# 4. Details of Each Processing Mode

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## 4.1  Interactive Processing Mode  (for NACCS Packaged Software)

### 4.1.1 Outline of processing mode

Figure 4.1.1 shows outline of the Interactive Processing Mode (for NACCS Packaged Software) in NACCS. For information on sending E-mail, please refer to "4.6.1 E-mail".
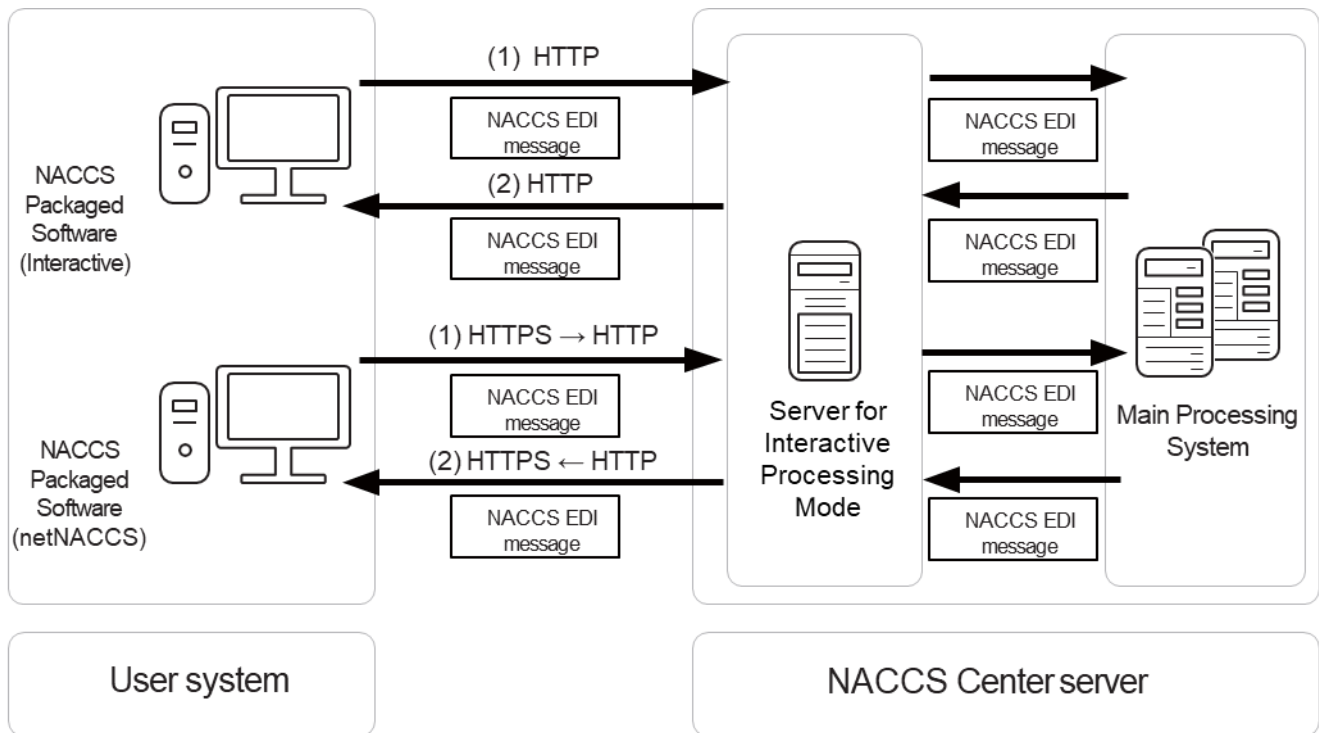


Figure 4.1.1 Outline of Interactive Processing Mode (for NACCS Packaged Software)

(1) A user enters the items required for procedure on the procedure screen of NACCS Packaged Software (NACCS Packaged Software Interactive Processing Mode or NACCS Packaged Software netNACCS Processing Mode), and sends them to NACCS Center server.

(2) In the main processing system, the Process Result Message will be returned to the user after performing the procedure processing based on the sent Process Request Message. The user confirms the Process Result on the procedure screen of NACCS Packaged Software.

## 4.1.2. Details of the Communications Protocol

### (1) For NACCS Network

The communication protocol for the Interactive Processing Mode in NACCS (interactive) uses TCP/IP for the network and transport layers and HTTP for its upper layer. However, since all communication control of this processing mode is performed by NACCS Packaged Software, the user does not need to be aware of the communication protocol.

### (2) For Internet

The communication protocol for the Interactive Processing Mode in NACCS (netNACCS) uses TCP/IP for the network transport layer and HTTPS for its upper layers. (Note)However, since all communication control of this processing mode is performed by NACCS Packaged Software, the user does not need to be aware of the communication protocol.

(Note) HTTPS is used from the NACCS Packaged Software to internet infrastructure, and HTTP is used from internet infrastructure to Server for Interactive Processing Mode.

### 4.1.3 Procedure Sequential Processing

The procedure processing sequence in the Interactive Processing Mode (for NACCS Packaged Software) is shown in Figure 4.1.2 and thereafter. For information on messages, refer to "Chapter 3. Message Format and Structure".

Refer to the contents of (1) below for Output Message Cache shown on the procedure processing sequence.

### (1) Output Message Cache

Output Message Cache is a table in which the Output Information Messages (for report) of the message type [P] and [A] for report, [T] for internal interfaces or [U] for storage are temporarily stored.
There are two methods to retrieve the Output Information Message (for report) stored in this table, depending on the storage destination. Refer to "3.7 Output Message Cache and Retrieval Procedure" for more information on the storage destination,
When stored in QST（Terminal Output-Type Message Queue ): See (A) below
When stored in QEX (Stored-Type Message Queue): See (B) below

(A) How to retrieve Output Information Message (for report) in logical terminal name unit
When retrieving the Output Information Message (for report) in logical terminal name unit, one of the following functions installed in NACCS Packaged Software can be used.
・ Issuing a Process Request Message (Report Retrieval Request) by timer
・ Issuing a Process Request Message (Report Retrieval Request) by Manual (Instant-Type Message Retrieval)
・ Issuing a Process Request Message (Report Retrieval Request) in conjunction with the receipt of the Process Result Output Message

(B) How to retrieve Output Information Message (for report) in User Code unit
When retrieving the Output Information Message (for report) in user code units, Stored-Type Message Retrieval is used.

