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New features in DB2 Server for VSE & VM V7.5 and the road ahead

World Alliance of VM and VSE 2008

Torsten Roeber, 18th April 2008

Agenda

Section 1

New Features in DB2 Server for VSE & VM Version 7.5

Section 2

Future Plan for DB2 Server for VSE & VM

Section 1 - New features and enhancements in Version 7.5

- DB2 Client Edition (CE) on VSE and VM

- Improved Checkpoint Performance

- Application Message Formatter

- Bind File support for Batch VSE and VM

- New EZASMI TCP/IP Interface

Section 1 - New features and enhancements in Version 7.5(contd.)

- DRDA Performance Enhancements

- Making Online Resource Adapter run above the line

- Communication Performance Enhancements

- Multirow or Buffered Insert

- Connection Pooling

- Batch Implicit connect (PK61360 / UK34936)

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DB2 Client Edition on VSE and VM

Business value for this feature:

- Reduce Total Cost of Ownership for Customers by helping them keep their investments on Applications

- Reduce cost on license charges if customers want to use only the client portion of the DB2 on VSE and VM product.

- Reduced code size means less storage and less maintenance costs

- Some of the key features under development focus on flexibility and enhanced performance for the Client which is planned to come along with the new Client Edition.

Improved Checkpoint Performance

Business value for this feature:

- High speed Archiving/Checkpoint performance by leveraging modern I/O capabilities on z.

Application Message Formatter

Business value for this feature:

- Flexibility and enhanced error message display method to the user to get the symptom description of an SQL error.

Bind file Support for VM/VSE Batch

Business value for this feature:

- More standardized and robust way of application update and maintenance

EZASMI TCP/IP Interface

Business value for this feature:

- Upgrade to more robust interface, which would help add more communication capabilities to the product in the future

DRDA Performance Enhancements

Business value for this feature:

- Faster turn around time, through
  - better buffering logic for Resource adapter runtime data

  - Enhanced DRDA message parsing logic that reduce CPU through better process elimination techniques

  - Increasing resident properties of frequently accessed routines

- Reduction of communication wait time at the server by reducing client processing time and faster turn around time to submit subsequent request to the server.

