

Version 25



Trapeze

Enterprise Asset Management

Comma Conversion

Tool Reference Guide

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Technical Support

Trapeze provides several ways to connect with the Customer Care team. Please provide detailed information to the representative. If you are reporting an issue by e-mail, include any error messages, screen shots of your problem, and steps to replicate the issue.

Customer Care is available Monday through Friday, 8:00 a.m. to 8:00 p.m., Eastern Standard Time.

Toll-Free Telephone: 1-877-411-8727

E-mail: cc@trapezegroup.com

FTP Site: <https://ftps.trapezegroup.com/>

Web Site: <https://collaborate.trapezegroup.com>

The website provides access to Trapeze Collaborate which offers resources to implement and operate the software, search knowledge, participate in communities, log/track service requests, sign-up for release alerts, view product health recommendations, and download updates or documentation. For secure access to Collaborate, contact Customer Care through the website or by calling the number above.

Product Compatibility

Refer to the latest [Product Compatibility](#) information on Trapeze Collaborate for requirements including operating system information, databases, Crystal reports, network protocol, HTTP servers and browsers that are supported.

Comma Conversion Tool - User Guide

February 2025

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1. Overview

This guide is for customers upgrading from versions prior to 6.4, or for clients that were on versions prior to 6.4 and have since been updated. New customers in version 6.4 and forward do not need to perform the steps provided below.

Prior versions of the application stored commas in the database as y-accents (character 253, sometimes referred to incorrectly as y-hats). As of version 6.4, data is saved with commas, and not as y-accents. Filters can search for commas in the database instead of y-accents. Because of this, it is recommended that customers change the way the application handles comma characters, by using the Comma Conversion Utility. This tool runs updates against the system database, replacing y-accents with commas, and sets a flag which changes the way the application processes commas, so that y-accents are no longer used. After running this utility, new data entered with commas will be stored as commas, and filtering for commas will look for actual commas in the database instead of y-accents.

The Comma Conversion Utility is a stand-alone application that can be installed and run on any platform that has the prerequisites listed below.

An example of fields to change is provided. This list includes IDs, descriptions, and names. We recommend that customers review this list and modify the configuration file to suit their needs. Alternatively, we have provided two [SQL queries \(MSSQL & Oracle\)](#) for generating a conversion plan that covers all VARCHAR database columns with a character length greater than one. This plan is much more thorough but will also take longer to complete depending on the size of the database.

Requirements

- Connectivity to the system database version 6.4 or later
- Oracle Client (32- or 64- bit) for the platform you are running the utility on (if running against Oracle)
- ODAC of the appropriate version for your Oracle database (if running against Oracle)



Note: ODAC for Oracle may require .NET 2.0 be installed (in addition to .NET 4.0) in order to install and run correctly on Windows. Please refer to your Oracle documentation for more information.

- SQL Server Native Client of the appropriate version for your SQL Server (if running against SQL Server)
- .NET Requirements:
 - .NET 4.0 – Versions 14.x and previous

- .NET 4.5.1 - Versions 15.x and forward
- .NET 4.7.2 – Versions 19.0.x and forward

2. Install and Configure

Install the Utility

Copy the utility to a directory in your local file system.

Configure the Utility to Connect to Your Database

The tool uses the *ConvertCommas.exe.config* configuration file for the application database connection information. Modify this file with the correct information to connect to your application's database, using the samples below as a guide.

