CA Gen 8.6 Support of ECI v2: Customer Training Webinar

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ECI v2 Training Agenda

- Overview
- Configuration
- Usage
- Additional Information
- Questions

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Overview

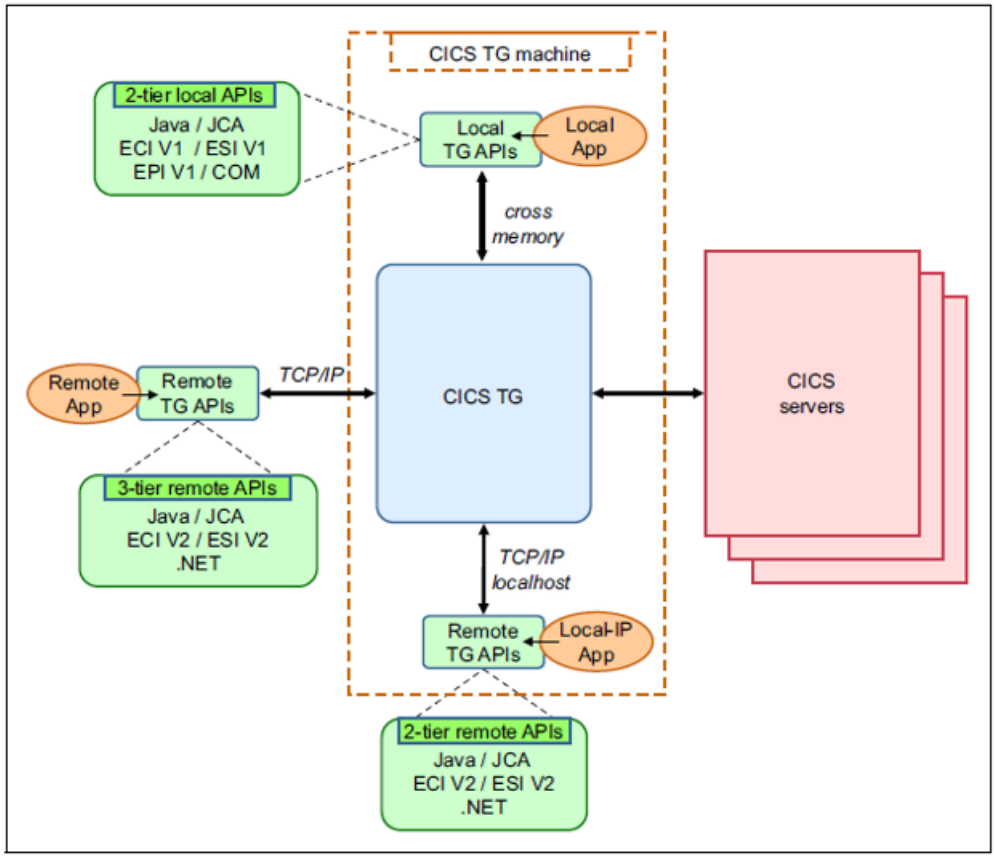
What is ECI?

- External Call Interface (ECI) is an API provided by IBM that provides client applications access to CICS programs
- Provided with IBM's CICS Transaction Gateway (CTG)
- One of the middleware options provided by CA Gen for many years to allow Gen clients to access Gen COBOL servers on CICS
- Client applications must reside on same machine as CTG
- Uses the DFHCOMMAREA to send data to/from CICS programs
  - Data size limited to 32 KB
- Now referred to as ECI v1

What is ECI v2?

- ECI v2 is a newer API provided by IBM that provides client applications access to CICS programs
- Provided with IBM's CICS Transaction Gateway (CTG)
- Allows client applications to reside on different machine than CTG
  - Smaller client footprint
  - CTG configuration and administration can be centralized
- Can now use Channels/Containers to send data to/from CICS
  - Data size limited to 16 MB
  - Requires use of the IPIC network protocol
- Can still use DFHCOMMAREA to send data to/from CICS
  - Data size limited to 32 KB

CICS Transaction Gateway Deployment Models



Source: IBM CICS Transaction Gateway Volume 1 Configuration and Administration

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What's in (and not in) the CA Gen 8.6 ECI v2 Enhancement?

