager**.
 - c. Change the Customer Type to show the desired Customer Group.
 - d. Go to the Search tab and click **Go**.
A list of all Customer Records in the Customer Group open.
 - e. Go to the One-Step Action menu and select **One-Step Manager**.
 - f. Click the Customer Type desired and click **New**.
 - g. In the Name field, type the **name** for the new One-Step Action.
 - h. Click **Add** and select **Update a Business Object**.
The Update Business Object Step window opens.
 - i. From the Contact fields list, select the **Short Phone** field.
 - j. Select the **Template** radio button.
 - k. Right-click the **Template** text field.
 - l. Select **Phone**.
 - m. In the Template field, right-click and select **Modifiers**.
 - n. Create a new Modifier for each possible text in the Phone field.
Examples: (,), -, X, *. For spaces, use the Remove white-space Modifier.
 - o. Click **OK** in each window until returned to the One-Step Action Manager.
 7. Right-click the newly created One-Step Action.
 8. Select **Run for Group**. This runs the One-Step Action against the entire Customer Group that was chosen and populates the phone number without text or spaces.
 9. Contact a CTI company to ensure commands are working within CSM.

External Database Integration

Overview

CSM integrates with several external databases (ex: SQL Server) so that data (Ex: Inventory, Customer, etc.) can be shared with and used within CSM. External integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, External workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: External utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an External Database, Users will most likely want to:

- Create Views of the External data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.
- Create an External Connection (SQL Server) to the External data.

- Map and Import the External Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object
- Note:** CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link External data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the External database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the External data](#). Data is either in the external External Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the External database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate External View](#):

Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each External View into the appropriate CSM Business Object](#).

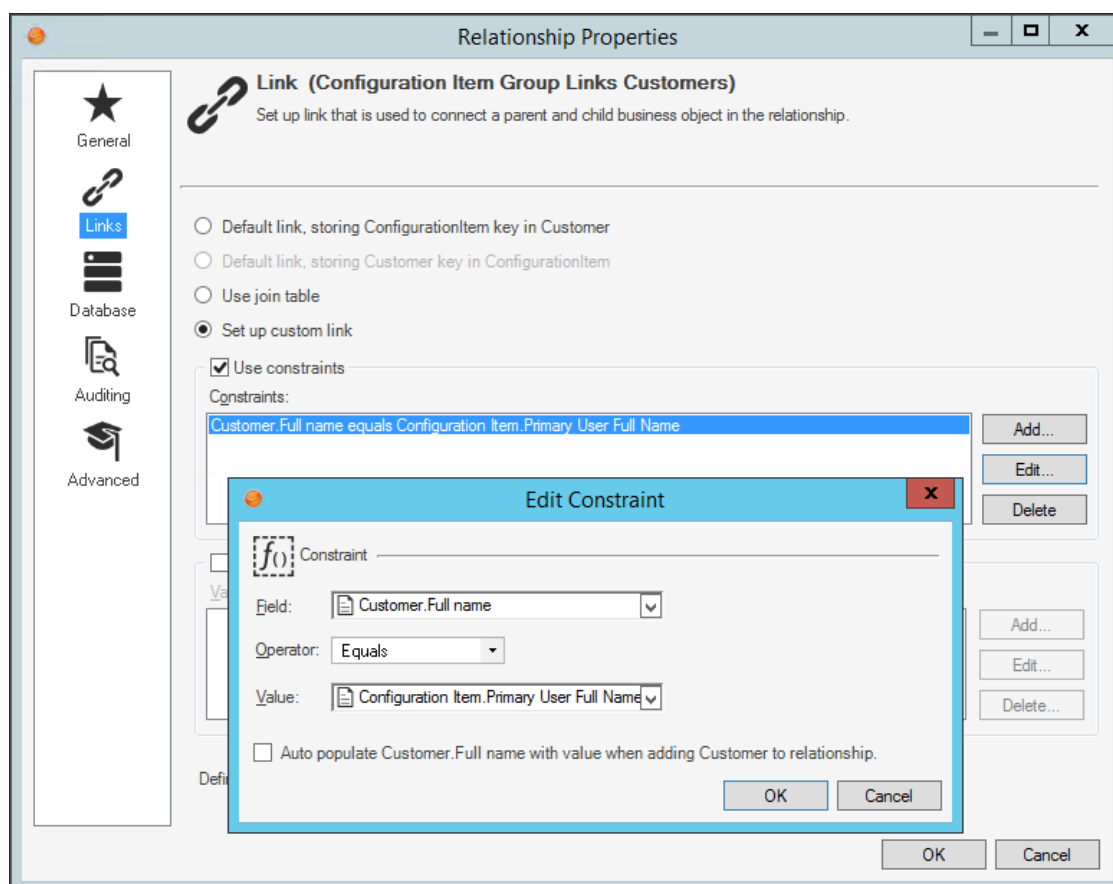
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.

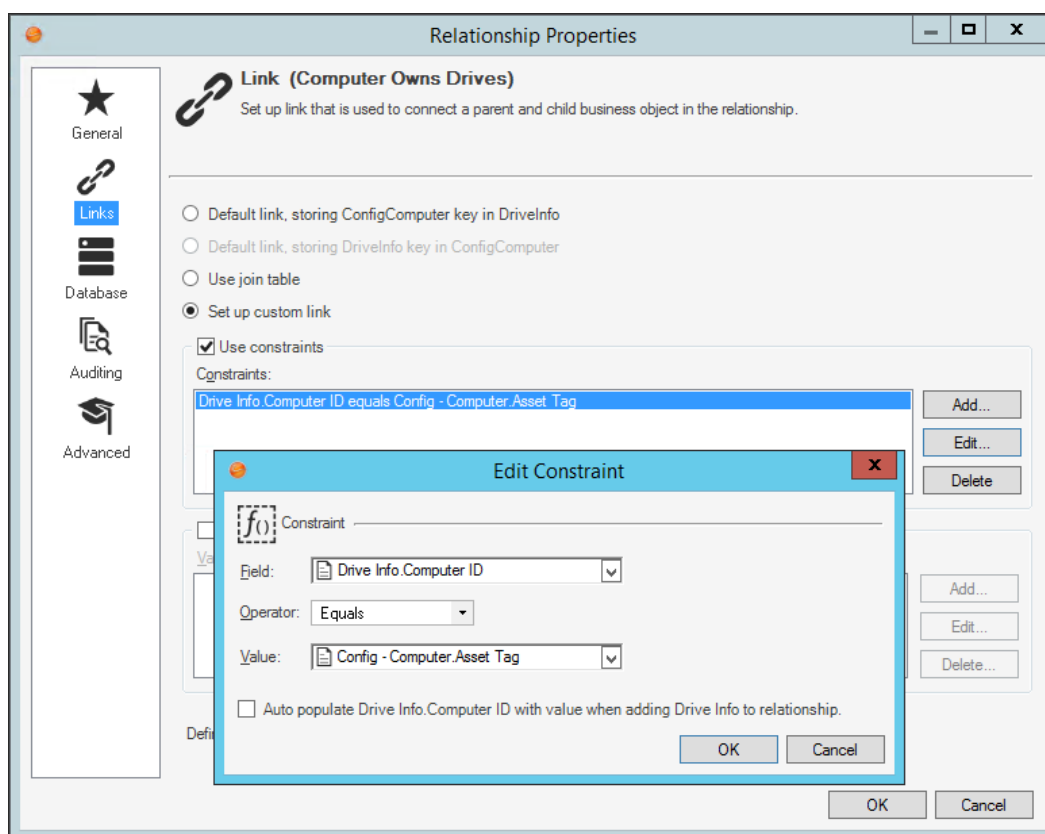
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

Footprints Integration

Overview

BMC Footprints is an integrated IT service and asset management platform. Footprints integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, Footprints workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: Footprints utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an Footprints Database, Users will most likely want to:

- Create Views of the Footprints data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.
- Create an External Connection (SQL Server) to the Footprints data.
- Map and Import the Footprints Views into existing CSM Business Objects, for example:

- Workstation View = Config-Computer Business Object
- Installed Software View = Installed Software Business Object
- Installed Services View = Installed Services Business Object
- Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link Footprints data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



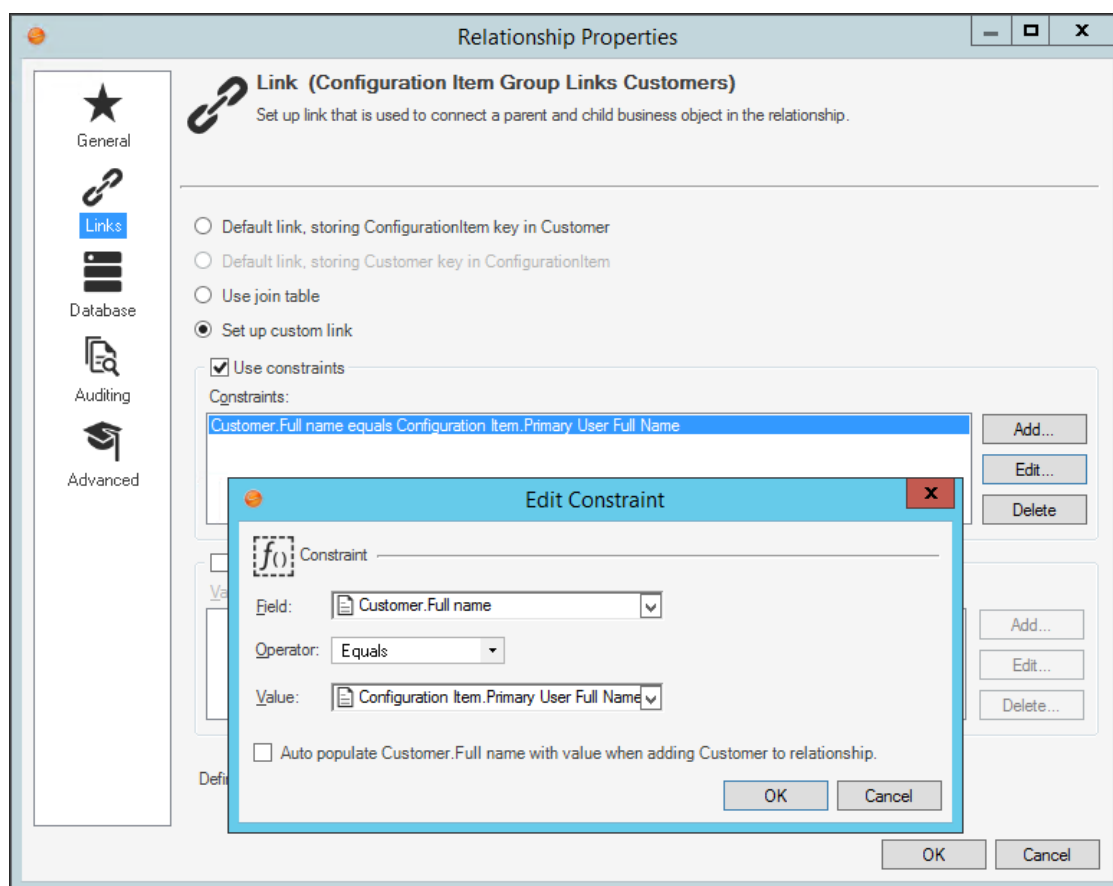
Note: Create the Views in the Footprints database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the Footprints data](#). Data is either in the external Footprints Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the Footprints database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate Footprints View](#): Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

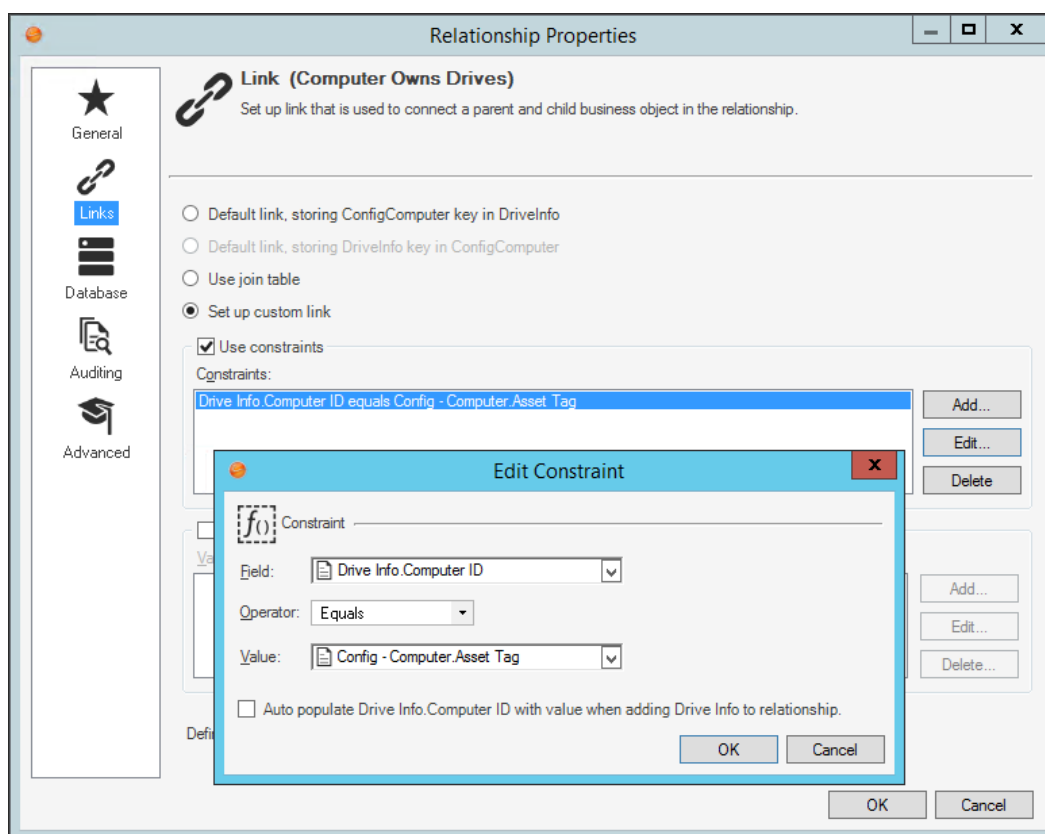
- Import vs. Linked: Click **Import Data**.
 - Data Source: Select the **External Connection** just created.
 - External Table to Map: Select the **View** in the external database.
 - Fields to Map: Map each individual field from the View to a field in the Business Object.
 - Unique Key: Varies (uses the field mapped to the Unique ID value).
 - Timestamp Fields: None.
5. [Import each Footprints View into the appropriate CSM Business Object](#).
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:
- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
 - Existing Records: Select **Update Existing Records**.
 - Choose Filter: Select **All Records** (typically, data in a View is already filtered).
6. Edit Relationships so that data can be shared and displayed between Business Objects:
Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

inContact ACD/IVR Integration

Overview

inContact ACD/IVR (Interactive Voice Response) is a call center product that matches callers in a queue to agents that can best help them. CSM integrates with ACD/IVR to provide additional telephony services, such as:

- Screen pop-ups of CSM Customer Records when an incoming call is received. The telephony client launches CSM and passes matching Automatic Number Identification (ANI) from a command line so that a CSM Customer Record can be opened on the computer screen.
- Click-to-dial for outgoing calls. A CSM One-Step Action passes the Customer phone number from a Customer Record to the telephony client.



Note: CSM integrates only with Telephony Application Programming Interface (TAPI)-compliant telephony clients. (The TAPI is a Microsoft Windows API that provides Computer Telephony Integration (CTI) and enables PCs running Microsoft Windows to use telephone services.)

Related Reading

- [About One-Step Actions](#)
- [About Business Object](#)

Steps to Integrate

1. Connect CSM to ACD/IVR using the command line. In the example, the Customer is the Cherwell Business Object to search and the number is the ANI (caller information) as passed by ACD/IVR.
Ex. "C:\Program Files\Cherwell Service Management\Trebuchet.App.exe"/S customer 3035555555
OR

CherwellClient://commands/search?rectype=Customer&search=searchText 3035555555



Note: The command executed must be able to access and run the Desktop Client application from the application's installed directory.