## (2) Examples of Procedure Processing Sequence for INQ Type Messages
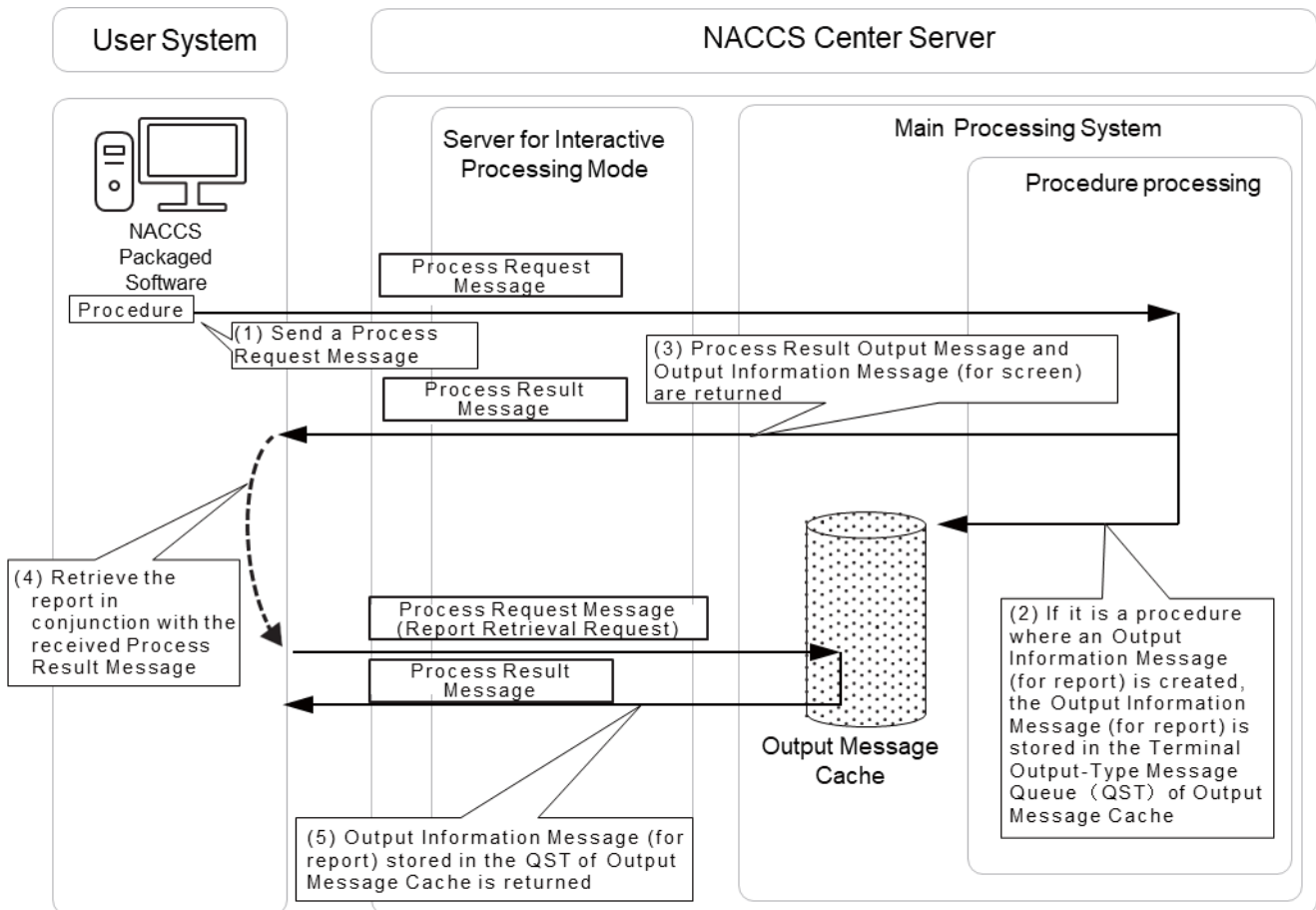
(A) When processed normally



Figure 4.1.2 Example of procedure processing (when INQ type messages are processed normally)

(1) A Process Request Message is sent from the NACCS Packaged Software.

(2) If it is a procedure where an Output Information Message (for report) is created, the Output Information Message (for report) is stored in the QST（Terminal Output-Type Message Queue ) of Output Message Cache in NACCS Center server.

(3) Either Process Result Output Message or Output Information Message (for screen) will be returned to the user.

(4) NACCS Packaged Software, which receives the Process Result Output Message, retrieves the Output Information Message (for report) by logical terminal name unit. In this example, a Process Request Message (Report Retrieval Request) is issued in conjunction with the receipt of the Process Result Output Message.

(5) In response to a processing request from the user, Output Information Message (for report) stored in QST（Terminal Output-Type Message Queue ) of the Output Message Cache is sent from NACCS Center server.