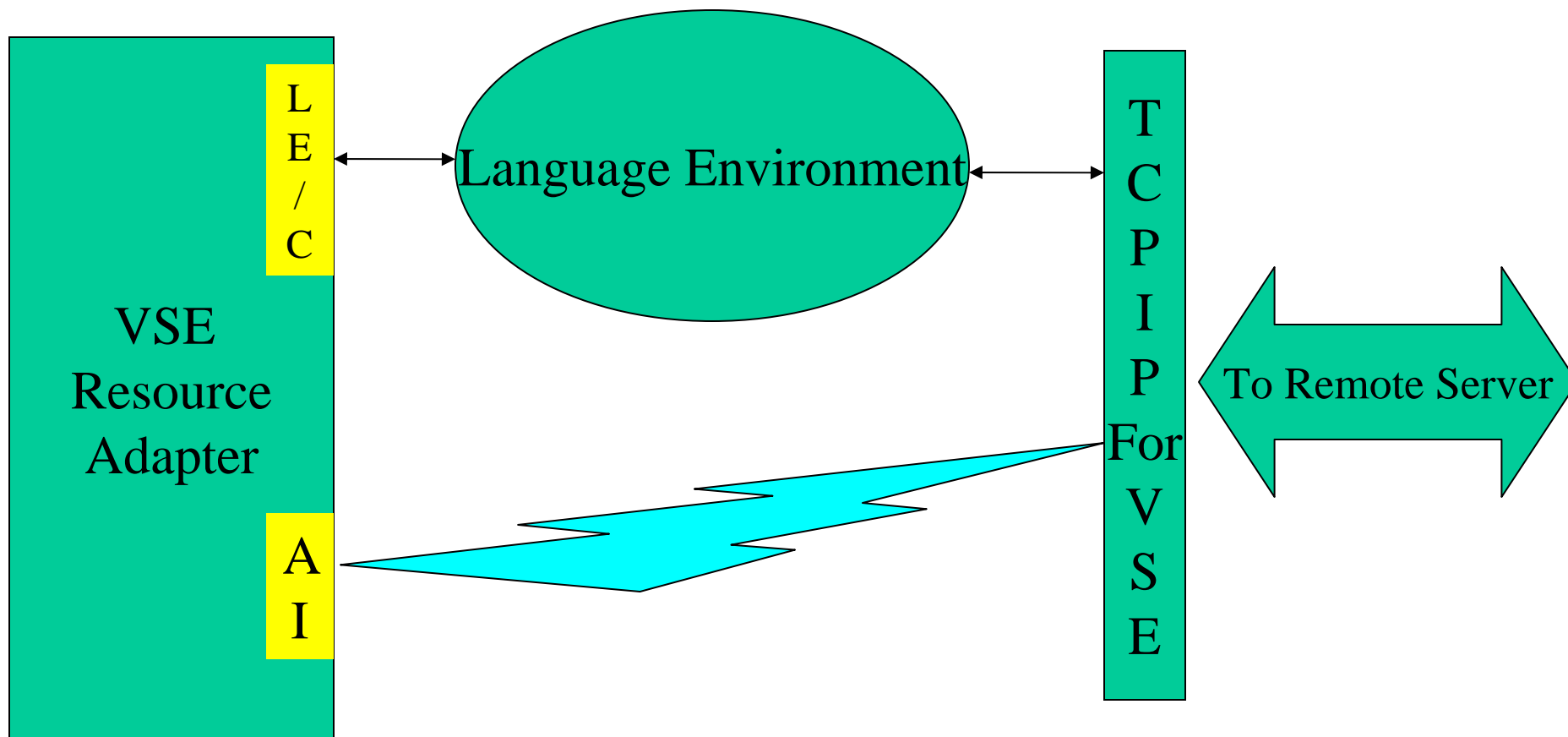# Make Online RA Phases run above the line

Business value for this feature:

• More space available for 24-bit applications

Communication Performance Enhancements

