

IBM WebSphere Commerce V7 Quarterly Releases – 2Q2015

Import/Export of Marketing Activities



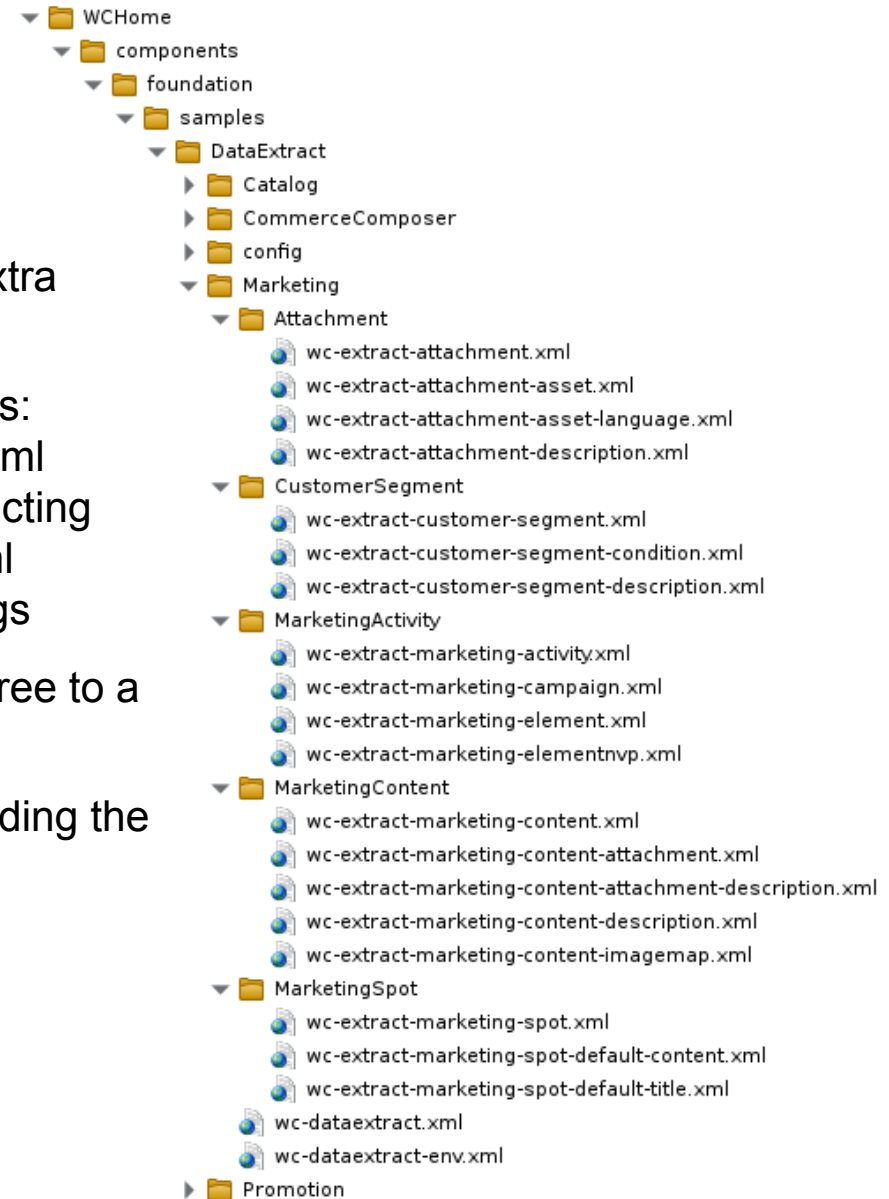
Import/Export of Marketing Activities

- In the past, you would have to manually keep marketing data in sync between environments, example scenarios:
 - Test environments may have specific marketing data that needs to be loaded into several separate databases
 - Identical (or near-identical) marketing data between different stores, but not able to create the data at an asset store level
 - Reproducing issues relating to marketing (e.g. wrong promotion prices) in a test environment, using production data
- The data extract and load utilities now supports exporting and importing marketing data:
 - Activities
 - Campaigns
 - Customer segments
 - Content
 - E-Marketing Spots
 - Attachments

