IBM Software Group

IBM WebSphere® Data Interchange V3.3

CICS Continuous Receive

Agenda

- Provide an overview of Continuous Receive
- Explain what's new since Base 3.2
- Review Response Programs
- Review Expedite/CICS Continuous Receive
- Review MQ Continuous Receive
- Summary

Continuous Receive Overview

- Continuous Receive allows an automated way for WDI to receive and process messages in a CICS environment
- Continuous Receives can occur three ways
  - Expedite/CICS and Information Exchange
  - Non-Expedite/CICS
    - Link to program EDICRIN with a COMMAREA that includes the name of the Continuous Receive profile
  - WebSphere MQ

Continuous Receive Overview

- Automatically receives and processes incoming messages
  - Responses can be automated
    - Example: A 270 (eligibility inquiry) is received. A 271 (eligibility information) can be created, enveloped, and automatically sent back.
- Automatically receives network status information
  - Expedite/CICS and Information Exchange
  - Updates WDI's Transaction Store statuses
    - From "Sent to network" to "Delivered by network"

Continuous Receive Overview - continued

- Base WDI version 3.2 supports four types of Continuous Receive processing
  - Deenvelope
    - PERFORM DEENVELOPE WHERE …
  - Deenvelope and translate
    - PERFORM DEENVELOPE AND TRANSLATE WHERE …
  - Execute response program only
  - Process network acknowledgements
    - PERFORM PROCESS NETWORK ACKS WHERE …

Continuous Receive Overview - continued

- Continuous Receive profile
  1. Select the mailbox to monitor
  2. Specify selection criteria for the mailbox
     - For example: only select messages from a certain trading partner
  3. Specify Utility control information (FFUS block)
     - For example: the name of the print file
  4. Select the type of PERFORM command to be executed when a message is received from the mailbox
  5. Select keywords and values to go on the PERFORM command
  6. Name a response program that is to be executed after the PERFORM command completes