1. Enhanced communication via TCPIP CSI Assembler Interface

Communication Performance Enhancements

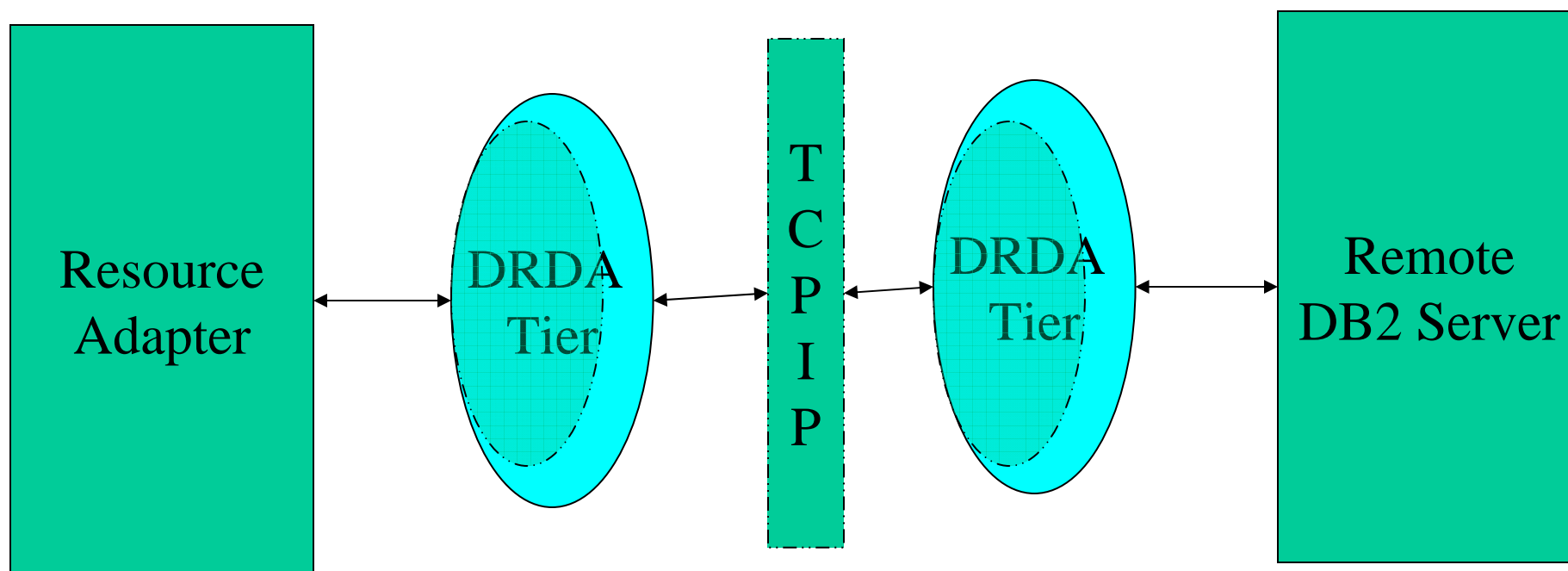## Limitations and Considerations: (Enhanced communication via TCPIP CSI Assembler Interface)