Exporting Marketing Data

Marketing Extract Configuration

- After installing JR53463, you will notice some extra sample files for Data Extract
- In the root Marketing directory, there are two files:
 - The main configuration file: `wc-dataextract.xml`
 - Refers to files in sub directories for extracting
 - The environment file: `wc-dataextract-env.xml`
 - Defines basic data, e.g. database settings
- You should copy the entire Marketing directory tree to a working directory before extracting
- You can configure all details of the extract, including the SQL statements, if needed



Marketing Extract Process

- Copy sample files to extract working directory
 - Samples are in WCHome/components/foundation/samples/DataExtract/Marketing
- Edit environment settings (wc-dataextract-env.xml)
 - Database settings (default: Cloudscape)
 - Language to export (default: US English)
 - Store for which data should be exported (default: Aurora)
- Edit export settings (wc-dataextract.xml)
 - Output directory
 - Which types of assets to export
 - File names for exported data
- Advanced: Modify individual component configuration files
- Run data extract utility
- Verify generated files
- Optional: Modify data to fit target system
- Load files into target system using the data load utility
 - See second part of presentation for this process

Settings in wc-dataextract-env.xml

- Basic configuration is stored in wc-dataextract-env.xml
 - This file name can be overridden by a setting in wc-dataextract.xml
 - Store to export from (storeIdentifier attribute)
 - Language to export for (langId)
 - Master catalog to export for (catalogIdentifier)
 - Database settings (_config:Database node)

```

<_config:DataLoadEnvConfiguration
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.ibm.com/xmlns/prod/commerce/foundation/config ../xsd/wc-dataload-env.xsd"
  xmlns:_config="http://www.ibm.com/xmlns/prod/commerce/foundation/config">

  <_config:BusinessContext storeIdentifier="Aurora" langId="-1" catalogIdentifier="Aurora"/>

  <_config:Database name="..\db\mall" type="derby" />

  <!-- database setting for Oracle -->
  <!--
  <_config:Database name="<database name>" user="<user>" password="<password>"
    port="1521" schema="<schema name>" server="<server>" type="Oracle" dbDriverType="thin" />
  -->

  <!-- database setting for AIX/DB2 server -->
  <!--
  <_config:Database type="db2" name="<database name>" user="<user>" password="<password>" server="<server>"
  port="<port>" schema="<schema>" />
  -->

</_config:DataLoadEnvConfiguration>

```

Settings in wc-dataextract.xml

- Extract options are stored in wc-dataextract.xml
- Output directory (default is a directory called output under the location of wc-dataextract.xml)

```
<_config:Variable name="outputDirectory" value="output" />
```

- Environment configuration file (default: wc-dataextract-env.xml)

```
<_config:DataLoadEnvironment configFile="wc-dataextract-env.xml" />
```

- Basic CSV file format

```
<_config:property name="firstTwoLinesAreHeader" value="true" />
```

- Which data to export and output file names for exported data (default: everything in subdirs)

```
<!-- Marketing Activity -->
<_config:LoadItem name="MarketingCampaign" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-campaign.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingCampaign.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingActivity" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-activity.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingActivity.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingElement" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-element.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingElement.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingElementNVP" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-elementnvp.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingElementNVP.csv" />
</_config:LoadItem>
```