Note: The Customer phone number without formatting needs to be in a field with Full-Text Search enabled.

2. [Create a Blueprint](#).
3. Edit the Customer Record by adding a new field. The new field should have the following attributes:



Note: This field does not need to be added to the form.



Note: The OOTB content sets up the next steps automatically. If using a CSM version before 5.0, then follow these steps to create a field with the phone number without formatting. The field must also be in the Full-Text Index.

- Name: ShortPhone (This is an example, any name can be used.)
 - Type: Text
 - Length: 15
 - Full Text Search enabled.
4. Edit the field properties and enable the calculated feature and the field is calculated by a text-base Expression. In the example, the ShortPhone field is calculated by the ShortPhone Expression. The short phone field is calculated from the phone field in an Expression.
 5. Add Modifiers to the Expression to **Remove (-)**.
 6. Create a One-Step Action to remove the Phone field, remove and extra text, and populate the field.
 - a. In Desktop Client, go to the Customer menu.
 - b. Select **Contact Manager**.
 - c. Change the Customer Type to show the desired Customer Group.
 - d. Go to the Search tab and click **Go**.
A list of all Customer Records in the Customer Group open.
 - e. Go to the One-Step Action menu and select **One-Step Manager**.
 - f. Click the Customer Type desired and click **New**.
 - g. In the Name field, type the **name** for the new One-Step Action.
 - h. Click **Add** and select **Update a Business Object**.
The Update Business Object Step window opens.
 - i. From the Contact fields list, select the **Short Phone** field.
 - j. Select the **Template** radio button.
 - k. Right-click the **Template** text field.
 - l. Select **Phone**.
 - m. In the Template field, right-click and select **Modifiers**.
 - n. Create a new Modifier for each possible text in the Phone field.
Examples: (,), -, X, *. For spaces, use the Remove white-space Modifier.
 - o. Click **OK** in each window until returned to the One-Step Action Manager.
 7. Right-click the newly created One-Step Action.
 8. Select **Run for Group**. This runs the One-Step Action against the entire Customer Group that was chosen and populates the phone number without text or spaces.

Contact ACD/IVR to ensure commands are working within CSM.

MIR3 Intelligent Notification Integrations

Overview

The MIR3 Intelligent Notification platform is an emergency and mass notification solution that launches message to groups of any size, or in one location, or all over the world. Intelligent Notification integrates so that CSM alert notifications can be sent to predefined Intelligent Notification groups who respond back to CSM with acknowledgment of the alert.

How the Integration Works

When CSM is integrated with Intelligent Notification, a CSM Automation Process initiates a One-Step Action to run the RBA Integrator (a tool from MIR3 that provides two-way communication), which then contacts Intelligent Notification with the event details. Intelligent Notification then sends out messages (mass alerts) to predefined Users who need to be notified. The RBA Integrator relays responses back to CSM, which then updates the appropriate CSM record with information from the Users. How information is updated in CSM Business Objects and fields is defined in a web service.

Related Reading

- [About One-Step Actions](#)
- [About Business Objects](#)

Steps to Integrate

Our team of experienced professional services consultants has performed integrations of this product with CSM. Please contact Cherwell for assistance.

KACE Integration

Overview

Dell® KACE provides detailed hardware and software inventory information for Windows®, Mac®, and Linux® systems. KACE integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, KACE workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: KACE utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an KACE Database, Users will most likely want to:

- Create Views of the KACE data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.
- Create an External Connection (SQL Server) to the KACE data.

- Map and Import the KACE Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object
- Note:** CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link KACE data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the KACE database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the KACE data](#). Data is either in the external KACE Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the KACE database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate KACE View](#):

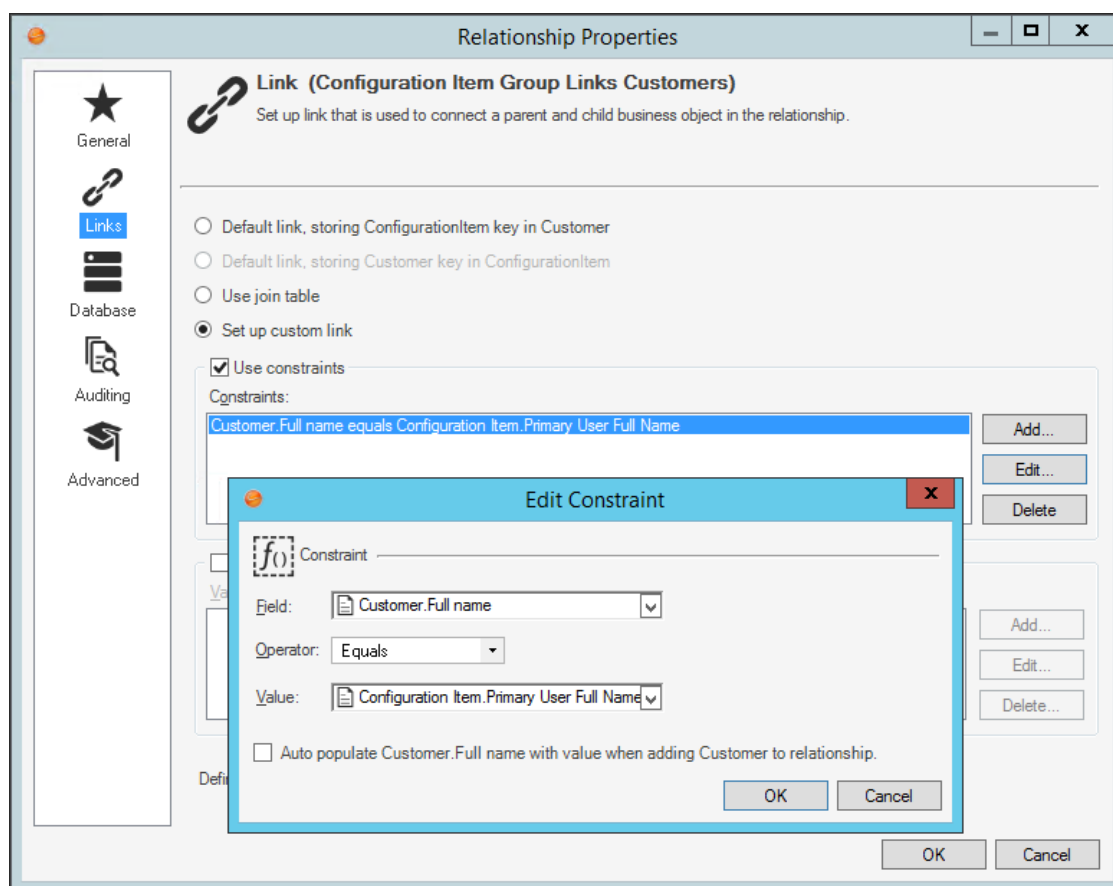
Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each KACE View into the appropriate CSM Business Object](#).

Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

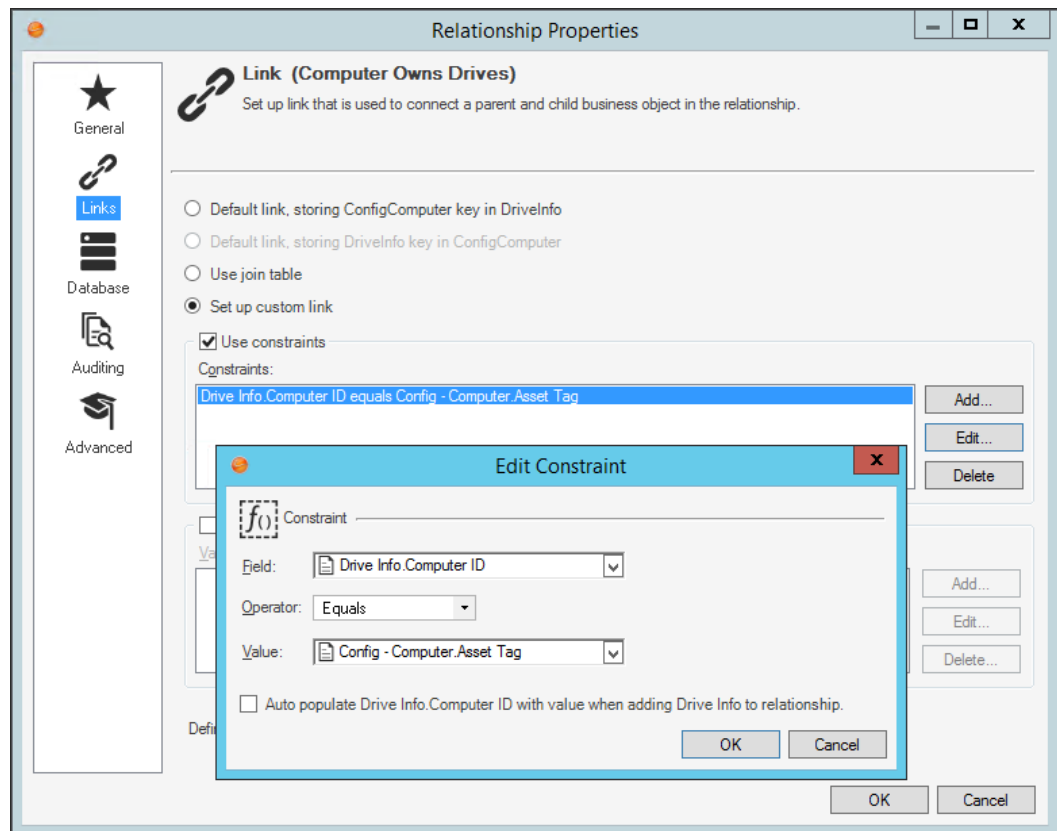
- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
 - Existing Records: Select **Update Existing Records**.
 - Choose Filter: Select **All Records** (typically, data in a View is already filtered).
6. Edit Relationships so that data can be shared and displayed between Business Objects:
Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

Knowledge Base Integration

Overview

CSM integrates with various third-party Knowledge Bases so that canned Knowledge Articles can be imported into and accessed from within CSM. For example, search canned Knowledge Articles directly from business process forms (ex: Incident), the Quick Search Pane, or the Knowledge Pane to quickly resolve issues.

How the Integration Works

The canned Knowledge Base integration interface is built into CSM, so the integration is simple. The Import Knowledge Wizard in CSM Administrator is used to access canned Knowledge Articles, and then import the data directly into CSM. After Knowledge Articles are imported, they are used as searchable knowledge sources in CSM. Users can search for Knowledge Articles via the Quick Search Pane from anywhere in the system, and configure Knowledge Article search functionality in the Knowledge Pane on an individual business processes basis. When a Knowledge Article is used as a solution to issue, it is attached to the record as a reference.

Related Reading

- [About Knowledge](#)
- [Using Knowledge](#)
- [Managing Knowledge Sources](#)

Recommendations

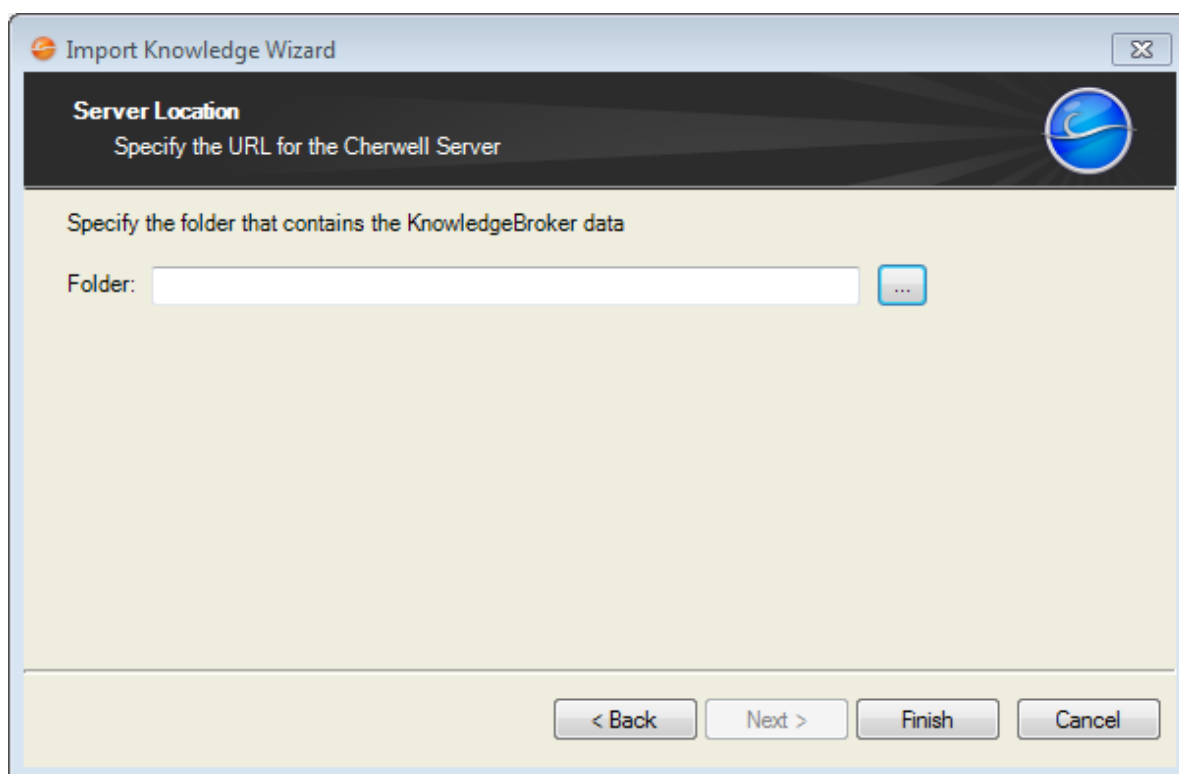
- Make a note of the location of knowledge data files before beginning the import wizard.


Steps to Integrate

1. In the CSM Administrator main window, select the **Database** category, and then click the **Import Knowledge** task.
The Import Knowledge Wizard opens.



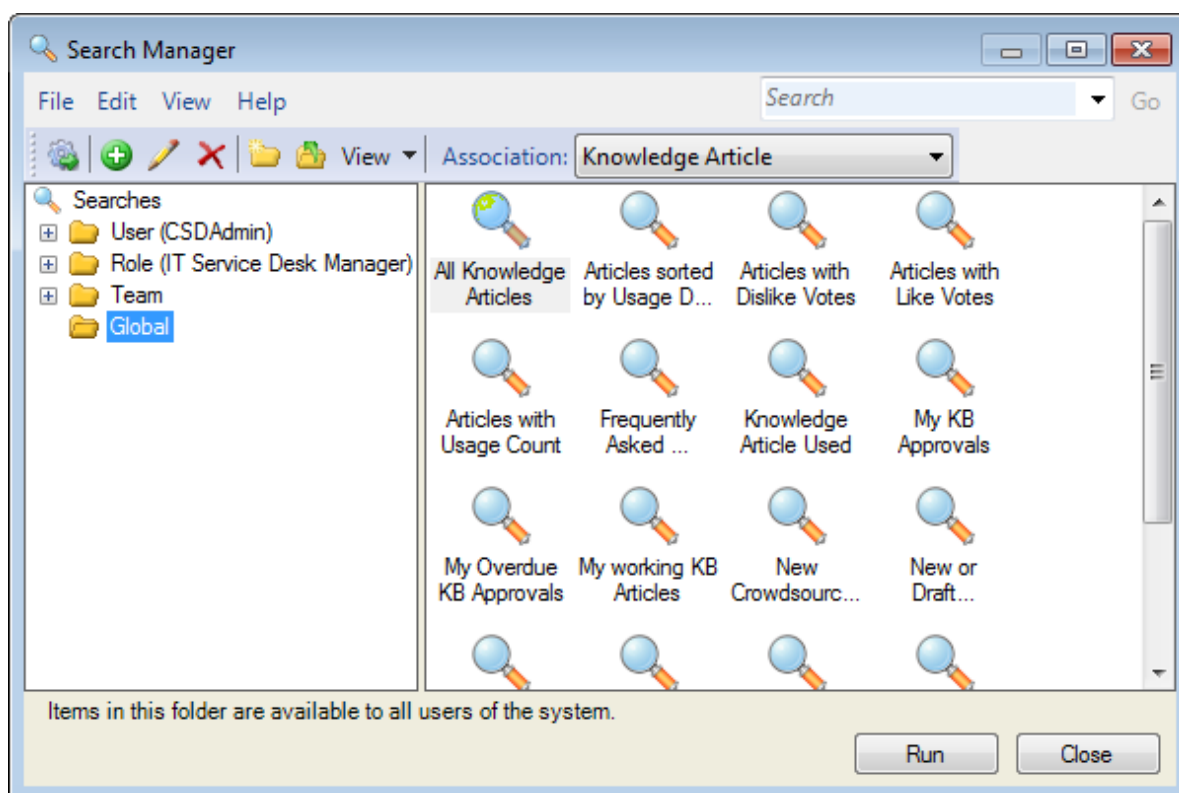
2. Read the Welcome information and click **Next**.
The Server Location page opens.



