

What's New in **SAS[®] Quality Knowledge Base for Contact Information 28**

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What's New in SAS® Quality Knowledge Base for Contact Information 28

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What's New in SAS Quality Knowledge Base for Contact Information 28

The SAS Quality Knowledge Base (QKB) is a collection of files that store data and logic that define data management operations. SAS software products reference the QKB when performing data management operations on your data.

This document explains the changes in SAS Quality Knowledge Base for Contact Information (CI) 28.

- [Overview](#)
- [Locale Support](#)
- [Additional Tokens](#)
- [Deprecations](#)
- [Enhancements](#)
- [Pre-parsed Input](#)
- [Known Problems](#)

See the SAS Quality Knowledge Base for Contact Information 28 online Help for additional information. For information about previous releases, see the SAS Quality Knowledge Base product page at <http://support.sas.com/documentation/onlinedoc/qkb/>.

Overview

SAS QKB CI 28 includes updates for the following locales and definitions:

All Locales

- Country locale guess and match definitions
- Country (ISO 2 Char), Country (ISO 3 Char), and Country (ISO Number) standardization definitions
- Date (DMY), Date (MDY), and Date (YMD) match, parse, and standardization definitions
- E-mail identification analysis, match, parse, and standardization definitions
- Phone locale guess definition

All English Locales

- Country, Country (Region), and Country (Sub-Region) standardization definitions

English, Philippines

- Address match and standardization definitions
- City match and standardization definitions
- City - State/Province - Postal Code match, parse, and standardization definitions
- Division standardization definition
- Organization match, parse, and standardization definitions
- Phone match, parse, and standardization definitions
- Postal Code match and standardization definitions
- State/Province match and standardization definitions
- Voter ID parse and standardization definitions

English, United States

- Address standardization definition

Various Locales

- Standardization and match definitions handling Date and Date/Time information have been updated so that a 2-digit year is assumed to fall between 1950 and 2049.

See the [Enhancements](#) section for a list of definitions that have been added or modified in this release. See the [Deprecations](#) section for a list of definitions that have been deprecated, renamed, or removed in this release.

The file format of libraries in this release differs from the file format of libraries in releases earlier than QKB CI 2010B. Therefore, it is not possible to merge QKB CI 28 into any QKB that was released prior to QKB CI 2010B. It is possible to merge an earlier QKB release into QKB CI 28 after installing the latest into a separate location. See the QKB Merge Tool section in the DataFlux Data Management Studio online Help for details.

Locale Support

This release includes support for the following locales:

Afrikaans, South Africa	English, South Africa	Korean, South Korea
Arabic, Egypt *	English, United Kingdom	Malay, Malaysia
Chinese, China	English, United States	Norwegian, Norway

Czech, Czech Republic	Finnish, Finland	Polish, Poland
Danish, Denmark	French, Belgium	Portuguese, Brazil
Dutch, Belgium	French, Canada	Portuguese, Portugal
Dutch, Netherlands	French, France	Russian, Russia
English, Australia	German, Germany	Slovak, Slovakia
English, Canada	Greek, Greece	Spanish, Mexico
English, Hong Kong *	Hebrew, Israel	Spanish, Spain
English, India	Hungarian, Hungary	Swedish, Sweden
English, New Zealand	Italian, Italy	Thai, Thailand
English, Philippines	Japanese, Japan	Turkish, Turkey

* partial support. See the Definitions by Locale section of the SAS QKB online Help.

Full Support

The following table lists the definition names and types that are fully supported in SAS QKB CI.

Definition Name	Definition Type
Account Number	Match
Address	Match, Parse, and Standardization
Address (Global)	Parse
ASCII Non-Printable Character Removal	Standardization
Character	Pattern Analysis
Character (Script Identification)	Pattern Analysis
City	Match and Standardization
City - State/Province - Postal Code	Match and Standardization
E-mail	Match, Parse, and Standardization
E-mail (Country Identification)	Identification Analysis
E-mail (Validation)	Identification Analysis
E-mail (with Combinations)	Match
Hyphen/Dash Removal	Standardization
IBAN	Parse
IBAN (Detailed)	Parse
IBAN (Electronic)	Standardization
IBAN (Printed)	Standardization
Name	Match, Parse, and Standardization
Name (Global)	Parse
Non-Alphanumeric Removal	Standardization
Non-Number Removal	Standardization
Number Removal	Standardization
Organization	Match and Standardization

Definition Name	Definition Type
Phone	Match, Parse, and Standardization
Phone (Global)	Parse
Phone Country Code to Country Name	Standardization
Postal Code	Match and Standardization
Punctuation Removal	Standardization
Punctuation Space Replacement	Standardization
Space Removal	Standardization
Surrounding Quote Removal	Standardization
URL	Standardization
Word	Pattern Analysis
Word (Script Identification)	Pattern Analysis

Additional Tokens

None.

Deprecations

The following tables list the deprecated definitions that exist in this QKB and their current statuses with the actions that users should take within the existing jobs to use the latest processing. Details about the deprecation status and the changes to each definition are available in the documentation for the definition. The deprecation process is fully described in the Deprecation Policy topic in the SAS QKB online Help.