Individual business object mediator and data reader files

- The details of how to export individual objects are in the subdirectories
- Example from CustomerSegment/wc-extract-customer-segment.xml:

```
<_config:DataLoader className="com.ibm.commerce.foundation.dataload.BusinessObjectLoader">
  <_config:DataReader className="com.ibm.commerce.foundation.dataload.datareader.UniqueIdReader" >
    <_config:Query>
      <_config:SQL>
        <![CDATA[
SELECT MBRGRP.MBRGRP_ID
FROM MBRGRP
      JOIN MBRGRPUSG ON (MBRGRP.MBRGRP_ID = MBRGRPUSG.MBRGRP_ID)
      JOIN STOREENT ON (MBRGRP.OWNER_ID = STOREENT.MEMBER_ID)
WHERE MBRGRPUSG.MBRGRPYPE_ID = -1 AND STOREENT.STOREENT_ID = ?
ORDER BY MBRGRP.MBRGRP_ID

]]>
      </_config:SQL>
      <_config:Param name="storeId" valueFrom="BusinessContext" />
    </_config:Query>
  </_config:DataReader>
```

```
ad.businessobjectmediator.AssociatedObjectMediator" >
SELECT MBRGRP.MBRGRPNAME, generatepurpose as USAGE, MBRGRPDESC.DISPLAYNAME, MBRGRPDESC.DESCRPTION
FROM MBRGRP
LEFT OUTER JOIN MBRGRPDESC ON (MBRGRP.MBRGRP_ID = MBRGRPDESC.MBRGRP_ID AND MBRGRPDESC.LANGUAGE_ID = ?)
WHERE MBRGRP.MBRGRP_ID in (?)

]]>
</_config:SQL>
<_config:Param name="LangId" valueFrom="BusinessContext" />
<_config:Param name="MBRGRP_ID" />

<_config:ColumnMapping name="MBRGRPNAME" value="memberGroupName" />
<_config:ColumnMapping name="USAGE" value="usage" />
<_config:ColumnMapping name="DISPLAYNAME" value="shortDescription" />
<_config:ColumnMapping name="DESCRIPTION" value="longDescription" />
</_config:Query>

<_config:DataWriter className="com.ibm.commerce.foundation.dataload.datawriter.CSVWriter">
  <_config:Data>
    <_config:column number="1" name="memberGroupName" />
    <_config:column number="2" name="usage" />
    <_config:column number="3" name="shortDescription" />
    <_config:column number="4" name="longDescription" />
    <_config:column number="5" name="delete" value="0" />
  </_config:Data>
</_config:DataWriter>
</_config:BusinessObjectMediator>
</_config:BusinessObjectBuilder>
```


Exported data

- Generated unique IDs (e.g. MBRGRP_ID) are not exported to avoid conflicts in target system
 - Instead, the unique key values are exported (e.g. MBRGRP.NAME)
 - Data load will then resolve the generated IDs when loading the data
- Files are comma-delimited (CSV) text files
 - Default setting includes two header lines
 - Asset type
 - Column definitions
 - Files are generated with UNIX line endings
- Example:

```
MemberGroup  
memberGroupName,usage,shortDescription,longDescription,delete  
Registered Customers,GeneralPurpose,Registered Customers,Customers who have registered,0  
Repeat Customers,GeneralPurpose,Repeat Customers,Customers who have placed an order,0  
Guest Shoppers,GeneralPurpose,Guest Shoppers,Shoppers who have not registered,0  
...
```