(B) When not processed normally
  1) Example of failure during reception of Process Result Output Message or Output Information Message (for screen)
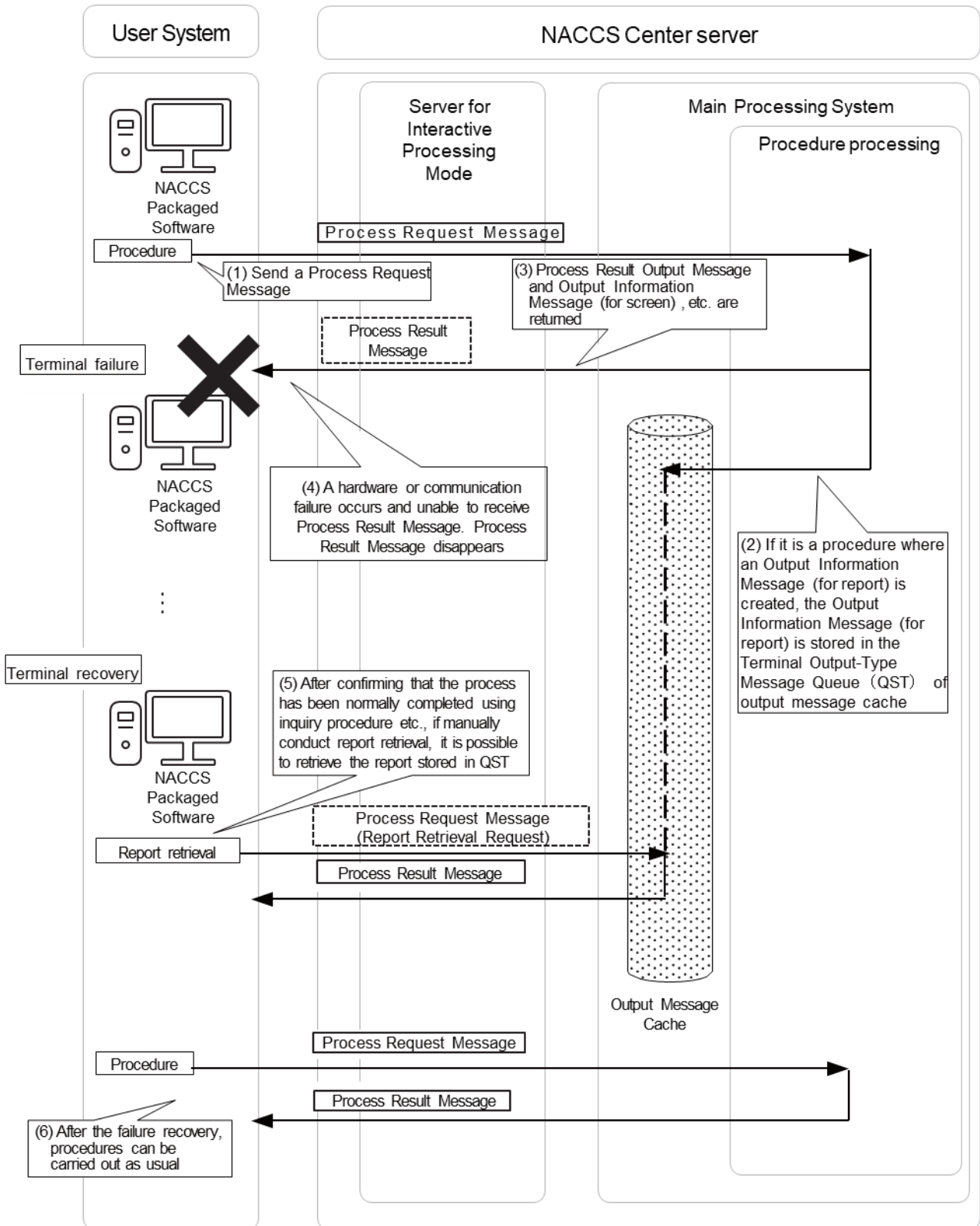


Figure 4.1.3 Example of procedure processing (When INQ type messages are not processed normally) : Error while receiving Process Result Output Message or Output Information Message (for screen)

(1) A Process Request Message is sent from the NACCS Packaged Software.

(2) If it is a procedure where an Output Information Message (for report) is created, the Output Information Message (for report) is stored in the QST（Terminal Output-Type Message Queue）of Output Message Cache in NACCS Center server.

(3) The Process Result Output Message or Output Information Message (for screen) will be returned to the user.

(4) A hardware failure or communication failure occur and cannot receive the Process Result Output Message or Output Information Message (for screen). In this case, the Process Result Output Message or Output Information Message (for screen) disappears.

(5) After the failure has been recovered, the user can confirm that the process is carried out properly by using inquiry procedure, etc. and then manually select the report retrieval from the menu of NACCS Packaged Software to acquire the message stored in the QST（Terminal Output-Type Message Queue）of the Output Message Cache.

(6) After the failure recovery, it is possible to send the Process Request Message (Report Retrieval Request) in conjunction with the receipt of the Process Result Output Message and the normal procedure messages as usual.

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Ⓘ If a hardware or communication failure occurs while a user receiving the Process Result Output Message or Output Information Message (for screen) for a Process Request from a user, the message disappears because NACCS Center server does not guarantee the message.

2) Example of failure after receiving the Process Result Output Message or Output Information Message (for screen)
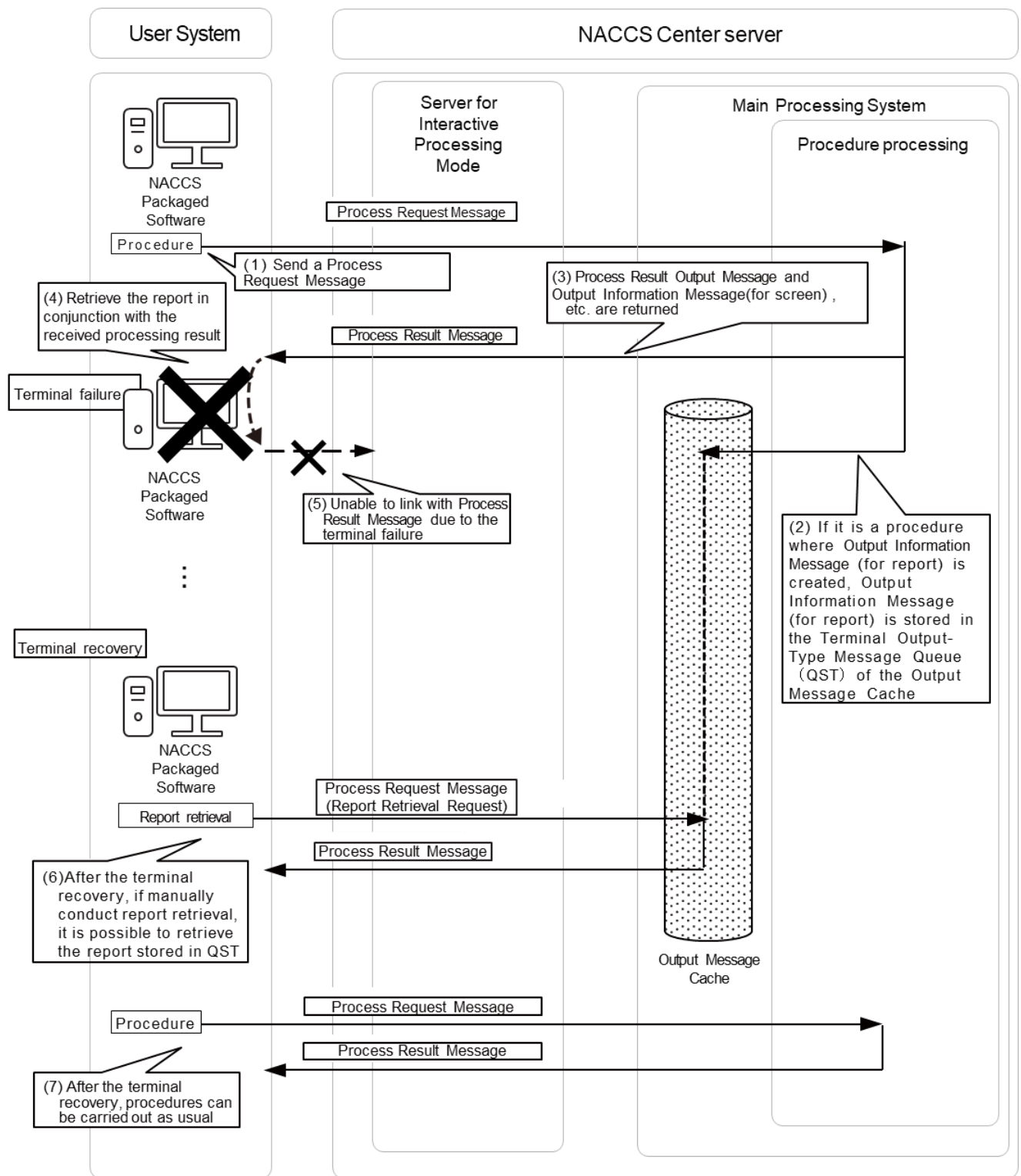


