FCUBS Length Semantics

Oracle FLEXCUBE Universal Banking

Release 14.8.3.0.0

Part No. G61377-01

October 2026



Contents

1. INTRODUCTION 1-1

1.1 BACKGROUND 1-1
1.2 APPROACH 1-1

1. Introduction

Oracle FLEXCUBE Universal Banking Solution supports multi-byte characters by means of setting session-level character length semantics during FCUBS installation using the NLS_LENGTH_SEMANTICS parameter of Oracle Database. Most of the application code is written without explicit length semantics (BYTE or CHAR) and, hence, adapts to the session-level semantics during compilation at the time of FCUBS installation.

1.1 Background

NLS_LENGTH_SEMANTICS parameter allows you to specify the length of a column datatype/PLSQL variable in terms of characters (CHAR) instead of the default BYTE. Typically, you would need this if you were to deal with (in PL/SQL code) and store data that contains multi-byte characters such as Japanese or Mandarin characters.

Oracle strongly recommends that you do not set NLS_LENGTH_SEMANTICS parameter on instance level (i.e. in the server parameter file) but only use it to alter session-level semantics as necessary. From MOS note 144808.1:

“Oracle advices to use explicit CHAR semantics in the SQL or PL/SQL syntax
OR
To make sure your application does an "ALTER SESSION SET NLS_LENGTH_SEMANTICS=CHAR;" when connecting if CHAR semantics is required but the semantic is not defined explicit in SQL.”

Based on this note and other available documentation for the parameter, we recommend an approach in the next section, which should be followed in sites where multi-byte character support is required.

Note:
SR with oracle mentioned below is feasible. (**SR 3-16364463401)**

1.2 Approach

In situations where PL/SQL code would interact with multi-byte character data and the same kind of data would be stored in FLEXCUBE tables, follow below approach:

Please note the approach is suggested for 12c and above Database version only.

1. Complete the database installation and set up as per the Oracle FLEXCUBE Database Best Practices for your FLEXCUBE release.

2. Immediately after creating the FLEXCUBE application user (schema), create a logon trigger as the SYS user to alter each new session so that the session-level length semantics are maintained as CHAR for the user at all times. For example, if the schema name were FCUBS and the trigger was named “FCUSER_LOGON”, the trigger would look like:

```
CREATE OR REPLACE TRIGGER SYS.FCUSER_LOGON
AFTER LOGON ON FCUBS.SCHEMA
BEGIN
   EXECUTE IMMEDIATE 'alter session set nls_length_semantics=CHAR';
END;
```

/

3. Proceed with the rest of the FLEXCUBE installation as per the installation documents.

In situations where an operation results in FLEXCUBE objects being invalidated, make sure the objects are re-compiled either:

1. By the FLEXCUBE schema user using one of the following options:
    a. Manually using ALTER… COMPILE statements
    b. SYS.UTL_RECOMP.RECOMP_PARALLEL procedure
    c. SYS.UTL_RECOMP.RECOMP_SERIAL procedure

Or,

2. By a user with appropriate privileges on SYS.UTL_RECOMP package (such as the SYS user) ***using one of the following options only***:
    a. SYS.UTL_RECOMP.RECOMP_PARALLEL procedure
    b. SYS.UTL_RECOMP.RECOMP_SERIAL procedure

Oracle FLEXCUBE strongly advises against manually compiling FLEXCUBE schema objects (using ALTER…COMPILE) as a non-FLEXCUBE application user when length semantics of CHAR are being enforced. Such an attempt may change the NLS_LENGTH_SEMANTICS parameter setting of the PL/SQL objects to BYTE and this may result in runtime exceptions within the application, such as:

*"*ORA-06502- PL/SQL: numeric or value error: character string buffer too small*"*.

Note:
If the FLEXCUBE schema is ever re-compiled using SYS.DBMS_UTILITY.COMPILE_SCHEMA in an environment that is using CHAR semantics, then it must be ensured that for the user executing the procedure, the session-level NLS_LENGTH_SEMANTICS parameter is set to CHAR. This is because while SYS.UTL_RECOMP.x procedures re-use existing PL/SQL object settings, SYS.DBMS_UTILITY.COMPILE_SCHEMA compiles the objects with the NLS settings of the invoking user's session and may alter the PL/SQL object settings of the objects (including length semantics).



FCUBS Length Semantics
October 2026
Version 14.8.3.0.0

Oracle Financial Services Software Limited
Oracle Park
Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:
Phone: +91 22 6718 3000
Fax:+91 22 6718 3001
www.oracle.com/financialservices/

Copyright © [2007], [2026], Oracle and/or its affiliates.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate failsafe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

This software or hardware and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services.