Afrikaans, South Africa

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

Chinese, China

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Czech, Czech Republic

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Danish, Denmark

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Dutch, Belgium

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Dutch, Netherlands

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

English, Australia

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, Canada

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, Hong Kong

Deprecated/Removed Definition	Definition Type	Status	Action
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, India

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, New Zealand

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, Philippines

Deprecated/Removed Definition	Definition Type	Status	Action
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, South Africa

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, United Kingdom

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

English, United States

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Deprecated/Removed Definition	Definition Type	Status	Action
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use
Proper (Address)	Case	Deprecated	Replace with Address standardization definition

Finnish, Finland

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

French, Belgium

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

French, Canada

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Country (FIPS)	Standardization	Deprecated	Discontinue use
Country (Internet)	Standardization	Deprecated	Discontinue use

French, France

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

German, Germany

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Greek, Greece

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Hungarian, Hungary

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Italian, Italy

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Japanese, Japan

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Korean, South Korea

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Malay, Malaysia

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Norwegian, Norway

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Polish, Poland

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Portuguese, Brazil

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
City (v27)	Match	Removed	Replace with updated City match definition
City - State/Province - Postal Code (v27)	Match	Removed	Replace with updated City - State/Province - Postal Code match definition
City - State/Province - Postal Code (v27)	Standardization	Removed	Replace with updated City - State/Province - Postal Code standardization definition
Organization (v27)	Match	Removed	Replace with updated Organization match definition

Portuguese, Portugal

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Russian, Russia

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Slovak, Slovakia

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Spanish, Mexico

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
City - State/Province - Postal Code (v27)	Match	Removed	Replace with updated City - State/Province - Postal Code match definition
Organization (v27)	Match	Removed	Replace with updated Organization match definition
Proper (City - State/Province - Postal Code)	Case	Removed	Replace with City - State/Province - Postal Code standardization definition
Proper (Organization)	Case	Removed	Replace with Organization standardization definition

Spanish, Spain

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use
Organization (v27)	Match	Removed	Replace with updated Organization match definition
Proper (Organization)	Case	Removed	Replace with Organization standardization definition

Swedish, Sweden

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Thai, Thailand

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Turkish, Turkey

Deprecated/Removed Definition	Definition Type	Status	Action
Address	Locale Guess	Deprecated	Discontinue use

Enhancements

Definitions including the version tag (v28) are the newest definitions. We recommend that you use these new definitions when possible. Be aware that software version restrictions apply for some definitions. See [Deprecations](#) for more details.

Here is a list of definitions that have been added or modified in this release. See the online Help for details about these definitions.

Afrikaans, South Africa

Definition Name	Action	Type of Definition
Address	Modified	Match
Address (Full)	Modified	Match
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization

Definition Name	Action	Type of Definition
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Organization Registration	Modified	Match
Phone	New	Locale Guess

Arabic, Egypt

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Chinese, China

Definition Name	Action	Type of Definition
Address (Full)	Modified	Parse
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date	Modified	Match
Date (Chinese Calendar)	Modified	Standardization
Date (DMY)	New	Match, Parse, and Standardization

Definition Name	Action	Type of Definition
Date (MDY)	New	Match, Parse, and Standardization
Date (Western Calendar)	Modified	Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	Modified	Parse
Phone	New	Locale Guess

Czech, Czech Republic

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Danish, Denmark

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Dutch, Belgium

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Dutch, Netherlands

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

English, Australia

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization

Definition Name	Action	Type of Definition
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

English, Canada

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization

Definition Name	Action	Type of Definition
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

English, Hong Kong

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match

Definition Name	Action	Type of Definition
Phone	New	Locale Guess

English, India

Definition Name	Action	Type of Definition
Address	Modified	Match
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

English, New Zealand

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization

Definition Name	Action	Type of Definition
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

English, Philippines

Definition Name	Action	Type of Definition
Address	New	Match and Standardization
Address (Abbreviated Street Name)	New	Standardization
City	New	Match and Standardization
City - State/Province - Postal Code	New	Match, Parse, and Standardization
City - State/Province - Postal Code (Global)	New	Parse
City - State/Province - Postal Code (International)	New	Standardization
Country	New	Locale Guess
Country	Modified	Match and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization

Definition Name	Action	Type of Definition
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
Division	New	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Organization	New	Match, Parse, and Standardization
Organization (Global)	New	Parse
Phone	New	Locale Guess, Match, Parse, and Standardization
Phone (Electronic)	New	Standardization
Phone (Global)	New	Parse
Phone (with Country Code)	New	Standardization
Postal Code	New	Match and Standardization
Postal Code (with Country Code)	New	Standardization
State/Province	New	Match and Standardization
Voter ID	New	Parse and Standardization

English, South Africa

Definition Name	Action	Type of Definition
Address	Modified	Match
Address (Full)	Modified	Match
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Organization Registration	Modified	Match
Phone	New	Locale Guess

English, United Kingdom

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization

Definition Name	Action	Type of Definition
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

English, United States

Definition Name	Action	Type of Definition
Address	Modified	Match, Parse, and Standardization
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization

Definition Name	Action	Type of Definition
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Name	Modified	Parse
Phone	New	Locale Guess

Finnish, Finland

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

French, Belgium

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization

Definition Name	Action	Type of Definition
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

French, Canada

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess, Match, and Standardization
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	Modified	Standardization
Country (Region)	Modified	Standardization
Country (Sub-Region)	Modified	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
Date/Time (DMY)	Modified	Match
Date/Time (DMY) Basic	Modified	Standardization
Date/Time (DMY) Extended	Modified	Standardization
Date/Time (MDY)	Modified	Match
Date/Time (MDY) Basic	Modified	Standardization
Date/Time (MDY) Extended	Modified	Standardization
Date/Time (YMD)	Modified	Match
Date/Time (YMD) Basic	Modified	Standardization
Date/Time (YMD) Extended	Modified	Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

French, France

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	Modified	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

German, Germany

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Greek, Greece

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization

Definition Name	Action	Type of Definition
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Hebrew, Israel

Definition Name	Action	Type of Definition
Country	New	Locale Guess and Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (DMY) (with Combinations)	Modified	Match
Date (MDY)	Modified	Match, Parse, and Standardization
Date (MDY) (with Combinations)	Modified	Match
Date (YMD)	Modified	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Hungarian, Hungary

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match

Definition Name	Action	Type of Definition
Phone	New	Locale Guess

Italian, Italy

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	Modified	Match, Parse, and Standardization
Date (MDY)	Modified	Match, Parse, and Standardization
Date (YMD)	Modified	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Japanese, Japan

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date	Modified	Match
Date (DMY)	New	Match, Parse, and Standardization
Date (Japanese Calendar)	Modified	Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (Western Calendar)	Modified	Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Korean, South Korea

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Identification Analysis, Match, Parse, and Standardization
E-mail (Multiple Address)	Modified	Parse
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Malay, Malaysia

Definition Name	Action	Type of Definition
Address	Modified	Match
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Organization	Modified	Match
Phone	New	Locale Guess

Norwegian, Norway

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization

Definition Name	Action	Type of Definition
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Polish, Poland

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess and Match
Country (ISO 2 Char)	Modified	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Portuguese, Brazil

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Definition Name	Action	Type of Definition
Postal Code	Modified	Match

Portuguese, Portugal

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Russian, Russia

Definition Name	Action	Type of Definition
City - State/Province - Postal Code	Modified	Match
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Slovak, Slovakia

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match

Definition Name	Action	Type of Definition
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Spanish, Mexico

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Spanish, Spain

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis

Definition Name	Action	Type of Definition
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Swedish, Sweden

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Thai, Thailand

Definition Name	Action	Type of Definition
Address	Modified	Match
Address (Full)	Modified	Match
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Name	Modified	Match
Organization	Modified	Match
Phone	New	Locale Guess

Turkish, Turkey

Definition Name	Action	Type of Definition
Country	Modified	Locale Guess
Country	New	Match
Country (ISO 2 Char)	New	Standardization
Country (ISO 3 Char)	New	Standardization
Country (ISO Number)	New	Standardization
Date (DMY)	New	Match, Parse, and Standardization
Date (MDY)	New	Match, Parse, and Standardization
Date (YMD)	New	Match, Parse, and Standardization
E-mail	Modified	Match, Parse, and Standardization
E-mail (Multi-Address)	Modified	Parse
E-mail (Validation)	Modified	Identification Analysis
E-mail (with Combinations)	Modified	Match
Phone	New	Locale Guess

Pre-parsed Input

Some standardization, match, and gender analysis definitions can be called with pre-parsed input from SAS data management products. In this release, some definitions that previously accepted pre-parsed input no longer do so. These definitions are shown below:

Portuguese, Brazil

Definition Name	Definition Type
City - State/Province - Postal Code	Match and Standardization

Spanish, Mexico

Definition Name	Definition Type
City - State/Province - Postal Code	Match

Spanish, Spain

Definition Name	Definition Type
Organization	Match

Known Problems

- In the QKB for Contact Information 28, the length of the match code created by some definitions increased. This was done to avoid inconsistent behavior

which occurred when multiple tokens used the same positions in the match code. The list of definitions and the match code change is listed below:

- Portuguese, Brazil
 - Postal Code match: increased from 15 to 16 characters
- Thai, Thailand
 - Name match: increased from 30 to 31 characters
 - Organization match: increased from 50 to 55 characters
- Due to the complexity of full addresses, jobs using **Address (Full)** match, parse, and standardization definitions might take a long time to complete.
- Due to the complexity of Indian addresses, jobs using the **Address**, **Address (Global)**, and **Address (Full)** match, parse, and standardization definitions in the English, India locale might show higher rates of error than are typical for other definitions. Jobs using these definitions might also take a long time to complete.
- Due to the large number of possible telephone area codes in Germany, extensive processing is required to parse German telephone numbers. Therefore, jobs run using the **Phone** match, parse, and standardization definitions in the German, Germany locale might take a long time to complete.
- When support for multiple locales is installed, the QKB installer for Windows might overestimate the amount of disk space required to complete the installation.