Figure 4.1.4 Example of procedure processing
(when INQ type messages are not processed normally)
: Error after receiving Process Result Output Message or Output Information Message (for screen)

(1) A Process Request Message is sent from the NACCS Packaged Software.

(2) If it is a procedure where an Output Information Message (for report) is created, the Output Information Message (for report) is stored in the QST（Terminal Output-Type Message Queue ) of Output Message Cache in NACCS Center server.

(3) The Process Result Output Message or Output Information Message (for screen) will be returned to the user.

(4) NACCS Packaged Software that received the Process Result Output Message retrieves the Output Information Message (for report) by logical terminal name unit. In this example, a Process Request Message (Report Retrieval Request) is issued in conjunction with the receipt of the Process Result Output Message.

(5) Hardware or communication failure occurs, messages cannot be sent, and the link with the Process Result Output Message stops.

(6) After the failure has been recovered, the message stored in the QST（Terminal Output-Type Message Queue ) of the Output Message Cache may be acquired by manually selecting the report retrieval from the menu of NACCS Packaged Software.

(7) After the failure recovery, it is possible to send the Process Request Message (Report Retrieval Request) in conjunction with the receipt of the Process Result Output Message and the normal procedure messages as usual.

## (3) Examples of Procedure Processing Sequence for EXC Type Messages

(A) When acquiring EXC type messages in logical terminal name unit by Instant-Type Message Retrieval
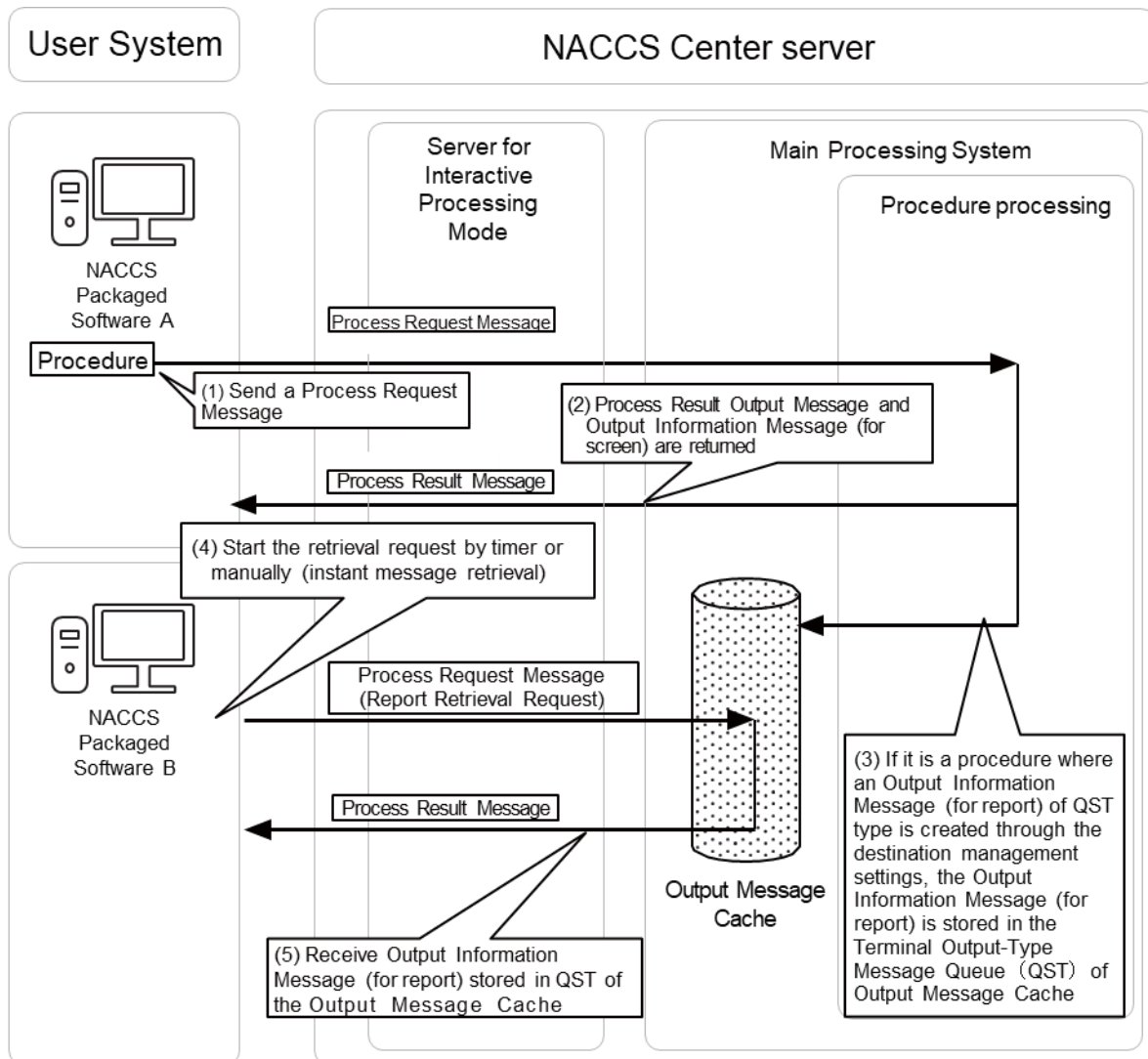


Figure 4.1.5 Example of procedure processing
(When acquiring EXC type messages in units of logical terminal name)

(1) A Process Request Message is sent from the NACCS Packaged Software A.

(2) NACCS Packaged Software A returns the Process Result Output Message or Output Information Message (for screen) to the user.