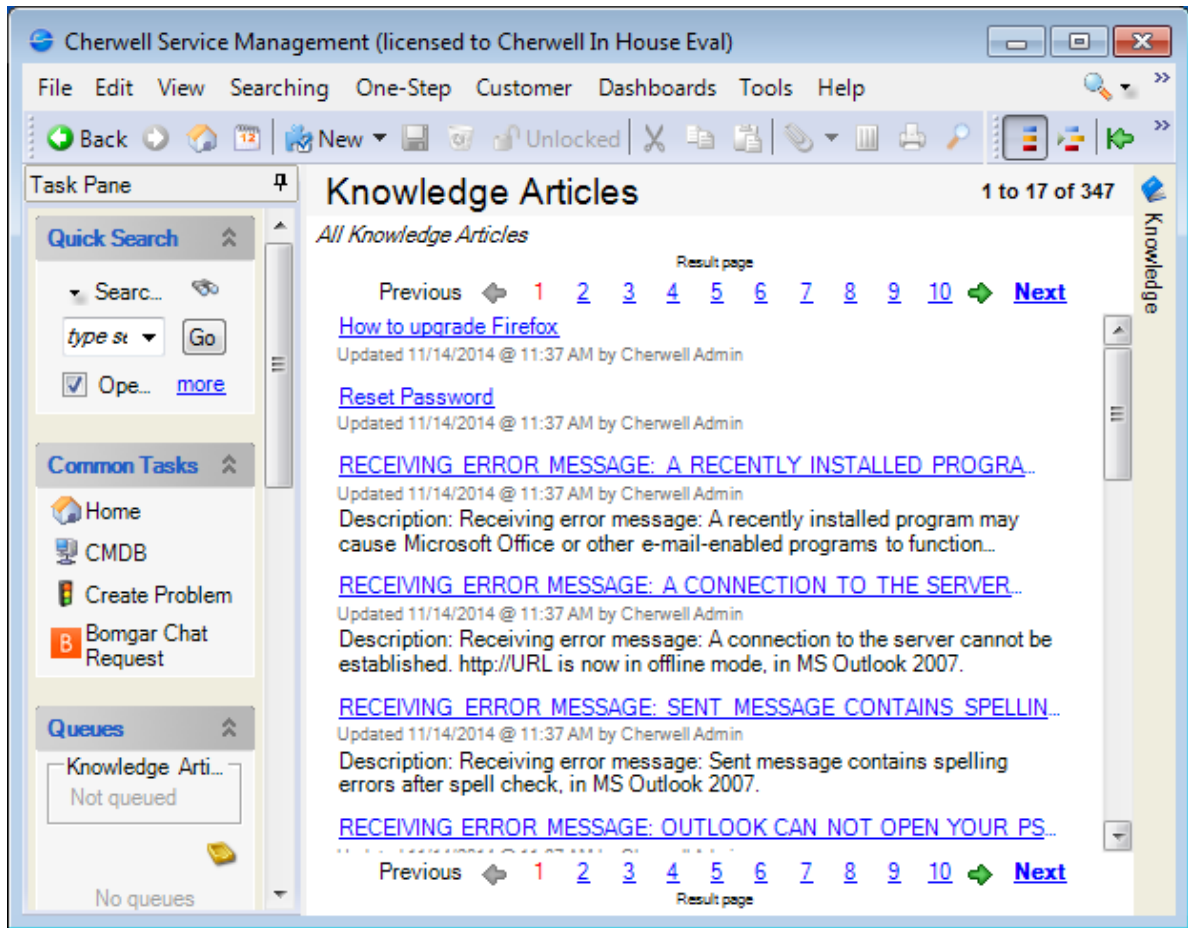
3. Click the **Ellipses** button  to navigate to the location of the KnowledgeBroker data. The Browse For Folder window opens.
4. Select the **folder** that contains the knowledge data.
5. Select **OK**.
The window closes to return to viewing the Import Knowledge Wizard.
6. Select **Finish**.
A message window opens indicating that the import is complete.

To View KnowledgeBroker Articles:

1. Open the Search Manager
2. In the Association drop-down, select **Knowledge Article**.
3. Click **Run**.
The page loads with the search results. All KnowledgeBroker article titles appear in all caps.



4. Click a **Knowledge Article** to view the record.



Knowledge Brokers Integration

Overview

KnowledgeBrokers licenses an industrial strength Desktop Computer Support Knowledge Base that provides immediate answers to thousands of common questions about Desktop and Internet applications. CSM integrates with KnowledgeBrokers so that KnowledgeBrokers knowledge articles can be imported into and accessed from within CSM. For example, KnowledgeBrokers knowledge articles can be searched directly from business process forms (ex: Incident), the Quick Search Pane, or the Knowledge Pane to quickly resolve issues.

How the Integration Works

The KnowledgeBrokers integration interface is built into CSM, so the integration is simple. The Import Knowledge Wizard in CSM Administrator is used to access KnowledgeBrokers data (.kbi), and then import the data directly into CSM. After KnowledgeBrokers knowledge articles are imported, they are used as searchable knowledge sources in CSM. Users can search for Knowledge Articles via the Quick Search Pane from anywhere in the system, and configure Knowledge Article search functionality in the Knowledge Pane on an individual business processes basis. When a Knowledge Article is used as a solution to issue, it is attached to the record as a reference.

Related Reading

- [About Knowledge](#)
- [Using Knowledge](#)
- [Managing Knowledge Sources](#)

Recommendations

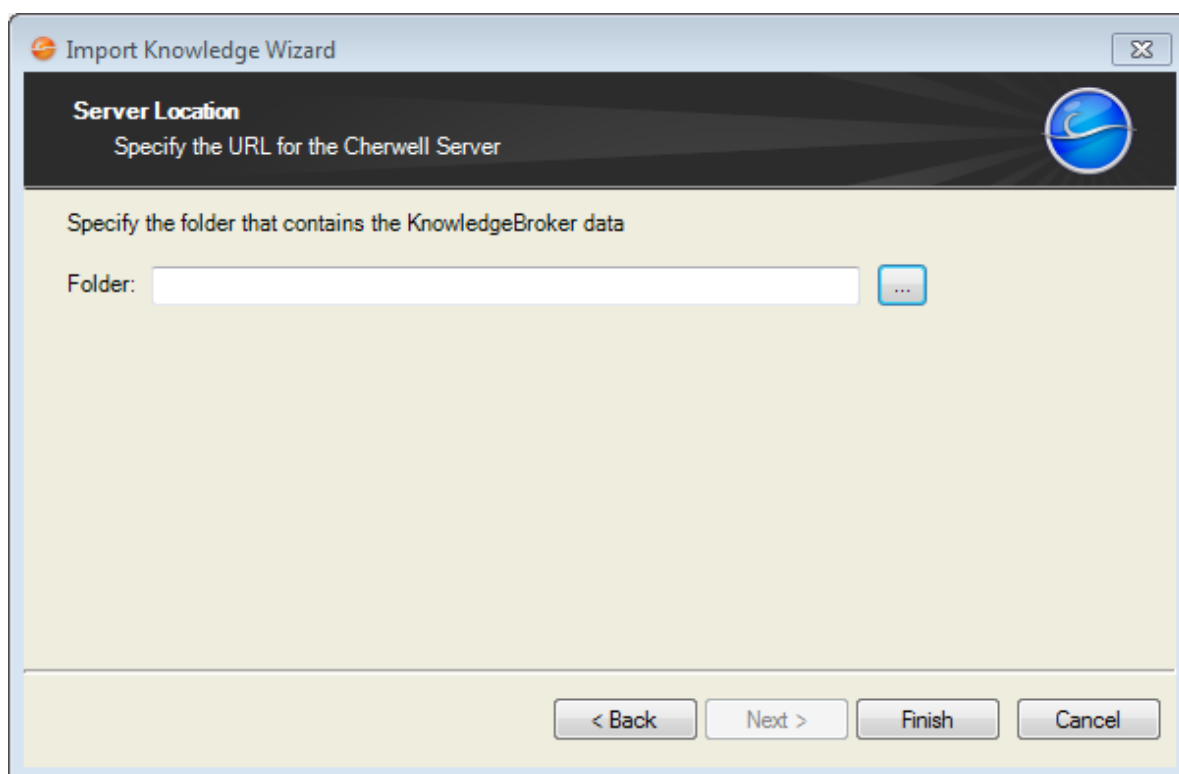
- Make a note of the location of knowledge data files before beginning the import wizard.


Steps to Integrate

1. In the CSM Administrator main window, select the **Database** category, and then click the **Import Knowledge** task.
The Import Knowledge Wizard opens.



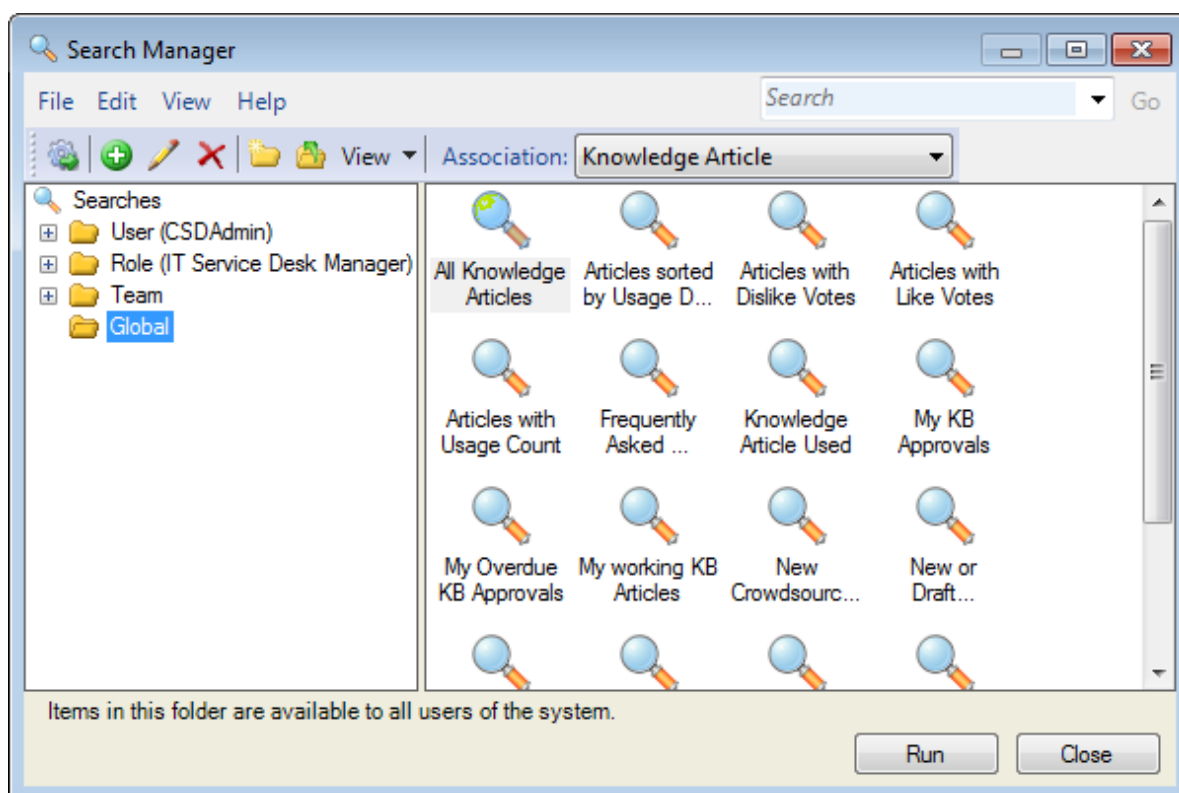
2. Read the Welcome information and click **Next**.
The Server Location page opens.



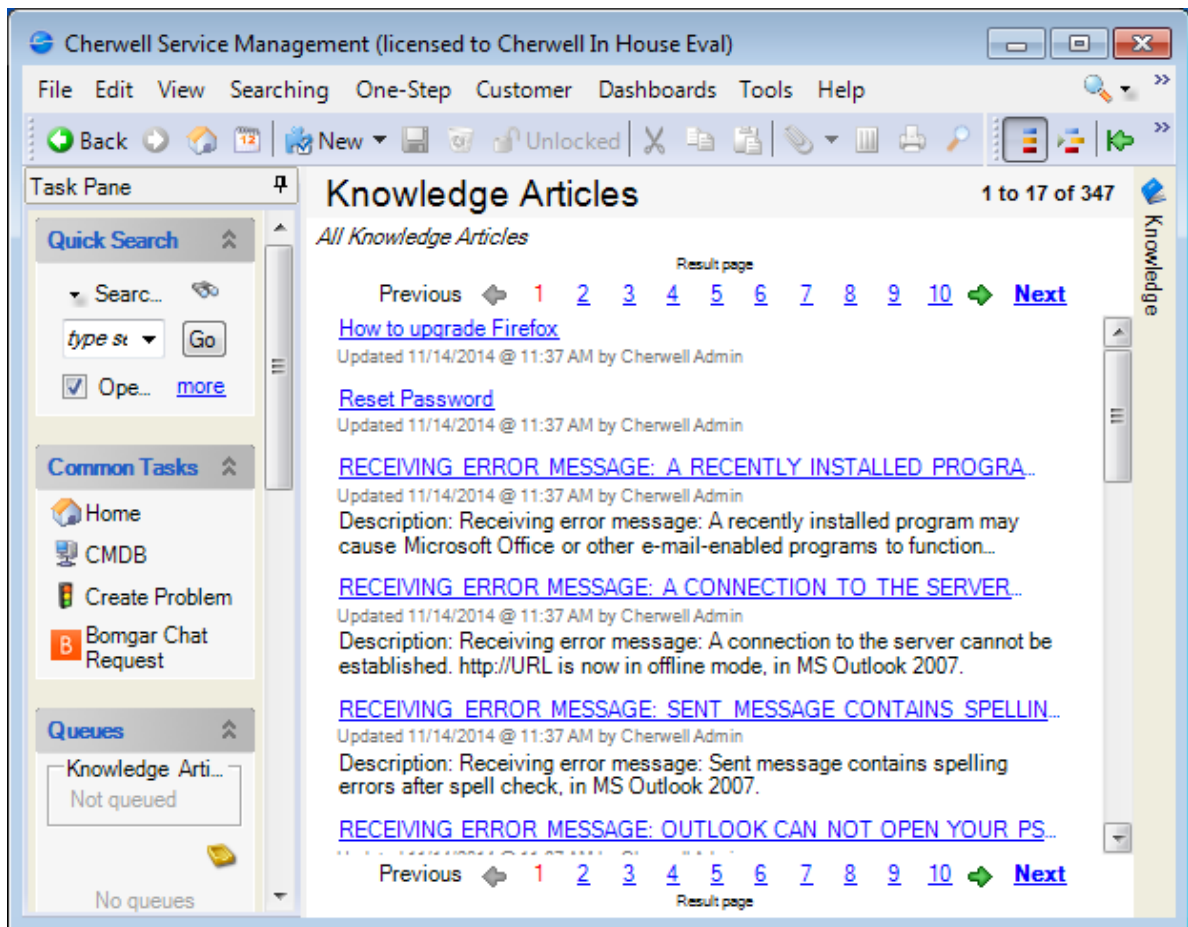
3. Click the **Ellipses** button  to navigate to the location of the KnowledgeBroker data. The Browse For Folder window opens.
4. Select the **folder** that contains the knowledge data.
5. Select **OK**.
The window closes to return to viewing the Import Knowledge Wizard.
6. Select **Finish**.
A message window opens indicating that the import is complete.