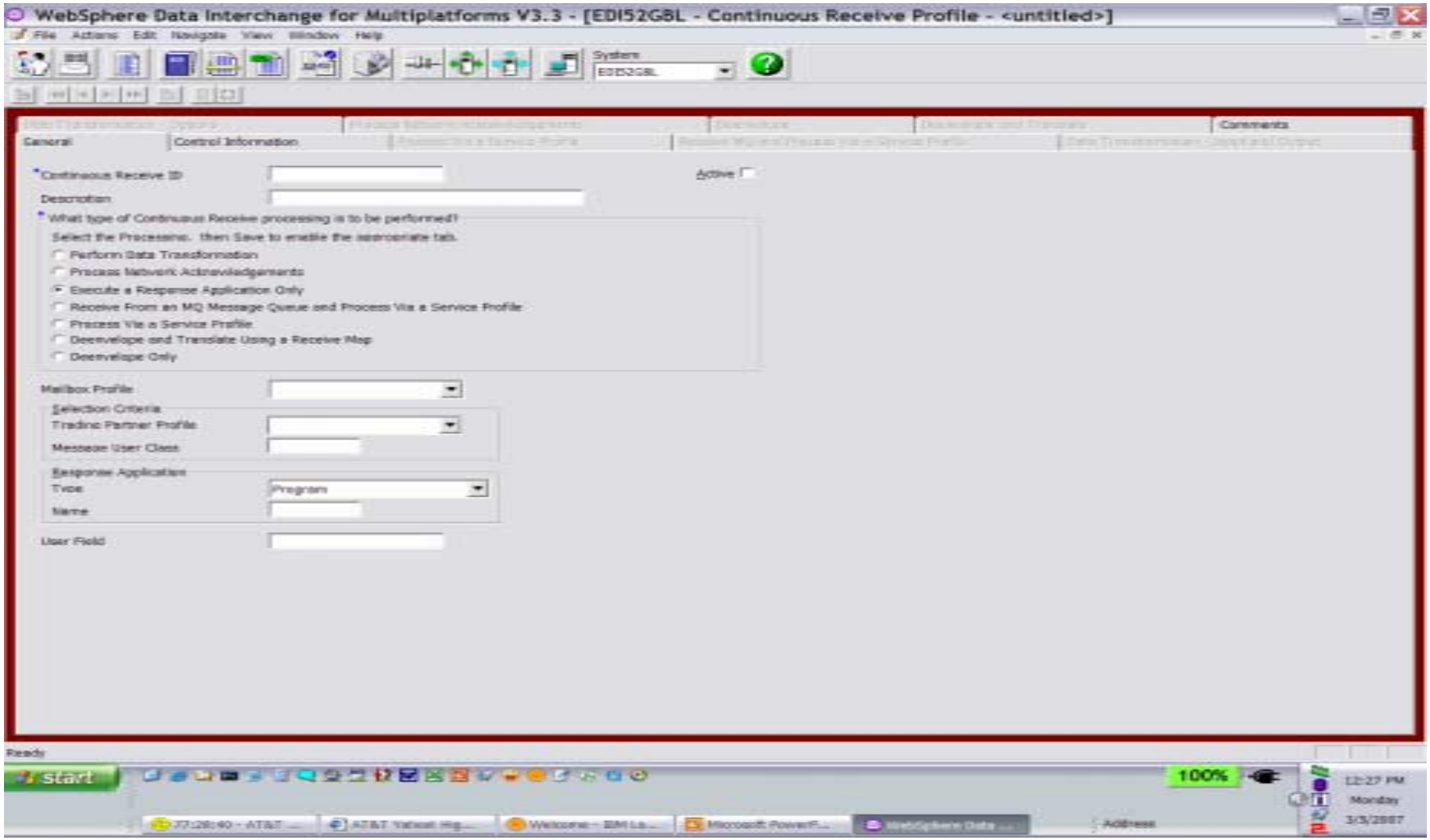
New Since Base 3.2

- Support for three new types of Continuous Receive processing
  - DT translations
    - PERFORM TRANSFORM WHERE …
  - Process via a Service profile
    - PERFORM PROCESS WHERE …
  - Receive from an MQ and process via a Service profile
    - PERFORM RECEIVE AND PROCESS WHERE …
- Keywords for each PERFORM command
- XML print file, ADF print file, Tracking file

New Since Base 3.2

- The Continuous Receive profile dialog in the WDI Client has been updated to support the new PERFORM commands and their keywords
  - Within the Client Continuous Receive profile there are now separate tabs for each type of processing
    - In other words, for each type of PERFORM command
  - When a PERFORM command is selected from the general dialog, the appropriate tab becomes active
  - Within each tab are fields that correspond to that PERFORM command's keywords

Client Continuous Receive Profile



Let's Review some Related Items

- Response Programs
- Expedite/CICS Continuous Receive
- MQ Continuous Receive

Response Programs

- User-written CICS programs - like user exits
- These programs are passed control at certain points in the translation process
- The Utility Control Information block (the FFUS block) is the interface passed to response programs
- If the WDI Utility is invoked asynchronously (EXEC CICS START TRANSID('EDIB') or Continuous Receive is used, response programs are an essential part of the complete processing picture
- Useful when you need to know the outcome of WDI processing

Response Programs - continued

- May be specified as programs or CICS transaction IDs
- Type = PG
  - WDI will EXEC CICS LINK PROGRAM (your-program) COMMAREA(FFUS) LENGTH(300)
  - These programs should not handle abends because WDI needs to free ENQs and other resources
- Type = TX
  - WDI will EXEC CICS START TRANSID(your-transaction) FROM(FFUS) LENGTH(300)
  - FFUS block obtained by doing an EXEC CICS RETRIEVE

Response Programs - continued

- Three types of response programs
  - Utility level response programs
  - EDI transaction level response programs
    - PERFORM TRANSLATE TO APPLICATION
    - PERFORM DEENVELOPE AND TRANSLATE
    - PERFORM RECEIVE AND TRANSLATE
  - Continuous Receive response programs

Response Programs - continued

- Utility level response programs
  - Specified in the FFUS block when the WDI Utility is invoked with a PERFORM command
  - Passed control after the PERFORM command completes
- EDI transaction level response programs
  - Specified in the Document Destination field in the Receive Usage or Data Format
  - Passed control after WDI translates each EDI transaction

Response Programs - continued

- Continuous Receive response programs
  - Specified in the Continuous Receive profile
  - Passed control after the PERFORM command completes (or instead of any PERFORM command)
  - Because Continuous Receives are real-time, background events, these programs are essential in order to know the outcome of translations, etc.