(3) If it is a procedure where an Output Information Message (for report) of QST type is created through the Destination Control settings, the Output Information Message (for report) is stored in the QST（Terminal Output-Type Message Queue ) of Output Message Cache in NACCS Center server. (See "5. Destination Control" for Destination Control)

(4) A Process Request Message (Report Retrieval Request) is sent to NACCS Center server by Manual (Instant-Type Message Retrieval) or timer from NACCS Packaged Software B. For details of the timer activation for instant message retrieval, refer to "Operation Manual for NACCS Packaged Software".

(5) If the Output Information Message (for report) for users of NACCS Packaged Software B exists in the QST（Terminal Output-Type Message Queue ) of Output Message Cache, the Output Information Message (for report) can be retrieved.

(B) When acquiring EXC type messages in user code unit by Stored-Type Message Retrieval
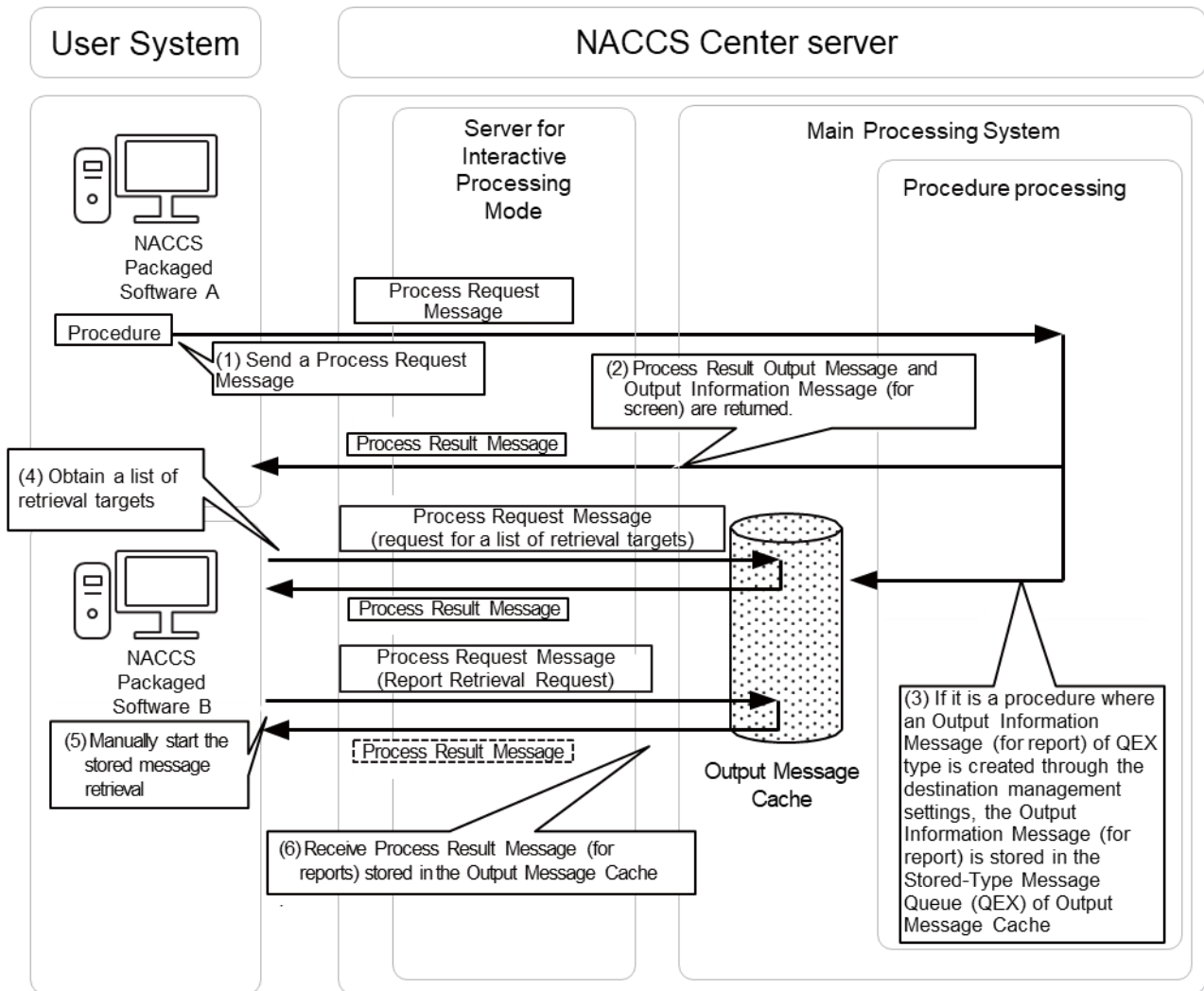


Figure 4.1.6 Example of procedure processing
(When acquiring EXC type messages in units of user code)
: start Stored-Type Message Retrieval

(1) A Process Request Message is sent from the NACCS Packaged Software A.

(2) NACCS Packaged Software A returns the Process Result Output Message or Output Information Message (for screen) to the user.

(3) If it is a procedure where an Output Information Message (for report) of QEX type is created through the Destination Control settings, the Output Information Message (for report) is stored in the QEX (terminal output type message queue) of Output Message Cache in NACCS Center server. (See "5. Destination Control" for Destination Control)

(4) NACCS Packaged Software B obtained a list of retrieval targets.

(5) Select the desired reports from the list of retrieval targets and retrieve Stored-Type Message Retrieval.

(6) If the Output Information Message (for report) for users of NACCS Packaged Software B exists in the QEX (stored type message queue) of Output Message Cache, the Output Information Message (for report) can be retrieved.