To View KnowledgeBroker Articles:

1. Open the Search Manager
2. In the Association drop-down, select **Knowledge Article**.
3. Click **Run**.
The page loads with the search results. All KnowledgeBroker article titles appear in all caps.



4. Click a **Knowledge Article** to view the record.



Lansweeper Integration

Overview

Lansweeper runs on a Microsoft SQL Server (MSSQL) database that is used for network inventory and asset management. Connect to Lansweeper from CSM so that Lansweeper configuration data can be imported or linked. Lansweeper integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, Lansweeper workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: Lansweeper utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an Lansweeper Database, Users will most likely want to:

- Create Views of the Lansweeper data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the Lansweeper data.
 - Map and Import the Lansweeper Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object
- Note:** CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link Lansweeper data. For detailed step-by-step instructions, refer to the [Share data with an external database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. Create Views of the Lansweeper data to which connect. For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the Lansweeper database or in the CSM database. (An onsite DBA might need to create a Linked Server in SQL if creating Views in a CSM database.)



Tip: For examples of Lansweeper Views that can be mapped, see [Integrating CSM with Lansweeper: View Examples](#)

2. [Create a Blueprint](#).
3. [Create an External Connection to the Lansweeper data](#). Data is either in the external Lansweeper database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of your CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the Lansweeper database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.

- Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate Lansweeper View](#):

Use the External Data Wizard (CSM Administrator>Blueprint>"Business Object">Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in your external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each Lansweeper View into the appropriate CSM Business Object](#).

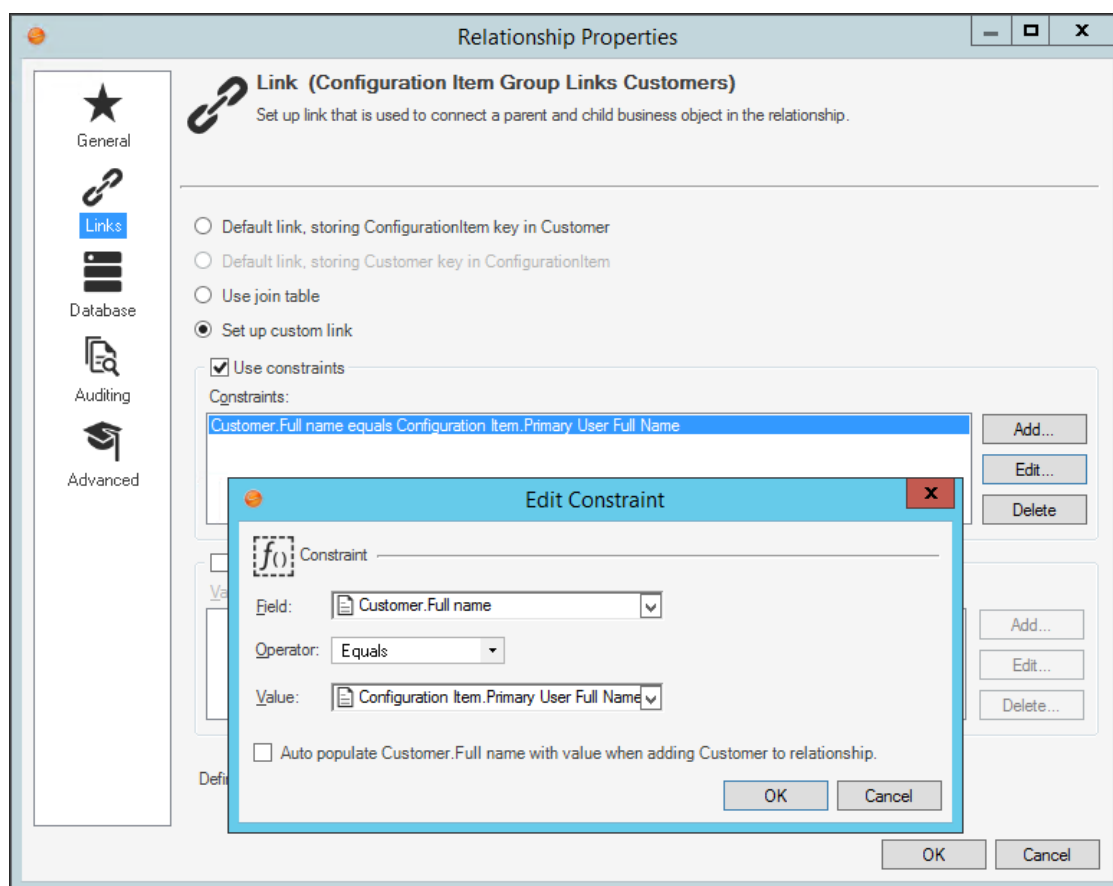
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the Relationship Editor within the [Object Manager](#) (CSM Administrator>Blueprint>Object Manager>[Business Object]>Edit Relationships).

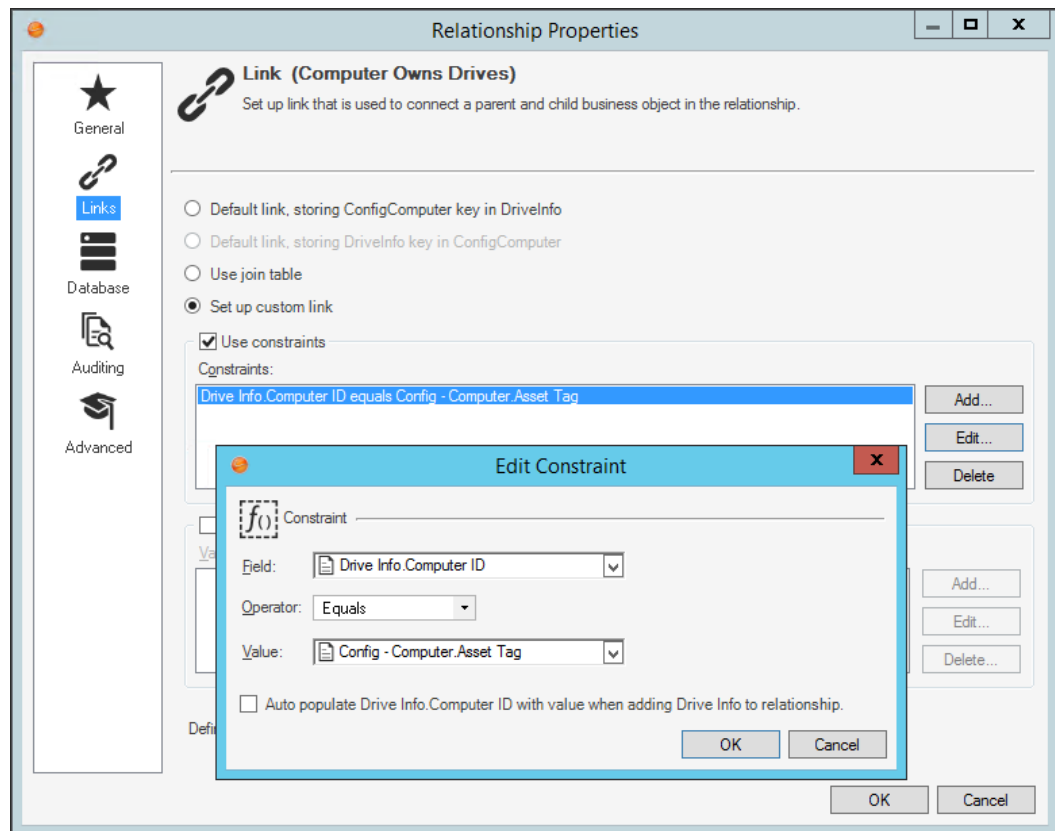
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraints similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives
- Computer Owns Installed Services
- Computer Owns Installed Software



7. (Optional) If there is additional mapped data, Users might want to edit the Business Object Forms and Grids to the display the additional information. Use the Form Editor to contain controls that show (and allow editing) of the values in the fields, and the Grid Editor to define how the Business Object is displayed.
8. [Publish the Blueprint.](#)

Lansweeper Integration: View Examples

Overview

Lansweeper runs on a Microsoft SQL Server (MSSQL) database that is used for network inventory and asset management. These are examples of the Views needed to integrate Lansweeper and CSM.

Workstation View Example

```
IF EXISTS (SELECT Name FROM Sysobjects
           WHERE Name = ' v_CherrywellComputers '
           AND Type = 'V' )
    DROP VIEW v_CherrywellComputers
GO

CREATE VIEW [dbo].[ v_CherrywellComputers] AS
SELECT DISTINCT dbo.tblAssets.AssetName,
               dbo.tblAssets.AssetUnique,
               dbo.tblAssets.Domain,
               dbo.tblOperatingSystem.Caption AS OperatingSystem,
               dbo.tblOperatingSystem.Version AS OperatingSystemVersion,
               dbo.tblAssets.FQDN,
               dbo.tblAssetCustom.Manufacturer,
               dbo.tblAssetCustom.Model,
               dbo.tblAssetCustom.Lastchanged,
               dbo.tblAssets.Firstseen,
               dbo.tblAssets.Lastseen,
               dbo.tblAssets.IPAddress,
               dbo.tblAssets.LastActiveScan,
               dbo.tblBIOS.Caption AS BiosName,
               dbo.tblBIOS.Version,
               dbo.tblBIOS.Manufacturer AS BIOSMake,
               dbo.tblBIOS.SerialNumber,
               dbo.tblBIOS.SMBIOSBIOSVersion,
               dbo.tblPROCESSOR.Caption AS CPUDesc, tblPROCESSOR.Name AS CPUType,
```

```
tblPROCESSOR.MaxClockSpeed, tblPROCESSOR.DataWidth AS L2Cache,
    dbo.tblAssetCustom.PurchaseDate, tblAssetCustom.Warrantydate,
    dbo.tblAssetCustom.Location, tblAssetCustom.Building, tblAssetCustom.Department,
    dbo.tblAssetCustom.Branchoffice, tblAssetCustom.State,
    dbo.tblAssetCustom.BarCode, tblAssetCustom.Custom1,
    Cast(Cast(dbo.tblDiskdrives.Freespace AS bigint) / 1024 / 1024 AS numeric) AS Free,
    Cast(Cast(dbo.tblDiskdrives.Size AS bigint) / 1024 / 1024 AS numeric) AS Total,
    dbo.tblAssets.Memory,
    dbo.tblAssets.NrProcessors

FROM dbo.tblAssets
    INNER JOIN dbo.tblAssetCustom ON dbo.tblAssets.AssetID = dbo.tblAssetCustom.AssetID
    INNER JOIN dbo.tblComputersystem ON dbo.tblAssets.AssetID = dbo.tblComputersystem.AssetID
    INNER JOIN dbo.tblADComputers ON dbo.tblAssets.AssetID = dbo.tblADComputers.AssetID
    INNER JOIN dbo.tblBIOS ON dbo.tblAssets.AssetID = dbo.tblBIOS.AssetID
    INNER JOIN dbo.tblOperatingsystem ON dbo.tblAssets.AssetID = dbo.tblOperatingsystem.AssetID
    INNER JOIN dbo.tblPROCESSOR ON dbo.tblAssets.AssetID = dbo.tblPROCESSOR.AssetID
    INNER JOIN dbo.tblDiskdrives ON dbo.tblAssets.AssetID = dbo.tblDiskdrives.AssetID

WHERE dbo.tblDiskdrives.Caption = 'C:'
GO
```

Installed Services View Example

```
IF EXISTS (SELECT Name FROM Sysobjects
           WHERE Name = 'v_ChерwellInstalledServices'
           AND Type = 'V' )
    DROP VIEW v_ChерwellInstalledServices
GO

CREATE VIEW [dbo].[v_ChерwellInstalledServices] AS
SELECT dbo.tblAssets.AssetName,
       dbo.tblAssets.AssetUnique,
       dbo.tblAssets.Domain,
       dbo.tblAssets.Username ,
       dbo.tblAssets.Userdomain,
       dbo.tblAssets.IPAddress,
       dbo.tblServices.ServiceID,
       dbo.tblServicesUni.Caption AS ServiceName,
       dbo.tblServicesUni.Name AS DisplayName,
       dbo.tblServices.Started,
       dbo.tblServiceStartMode.Startmode,
       dbo.tblServicesUni.Startname,
       dbo.tblServiceState.State ,
       dbo.tblServices.Lastchanged

FROM dbo.tblAssets
     INNER JOIN dbo.tblServices ON dbo.tblAssets.AssetID = dbo.tblServices.AssetID
     INNER JOIN dbo.tblServicesUni ON dbo.tblServices.ServiceuniqueID =
dbo.tblServicesUni.ServiceuniqueID
     INNER JOIN dbo.tblServiceStartMode ON dbo.tblServices.StartID = dbo
.tblServiceStartMode.StartID
     INNER JOIN dbo.tblServiceState ON dbo.tblServices.StateID = dbo.tbl
ServiceState.StateID
```

```
WHERE ISNULL (CAST (dbo.tblServices.ServiceID AS VARCHAR (10 )), '') <> ''
GO
```

Installed Software View Example

```
IF EXISTS (SELECT Name FROM Sysobjects
           WHERE Name = 'v_CherwellInstalledSoftware'
           AND Type = 'V' )
    DROP VIEW v_CherwellInstalledSoftware
GO

CREATE VIEW [dbo].[v_CherwellInstalledSoftware] AS
SELECT dbo.tblAssets.AssetName,
       dbo.tblAssets.AssetUnique,
       dbo.tblAssets.Domain,
       dbo.tblAssets.Username,
       dbo.tblAssets.Userdomain,
       dbo.tblAssets.IPAddress,
       dbo.tblSoftwareUni.softwareName,
       dbo.tblSoftware.SoftwareID,
       dbo.tblSoftware.Lastchanged,
       dbo.tblSoftware.softwareVersion,
       dbo.tblSoftwareUni.SoftwarePublisher,
       dbo.tblSoftware.Installdate AS SWInstallDate

FROM dbo.tblAssets
     INNER JOIN dbo.tblSoftware ON dbo.tblAssets.AssetID = dbo.tblSoftware.AssetID
     INNER JOIN dbo.tblSoftwareUni ON dbo.tblSoftware.softID = dbo.tblSoftwareUni.SoftID

WHERE ISNULL(CAST(dbo.tblSoftware.SoftwareID AS VARCHAR(10)), '') <> ''
GO
```

Lightweight Directory Access Protocol (LDAP) Integration

Overview

Lightweight Directory Access Protocol (LDAP) is a protocol used to access information in a directory service (a directory stored on a server). LDAP integrates by connecting to the directory service, mapping objects, and enabling security settings to import the Users into CSM.

Recommendations

When sharing data with LDAP, Users should:

- Connect directly to directory service using LDAP.
- Import the LDAP Customer data into the CSM Customer-Internal Business Object (after mapping the Customer-Internal Business Object to the LDAP Directory Service).
- [Edit web.config files](#) to enforce redirecting HTTP requests to HTTPS for a better, more secure logon experience.