Connecting to Oracle Database

1. Update the **DatabaseType** value to be ORACLE.
2. Update the **DatabaseServer** value to be blank. This value is not required for Oracle databases. See the example below for how this element should be set.
3. Update the **DatabaseName** value to match your **TNSNames** Connect Identifier entry for the database (EAMPROD in the example below).
4. Add the following section on a new line between `</startup>` and `</configuration>`.

```
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentity name="Oracle.DataAccess"
        publicKeyToken="89b483f429c47342" culture="Neutral"/>
      <bindingRedirect oldVersion="2.102.2.20"
        newVersion="[YOUR Oracle.DataAccess.dll VERSION]"/>
      <publisherPolicy apply="no"/>
    </dependentAssembly>
  </assemblyBinding>
</runtime>
```

5. Update the **newVersion** value to match the **Oracle.DataAccess** version your database is running against. This will be the version on the server that is associated with the Oracle client that you are running the tool on. This value can also be found on the Database or Advanced tab of the Web Modules configurator.

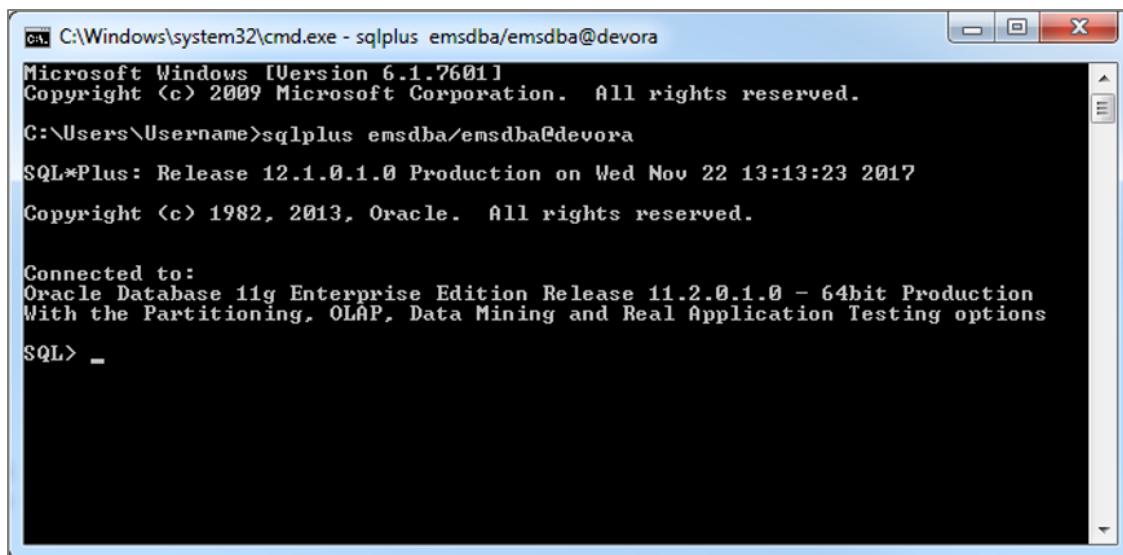
```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
```

```
<configSections>
  <section name="FASuiteConfiguration"
type="FACCommon.Configuration, FACCommon"/>
</configSections>
<FASuiteConfiguration>
  <add key="FASuite.DataAccess.DatabaseType" value="ORACLE"/>
  <add key="FASuite.DataAccess.DatabaseServer" value=""/>
  <add key="FASuite.DataAccess.DatabaseName" value="EAMPROD"/>
</FASuiteConfiguration>
<appSettings/>
<startup>
  <supportedRuntime sku=".NETFramework,Version=v4.7.2"
version="v4.0"/>
</startup>
<runtime>
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentity culture="Neutral"
name="Oracle.DataAccess" publicKeyToken="89b483f429c47342"/>
      <bindingRedirect oldVersion="2.102.2.20"
newVersion="4.122.18.3"/>
      <publisherPolicy apply="no"/>
    </dependentAssembly>
  </assemblyBinding>
</runtime>
</configuration>
```

Using 32-bit vs 64-bit Oracle

The tool is setup to be able to run against 64-bit Oracle client without an issue.