- Give/Take Socket calls not available in this interface
- Abend Handling is not advanced when compared to LE/C
- Password encryption available with LE interface only

Recommendations:

Good option for high speed communication from VSE to Remote Servers over TCP/IP

Communication Performance Enhancements (contd..)

2. Code Path Length Reduction

- Tests under controlled environments showed 10 % performance improvement

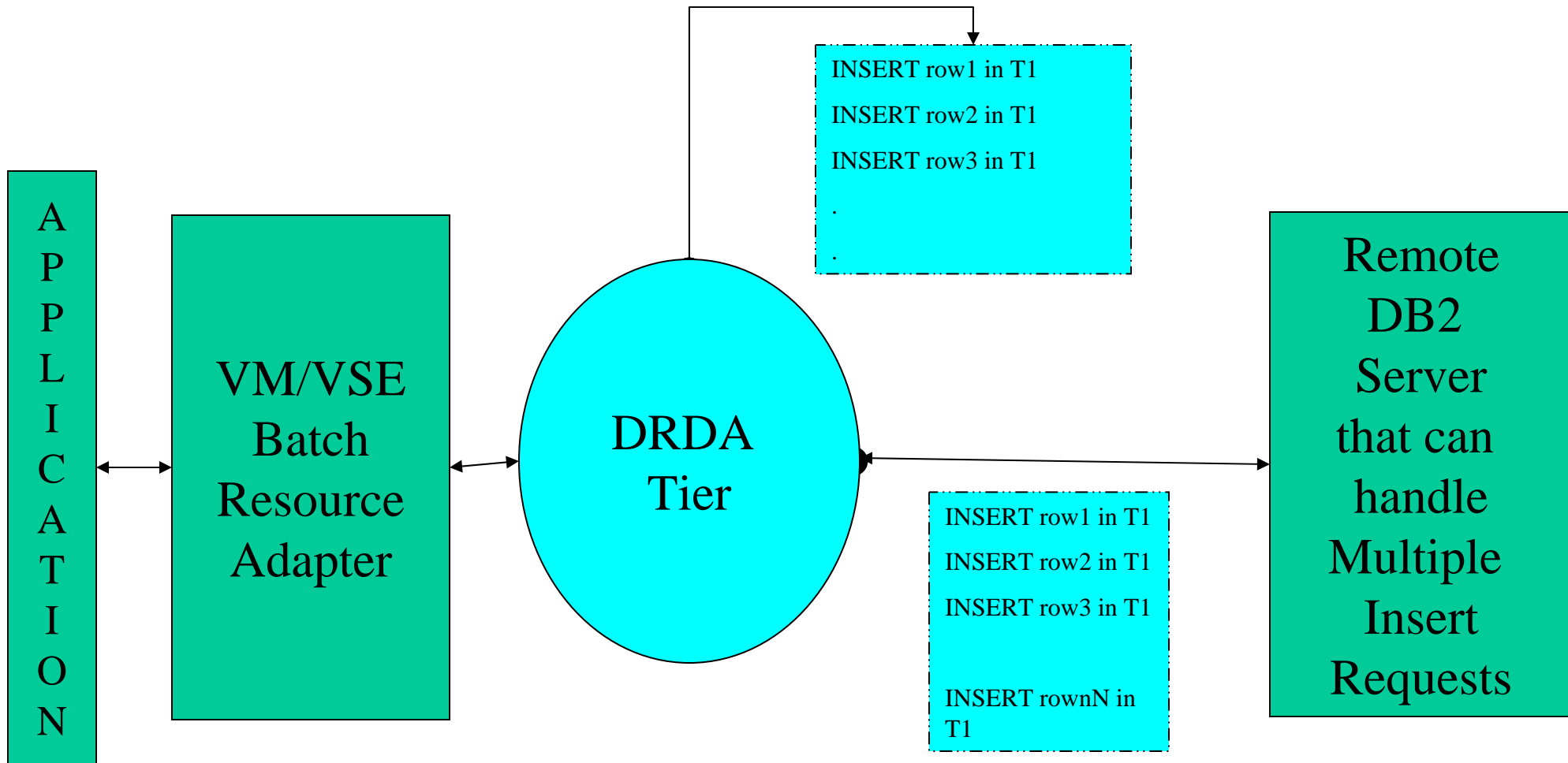# Communication Performance Enhancements (contd..)