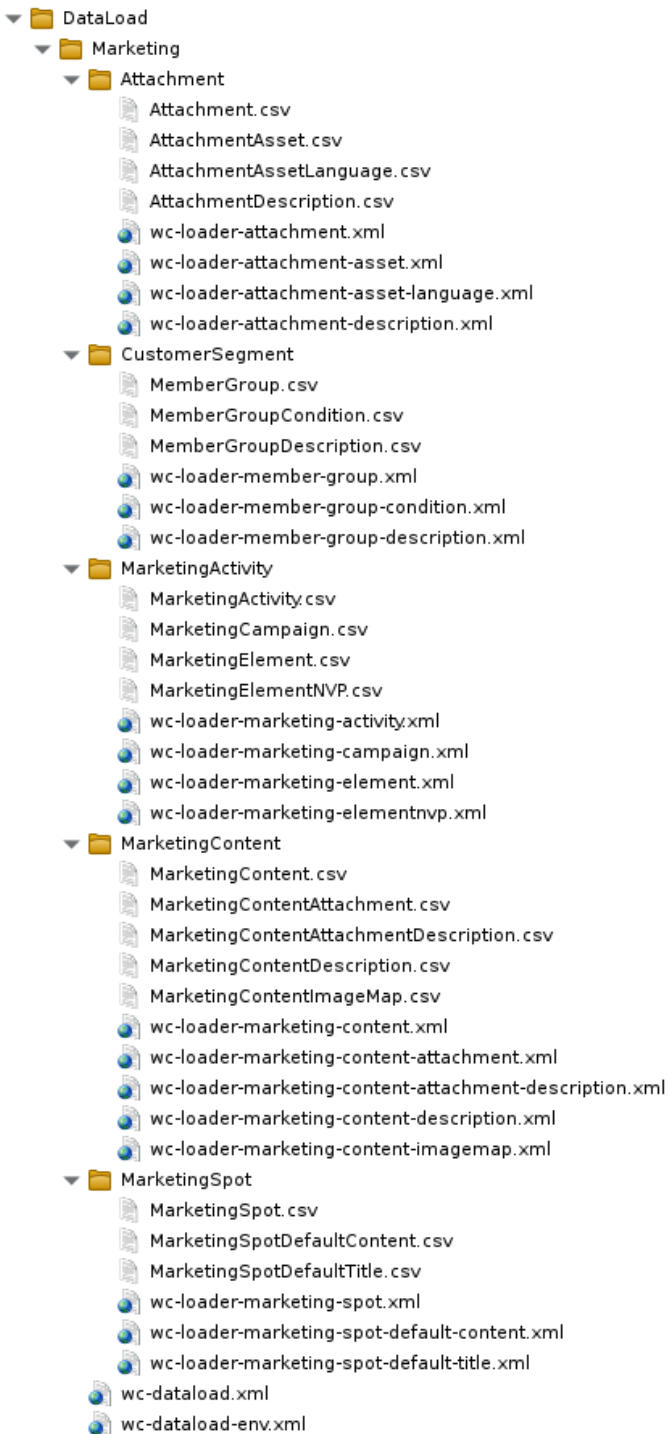
Usage Notes

- This functionality is not meant to replace for stage propagation
 - For production environments, create marketing data in a staging or authoring server and then publish to the live servers
- Extracts are limit to a single store
 - If you need data from multiple stores, re-run the utility for each store
- Extracted attachment data does not include file data
 - You must manually import actual files before loading an extract if needed
- Not all Activity data is exported, for example:
 - Search rules
 - E-mail templates
- The functionality requires install of cumulative fixes JR53438.fp and JR53438.fep
- Since this feature is using data extract, troubleshooting is the same as for other extracts
 - Specifically, the log file is saved in *WC_Home/logs/wc-dataextract.log*

Importing Marketing Data

Marketing Load Configuration

- After installing JR53463, you will notice some extra sample files for Data Load
- In the root Marketing directory, there are two files:
 - The main configuration file: wc-dataload.xml
 - Refers to files in sub directories for extracting
 - The environment file: wc-dataload-env.xml
 - Defines basic data, e.g. database settings
- You should copy the entire Marketing directory tree to a working directory before loading
 - You can delete the sample CSV files if you are loading previously extracted data



Marketing Load Process

- Copy sample files to load working directory
 - Samples are in WCHome/components/foundation/samples/DataLoad/Marketing
 - Exclude the sample CSV files if you are planning on loading a previously extract
- Edit environment settings (wc-dataload-env.xml)
 - Database settings
 - Language to export
 - Store for which data should be exported
- Edit load settings (wc-dataload.xml)
 - Load directories
 - Which types of assets to load
 - File names for exported data
- Copy previously extracted files to the working directory
- Run data load utility
- Verify log files

Settings in wc-dataload-env.xml

- Basic configuration is stored in wc-dataload-env.xml
 - Includes the same settings as for wc-dataextract-env.xml
 - Additionally settings for the ID resolver and JDBC data writer

```
<_config:DataLoadEnvConfiguration
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.ibm.com/xmlns/prod/commerce/foundation/config ../xsd/wc-dataload-env.xsd"
  xmlns:_config="http://www.ibm.com/xmlns/prod/commerce/foundation/config">

  <_config:BusinessContext storeIdentifier="Aurora" langId="-1" catalogIdentifier="Aurora"/>

  <_config:Database name="..\db\mall" type="derby" />

  <!-- database setting for Oracle -->
  <!--
  <_config:Database name="<database name>" user="<user>" password="<password>"
    port="1521" schema="<schema name>" server="<server>" type="Oracle" dbDriverType="thin" />
  -->

  <!-- database setting for AIX/DB2 server -->
  <!--
  <_config:Database type="db2" name="<database name>" user="<user>" password="<password>" server="<server>"
  port="<port>" schema="<schema>" />
  -->

  <_config:IDResolver className="com.ibm.commerce.foundation.dataload.idresolve.IDResolverImpl" cacheSize="2000000" >
  </_config:IDResolver>

  <_config:DataWriter className="com.ibm.commerce.foundation.dataload.datawriter.JDBCDataWriter" />

</_config:DataLoadEnvConfiguration>
```

Settings in wc-dataload.xml

- Load options are stored in wc-dataload.xml
- Environment configuration file (default: wc-dataextract-env.xml)

```
<_config:DataLoadEnvironment configFile="wc-dataextract-env.xml" />
```