Related Reading

- [Using LDAP](#)
- [Configure System Security Settings](#)

Steps to Integrate

Perform the following high-level steps to import/link LDAP data. The detailed step-by-step instructions are also in the [Directory Services](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. In the CSM Administrator main window, click the **Blueprints** category, and then click the **Create a New Blueprint** task.
2. [Configure CSM Directory Services Settings](#): Defines how CSM connects with an LDAP Directory Service. After configuring CSM, configure both or either:
 - [Configure Users for Directory Services](#): Configures CSM to import LDAP Users.
 - [Configure Customers for Directory Services](#): Configures CSM to import LDAP Customers.
3. Enable Authentication: Turn on LDAP authentication.
 - [Enabling Authentication for Users](#)
 - [Enabling Authentication for Customers](#)

Microsoft Active Directory Integration

Overview

Microsoft® Active Directory is a special-purpose database that stores data for objects in a network, including Customer information. Customer data from Active Directory can be imported into CSM to readily view account information such as full names, e-mail addresses, etc. for internal Customers. Active Directory integrates by connecting to the directory service, mapping objects, and enabling security settings to import Users and data into CSM.

Recommendations

When sharing data with Active Directory, Users will most likely want to:

- Create an Active Directory Object.
- Map Security Groups.
- Import the Active Directory data into the CSM Customer-Internal Business Object (after mapping the Customer-Internal Business Object).

Steps to Integrate

Perform the following steps to import/link Microsoft Active Directory data. The detailed step-by-step instructions are also in the [Integrating CSM with Microsoft Active Directory](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Configuring CSM Directory Services Settings](#): Define how CSM connects with Microsoft Active Directory.
2. [Configuring Users for Directory Services](#): Configures CSM to import Active Directory Users.
3. [Enabling Authentication for Users](#): Turn on Active Directory authentication for Users.
4. [Configuring Users for Directory Services](#): Configures CSM to import Active Directory Customers.
5. [Enabling Authentication for Customers](#): Turns on Active Directory authentication for Customers.

Microsoft Outlook Integration

Overview

Microsoft Outlook® CSM integrates with Outlook® through the Cherwell Outlook Add-In to interact with SMC Business Object Records. The Outlook® Add-In allows Users to track e-mail correspondence from Microsoft Outlook and interact directly with CSM Records. With the Add-In, automatically link incoming e-mails to records, execute Actions against records, and capture e-mail history.

How the Integration Works

When installing the Cherwell Outlook Add-In in Microsoft Outlook, a Cherwell group appears in the Outlook ribbon. From here, configure the Add-In to connect to CSM and scan incoming e-mails. If the Add-In can identify a Customer and a specific Business Object Record, it automatically links incoming e-mails to records. To link e-mails that already exist in Outlook, click the **Rescan Items** button to establish links. When an e-mail is linked to a record, the e-mail is [tracked and stored as a Journal - Mail History Record](#) on the linked record.

For more information about the Outlook Add-In, see [About the Cherwell Outlook Add-In](#).

Related Reading

- [CSM E-mail Good to Know](#)
- [Configuring CSM Outlook Integration Configurations in CSM Administrator](#)
- [Cherwell Outlook Add-In Interface](#)

Steps to Integrate

1. Configure Outlook Integration [security rights](#): Determine who can set or override defaults, run the Add-In from Outlook, and add, edit, or delete Outlook Integration Configurations.
2. [Create an Outlook Integration Configuration](#) in CSM Administrator: Use the Configure Outlook Integration window (accessed from the [Outlook Integration Manager](#)) to create an Outlook Integration Configuration and define:
 - a. General settings for the Outlook Integration Configuration: Name, description, auto-link options, and Conversation ID options.

A Conversation ID is a unique, alphanumeric identifier that correlates an e-mail message with a particular conversation so that it can be associated with a CSM Record. CSM inserts Conversation IDs into e-mails to identify if a particular e-mail is a reply to a previous message that was associated with a specific Business Object record. A Conversation ID looks similar to the following: {CMI: ABCD1234}, where ABCD is an identifier for the particular CSM system (set this value in the [History Attachment Options for a global e-mail account](#)), and the numeric indicator is the specific Conversation ID. The number is automatically incremented for each message.
 - b. Customer Identification settings for the Outlook Integration Configuration.
 - c. Which Business Objects can be linked to Outlook e-mails.

3. Configure Outlook Integration Configuration Defaults: Define which Roles can view and use which Outlook Integration Configurations.

Microsoft System Center Configuration Manager (SCCM) Integration

Overview

Microsoft System Center Configuration Manager® (SCCM) is a Microsoft SQL Server (MSSQL) database that is used for asset discovery. SCCM integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, SCCM workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: SCCM utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an SCCM Database, Users will most likely want to:

- Create Views of the SCCM data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the SCCM data.
- Map and Import the SCCM Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link SCCM data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the SCCM database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the SCCM data](#). Data is either in the external SCCM Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the SCCM database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate SCCM View](#):

Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each SCCM View into the appropriate CSM Business Object](#).

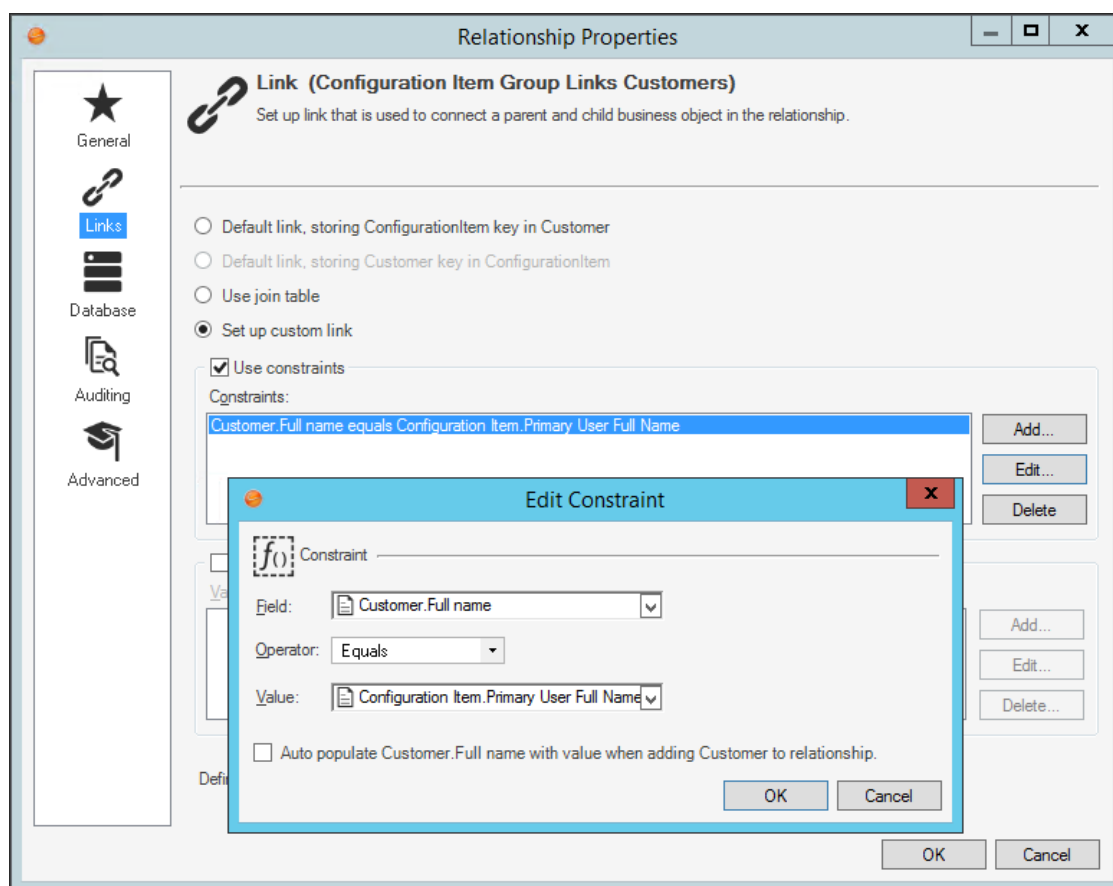
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.

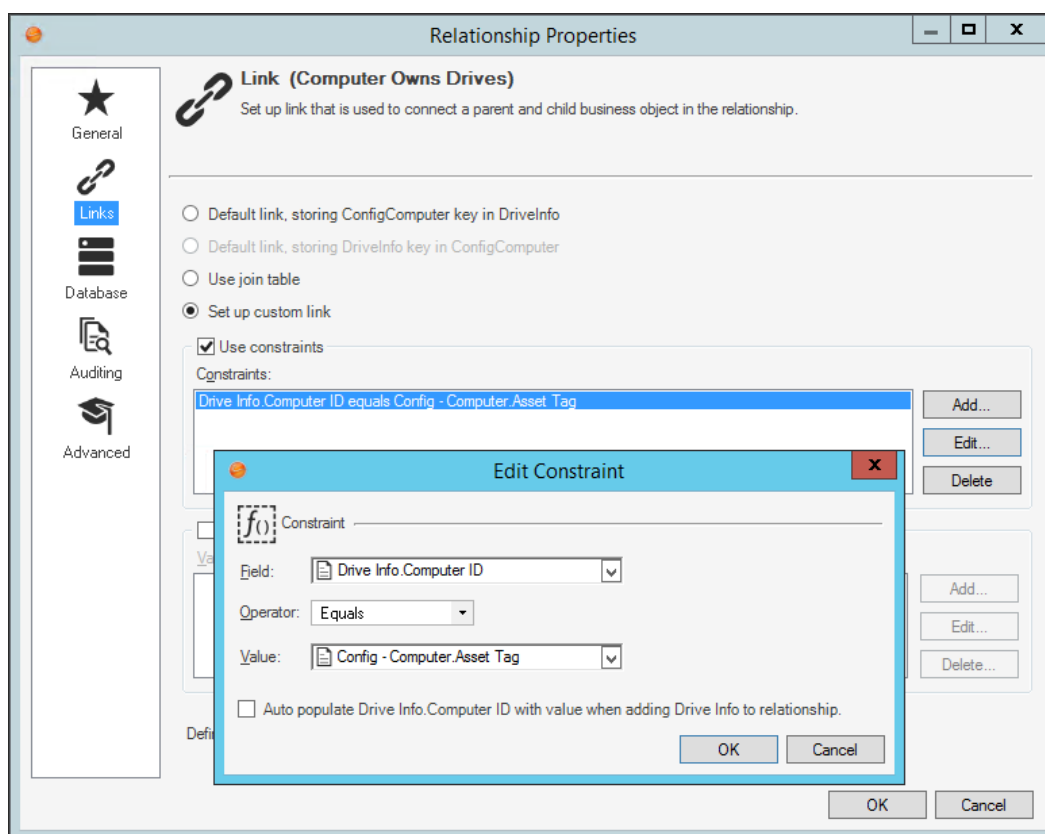
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

Microsoft System Center Operations Manager (SCOM) Integration

Overview

Microsoft System Center Operations Manager® (SCOM) is a cross-platform data center management system for operating systems and supervisors. SCOM integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, SCOM workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: SCOM utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an SCOM Database, Users will most likely want to:

- Create Views of the SCOM data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the SCOM data.
 - Map and Import the SCOM Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object
- Note:** CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link SCOM data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the SCOM database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the SCOM data](#). Data is either in the external SCOM Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the SCOM database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate SCOM View](#):

Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each SCOM View into the appropriate CSM Business Object](#).

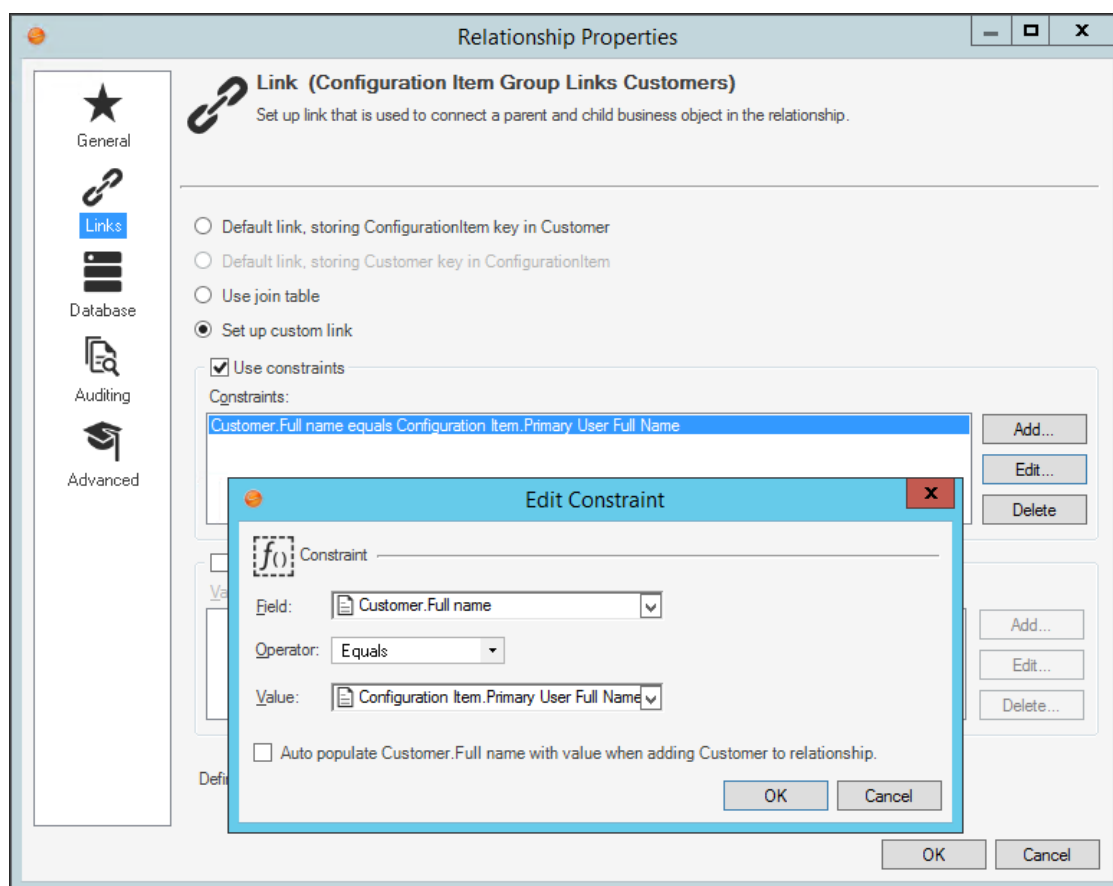
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.