Limitations and Considerations:

- None

Recommendations:

Good option for high speed mass data movement

Multirow Insert or Buffered Insert over DRDA

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VM/VSE
Batch
Resource
Adapter

DRDA
Tier

INSERT row1 in T1

INSERT row2 in T1

INSERT row3 in T1

.

.

INSERT row1 in T1

INSERT row2 in T1

INSERT row3 in T1

INSERT rownN in T1

Remote
DB2
Server
that can
handle
Multiple
Insert
Requests

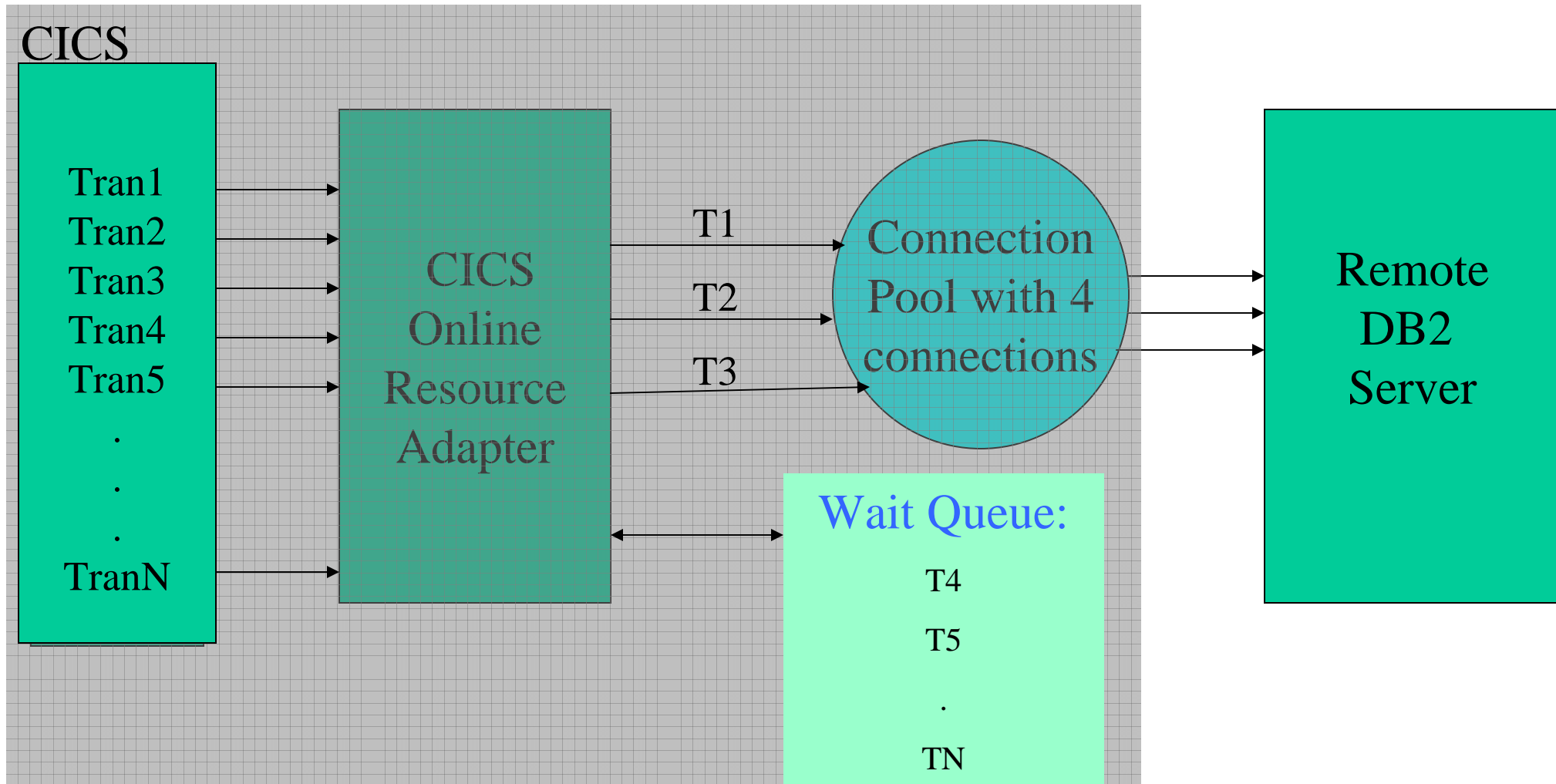# Multirow Insert or Buffered Insert over DRDA

Limitations and Considerations:

- Heterogeneous INSERTs or non-INSERT SQLs between homo-genous INSERTs cannot benefit from this feature.
- Not enabled for Online applications where user intervention is high
- Number of INSERTs or PUTs that can be buffered is limited to a maximum limit of 32K. But this is a lot

Recommendations:

Good option for high speed mass data movement

Connection Pooling for Online users over DRDA via TCP/IP

CICS

Tran1
Tran2
Tran3
Tran4
Tran5
.
.
.
TranN

CICS
Online
Resource
Adapter

T1
T2
T3

Connection
Pool with 4
connections

Remote
DB2
Server

Wait Queue:

T4

T5

.

TN

Connection Pooling for Online Users

Limitations and Considerations:

- Users have to wait if all connections in the pool are exhausted
- Transactions communication across different CICS regions have seen problems sharing the allocated connection. This will be ironed out by the development soon.
- DB2_SERVER_CONTIMEOUT at the server has to be set to zero to avoid lost connections in the pool. (V8: LI72085 / V9: IZ07458)

Recommendations:

Good option for Online users that connect to a remote database with a high number of users but limited resources for creating those many connections

Batch Implicit Connect

Business value for this feature:

- VSE Batch application need not have a CONNECT statement in the application program
  - if the parameter IMPLUSER is used while defining the DBNAME directory
  - // SETPARM USERID = <userid> defined in the JCL invoking the application program

Section 2 - Future Plan for DB2 Server for VSE and VM

- Line Items Planned for the future releases

- Strategy ahead for DB2 Server for VSE and VM

Line items Planned for upcoming DB2 Server for VSE and VM releases

- More SQL Capabilities

- Preprocessor Enhancements

- Data Migration Tool Kit

Strategy ahead for DB2 Server for VSE and VM

- DB2 for VSE/VM Strategy is to closely align with its Customers IT Strategy

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Q & A

Thank You.

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