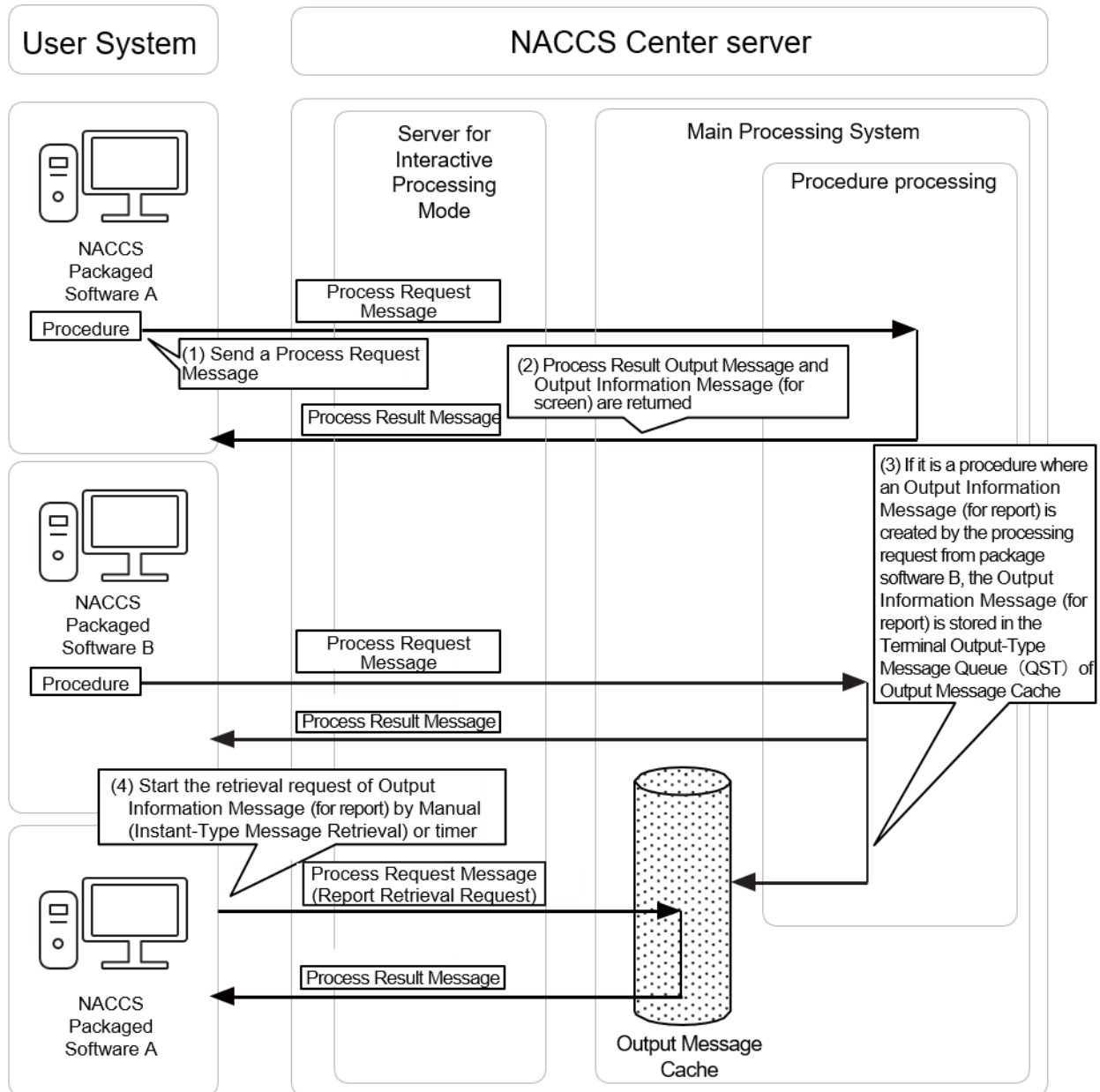## (4) Examples of Procedure Processing Sequence for EXZ Type Messages



Figure 4.1.7 Example of procedure processing (for EXZ type message)

(1) A Process Request Message is sent from the NACCS Packaged Software A.

(2) NACCS Packaged Software A returns the Process Result Output Message or Output Information Message (for screen) to the user.

(3) If NACCS Packaged Software B performs the procedure, and Output Information Message (for report) is created, the Output Information Message (for report) is stored in the QST （Terminal Output-Type Message Queue ) of Output Message Cache.

(4) A Process Request Message (Report Retrieval Request) is sent to NACCS Center server by timer or Manual (Instant-Type Message Retrieval) from NACCS Packaged Software A, and obtains the Output Information Message (for report).
For details of the timer activation for instant message retrieval, refer to "Operation Manual for NACCS Packaged Software".

## (5) Examples of Procedure Processing Sequence for Attachment File Messages
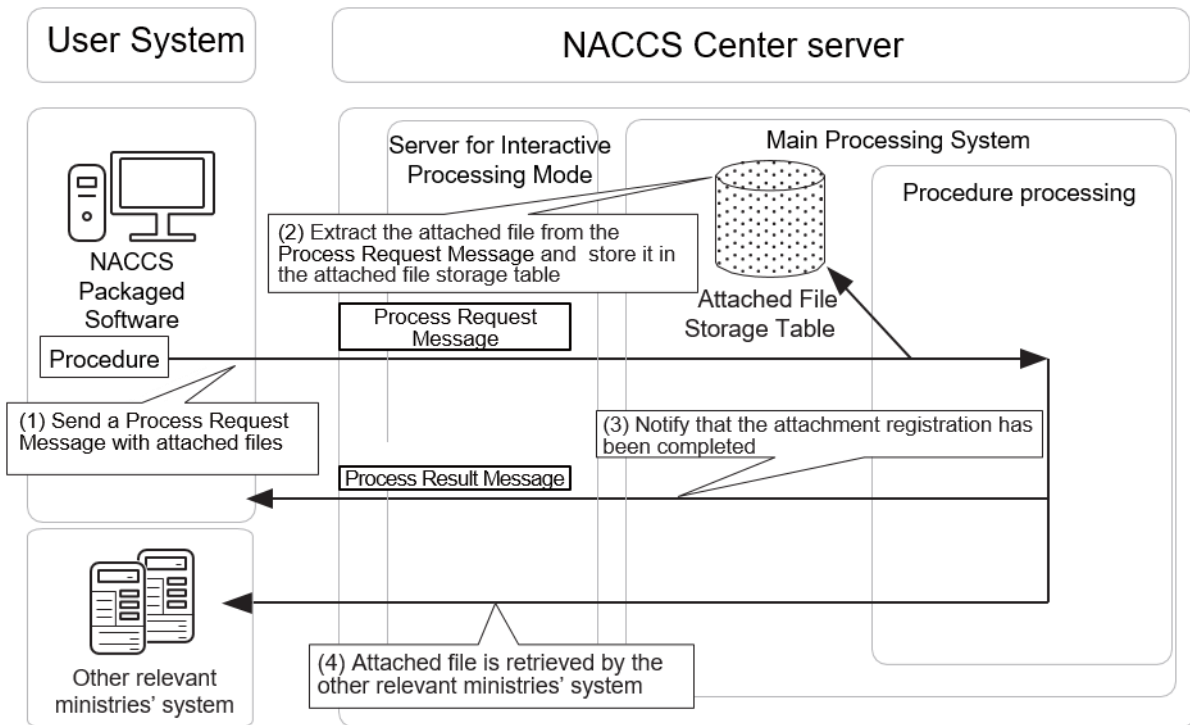
(A) When sending an attachment file



Figure 4.1.8 Example of procedure processing (when sending attachment file)

(1) A Process Request Message (attachment registration procedure) is sent from NACCS Packaged Software (terminal of User (non-Government)).