- Commit count and load mode

```
<_config:LoadOrder commitCount="10000" batchSize="1" dataLoadMode="Insert">
```

- Basic CSV file format

```
<_config:property name="firstTwoLinesAreHeader" value="true" />
```

- Which data to load and input file names for exported data (default: same as data extract)

```
<!-- Marketing Activity -->
<_config:LoadItem name="MarketingCampaign" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-campaign.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingCampaign.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingActivity" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-activity.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingActivity.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingElement" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-element.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingElement.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingElementNVP" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-elementnvp.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingElementNVP.csv" />
</_config:LoadItem>
```

Individual business object mediator and data reader files

- The details of how to load individual objects are in the subdirectories
- Example from CustomerSegment/wc-loader-customer-segment.xml:

```
<_config:DataLoader className="com.ibm.commerce.foundation.dataload.BusinessObjectLoader" >
  <_config:DataReader className="com.ibm.commerce.foundation.dataload.datareader.CSVReader" firstLineIsHeader="true" useHeaderAsColumnName="true" >
    <_config:property name="keyColumns" value="memberGroupName,ownerId,storeId,storeIdentifier" />
  </_config:DataReader>
  <_config:BusinessObjectBuilder className="com.ibm.commerce.foundation.dataload.businessobjectbuilder.BaseBusinessObjectBuilder"
    packageName="com.ibm.commerce.member.facade.datatypes.MemberPackage" dataObjectType="MemberGroupType" >
    <_config:DataMapping>
      <_config:mapping xpath="MemberGroupIdentifier/UniqueID" value="memberGroupId" />
      <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/Name" value="memberGroupName" />
      <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/ownerID" value="ownerId" />
      <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/StoreIdentifier/UniqueID" value="storeId" />
      <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/StoreIdentifier/ExternalIdentifier/NameIdentifier" value="storeIdentifier" />

      <_config:mapping xpath="LastUpdate" value="lastUpdate" />
      <_config:mapping xpath="LastUpdatedBy" value="lastUpdatedByLogonId" />

      <_config:mapping xpath="MemberGroupDescription[0]/ShortDescription" value="shortDescription" />
      <_config:mapping xpath="MemberGroupDescription[0]/LongDescription" value="longDescription" />
      <_config:mapping xpath="MemberGroupDescription[0]/Language" value="langId" />

      <_config:mapping xpath="Usage[0]" value="usage" />

      <_config:mapping xpath="" value="delete" deleteValue="1"/>
    </_config:DataMapping>
    <_config:BusinessObjectMediator className="com.ibm.commerce.member.dataload.mediator.MemberGroupMediator" componentId="com.ibm.commerce.member" >
    </_config:BusinessObjectMediator>
  </_config:BusinessObjectBuilder>
</_config:DataLoader>
```


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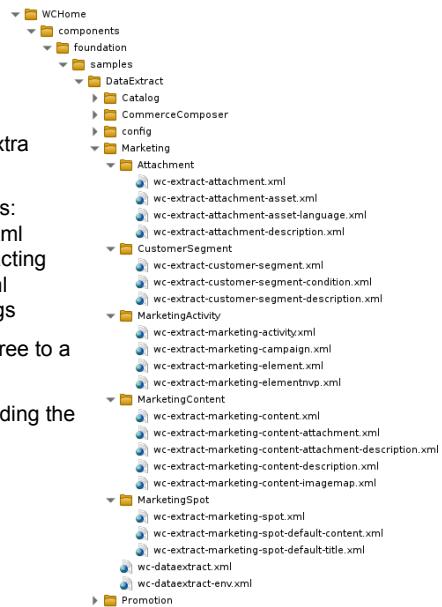
Import/Export of Marketing Activities

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 - Reproducing issues relating to marketing (e.g. wrong promotion prices) in a test environment, using production data
- The data extract and load utilities now supports exporting and importing marketing data:
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 - Customer segments
 - Content
 - E-Marketing Spots
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Exporting Marketing Data

Marketing Extract Configuration

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 - Defines basic data, e.g. database settings
- You should copy the entire Marketing directory tree to a working directory before extracting
- You can configure all details of the extract, including the SQL statements, if needed



