IBM

SupportPac CA0B

64-bit ECI Version 2 support for CICS Transaction Gateway V8

Installation and User Guide
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Description

SupportPac CA0B enables the development of 64-bit C applications on AIX that can call CICS COMMAREA programs synchronously or asynchronously using ECI version 2. The ECI version 2 API supplied with CICS Transaction Gateway (CICS TG) V8 supports 32-bit applications and synchronous calls. ECI version 2 supports remote mode operation only. You cannot call CICS channel programs using this SupportPac.

The SupportPac provides a 64-bit version of the ECI version 2 API library (libctgclient.a), and header files for use on AIX. 32-bit applications must use the API library and header files supplied with CICS TG. Sample programs ctgecib1.c, ctgecib2.c, and header file ctgutils.h are included, with a makefile that compiles the samples as 64-bit programs. API documentation is also provided.

This SupportPac can be used with CICS Transaction Gateway for z/OS and CICS Transaction Gateway for Multiplatforms. The SupportPac files are not intended to replace the files supplied with CICS TG.

System requirements

CICS Transaction Gateway for z/OS V8.0 or later
CICS Transaction Gateway for Multiplatforms V8.0 or later
AIX operating system V6.1 or later
XL C/C++ Enterprise Edition for AIX V9.0 or later

Skill level required

Application developers must be familiar with developing 64-bit C applications.

Supplied files

`AIX/lib64/libctgclient.a`	64-bit ECI V2 shared object file
`AIX/include/ctgclient.h`	ECI V2 header file
`AIX/include/ctgclient_eci.h`	ECI V2 header file
`AIX/samples/c/eci_v2/ctgecib1.c`	ECI V2 synchronous sample program
`AIX/samples/c/eci_v2/ctgecib2.c`	ECI V2 asynchronous sample program
`AIX/samples/c/eci_v2/ctgutils.h`	Sample utility header file
`AIX/samples/c/eci_v2/samp.mak`	Sample makefile
`AIX/samples/c/env_c.def`	Environment file used by the makefile
`Documentation/`	HTML documentation for the ECI V2 API
`License/`	SupportPac license files
`ca0b.pdf`	This readme file

Installation

Copy the file ca0b.tar.gz to a temporary directory on your chosen system. Uncompress the file using a utility that supports the GZip format and extract the file contents using a utility that supports the tar format. The following command can be used to uncompress and extract the SupportPac contents:

```
gzip -cd <supportpac_path>/ca0b.tar.gz | tar -xvf -
```

Do not extract the SupportPac into the CICS TG installation directory.

After extracting the SupportPac contents, add the location of the extracted libctgclient.a file to the LIBPATH environment variable for all users that will run programs that use the ECI V2 API. The environment variable can be modified using the following command:

```
export LIBPATH=<supportpac_path>/AIX/lib64:$LIBPATH
```

Compiling and using the sample programs

The SupportPac includes sample programs written in C. To run the sample programs, CICS TG must be configured with a TCP/IP protocol handler and one or more CICS server connections. The sample CICS program EC01 must be available on the target CICS servers. The EC01 CICS program is included with CICS Transaction Gateway.

The sample makefile requires the location of the compiler (such as `/usr/vac/bin`) to be included in the PATH environment variable. The samples can be compiled using the sample makefile with the following commands:

```
cd <supportpac_path>/AIX/samples/c/eci_v2
make -f samp.mak
```

The synchronous sample program can be run using the following command:

```
./ctgecib1 [gateway_tcpip_hostname] [gateway_tcpip_port]
```

The asynchronous sample program can be run using the following command:

```
./ctgecib2 [gateway_tcpip_hostname] [gateway_tcpip_port] [num_calls]
```

Application development

The ECI V2 API is defined in header files ctgclient.h and ctgclient_eci.h. Documentation for the API is provided in HTML format and can be viewed by opening the file `<supportpac_path>/Documentation/index.html` in a web browser.

The ctgclient.h header file defines functions for opening and closing connections to CICS TG, querying the CICS servers defined in CICS TG, and querying the properties of the ECI V2 API.

The ctgclient_eci.h header file defines function for calling CICS COMMAREA programs using a connection to CICS TG.

To compile your application with ECI V2, the location of the ECI V2 header files must be specified in the compile command with a compiler option to generate 64-bit object files, and the CICS_AIX symbol defined. To link your application, the location of the libctgclient.a shared object file must be specified in the link command with an option to generate a 64-bit output file. Examples of compile and link commands can be found in the sample makefile and environment files supplied in the SupportPac.

Further details

More information, see the CICS TG V8.0 Information Center:

   http://www.ibm.com/software/htp/cics/ctg/library/index.html

Support information can be found on the SupportPac download page:

   http://www.ibm.com/support/docview.wss?uid=swg24031232