(2) NACCS Center server extracts the attached file data from the received Process Request Message and stores it in the Attachment File Storage Table.

(3) A Process Result Output Message indicating the attachment file storage has been completed is returned to the NACCS Packaged Software (terminal of User (non-Government).

(4) The stored attached file can be retrieved by other relevant ministries 'systems.
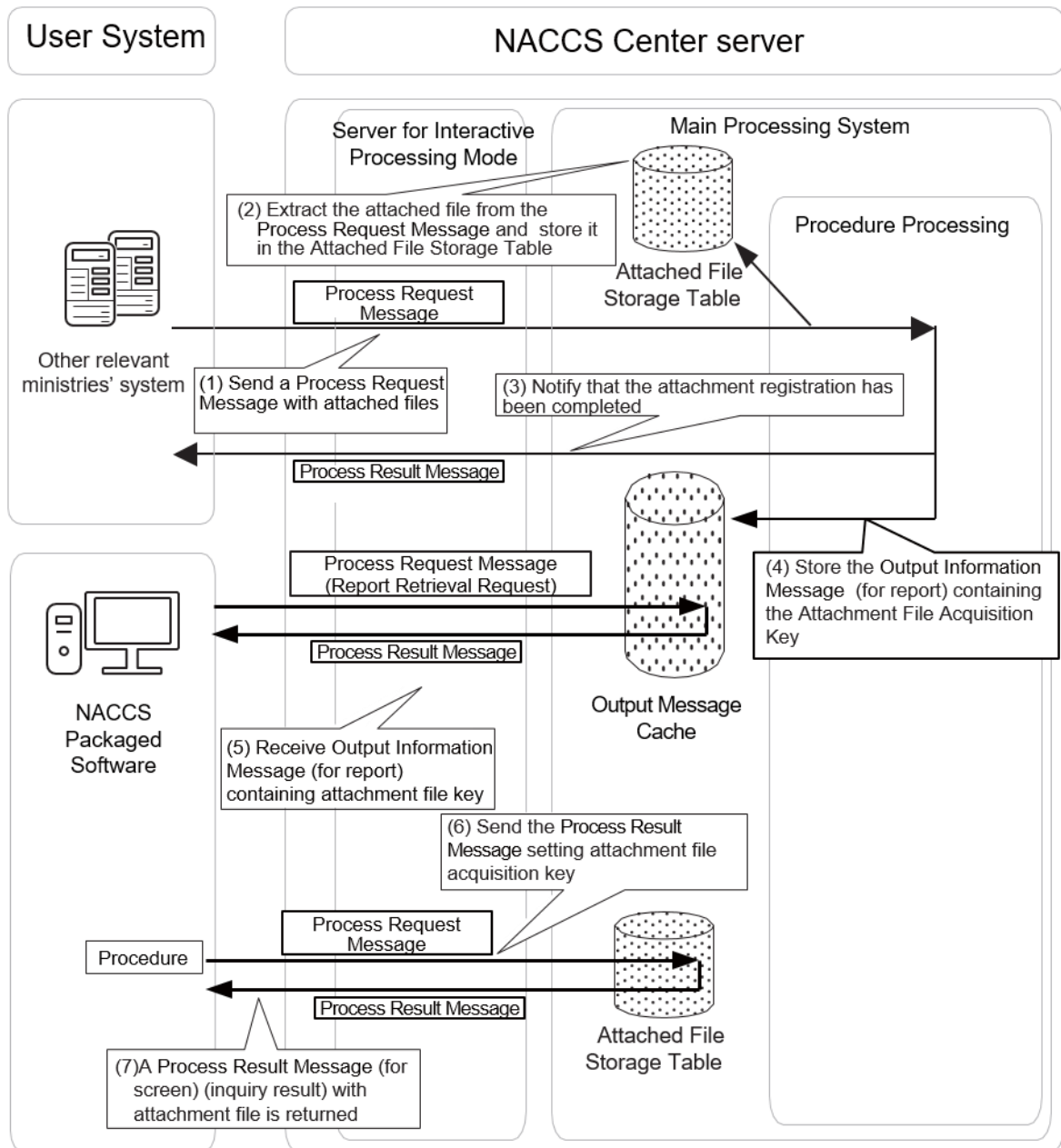
## (B) When acquiring attachment file



Figure 4.1.9 Example of procedure processing (when acquiring attachment file)

(1) The other relevant ministries' system sends a Process Request Message (attachment registration procedure).

(2) NACCS Center server extracts the attached file data from the received Process Request Message and stores it in the Attachment File Storage Table.

(3) A Process Result Output Message indicating the attachment file storage has been completed is returned to the other relevant ministries' system.

(4) NACCS Center server issues Attachment File Acquisition Key and stores the Output Information Message (for report) containing the key information in Output Message Cache.

(5) Extract the Output Information Message (for report) containing the Attachment File Acquisition Key from the NACCS Packaged Software (terminal for User (non-Government)).

(6) A Process Request Message (attachment acquisition procedure) setting Attachment File Acquisition Key is sent from NACCS Packaged Software (terminal of User (non-Government)).

(7) An Output Information Message (for screen) (inquiry result) with attachment file is returned to NACCS Packaged Software (terminal of User (non-Government)).

### 4.1.4　　Others

**(1) Retention period of Output Information Messages (for report) stored in Output Message Cache**

The user must promptly retrieve the Output Information Message (for report) in the Output Message Cache. Messages will be deleted from the Output Message Cache after the user retrieves them.

However, for the Output Information Messages (for report) that have not been retrieved by the user, messages are stored in Output Message Cache for seven days (including Saturdays, Sundays, and holidays), including the day they are registered in the Output Message Cache. Messages are deleted at a certain time in the middle of the night.

During Golden Week holidays and the year-end and New Year holidays, NACCS Center will separately change the retention period settings.