- CA Gen C clients only
  - GUI clients
  - COM Proxy clients
  - C Proxy clients
- Did not change runtimes for Java clients or for Communications Bridge
- Still support ECI v1 flows for backward compatibility
- Added support for ECI v2 flows
  - DFHCOMMAREA
  - Containers
- Server-to-Server flows still limited to a data size of 32 KB
  - ECI is not used for Server-to-Server flows

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Supported ECI Flow Types for CA Gen C Clients

Flow Type	Data Encapsulation Type	Data Size Limit	Network Protocol	Reason why someone might choose this option
ECI v1	COMMAREA	32 KB	ECI over TCP/IP	Backward compatibility
ECI v2	COMMAREA	32 KB	ECI over TCP/IP	CTG remote application support, but don't have IPIC configured
ECI v2	COMMAREA	32 KB	IPIC	CTG remote application support, IPIC benefits, but don't need Containers
ECI v2	CONTAINER	16 MB	IPIC	CTG remote application support, IPIC benefits and >32 KB

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Configuration

Configuration

- CICS Resources
  - TCPIPService
  - IPCONN
    - Required if using IPIC
    - Can be predefined or autoinstalled
- CICS Transaction Gateway (CTG)
  - CICS Transaction Gateway Configuration Tool
  - Edit ctg.ini file

CEDA DEF TCPIPS

```
DEF TCPIPS
OVERTYPE TO MODIFY                                  CICS RELEASE = 0720
 CEDA  DEFine TCpipservice(         )
  TCpipservice ==>
  GROup        ==>
  DEScription  ==>
  Urm          ==>
  POrtnumber   ==> 00000            1-65535
  STatus       ==> Open             Open | Closed
  PROtocol     ==>                  Http | Eci | User | IPic
  TRansaction  ==>
  Backlog      ==> 00000            0-32767
  TSqprefix      :
  Host         ==>
  (Mixed Case) ==>
  Ipaddress    ==>
  SPeciftcps   ==>
  SOcketclose  ==> No               No | 0-240000 (HHMMSS)
  MAXPersist   ==> No               No | 0-65535
+ MAXDatalen   ==>                  3-524288
```


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CEDA DEF IPCONN

```
 DEF IPCONN
 OVERTYPE TO MODIFY                                  CICS RELEASE = 0720
  CEDA  DEFine Ipconn(         )
   Ipconn       ==>
   Group        ==>
   DEScription  ==>
  IPIC CONNECTION IDENTIFIERS
   APplid       ==>
   Networkid    ==>
   HOst         ==>
   (Mixed Case) ==>
   Port         ==> No              No | 1-65535
   Tcpipservice ==>
   HA           ==> No              No | Yes
  IPIC CONNECTION PROPERTIES
   Receivecount ==> 001             1-999
   SENdcount    ==> 000             0-999
   Queuelimit   ==> No              No | 0-9999
   MAxqtime     ==> No              No | 0-9999
 + OPERATIONAL PROPERTIES
```