1. Confirm if your data base in on a 32-bit or 64-bit Oracle by opening a command prompt and connecting to the database via SQLPlus as sysadmin



```
C:\Windows\system32\cmd.exe - sqlplus emsdba/emsdba@devora
Microsoft Windows [Version 6.1.7601]
Copyright (c) 2009 Microsoft Corporation. All rights reserved.

C:\Users\Username>sqlplus emsdba/emsdba@devora
SQL*Plus: Release 12.1.0.1.0 Production on Wed Nov 22 13:13:23 2017
Copyright (c) 1982, 2013, Oracle. All rights reserved.

Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.1.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options
SQL> _
```

2. If you are already on 64-bit, no further action required. If you are on 32-bit, take the next steps below.
3. In the Comma Conversion tool's directory, navigate to the CorFlag directory.
4. In this directory run the Set32_Auto.bat file. This will set the tool to run as a 32-bit.

 Note: If you need to go back to using 64-bit, run the Set64.bat file.

Connecting to SQL Server Database

1. Modify the DatabaseType element to be MSSQL.
2. Modify the DatabaseServer element to be the server that the database is on (10.100.11.10 in the example below).
3. Modify the DatabaseName element to match the database name as it resides on the server (called [DatabaseName] in the example below, remove brackets when entering the actual name).

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <configSections>
    <section name="FASuiteConfiguration"
type="FACCommon.Configuration, FACCommon"/>
  </configSections>
  <FASuiteConfiguration>
    <add key="FASuite.DataAccess.DatabaseType" value="MSSQL"/>
    <add key="FASuite.DataAccess.DatabaseServer"
value="AWESOMESERVER1\SQLEXPRESS"/>
    <add key="FASuite.DataAccess.DatabaseName" value="EAMPROD"/>
  </FASuiteConfiguration>
  <appSettings/>
  <startup>
    <supportedRuntime sku=".NETFramework,Version=v4.7.2"
version="v4.0"/>
  </startup>
</configuration>
```

Back up Your Database

As a standard practice, always make a backup of your database before performing any data changes on your production database.

3. Conversion Plan

How Does the Tool Know What Fields to Update?

The Comma Conversion Utility looks for a file called *ConvertPlan.xml* which defines for the tool what columns in the database to convert from y-accents to commas.

The utility does not automatically update all fields in the database as this would take an extensive amount of time. It is recommended that you add fields to the provided configuration file as needed. For example, if you run reports on a regular basis and see y-accents, add those fields to the configuration file.

 Important: Once the comma conversion tool has run, the system will search for commas instead of y-accents. It is important that you convert all field data with y-accents so filters can find all proper data in all fields. If the data you search for still exists with y-accents, the search will not return these items since it now filters on commas instead of the y-accent character.

- For example: If the field you search for includes a comma, such as **123,45**, and that field was not converted, the system will not return the search because in the database, that data is still stored as **123ÿ45**.

If you do want to cover all fields in the database, we have provided a SQL query you can run against your database that will give you a list of all columns in the database whose character limit is greater than one. The output of this query includes all the necessary XML tags to create a complete *ConvertPlan.xml* file. Ensure each of your rows from the SQL script's output are not encased in "" when you copy the SQL script's output. Keep in mind this conversion could take a considerable amount of time depending on the size of your database.

MSSQL Query

```
SELECT xml FROM ( SELECT '<ConvertPlan>' AS xml, '____' AS TABLE_NAME
FROM SYS_MAIN UNION ALL SELECT CONCAT( '      <Group title="",
TABLE_NAME, ' - ', COLUMN_NAME, '">
                <Table name="", TABLE_NAME, '" column="", COLUMN_NAME,
'"></Table>
                </Group>' ), TABLE_NAME FROM DATA_DICTIONARY WHERE OBJECT_TYPE
= 'Table' AND COLUMN_TYPE LIKE 'varchar%' AND TOTAL_WIDTH > 1 UNION ALL
SELECT '</ConvertPlan>' AS xml, 'zzzzz' AS TABLE_NAME FROM SYS_MAIN )
TMPDATA ORDER BY TABLE_NAME;
```

Oracle Query