Response Programs - continued

- Why a response program might be used:
  - Check translation return codes
  - If necessary, invoke exception handling
  - Subsequently process input and/or output files
  - Commit or rollback unit-of-work
    - When WDI is instructed not to issue SYNCPOINTs and the response program is linked to

Expedite/CICS Continuous Receive

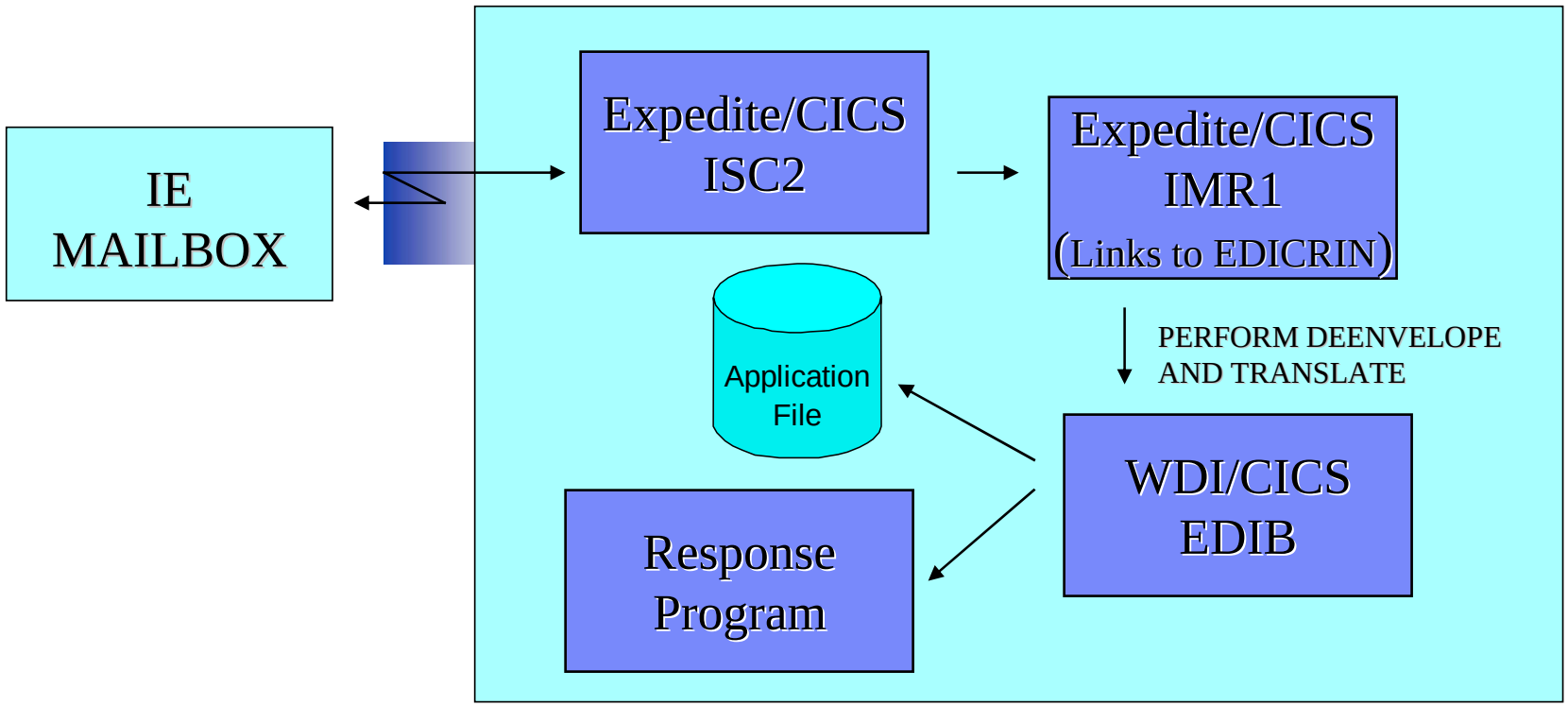
- IE to Expedite/CICS to WDI
- Start and stop Continuous Receives
  - EDIR (CICS transaction ID to start CR)
  - EDIS (CICS transaction ID to stop CR)
  - PERFORM START CONTINUOUS RECEIVE
  - PERFORM STOP CONTINUOUS RECEIVE
- Continuous Receive statuses
  - PERFORM REPORT CONTINUOUS RECEIVE STATUS

Expedite/CICS Continuous Receive - continued

- Continuous Receive Flow
  1. Message delivered to IE mailbox
  2. IE automatically triggers Expedite/CICS transaction ISC2, which receives the message from IE
  3. ISC2 then starts transaction IMR1, which links to WDI (program EDICRIN)
  4. EDICRIN starts the WDI Utility transaction EDIB
  5. The Utility does what is instructed in the Continuous Receive profile