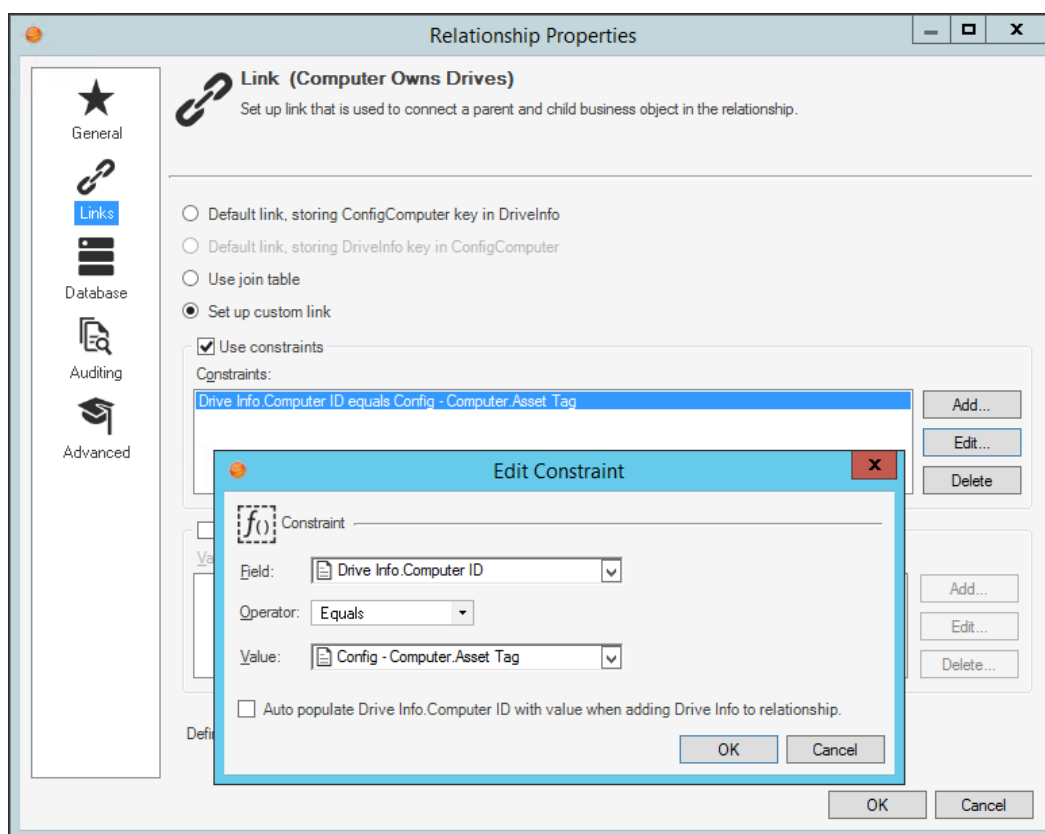
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

Microsoft Windows PowerShell Integration

Overview

Microsoft® Windows PowerShell® is a task automation and configuration management framework from Microsoft, consisting of a command-line shell and associated scripting language built on the .NET Framework.



Note: Due to the power and potentially damaging results of running some of these PowerShell runbooks, these runbooks can only be run via the CSM Desktop Client. The commands cannot be run from the CSM Browser Client because of security restrictions with browser access to the file system and server scripts.

Steps to Integrate

Our team of experienced professional services consultants has performed integrations of this product with CSM. Please contact Cherwell for assistance.

Oracle Enterprise Resource Planning (ERP) Integration

Overview

Oracle Enterprise Resource Planning (ERP) is an integrated suite of business management software used to manage and automate back office functions. CSM integrates with ERP so that ERP Customer data can be shared with and used within CSM (ex: Populates a Customer Record).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data is accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the external database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, ERP Customer data is imported into the Customer-Internal Business Object. CSM provides several wizards to walk Users through the steps to create the External Connection and import the external data.



Note: ERP utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized external database, one or more database Views might need to be created to collect, combine, and filter the shared (imported) information. Create the Views in the ERP database or in the CSM database. If choosing to create Views in the CSM database, a Linked Server might need to be created.

Recommendations

When sharing data with ERP, Users will most likely want to:

- Create a View of the ERP Customer data.
- Create an External Connection (SQL Server) to the ERP data.
- Import the ERP Customer View into the CSM Customer-Internal Business Object (after mapping the Customer-Internal Business Object to the View).

Steps to Integrate

Perform the following high-level steps to import ERP data. For detailed step-by-step instructions, refer to the [Create an External Connection to an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. Create a Customer Information/Profile View of the ERP data to which to connect.



Note: Create the Views in the ERP database or in the CSM database. (If choosing to create Views in a CSM database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).

3. Create an External Connection to the ERP data. Data is either in the external ERP database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of your CSM. Use the External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:

- **Data Source:** Select SQL Server.
- **Database Location, Name, and Login Options for the ERP database:** Ask a DBA.
- **Database Owner or Schema:** Auto-populated by the database selection.
- **Pooling Options:** Keep defaults.

The new connection is shown in the External Connections window.

4. Map each CSM Business Object to the appropriate ERP View:
Use the External Data Wizard (CSM Administrator>Blueprint>"Business Object">Map to external Data) to map the data. Typically:
 - **Import vs. Linked:** Click **Import Data**.
 - **Data Source:** Select the **External Connection** you just created.
 - **External Table to Map:** Select the **View** in the external database.
 - **Fields to Map:** Map each individual field from the View to a field in the Business Object.
 - **Unique Key:** Varies (uses the field mapped to the Unique ID value).
 - **Timestamp Fields:** None.
5. Import the SQL View into the appropriate CSM Business Object.
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:
 - Select Business Object: Select the **Customer-Internal** Business Object.
 - Existing Records: Select **Update Existing Records**.
 - Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. (Optional) If there is additional mapped data, Users might want to edit the Business Object Forms and Grids to the display the additional information.
Use the Form Editor to contain controls that show (and allow editing) of the values in the fields, and the Grid Editor to define how the Business Object is displayed.
7. [Publish the Blueprint.](#)

Salesforce Chatter Integration

Overview

Salesforce Chatter is a real-time collaboration tool that facilitates information-sharing across a social network. When Chatter integrates, the Chatter news feeds display using a Search Results List Widget on a Dashboard.

How the Integration Works

To integrate Chatter with CSM, export Chatter news feeds to a CSV file using the Salesforce Apex Data Loader interface. Then create a Stored Import to point to the CSV file and use the CSM Import Data Wizard to import the CSV file into a CSM Business Object that is designated to store the Chatter data (typically, a new Business Object). After the data imports into CSM, the User builds a Search Results List Widget to display the news feed on a CSM Dashboard. This data export and import can be configured to run on a scheduled basis using the [CSM Scheduler](#).

Related Reading

- [About CSV data](#)
- [Import External Data into a Business Object](#)
- [Search Results List Widgets](#)
- [Create a Search Results List Widget](#)

Recommendations

- When exporting Chatter data to a CSV file, create column headers that match the intended CSM field names so CSM's Import Data Wizard automatically links them.

Steps to Integrate

1. Export data from Chatter to a CSV file (ex: NewsFeed.csv) using the Salesforce Apex Data Loader. Refer to the Apex Data Loader Documentation to determine which fields should be exported to the CSV file.
2. Create a Salesforce Chatter Business Object to house the Chatter CSV data (ex: NewsFeed data). The Business Object should include:
 - Type: Major Object.
 - Name: NewsFeed.
 - Fields: Add a field to match each column in the Chatter CSV file.
3. Import the CSV data into the new Salesforce Chatter Business Object:
 - a. Create a [CSV Stored Import](#), then use the Import Data Wizard to run a one-time import of the CSV data.

- b. When prompted, import the Chatter CSV file into the new Salesforce Chatter Business Object.

Import Data Wizard

File to Import and Primary Business Object
Select the import file and the type of business object to create.

File name: C:\Desktop\NewsFeed.csv

Primary business object: NewsFeed

Help
Choose the file to import from. Select the primary business object. Data can be imported into this business object and its related business objects. NOTE: Only one of each type of related business object can be created.

- c. When prompted, define how columns from the CSV file are mapped to fields in the Salesforce Chatter Business Object.

The screenshot shows the 'Import Data Wizard' dialog box, specifically the 'Map Import File Columns to Fields' step. The title bar reads 'Import Data Wizard' and the subtitle is 'Map Import File Columns to Fields'. Below the subtitle is the instruction: 'Map columns from the import file to fields in business objects.' A table titled 'How Columns are Mapped to Fields' lists the following mappings:

Column in File	Mapped Field
BODY	NewsFeed.Body
COMMENTCOUNT	NewsFeed.Comment Count
CREATEDBYID	NewsFeed.Created By ID
CREATEDDATE	NewsFeed.Created Date Time
ID	NewsFeed.ReclID
INSERTEDBYID	NewsFeed.Inserted By ID
ISDELETED	NewsFeed.Is Deleted
LASTMODIFIEDDATE	NewsFeed.Last Modified Date Time
LIKECOUNT	NewsFeed.Like Count
LINKURL	NewsFeed.Link URL
PARENTID	NewsFeed.Parent ReclID
SYSTEMMODSTAMP	NewsFeed.System Mod Date Time
TYPE	NewsFeed.Type

Below the table, the 'Action to Take' section has two radio buttons: 'Do not import this column' (unselected) and 'Import into field:' (selected). The 'Import into field:' dropdown menu is set to 'NewsFeed.Created Date Time'. A 'Help' section with a green question mark icon contains the text: 'Select how each column in the file will be imported. You can import into the primary business object as well as any related business objects.' At the bottom, there are four buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

4. [Create a Search Results List Widget](#), and then add it to a Dashboard to display Salesforce Chatter data in CSM.

SAP Integration

Overview

SAP makes enterprise software to manage business operations and customer relations. CSM integrates with SAP so that SAP customer data can be shared with and used within CSM (ex: Populates a Customer Record).

How the Integration Works

Shared external data is either [imported or linked](#). Imported data is accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the external database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, SAP Customer data is imported into the Customer-Internal Business Object. CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import the external data.



Note: SAP utilizes a normalized Object Linking and Embedding (OLE) database (data is spread across many tables). Before CSM can share data in a normalized external database, create one or more database Views to collect, combine, and filter the shared (imported) information. Create the Views in the SAP database or in the CSM database. If creating Views in the CSM database, a Linked Server might need be created.

Recommendations

When sharing data with SAP, Users will most likely want to:

- Create a View of the SAP Customer data.
- Create an External Connection (OLEServer) to the SAP data.
- Import the SAP Customer View into the CSM Customer-Internal Business Object (after mapping the Customer-Internal Business Object to the View).

Steps to Integrate

Perform the following high-level steps to import SAP data. For detailed step-by-step instructions, refer to the [Create an External Connection to an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. Create a Customer Information/Profile View of the SAP data to which to connect.



Note: You can create the Views in the SAP database or in the CSM database. (If choosing to create Views in a CSM database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).

3. Create an External Connection to the SAP data. Data is either in the external SAP database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of your CSM.

Use the External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:

- **Data Source:** Select OLE DB Server.
- **Database Location, Name, and Login Options for the SAP database:** Ask a DBA.
- **Database Owner or Schema:** Auto-populated by your database selection.
- **Pooling Options:** Keep defaults.

The new connection is shown in the External Connections window.

4. Map each CSM Business Object to the appropriate SAP View:
Use the External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- **Import vs. Linked:** Click **Import Data**.
- **Data Source:** Select the **External Connection** just created.
- **External Table to Map:** Select the **View** in the external database.
- **Fields to Map:** Map each individual field from the View to a field in the Business Object.
- **Unique Key:** Varies (uses the field mapped to the Unique ID value).
- **Timestamp Fields:** None.

5. Import the OLE DB View into the appropriate CSM Business Object.
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the **Customer-Internal** Business Object .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. (Optional) If you have additional mapped data, you might want to edit the Business Object Forms and Grids to the display the additional information.

Use the Form Editor to contain controls that show (and allow editing) of the values in the fields, and the Grid Editor to define how the Business Object is displayed.

7. [Publish the Blueprint](#).

Snow Inventory Integration

Overview

Snow Inventory is a multi-platform audit solution designed to find devices, audit installed applications, and track usage. Snow Inventory integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, Snow Inventory workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: Snow Inventory utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an Snow Inventory Database, Users will most likely want to:

- Create Views of the Snow Inventory data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the Snow Inventory data.
- Map and Import the Snow Inventory Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link Snow Inventory data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the Snow Inventory database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the Snow Inventory data](#). Data is either in the external Snow Inventory Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the Snow Inventory database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate Snow Inventory View:](#)

Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each Snow Inventory View into the appropriate CSM Business Object.](#)

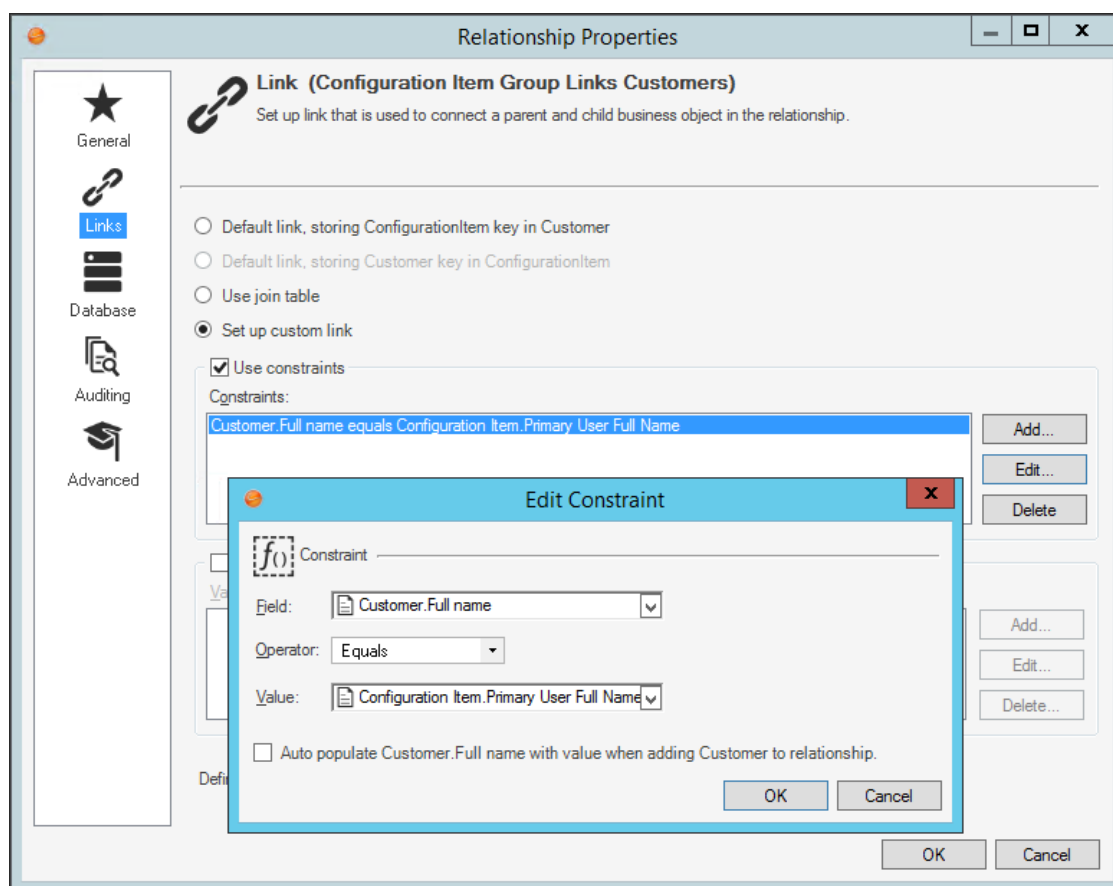
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.