```
SELECT xml FROM( SELECT '<ConvertPlan>' AS xml, 'AAAA' AS TABLE_NAME
FROM SYS_MAIN UNION ALL SELECT ('    <Group title="" || TABLE_NAME || '
- ' || COLUMN_NAME || '">
        <Table name="" || TABLE_NAME || '" column="" || COLUMN_NAME
|| '"></Table>
        </Group>') AS xml, TABLE_NAME FROM DATA_DICTIONARY WHERE
OBJECT_TYPE = 'TABLE' and COLUMN_TYPE like 'VARCHAR%' and TOTAL_WIDTH >
1 UNION ALL SELECT ('</ConvertPlan>') AS xml, 'ZZZZ' AS TABLE_NAME FROM
SYS_MAIN ) TMPDATA ORDER BY TABLE_NAME;
```

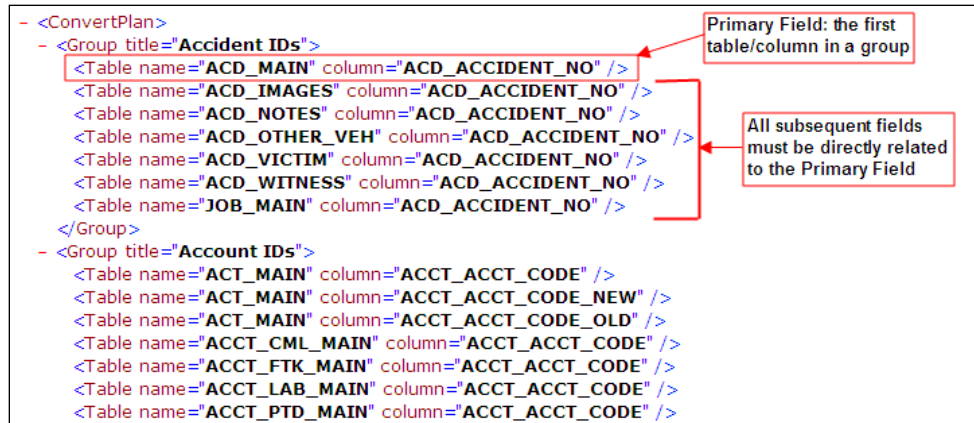
How to Edit ConvertPlan.xml

By default, we have included several known table or column combinations where commas may have been stored as y-accents. Modify this file to add and remove tables or columns as you need, using the provided sample file as a guide.

The following list outlines some basic rules to keep in mind when editing the *ConvertPlan.xml* file:

- Any changes you make to the file must be well-formed xml. Follow the default *ConvertPlan.xml* file as a format guide.
- Table and field names may be upper or lower case.
- Any tables/columns you add to the *ConvertPlan.xml* file must be tables/columns from the asset management system application, and must be data types that the tool can change (see below for explanation of which data types the tool can and cannot change).
- Tables/columns are added to a group. Each group is processed as a single database transaction, and will either successfully update together, or fail together.
- The first table/column in a group is the primary field. This can affect processing, as the utility will check the primary field first for y-accent characters, and if it finds any, will process the subsequent fields in the group. If the utility does not find any y-accents in the primary field, it will not process subsequent fields in the group, and will move on to the next group.
- As a rule, subsequent tables/columns in a group should be directly related to the primary field for that group.

See the default file for an example of how things are grouped.



Data Types the Tool Can Change

- VARCHAR
- VARCHAR2

These data types are what this tool is intended to convert. Most fields that affect the application or reports reside in these types of fields.

Data Types the Tool Cannot Change

- LONG data types (Oracle Only)
- TEXT data types (SQL Server Only)

LONG data type fields (Oracle Only) and TEXT data type fields (SQL Server Only) are special data types in the database that limit the operations that can be performed on them due to the way they are stored. For this reason, the tool will not convert the characters in these fields. The tool will pass over any groups that contain mappings to these kinds of fields by throwing an error.

The tool then continues to the next group in your convert plan.

If you intend to convert y-accent in LONG or TEXT fields, please contact your database Administrator for help as it is beyond the scope of this utility, and may involve complex database procedures.

Save the Changes to ConvertPlan.xml

Save changes to the file. When you run the tool, errors will be displayed in detail if there are problems with your edits in the .xml file. If this happens, you may correct errors and run the tool again.

4. Disable Update Triggers in the database

You may have triggers in your database that are fired on updates. If this is the case, disable these triggers before running the comma conversion tool as they may interfere or cause performance problems. If you are absolutely sure that the trigger does not affect any table or columns laid out in your conversion plan (described below), you may skip this step. You may enable triggers again after you have completed the conversion process.

For more information about disabling and enabling triggers, contact your database administrator.

5. Run the Tool

When to Run the Tool

Run this tool during off hours, when you can have exclusive access to the database. The asset management application should not be running against the database, and users should not be accessing data while this utility is running.

How to Run the Tool

Use the following procedure to run the comma conversion tool.

To run the tool:

1. Open a Windows Command Process (also known as command prompt) and navigate to the directory in which you placed the utility.
2. Type **convertcommas**, and provide as an argument, the password for the EMSDBA account that you have configured for the application to access the database. If you do not know this password, contact your database administrator.