(For reference) Example of deletion of Output Information Message (for report) stored in the Output Message Cache

(Assuming a fixed time of 0:30 a.m.)
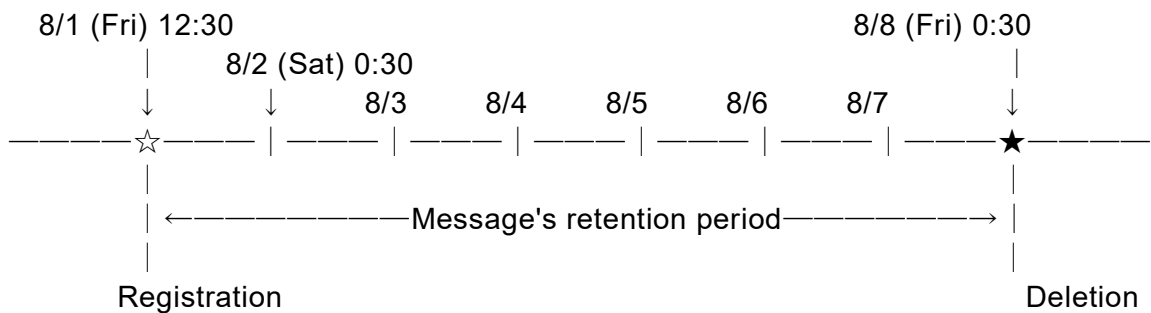


**(2) Retention period for attachment files stored in attached file storage table**

For the retention period of attached files for each procedure, refer to "System Retention Period for Each (DB)" in "Procedure Specifications" .

**(3) Other Precautions**

(A) During times of high system load, operational restrictions such as stopping the receipt of Process Request Message from all users may be applied. In this case, NACCS Center will inform the user.

(B) NACCS Packaged Software is equipped with the function of retrieving reports for the other terminal in case of failure. The sequence in this case is shown in Figure 4.1.10.
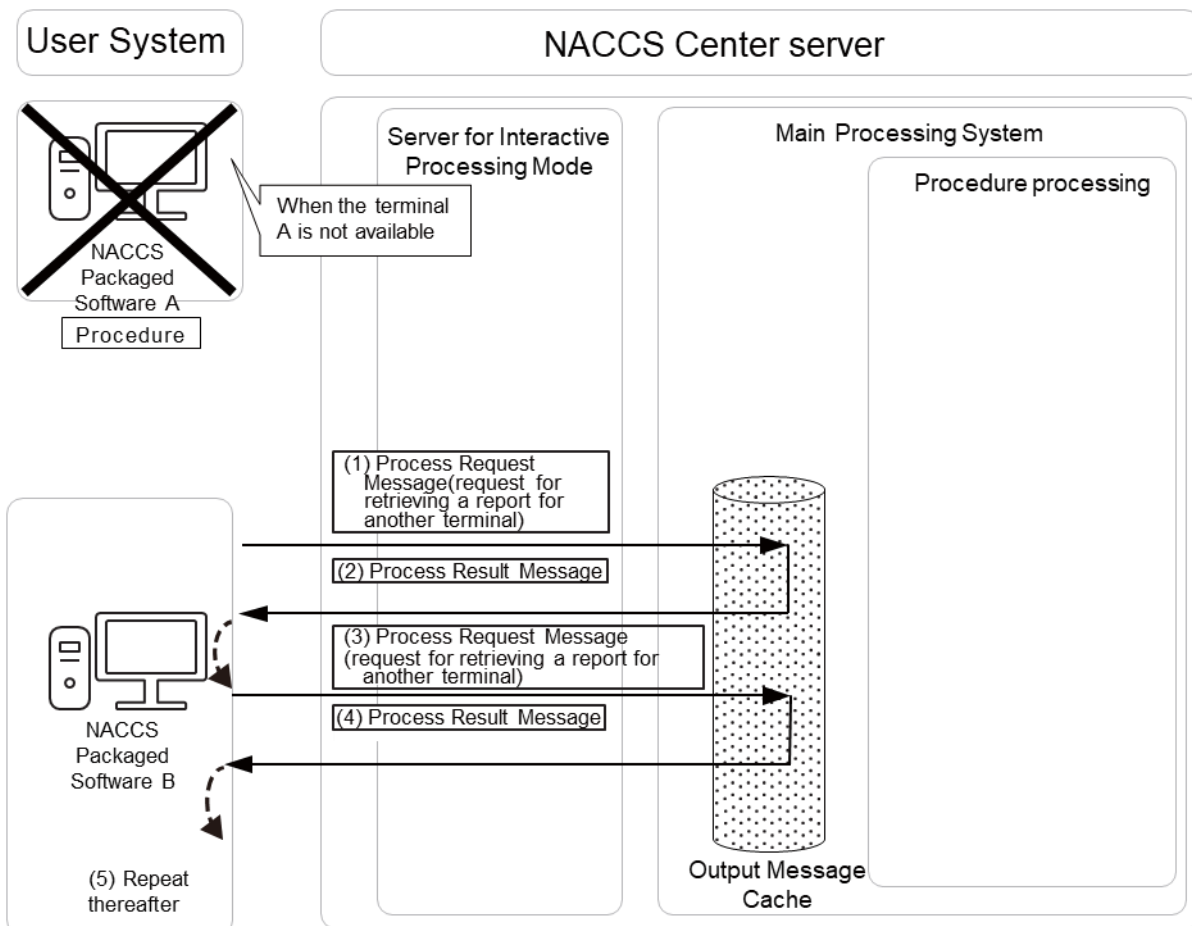
Figure 4.1.10 Example of Interactive Processing Mode (for NACCS Packaged Software)
: When retrieving the Output Information Message (for report) from another terminal when the terminal is disabled

(1) In NACCS Packaged Software B, enter the terminal access key and manually send a Process Request Message (request for retrieving a report for another terminal) to obtain the Output Information Message (for report) for NACCS Packaged Software A, and stored in NACCS Center server's QST （Terminal Output-Type Message Queue ).

(2) Server for Interactive Processing Mode obtains the Output Information Message (for report) for the entered terminal access key from the QST （Terminal Output-Type Message Queue ) of Output Message Cache and sends it to NACCS Packaged Software B.

(3) In order to obtain the next Output Information Message (for report), NACCS Packaged Software B sends a message to NACCS Center server to retrieve reports for other terminals in conjunction with the Output Information Message (for report) of (2).

(4) If the Output Information Message (for report) exists in the QST （Terminal Output-Type Message Queue ) of the Output Message Cache, send a message to NACCS Packaged Software B.

(5) Thereafter, repeat (3) and (4) until there is no Output Information Message (for report) for NACCS Packaged Software A in the QST （Terminal Output-Type Message Queue ) of the Output Message Cache.

⚠ What is a terminal access key?
A terminal access key is issued, managed, and operated by NACCS Center on a 1:1 basis for each logical terminal. Since NACCS Center server identifies terminals with logical terminal names and terminal access keys, the Output Information Message (for report) can be obtained for other terminals using the other terminal access keys.