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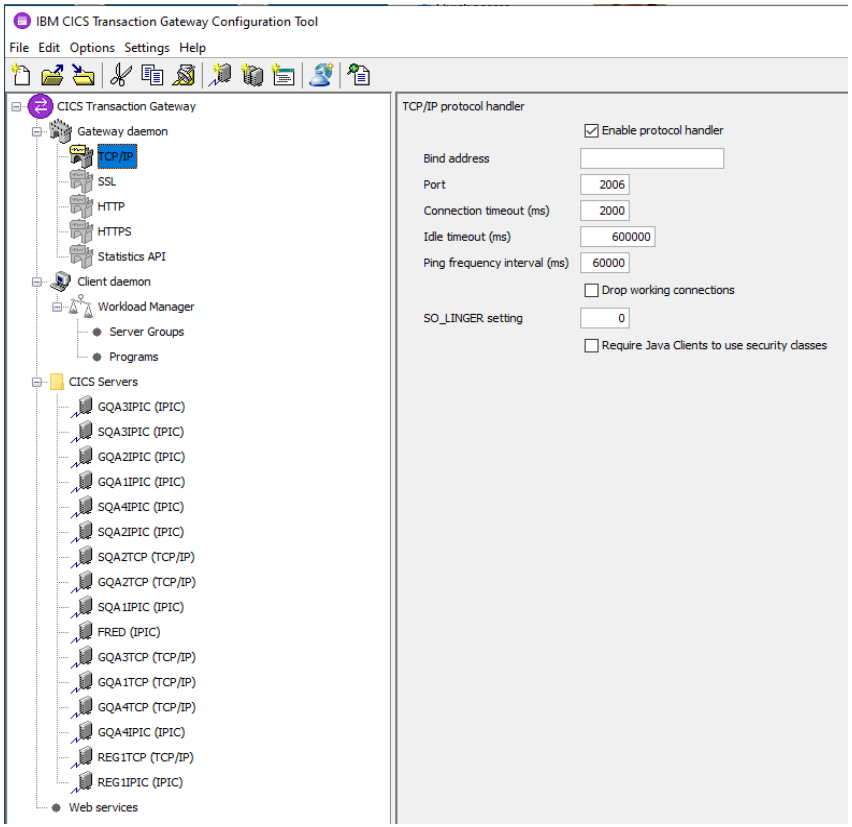
TCP/IP Protocol Handler for Gateway Daemon



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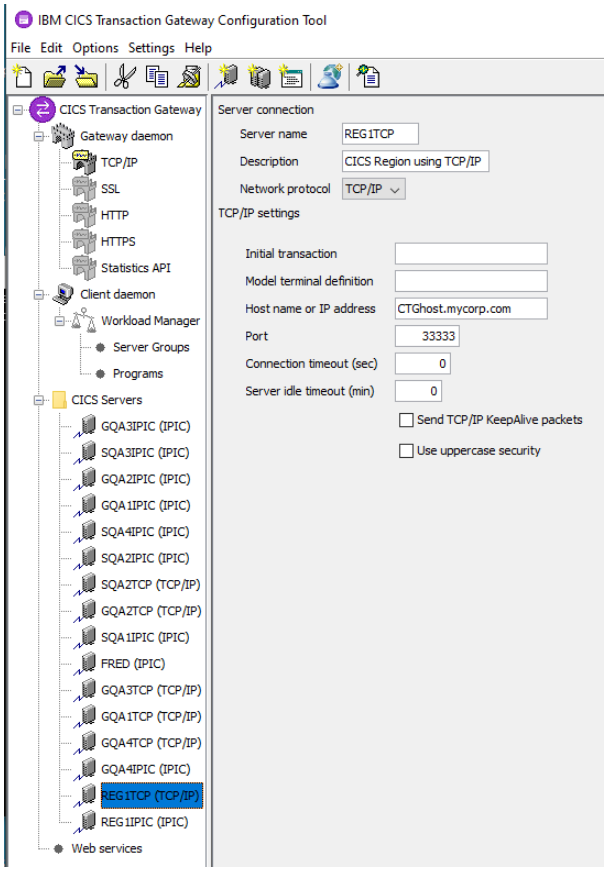
Configure CICS Servers – TCP/IP




```
CEDA  DEFine TCpipservice( MYTCPS1  )
 TCpipservice ==> MYTCPS01
 GROup        ==> MYGROUP
 DEScription  ==> TCPIP SERVICE USING ECI OVER TCP/IP
 Urm          ==>
 POrtnumber   ==> 33333            1-65535
 STatus       ==> Open             Open | Closed
 PROtocol     ==> Eci              Http | Eci | User | IPic
```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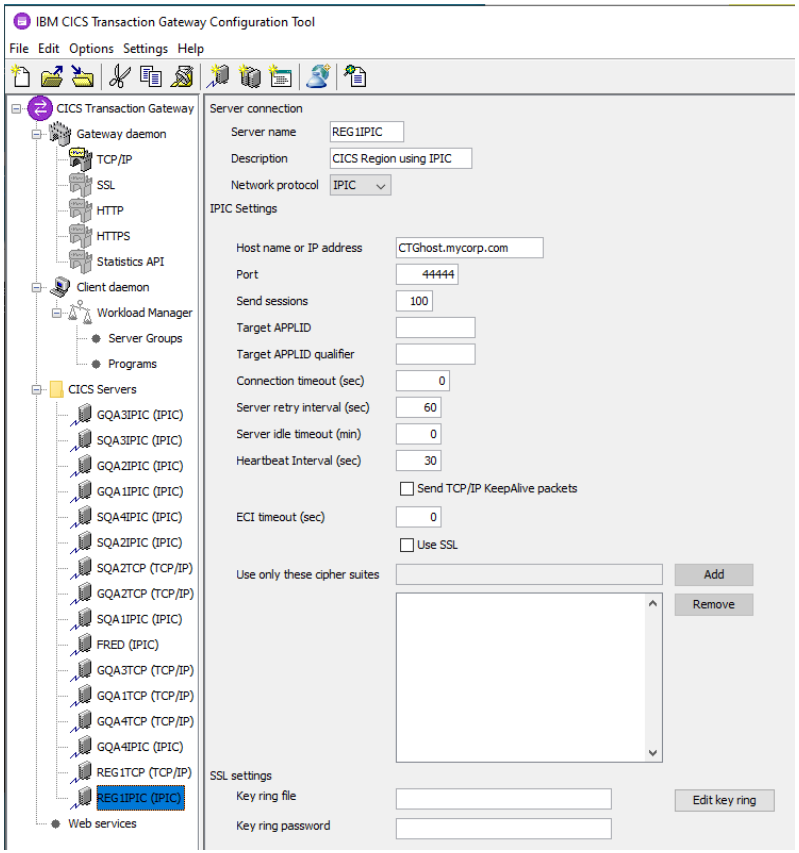
Configure CICS Servers – IPIC




```
CEDA  DEFine TCpipservice( MYTCPS02 )
 TCpipservice ==> MYTCPS02
 GROup        ==> MYGROUP
 DEScription  ==> TCPIP SERVICE USING IPIC
 Urm          ==> DFHISAIP
 POrtnumber   ==> 44444            1-65535
 STatus       ==> Open             Open | Closed
 PROtocol     ==> IPic             Http | Eci | User | IPic
```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Usage