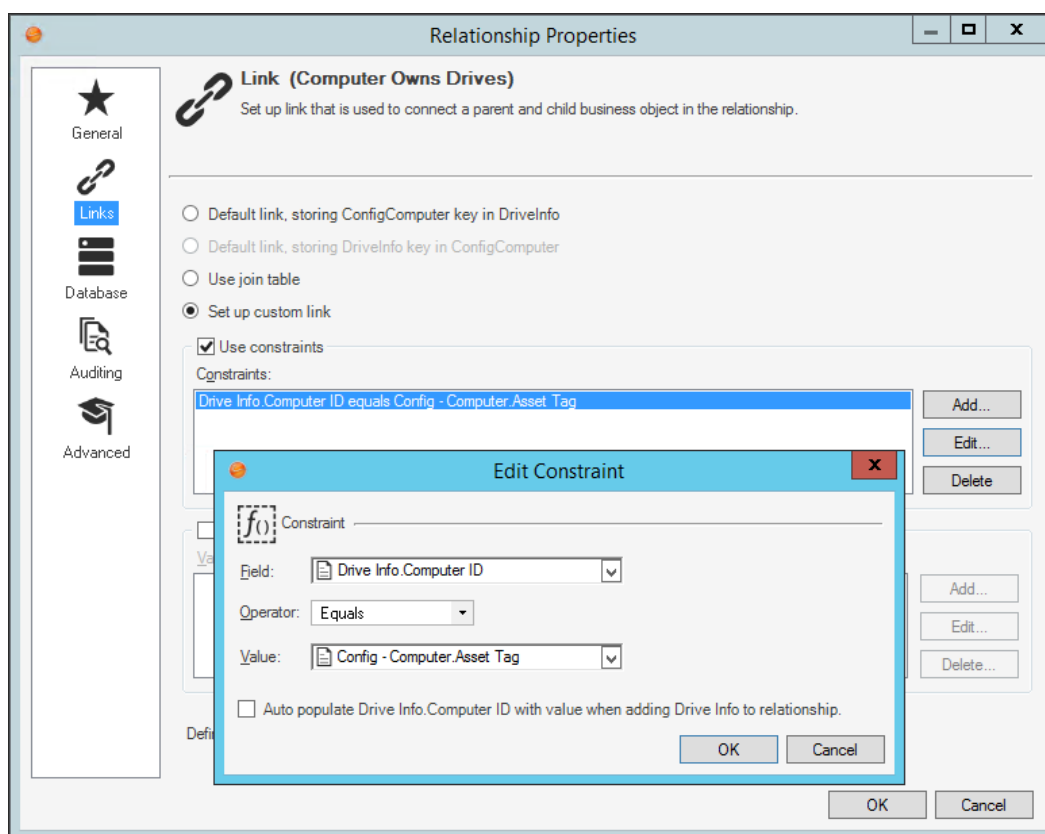
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

SolarWinds Inventory Integration

Overview

SolarWinds develops and markets enterprise information technology (IT) infrastructure management software to IT professionals. SolarWinds integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, SolarWinds workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: SolarWinds utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an SolarWinds Database, Users will most likely want to:

- Create Views of the SolarWinds data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.
- Create an External Connection (SQL Server) to the SolarWinds data.

- Map and Import the SolarWinds Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link SolarWinds data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks



Note: Create the Views in the SolarWinds database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the SolarWinds data](#). Data is either in the external SolarWinds Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the SolarWinds database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

4. [Map each CSM Business Object to the appropriate SolarWinds View](#):

Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:

- Import vs. Linked: Click **Import Data**.
- Data Source: Select the **External Connection** just created.
- External Table to Map: Select the **View** in the external database.
- Fields to Map: Map each individual field from the View to a field in the Business Object.
- Unique Key: Varies (uses the field mapped to the Unique ID value).
- Timestamp Fields: None.

5. [Import each SolarWinds View into the appropriate CSM Business Object.](#)

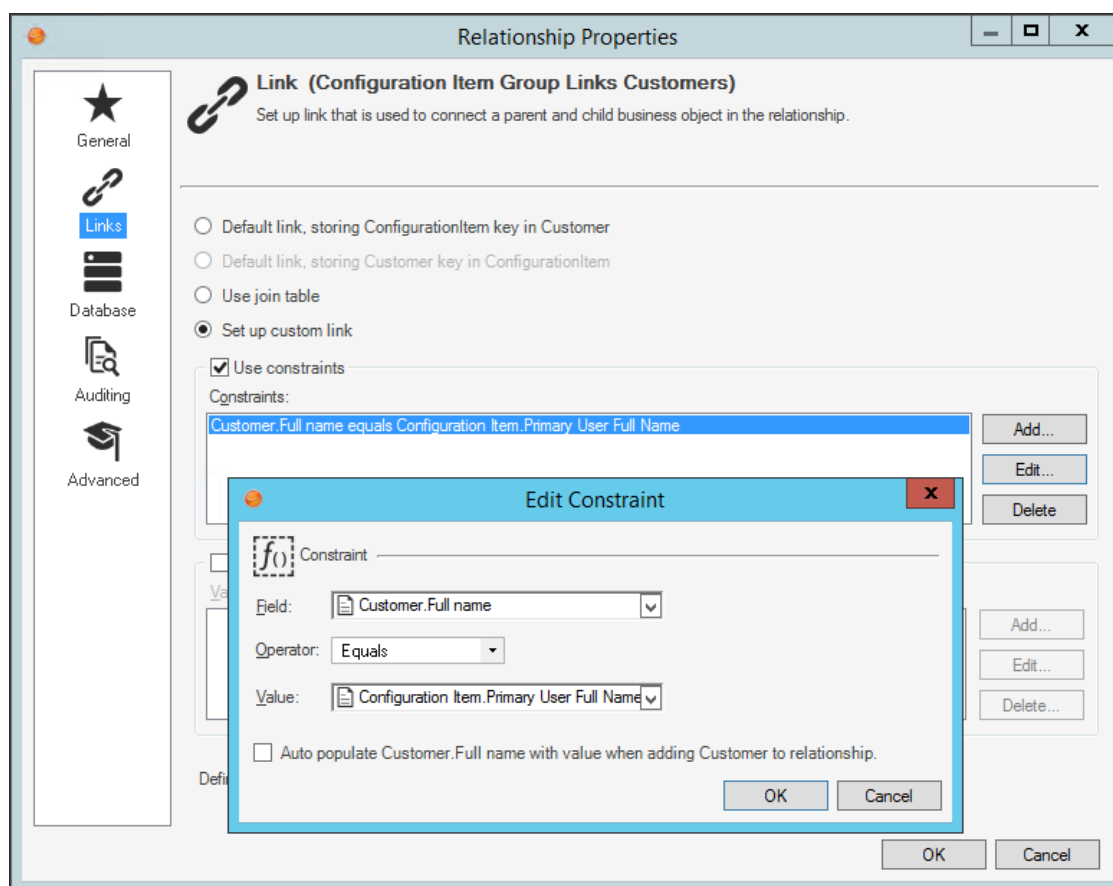
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:

- Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
- Existing Records: Select **Update Existing Records**.
- Choose Filter: Select **All Records** (typically, data in a View is already filtered).

6. Edit Relationships so that data can be shared and displayed between Business Objects:

Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.

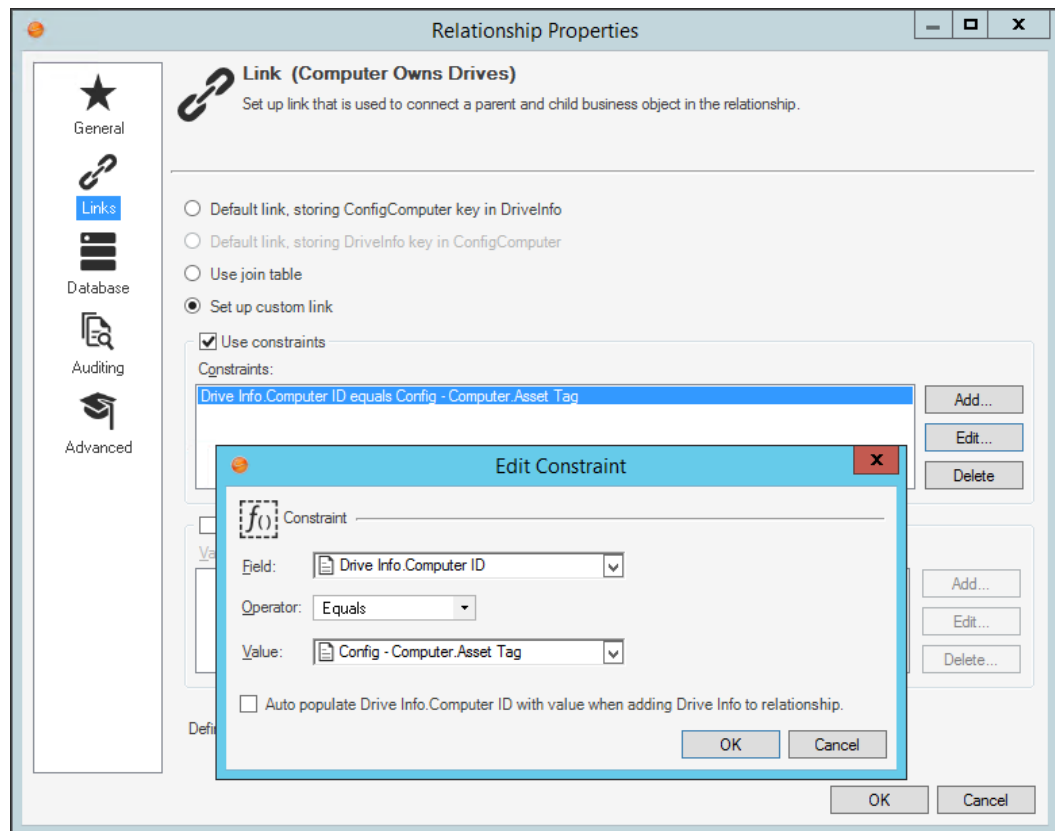
- a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

SpiceWorks Integrations

Overview

SpiceWorks is a free ad-supported IT systems management, inventory, and help desk software application designed for network administrators working in small- to mid-sized businesses and managing up to 1,000 network devices. SpiceWorks integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, SpiceWorks workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: SpiceWorks utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an SpiceWorks Database, Users will most likely want to:

- Create Views of the SpiceWorks data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the SpiceWorks data.
- Map and Import the SpiceWorks Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link SpiceWorks data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks

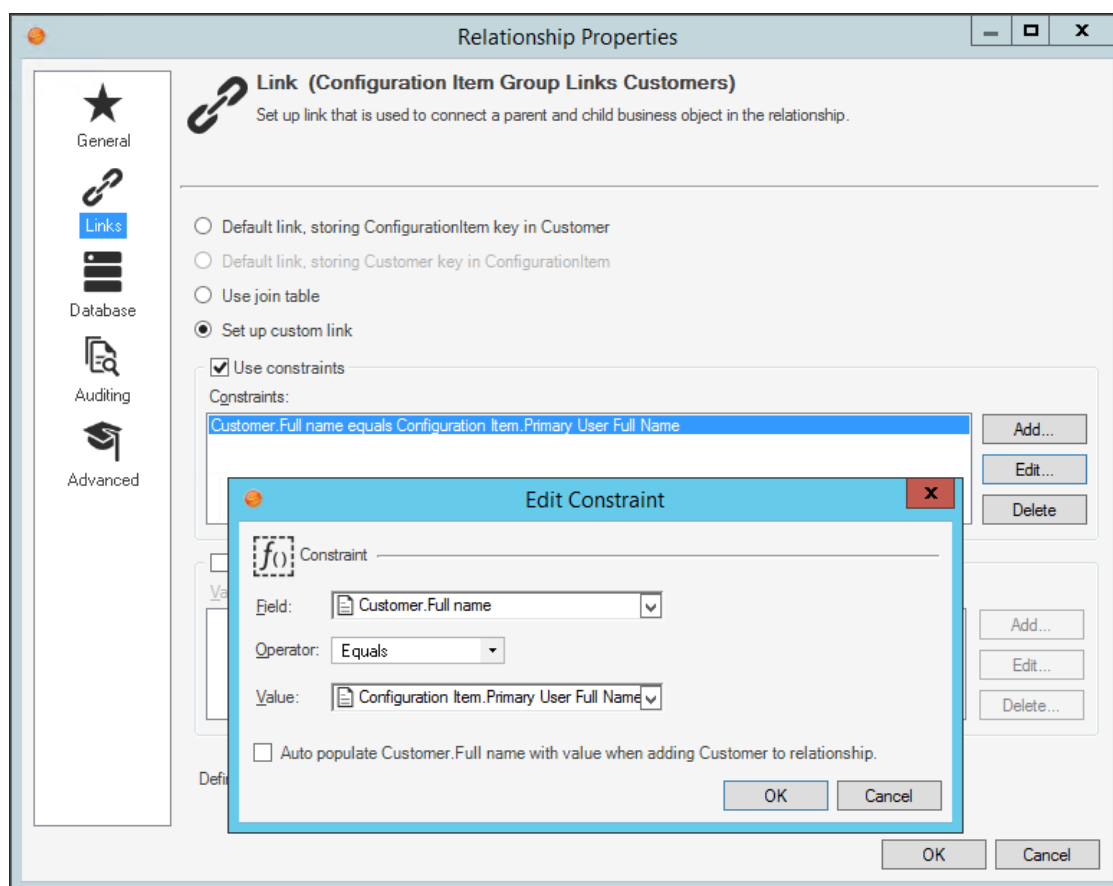


Note: Create the Views in the SpiceWorks database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the SpiceWorks data](#). Data is either in the external SpiceWorks Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the SpiceWorks database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

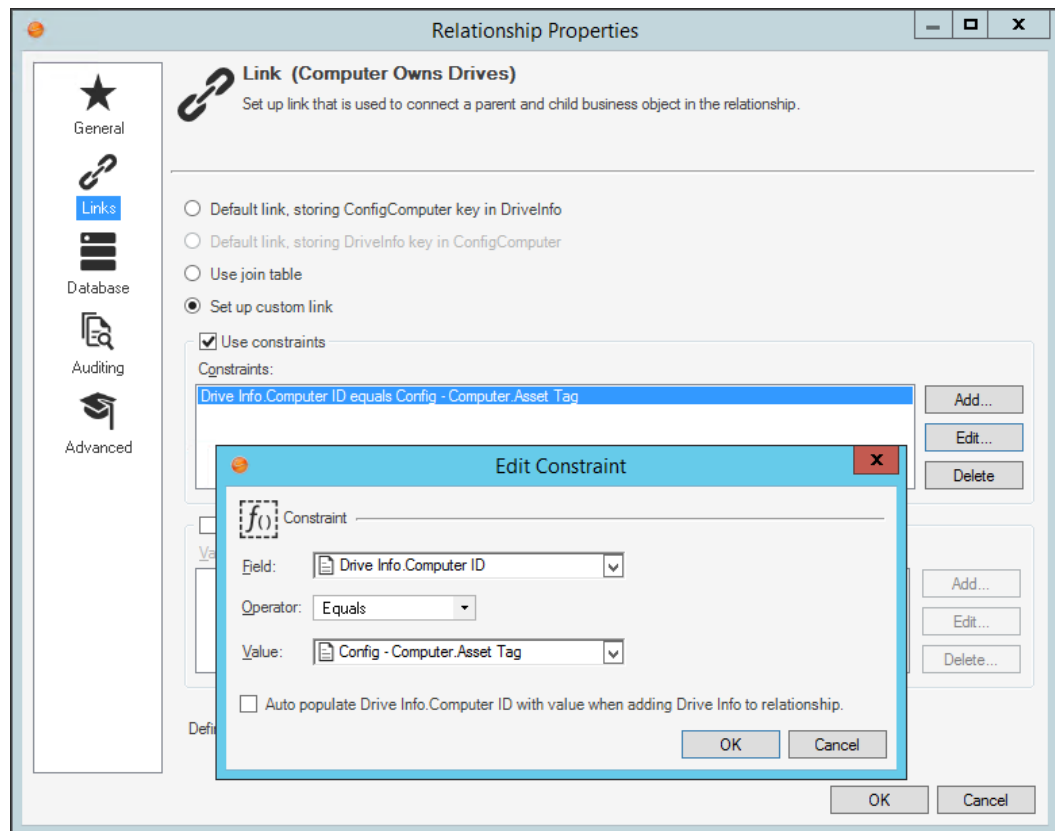
4. [Map each CSM Business Object to the appropriate SpiceWorks View:](#)
Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:
 - Import vs. Linked: Click **Import Data**.
 - Data Source: Select the **External Connection** just created.
 - External Table to Map: Select the **View** in the external database.
 - Fields to Map: Map each individual field from the View to a field in the Business Object.
 - Unique Key: Varies (uses the field mapped to the Unique ID value).
 - Timestamp Fields: None.
5. [Import each SpiceWorks View into the appropriate CSM Business Object.](#)
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:
 - Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
 - Existing Records: Select **Update Existing Records**.
 - Choose Filter: Select **All Records** (typically, data in a View is already filtered).
6. Edit Relationships so that data can be shared and displayed between Business Objects:
Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.
 - a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint](#).