Expedite/CICS Continuous Receive - continued

- Continuous Receive Flow
  - IE ➔ Expedite/CICS ➔ WDI



MQ Continuous Receive

1. Define a WDI Queue profile
   - Set profile name to MQI
   - Set queue name to CICSI.EDIRECEIVE
2. Define a WDI Continuous Receive profile
   - Set profile name to CRI
   - Leave selection fields blank (i.e. Mailbox)

MQ Continuous Receive - continued

3. Define MQ objects
   - Define an initiation queue

     DEFINE QLOCAL(CICSI.TRIGGER)
   - Define a process

     DEFINE PROCESS(EDIPROC) APPLICID(EDIQ) APPLTYPE(CICS)
   - Define the data queue that will receive messages

     DEFINE QLOCAL(CICSI.EDIRECEIVE) INITQ(CICSI.TRIGGER)
     PROCESS(EDIPROC) TRIGGER TRIGTYPE(FIRST)
     TRIGDATA('CRPROF=CRI MQPROF=MQI')

MQ Continuous Receive - continued

4. Optionally, set the default queue manager name and initiation queue name in the CICS SIT.

```
INITPARM=(CSQCPARM='SN=MQ65,TN=001,IQ=CICSI.TRIGGER')
```

MQ Continuous Receive - continued

5. Start an MQ connection in CICS
   - The CICS adapter control panel (transaction CKQC)
     - Select “Connection” then “Start”
     - Displays screen where you enter connection parameters
   - The CICS command line
     - CKQC START Y MQ65 001 CICSI.TRIGGER
   - A CICS application program
     - EXEC CICS LINK PROGRAM(’CSQCQCON’) . . .
   - CICS SIT parameter -or- CICS initialization PLT entry
     - SIT Parameter: MQCONN=YES
     - PLTPI Entry: DFHPLT TYPE=ENTRY,PROGRAM=CSQCCODF

MQ Continuous Receive - continued

6. Start an instance of the MQ trigger monitor CKTI
   - The CICS adapter control panel (transaction CKQC)
     - Select “CKTI” then “Start”
     - Displays screen where you enter initiation queue name
   - The CICS command line
     - CKQC STARTCKTI CICSI.TRIGGER
   - A CICS application program
     - EXEC CICS LINK PROGRAM(’CSQCSSQ ’) INPUTMSG(’CKQC STARTCKTI CICSI.TRIGGER’)

MQ Continuous Receive - continued

- Continuous Receive Flow
  A. Data is written to queue CICSI.EDIRECEIVE
  B. TRIGDATA is written to queue CICSI.TRIGGER
  C. The MQ trigger monitor (CKTI) starts application EDIQ, which is specified in process EDIPROC

```
DEFINE QLOCAL(CICSI.TRIGGER)

DEFINE PROCESS(EDIPROC) APPLICID(EDIQ) APPLTYPE(CICS)

DEFINE QLOCAL(CICSI.EDIRECEIVE) INITQ(CICSI.TRIGGER)
  PROCESS(EDIPROC) TRIGGER TRIGTYPE(FIRST)
  TRIGDATA('CRPROF=CRI  MQPROF=MQI')
```

MQ Continuous Receive - continued

- Continuous Receive Flow - continued
  - D. EDIQ does an EXEC CICS RETRIEVE to get the TRIGDATA
  - E. EDIQ then LINKs to program EDICRIN with commarea EXICOMM
    - Continuous Receive profile name (‘CRI’) in EXIFNAME
    - MQSeries profile name (‘MQI’) in EXIMQNAM

Note: EXIFNAME and EXIMQNAM are two fields in the EXICOMM data structure

MQ Continuous Receive - continued

- Continuous Receive Flow - continued

F. EDICRIN starts the WDI Utility transaction EDIB

- An FFUS block is passed along with a PERFORM command containing keyword MQPNAME and the name of the WDI Queue profile:

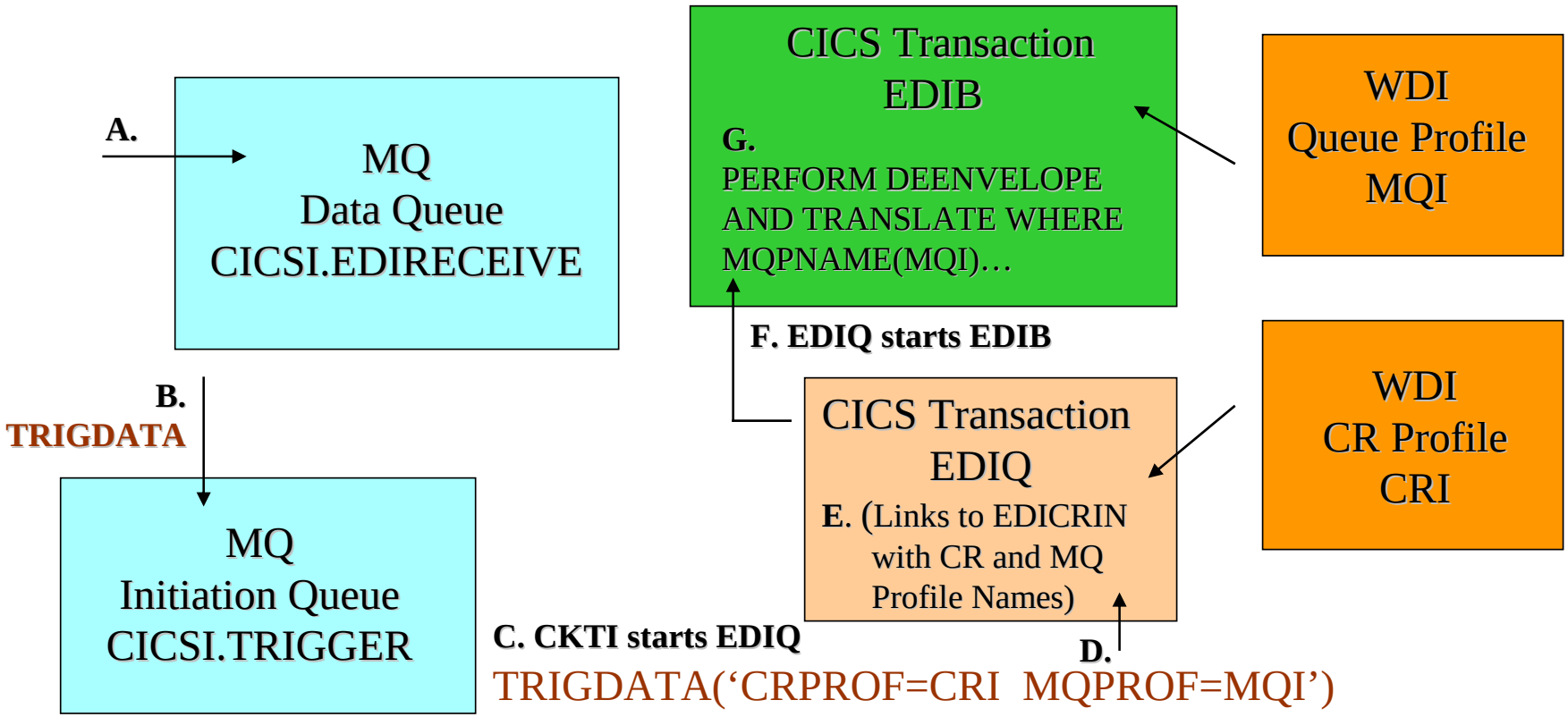
  MQPNAME(MQI)

G. The Utility does what is instructed in the Continuous Receive profile

- The queue named in the WDI Queue profile is processed

MQ Continuous Receive - continued

- Continuous Receive Flow



MQ Continuous Receive - continued

- The WDI Utility is invoked with PERFORM command:

  PERFORM DEENVELOPE AND TRANSLATE WHERE MQPNAME(MQI)…

- MQI is the name of the WDI Queue profile. Within this profile is MQ queue name CICSI.EDIRECEIVE
- The Utility deenvelopes and translates the data in CICSI.EDIRECEIVE
  - Data was written to CICSI.EDIRECEIVE back in Step A. This triggered the Continuous Receive process which ended with the data being deenveloped and translated.

Summary

- Three new types of Continuous Receive processing for WDI 3.3
  - PERFORM TRANSFORM WHERE …
  - PERFORM PROCESS WHERE …
  - PERFORM RECEIVE AND PROCESS WHERE …
- XML print file, ADF print file, and tracking file added to Continuous Receive profile
- Client Continuous Receive profile changed
  - Tabs for each type of processing (PERFORM command)
  - Within each tab are fields associated with the PERFORM command's keywords

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