Marketing Extract Process

- Copy sample files to extract working directory
 - Samples are in WCHome/components/foundation/samples/DataExtract/Marketing
- Edit environment settings (wc-dataextract-env.xml)
 - Database settings (default: Cloudscape)
 - Language to export (default: US English)
 - Store for which data should be exported (default: Aurora)
- Edit export settings (wc-dataextract.xml)
 - Output directory
 - Which types of assets to export
 - File names for exported data
- Advanced: Modify individual component configuration files
- Run data extract utility
- Verify generated files
- Optional: Modify data to fit target system
- Load files into target system using the data load utility
 - See second part of presentation for this process

Settings in wc-dataextract-env.xml

- Basic configuration is stored in wc-dataextract-env.xml
 - This file name can be overridden by a setting in wc-dataextract.xml
 - Store to export from (storeIdentifier attribute)
 - Language to export for (langId)
 - Master catalog to export for (catalogIdentifier)
 - Database settings (_config:Database node)

```
<_config:DataLoadEnvConfiguration
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://www.ibm.com/xmlns/prod/commerce/foundation/config ../xsd/wc-dataextract-env.xsd"
  xmlns:_config="http://www.ibm.com/xmlns/prod/commerce/foundation/config">

  <_config:BusinessContext storeIdentifier="Aurora" langId="-1" catalogIdentifier="Aurora"/>

  <_config:Database name="..\db\mall" type="derby" />

  <!-- database setting for Oracle -->
  <!--
  <_config:Database name="<database name>" user="<user>" password="<password>"
    port="1521" schema="<schema name>" server="<server>" type="Oracle" dbDriverType="thin" />
  -->

  <!-- database setting for AIX/DB2 server -->
  <!--
  <_config:Database type="db2" name="<database name>" user="<user>" password="<password>" server="<server>"
    port="<port>" schema="<schema name>" />
  -->

</_config:DataLoadEnvConfiguration>
```

Settings in wc-dataextract.xml

- Extract options are stored in wc-dataextract.xml
- Output directory (default is a directory called output under the location of wc-dataextract.xml)

```
<_config:Variable name="outputDirectory" value="output" />
```

- Environment configuration file (default: wc-dataextract-env.xml)

```
<_config:DataLoadEnvironment configFile="wc-dataextract-env.xml" />
```

- Basic CSV file format

```
<_config:property name="firstTwoLinesAreHeader" value="true" />
```

- Which data to export and output file names for exported data (default: everything in subdirs)

```
<!-- Marketing Activity -->
<_config:LoadItem name="MarketingCampaign" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-campaign.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingCampaign.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingActivity" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-activity.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingActivity.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingElement" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-element.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingElement.csv" />
</_config:LoadItem>

<_config:LoadItem name="MarketingElementNVP" businessObjectConfigFile="MarketingActivity/wc-extract-marketing-elementnvp.xml" >
  <_config:DataOutputLocation location="{outputDirectory}/MarketingActivity/MarketingElementNVP.csv" />
</_config:LoadItem>
```


Individual business object mediator and data reader files

- The details of how to export individual objects are in the subdirectories
- Example from CustomerSegment/wc-extract-customer-segment.xml:

```

<_config:DataLoader className="com.ibm.commerce.foundation.dataLoad.BusinessObjectLoader">
  <_config:DataReader className="com.ibm.commerce.foundation.dataLoad.dataReader.UniqueIdReader" >
    <_config:Query>
      <_config:SQL>
        <![CDATA[
          SELECT MBRGRP_MBRGRP_ID
          FROM MBRGRP
          JOIN MBRGRPUSG ON (MBRGRP.MBRGRP_ID = MBRGRPUSG.MBRGRP_ID)
          JOIN STOREENT ON (MBRGRP.OWNER_ID = STOREENT.MEMBER_ID)
          WHERE MBRGRPUSG.MBRGRP_TYPE_ID = -1 AND STOREENT.STOREENT_ID = ?
          ORDER BY MBRGRP.MBRGRP_ID
        ]]>
      </_config:SQL>
      <_config:Param name="storeId" valueFrom="BusinessContext" />
    </_config:Query>
  </_config:DataReader>
  <_config:BusinessObjectMediator className="com.ibm.commerce.foundation.dataLoad.dataReader.UniqueIdReader" >
    <_config:Query>
      <_config:SQL>
        <![CDATA[
          FROM MBRGRP
          LEFT OUTER JOIN MBRGRPDESC ON (MBRGRP.MBRGRP_ID = MBRGRPDESC.MBRGRP_ID AND MBRGRPDESC.LANGUAGE_ID = ?)
          WHERE MBRGRP.MBRGRP_ID IN (?)
        ]]>
      </_config:SQL>
      <_config:Param name="langId" valueFrom="BusinessContext" />
      <_config:Param name="MBRGRP_ID" />
      <_config:ColumnMapping name="MBRGRPNAME" value="memberGroupName" />
      <_config:ColumnMapping name="USAGE" value="usage" />
      <_config:ColumnMapping name="DISPLAYNAME" value="shortDescription" />
      <_config:ColumnMapping name="DESCRIPTION" value="longDescription" />
    </_config:Query>
    <_config:DataWriter className="com.ibm.commerce.foundation.dataLoad.dataWriter.CSVWriter">
      <_config:Data>
        <_config:Column number="1" name="memberGroupName" />
        <_config:Column number="2" name="usage" />
        <_config:Column number="3" name="shortDescription" />
        <_config:Column number="4" name="longDescription" />
        <_config:Column number="5" name="delete" value="0" />
      </_config:Data>
    </_config:DataWriter>
  </_config:BusinessObjectMediator>
</_config:BusinessObjectLoader>

