Installation and Administration

This chapter describes the administration and installation for an R/3 System with multi-codepage capability. The profile parameters required for the installation of such an R/3 System are explained in Appendix.

Common Character Set

In Section 3.2 the *common character set* was introduced. Data fields that are to be displayable in every codepage that a company uses are only allowed to use symbols of the common character set (ASCII 0x20 to 0x7E). The symbols in the common character set represent the intersection of the symbols of all codepages supported by SAP (single- and double-byte). The position of a symbol in the common character set is identical in every codepage table (exception: "\").

Logon Process

During logon of a user to an R/3 System, an application server is selected whose codepage (language) is appropriate to the codepage of the frontend process. The codepage of the frontend is appropriate if the logon language is contained in the codepage of the application server (see chapter 3). The logon process can be implemented with a group selection method - the SAP Logon. (A documentation of the SAP Logon installation and usage will be available.) A user can be assigned to a (pool of) application server(s) that have the appropriate codepage using the R/3 dynamic user distribution technique. If the user logs on to an application server that does not have the appropriate codepage, he/she gets a warning message.

Available Codepages

At installation of the R/3 System, all supported codepages for application servers, frontends, printers, and other output devices (e.g. telex) must be installed. The specification of translations between codepages (e.g. between application server- and printer codepage) is supported by an R/3 transaction.

Assignment of the Update Server

For each codepage used in a dialog program of the R/3 System at least one update server (application server with update work process; V1 and V2 update server) with this codepage must be started. In release 2.2, the correct assignment of the update server to the dialog server (application server with dialog work processes) must be guaranteed through administrative measures. The profile parameters rdisp/vbname must be set with the name of the update task server installed with the appropriate codepage. (The following profile parameters set the number of update task work processes: rdisp/wp_no_vb, rdisp/wp_no_vb2; see Appendix). As a result, the update tasks are processed in the appropriate application server. In release 3.0, update task requests are dispatched dynamically. With the default settings of the profile parameters, an update task server with the same codepage as the dialog server is automatically selected. (For further detail see Appendix)

Printer

A printer must support the codepages required in an R/3 installation with multi-language capabilities and must be able to change codepages dynamically. A list of such printers that have been tested by SAP can be found in Appendix. Two types of data are printed in an R/3 System: ABAP lists and SAPscript forms. The codepage of the application server that created an ABAP list is relevant to the printing. In SAPscript, a new command exists to switch the codepage within a form. Therefore forms with several codepages are supported.

Of course, any local data (containing only text of the own language/codepage) can still be printed with every normal printer.

Development Systems

In development systems only characters of the common character set can be used for development. A developer must take care of a language-independent implementation (e.g. strings in ABAP programs).

Batch Input

Data from an external system which is provided by batch input to an R/3 System can be entered in two ways. If the data consists only of characters within the common character set, the batch input processing can take place on any application server. If the batch input file contains codepage-specific data - e.g. Japanese characters - the data must be passed to the R/3 System via an application server that supports the same codepage as the source file.

Installation of Codepages

This section gives a short description of the installation measures for a multi-codepage capable R/3 System. The first part, shows the actions to be done for the application server and the second part refers to the frontend installation process.[10]

Application Server

- A special operating system component *native language support* (NLS) must be installed for a new language.
- At least one application server (R/3 instance) must be installed for a codepage. The group of the application servers for one codepage must contain the following types of work processes: dialog, background, update, and spool. The central instance (application server on the database host) should be installed in Latin 1 for service purposes like installation, and upgrades. Beside dialog, background, update and spool work processes, the central instance contains the enqueue server, message server work processes and the gateway. An application server for an additional codepage can then be installed on another host (with the SAP tool R3INST) or again on the database host. The latter is not supported by R3INST and has to be done manually.
- For each new codepage a new instance profile should be created in the profile directory (/usr/sap/<*system_name*>/SYS/profile). The following codepage-dependent profile parameters should be set:
  - saptemu/Codepage (only for connected X-Windows frontends; the other frontends set the environment variable SAP_CODEPAGE)
  - rsts/ccc/cachesize
  - rsts/ccc/max_sapcode
  - abap/locale_ctype
  - install/codepage/db/transp = multi
  - install/codepage/db/non_transp = multi
  - Parameter specific for single byte codepages:
    - install/codepage/appl_server

[10] Additional information concerning the installation of a multi-codepage capable R/3 System can be found in CSP note 24939.

- Parameter specific for Release 2.2:
  - rdisp/vbname

- In the R/3 System, the logon groups must be maintained. This is implemented by a transaction in the CCMS component of the R/3 System. At least one group should exist for each codepage.

Frontend (SAPGUI)

MS Windows

- The country version of MS Windows (e.g. Russian Windows) or an add-on package for English MS Windows providing the additional fonts must be running.
- The SAPGUI uses MS Windows fonts after the following rules:
  - Only ANSI fonts are used (no OEM fonts, the ANSI fonts can be True Type)
  - fixed fonts
- The terminal resolution should be at least 800 x 600
- The environment variable SAP_CODEPAGE must be set with the corresponding SAP codepage number. (The same holds for OS/2.)
- The environment variable PATH_TO_CODEPAGE must be set with the path for the RFC conversion table. This table can be generated and downloaded in the R/3 System in the RFC administration. The conversion table has to be moved to the SAPGUI working directory and is used when a conversion between codepages has to be done in an RFC. (The same holds for OS/2.)[11]

X-Windows (Motif)

- Codepage fonts must be installed (e.g. HP-UX: /usr/lib/X11/fonts) and be available (e.g. HP-UX: command 'mkfontdir')
- The corresponding keyboard for the codepage characters must be available
- The frontend (SAPGUI) must be started with reference to the corresponding profile as it needs access to the codepage-relevant profile parameters.
  (e.g. /usr/sap/<system name>/SYS/exe/run/sapgui \
  pf=/usr/sap/<system name>/SYS/profile/<profile name>)

[11] Additional information can be found in CSP note 13876.