```
C:\ConvertComma> convertcommas emsdba
```

3. Press **Enter**.

As the tool runs, results are displayed in the console window as in the example below:

```
Starting Comma Conversion Process @ 02/11/2012 10:05:03 Converting Group
[Accident IDs]
    ACD_MAIN.ACD_ACCIDENT_NO
    ACD_IMAGES.ACD_ACCIDENT_NO
    ACD_NOTES.ACD_ACCIDENT_NO
    ACD_OTHER_VEH.ACD_ACCIDENT_NO
    ACD_VICTIM.ACD_ACCIDENT_NO
    ACD_WITNESS.ACD_ACCIDENT_NO
    JOB_MAIN.ACD_ACCIDENT_NO
Converted 7 columns in [Accident IDs] group
Converting Group [Account IDs]
    No commas found in group, not converting
Converting Group [Account Group IDs]
    No commas found in group, not converting
    and so on
```

Total Groups Processed:	117
Groups with commas:	1
Groups without commas:	116
Group rollbacks:	0
Total Columns Processed:	7

Comma Conversion Completed @ 02/11/2012 10:05:04

Summary Output Description

Total Groups Processed: Total groups defined in your convert plan that were processed.

Groups with commas: Groups that had commas in the primary field and any subsequent fields.

Groups without commas: Groups that had no commas found in the primary field or any subsequent fields.

Group rollbacks: Groups that had errors and were rolled back and not changed.

Total Columns Processed: Number of columns (fields) processed.

Utility Log

The utility creates a log of what it does (*commaconvert.log*) and places the file in a directory named **LogDir**. The log contains a simple output of what happened during the run.

Errors

Critical errors encountered by the tool will be displayed in the console window, and the tool will stop. Correct any errors conditions that occur, and run the tool again.

Minor errors encountered by the tool will also be displayed in the console window, and the tool will continue to run. These include things such as errors processing groups in the convert plan. Correct any problematic errors and run the tool again where necessary.

Most errors are described fairly well as they are output, but if you encounter an error that you do not understand, please contact Customer Care.

Error: Could not load file or assembly



Note: This error is an Oracle error only.

Could not load file or assembly 'Oracle.DataAccess, Version=4.121.2.0, Culture=neutral, PublicKeyToken=89b483f429c47342' or one of its dependencies. The system cannot find the file specified.

The error occurs because the application is running as 64-bit, and cannot find a 64-bit Oracle client to connect to the database. Run the Set32.bat file in the CorFlaq directory of the tool to fix this.