```

Exported data

- Generated unique IDs (e.g. MBRGRP_ID) are not exported to avoid conflicts in target system
 - Instead, the unique key values are exported (e.g. MBRGRP.NAME)
 - Data load will then resolve the generated IDs when loading the data
- Files are comma-delimited (CSV) text files
 - Default setting includes two header lines
 - Asset type
 - Column definitions
 - Files are generated with UNIX line endings
- Example:

```
MemberGroup
memberGroupName,usage,shortDescription,longDescription,delete
Registered Customers,GeneralPurpose,Registered Customers,Customers who have registered,0
Repeat Customers,GeneralPurpose,Repeat Customers,Customers who have placed an order,0
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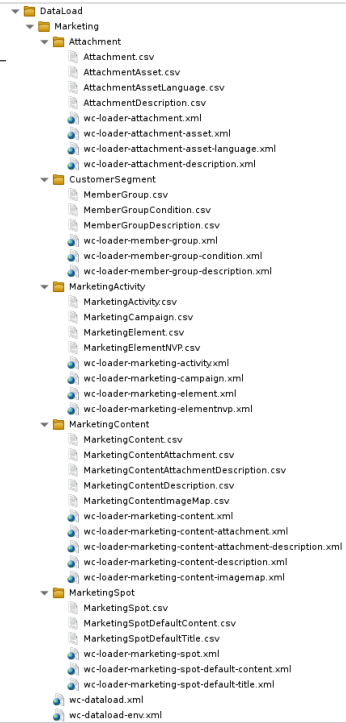
Usage Notes

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 - For production environments, create marketing data in a staging or authoring server and then publish to the live servers
- Extracts are limit to a single store
 - If you need data from multiple stores, re-run the utility for each store
- Extracted attachment data does not include file data
 - You must manually import actual files before loading an extract if needed
- Not all Activity data is exported, for example:
 - Search rules
 - E-mail templates
- The functionality requires install of cumulative fixes JR53438.fp and JR53438.fep
- Since this feature is using data extract, troubleshooting is the same as for other extracts
 - Specifically, the log file is saved in *WC_Home/logs/wc-dataextract.log*

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 - You can delete the sample CSV files if you are loading previously extracted data



Marketing Load Process

- Copy sample files to load working directory
 - Samples are in WCHome/components/foundation/samples/DataLoad/Marketing
 - Exclude the sample CSV files if you are planning on loading a previously extract
- Edit environment settings (wc-dataload-env.xml)
 - Database settings
 - Language to export
 - Store for which data should be exported
- Edit load settings (wc-dataload.xml)
 - Load directories
 - Which types of assets to load
 - File names for exported data
- Copy previously extracted files to the working directory
- Run data load utility
- Verify log files

Settings in wc-dataload-env.xml

- Basic configuration is stored in wc-dataload-env.xml
 - Includes the same settings as for wc-dataextract-env.xml
 - Additionally settings for the ID resolver and JDBC data writer

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  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
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  xmlns:_config="http://www.ibm.com/xmlns/prod/commerce/foundation/config">

  <_config:BusinessContext storeIdentifier="Aurora" langId="-1" catalogIdentifier="Aurora"/>

  <_config:Database name="..\db\mall" type="derby" />

  <!-- database setting for Oracle -->
  <!--
  <_config:Database name="<database name>" user="<user>" password="<password>"
    port="1521" schema="<schema name>" server="<server>" type="Oracle" dbDriverType="thin" />
  -->

  <!-- database setting for AIX/DB2 server -->
  <!--
  <_config:Database type="db2" name="<database name>" user="<user>" password="<password>" server="<server>"
    port="<port>" schema="<schema>" />
  -->

  <_config:IDResolver className="com.ibm.commerce.foundation.dataload.idresolve.IDResolverImpl" cacheSize="2000000" >
  </_config:IDResolver>

  <_config:DataWriter className="com.ibm.commerce.foundation.dataload.datawriter.JDBCDataWriter" />

</_config:DataLoadEnvConfiguration>
```