PTFs Required for CA Gen 8.6 ECI v2 Enhancement

- PTF for Windows
  - RTN86206
    - https://support.broadcom.com/download-center/solution-detail.html?aparNo=SS12686&os=WINDOWS
- PTFs for z/OS
  - SO12045
    - https://support.broadcom.com/download-center/solution-detail.html?aparNo=SO12045&os=z%2FOS
  - SO12046
    - https://support.broadcom.com/download-center/solution-detail.html?aparNo=SO12046&os=z%2FOS

NOTE: Code regeneration is not required

Modify COMMCFG.INI File

CA Gen uses the COMMCFG.INI file to specify which communication type a client will use to process the cooperative flow to a target server

For ECI two formats will be supported:

<TRANCODE> ECI {ECI System Name} (for backward compatibility)

for example, * ECI REG1TCP

<TRANCODE> ECI <Storage Type> {Host} {Port} {ECI System Name}

for example, * ECI **COMMAREA** CTGhost.mycorp.com 2006 REG1TCP

or * ECI **COMMAREA** CTGhost.mycorp.com 2006 REG1IPIC

or * ECI **CONTAINER** CTGhost.mycorp.com 2006 REG1IPIC

CA Gen ECI DLLs

Flow Type	Cooperative Flow Runtime DLL	User Exit DLL	User Exit Source	User Exit Makefile
ECI v1	ECICFN.DLL	ECICXN.DLL	CIECICLX.C	CECIEXIT.NT
ECI v2	ECIV2CFN.DLL	ECIV2CXN.DLL	CIECIV2X.C	CECIV2EX.NT

NOTE: CTG remote application support for ECI v2 requires IBM's CTGCLIENT.DLL to be deployed with the client application.

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Additional Information

Additional Information

- ECI v2 Overview
  - https://knowledge.broadcom.com/external/article?articleId=189046
- Troubleshooting and Common Errors
  - https://knowledge.broadcom.com/external/article?articleId=188849
- CTG Online Documentation
  - https://www.ibm.com/support/knowledgecenter/SSZHFX_9.2.0/welcome.html

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Questions


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Thank You