Log to Splunk

Splunk® Enterprise (referred to as Splunk) is a built-in integration that offers data analysis and monitoring. Splunk integrates so that users can log data from CSM directly into Splunk.

Go to the Splunk website and set up an account with Splunk to get a user name and password. Then install Splunk on a workstation prior to starting the CSM integration.

Splunk is an application that captures logging information and makes it searchable and easier to read. CSM connects to a Splunk server, and then sends logging information to Splunk. The logging information is viewed by connecting and launching the Splunk application.

The steps to integrate Splunk with CSM are performed in both the CSM Desktop Client and Cherwell Server Manager.

To configure Splunk in the CSM Desktop Client:

1. In the CSM client, go to **Tools > Options**.
2. On the General Options page, select **Configure**.
3. Select the **Log to Splunk** check box. The **Server** field displays a **Not Configured** message.
4. In the **Log Level** drop-down list, select an option.
5. Select **Configure** to open the Splunk Server Settings window.
6. Define the following settings:
 - **Server URL**: Provide the URL of the Splunk Server (example: https://splunkserver:8089).
 - **User Name**: Provide the user name for the Splunk Server account.
 - **Password**: Provide the password of the individual with an account on the Splunk Server.
 - **Ignore Certificate Errors**: Select this check box to ignore certificate errors that might be generated by Splunk using self-signed certificates to encrypt data. Select this check box only if you trust your connection with the server.
7. Select **OK > OK**.
The Splunk Server Settings window closes so you can view the Cherwell Application Server Logging Options window. **Configured** shows next to the **Configure** button.
8. Select **OK**.

To configure Splunk in the Cherwell Server Manager:

9. Select **Start > All Programs > Cherwell Service Management > Tools > Server Manager**.
10. Select **Logging** to open the Cherwell Application Server Logging Options window.
11. Select **Log to Splunk**.
12. In the **Log Level** drop-down list, select an option. The **Server** section shows **Not Configured** next to the **Configure** button until the configuration is complete.
13. Select **Configure** to open the Splunk Server Settings window.
14. Define the following settings:
 - **Server URL**: Provide the URL of the Splunk Server (example: https://splunkserver:8089).
 - **User Name**: Provide the user name for the Splunk Server account.

- **Password:** Provide the password of the individual with an account on the Splunk Server.
- **Ignore Certificate Errors:** Select this check box to ignore certificate errors that might be generated by Splunk using self-signed certificates to encrypt data. Select this check box only if you trust your connection with the server.

15. Select **OK > OK**.

The Splunk Server Settings window closes so you can view the Cherwell Application Server Logging Options window. **Configured** shows next to the **Configure** button.

16. Select **OK**.

Read the following documentation for more information.

- [Splunk Documentation](#)
- [About the Server Manager](#)

Textlocal Integration

Overview

Textlocal offers a text messaging platform for businesses. CSM integrates with Textlocal so that Textlocal network events and alerts can be tracked within CSM records.

When integrated with Textlocal, the CSM E-mail and Event Monitor watches for Textlocal e-mail alerts in a monitored account. If an incoming e-mail meets a defined condition (ex: Contains an existing Record ID, specific words or phrases in the subject line or body, or is from a specific sender), CSM processes the incoming e-mails according to monitoring rules (defined in the CSM E-mail and Event Monitor), performing Actions, such as creating or updating an Incident, adding records to a Queue, or initiating One-Step Actions. A typical Action would be for CSM to create or update a record (ex: Incident or Event record), populating the record with details from the e-mail message.

Recommendations

- Configure an e-mail account in CSM so it can access the account where Textlocal alerts are sent.
- Configure an e-mail monitor that watches the account.

Related Reading

- [About CSM E-mail Accounts](#)
- [About E-mail and Event Monitor](#)

Steps to Integrate

1. [Configure E-mail Accounts](#): Configure an e-mail account in CSM.
2. Implement E-mail Monitor:
 - a. [Send a test e-mail](#).
3. [Create an e-mail monitor](#).

Tripwire Enterprise Integration

Overview

Tripwire Enterprise is a security configuration management suite whose Policy Management, Integrity Management, and Remediation Management capabilities stand-alone capabilities or work together in a comprehensive, tightly integrated SCM solution. Tripwire Enterprise integrates so that inventory data (ex: workstations, installed programs/software, installed services, disks, etc.) can be shared with and used within the CSM CMDB (as Configuration Item records).

How the Integration Works

Shared external data is either [imported](#) or [linked](#). Both imported and linked data are accessed using a created [External Connection](#); however:

- When importing external data into CSM, import it into the Cherwell database. From that point forward, the records can diverge, although data can be re-imported (entirely replacing existing data or appending/updating changed data) if desired. Re-imports can be run manually or they can be regularly scheduled using the [CSM Scheduler](#). A Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.
- When linking to external data, view (and sometimes update) the external data in CSM but it continues to reside in the External Database. A special External Business Object keeps track of the external data and facilitates viewing/updating that data in CSM.

Typically, Tripwire Enterprise workstation data is imported into the Config-Computer Business Object, and all other data (installed programs/software, installed services, disks, etc.) is linked to using supporting Business Objects (either existing or newly created External Supporting Business Objects). CSM provides several wizards to walk Users through the steps to create the External Connection, create the External Business Object, and import/link the external data.



Note: Tripwire Enterprise utilizes a normalized Microsoft SQL Server (MSSQL) database (data is spread across many tables). Before CSM can share data in a normalized External Database, one or more database Views need to be created to collect, combine, and filter the shared (imported/linked) information. Create the Views in CSM database. This could require creating a Linked Server.

Recommendations

When sharing data with an Tripwire Enterprise Database, Users will most likely want to:

- Create Views of the Tripwire Enterprise data to share, for example:
 - Workstations View: For workstation data.
 - Installed Software: For installed programs/software.
 - Installed Services: For installed services
 - Disk View: For logical disk data/drives.

- Create an External Connection (SQL Server) to the Tripwire Enterprise data.
- Map and Import the Tripwire Enterprise Views into existing CSM Business Objects, for example:
 - Workstation View = Config-Computer Business Object
 - Installed Software View = Installed Software Business Object
 - Installed Services View = Installed Services Business Object
 - Disk View = Drive Info Business Object

Note: CSM provides the above default Business Objects with appropriate Fields, Relationships, Forms, and Grids for mapping/importing inventory data; however, also create new External Business Objects for the data, if needed. If creating additional Business Objects and/or Relationships, the settings should be set up similar to the default. See Edit Major External Business Object Properties, Edit Supporting External Business Object Properties, and Edit the Parent and Supporting Business Object Relationship Properties.

Steps to Integrate

Perform the following high-level steps to import/link Tripwire Enterprise data. For detailed step-by-step instructions, refer to the [Share data with an External Database](#) section in our online help.



Note: Most steps are performed in CSM Administrator, within a [Blueprint](#).

1. [Create CSM Database Views](#). For example:
 - Workstations
 - Installed Software
 - Installed Services
 - Disks

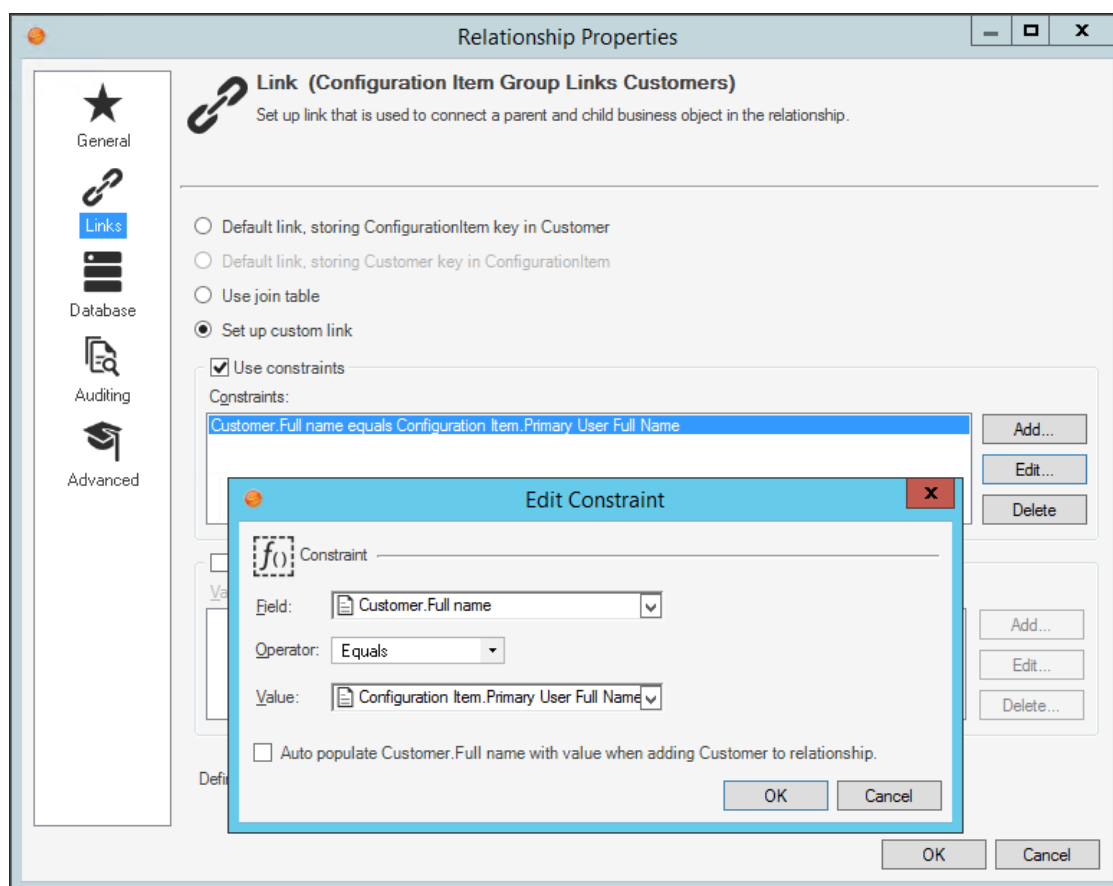


Note: Create the Views in the Tripwire Enterprise database or in the CSM database. (If choosing to create Views in a CSM Database, an onsite DBA might need to create a Linked Server in SQL.)

2. [Create a Blueprint](#).
3. [Create an External Connection to the Tripwire Enterprise data](#). Data is either in the external Tripwire Enterprise Database or in the database Views, which are accessed through a Linked Server. Accessing a Linked server depends on the configuration of CSM. Use the CSM External Connection Wizard (CSM Administrator>Blueprint>Tools>External Connections) to create an External Connection. Typically:
 - Data Source: Select **SQL Server**.
 - Database Location, Name, and Login Options for the Tripwire Enterprise database: Ask a DBA.
 - Database Owner or Schema: Auto-populated by the database selection.
 - Pooling Options: Keep defaults.

The new connection is shown in the External Connections window.

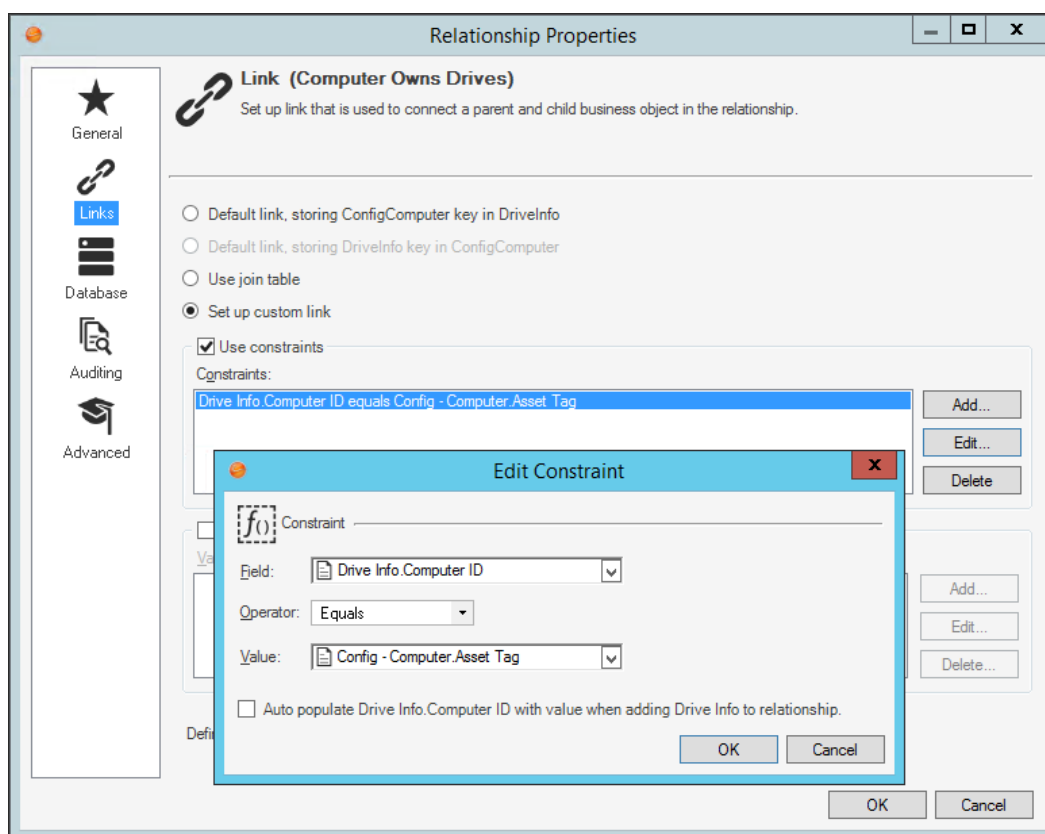
4. [Map each CSM Business Object to the appropriate Tripwire Enterprise View:](#)
Use the CSM External Data Wizard (CSM Administrator>Blueprint>[Business Object]>Map to external Data) to map the data. Typically:
 - Import vs. Linked: Click **Import Data**.
 - Data Source: Select the **External Connection** just created.
 - External Table to Map: Select the **View** in the external database.
 - Fields to Map: Map each individual field from the View to a field in the Business Object.
 - Unique Key: Varies (uses the field mapped to the Unique ID value).
 - Timestamp Fields: None.
5. [Import each Tripwire Enterprise View into the appropriate CSM Business Object.](#)
Use the External Data Import Wizard (CSM Administrator>Database>Import External Data) to import the data. Typically:
 - Select Business Object: Select the appropriate Business Object (ex: Config-Computer, Installed Software, Installed Service, and Drive Info) .
 - Existing Records: Select **Update Existing Records**.
 - Choose Filter: Select **All Records** (typically, data in a View is already filtered).
6. Edit Relationships so that data can be shared and displayed between Business Objects:
Use the [Relationship Editor](#) (CSM Administrator>Blueprint>"Business Object">Edit Relationships) to edit Relationships.
 - a. Edit the *Configuration Item Group Links Customers* Relationship to use custom link constraints similar to:
Customer.FullName = ConfigurationItem.PrimaryUserFullName.



- b. Edit the following existing Relationships to use a custom link constraint similar to:
Config-ComputerAssetTag = ComputerID.

ComputerID is used for:

- Computer Owns Drives.
- Computer Owns Installed Services.
- Computer Owns Installed Software.



7. (Optional) If there is additional mapped data, edit the Business Object Forms and Grids to display the additional information.
Use the [Form Editor](#) to add Form Controls to the Form that show (and allow editing) of the values in the fields; use the [Grid Editor](#) to define which fields are displayed as columns in the the Business Object Grid.
8. [Publish the Blueprint.](#)