Settings in wc-dataload.xml

- Load options are stored in wc-dataload.xml
- Environment configuration file (default: wc-dataextract-env.xml)

```
<_config:DataLoadEnvironment configFile="wc-dataextract-env.xml" />
```

- Commit count and load mode

```
<_config:LoadOrder commitCount="10000" batchSize="1" dataLoadMode="Insert">
```

- Basic CSV file format

```
<_config:property name="firstTwoLinesAreHeader" value="true" />
```

- Which data to load and input file names for exported data (default: same as data extract)

```
<!-- Marketing Activity -->
<_config:LoadItem name="MarketingCampaign" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-campaign.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingCampaign.csv" />
</_config:LoadItem>
<_config:LoadItem name="MarketingActivity" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-activity.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingActivity.csv" />
</_config:LoadItem>
<_config:LoadItem name="MarketingElement" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-element.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingElement.csv" />
</_config:LoadItem>
<_config:LoadItem name="MarketingElementNVP" businessObjectConfigFile="MarketingActivity/wc-loader-marketing-elementnvp.xml" >
  <_config:DataSourceLocation location="MarketingActivity/MarketingElementNVP.csv" />
</_config:LoadItem>
```


Individual business object mediator and data reader files

- The details of how to load individual objects are in the subdirectories
- Example from CustomerSegment/wc-loader-customer-segment.xml:

```
<_config:DataLoader className="com.ibm.commerce.foundation.dataLoad.BusinessObjectLoader" >
  <_config:DataReader className="com.ibm.commerce.foundation.dataLoad.dataReader.CSVReader" firstLineIsHeader="true" useHeaderAsColumnName="true" >
    <_config:property name="keyColumns" value="memberGroupName,ownerId,storeId,storeIdentifier" />
  </_config:DataReader>
</_config:DataLoader>
<_config:BusinessObjectBuilder className="com.ibm.commerce.foundation.dataLoad.businessobjectbuilder.BaseBusinessObjectBuilder"
  packageName="com.ibm.commerce.member.facade.datatypes.MemberPackage" dataObjectType="MemberGroupType" >
  <_config:DataMapping>
    <_config:mapping xpath="MemberGroupIdentifier/UniqueID" value="memberGroupId" />
    <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/Name" value="memberGroupName" />
    <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/ownerID" value="ownerId" />
    <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/StoreIdentifier/UniqueID" value="storeId" />
    <_config:mapping xpath="MemberGroupIdentifier/ExternalIdentifier/StoreIdentifier/ExternalIdentifier/NameIdentifier" value="storeIdentifier" />
    <_config:mapping xpath="LastUpdate" value="lastUpdate" />
    <_config:mapping xpath="LastUpdatedBy" value="lastUpdatedByLogonId" />
    <_config:mapping xpath="MemberGroupDescription[0]/ShortDescription" value="shortDescription" />
    <_config:mapping xpath="MemberGroupDescription[0]/LongDescription" value="longDescription" />
    <_config:mapping xpath="MemberGroupDescription[0]/Language" value="langId" />
    <_config:mapping xpath="Usage[0]" value="usage" />
    <_config:mapping xpath="" value="delete" deleteValue="1"/>
  </_config:DataMapping>
</_config:BusinessObjectBuilder>
</_config:BusinessObjectMediator>
</_config:BusinessObjectMediator>
</_config:BusinessObjectBuilder>
</_config:DataLoader>
```



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