



z/VSE in a 24 X 7 operation

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z/VSE 24 X 7

Traditional mainframe IT operation schedule

- Online Time 6:00 AM - 10:00 PM
 - **NO CICS applications after 10:00 PM**
 - Because of parallel batch
 - Because of data access
 - VSAM 'write one read multiple setting' -> SHR(2)

- Batch workload from 10:00 PM – 5:00 AM
 - **Backup from 10 PM till 11 PM**
 - **NO batch workload after 5:00 AM**
 - Because CICS workload started and files are opened for write in CICS

- Web Applications are 24 hours online and usable
 - **Data change to mainframe data has to be disabled at 10:00 PM**

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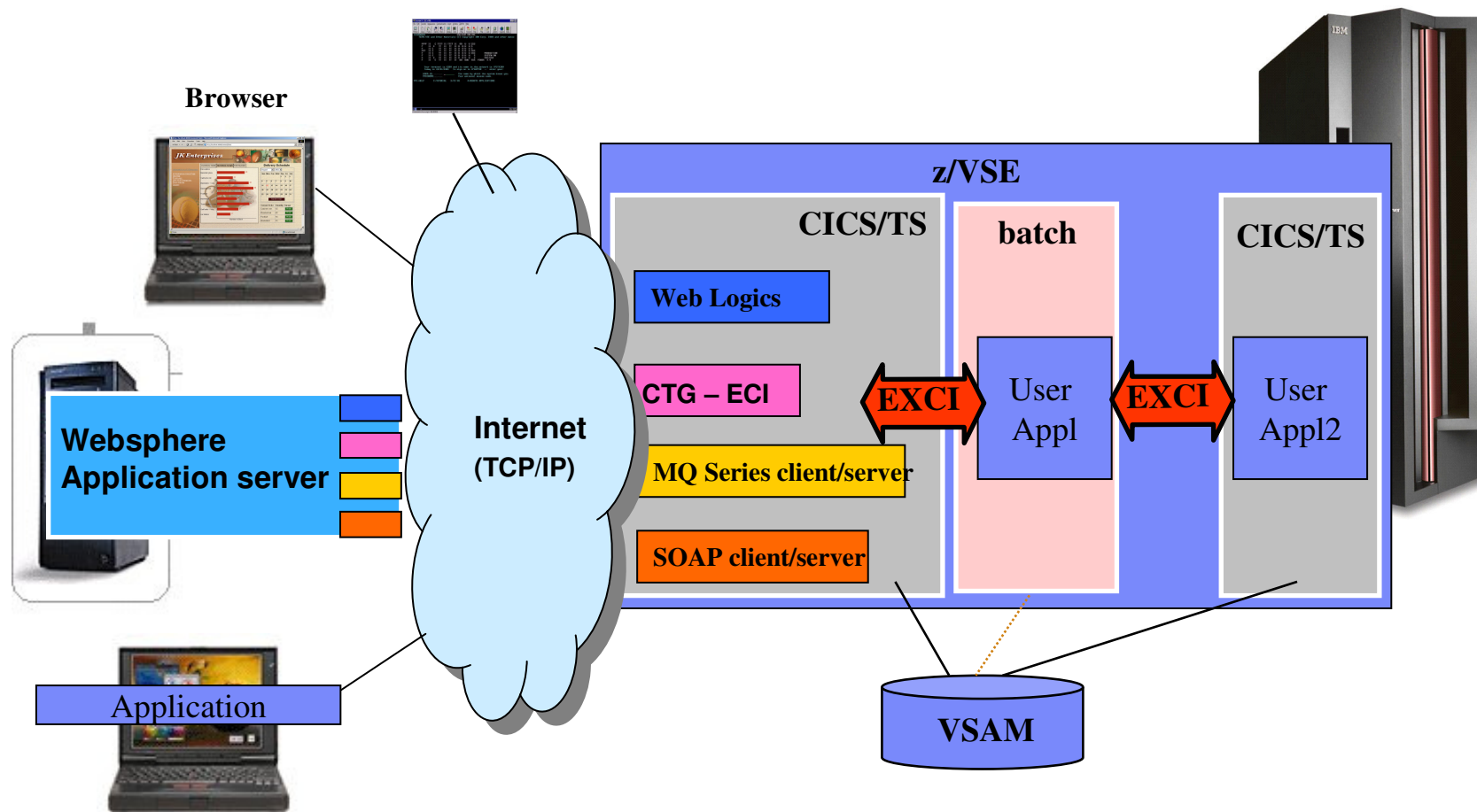
Restriction: Online Time 6:00 AM - 10:00 PM

- NO CICS applications after 10:00 PM**
 - Because of parallel batch
 - Because of VSAM 'write one read multiple setting' -> SHR(2)

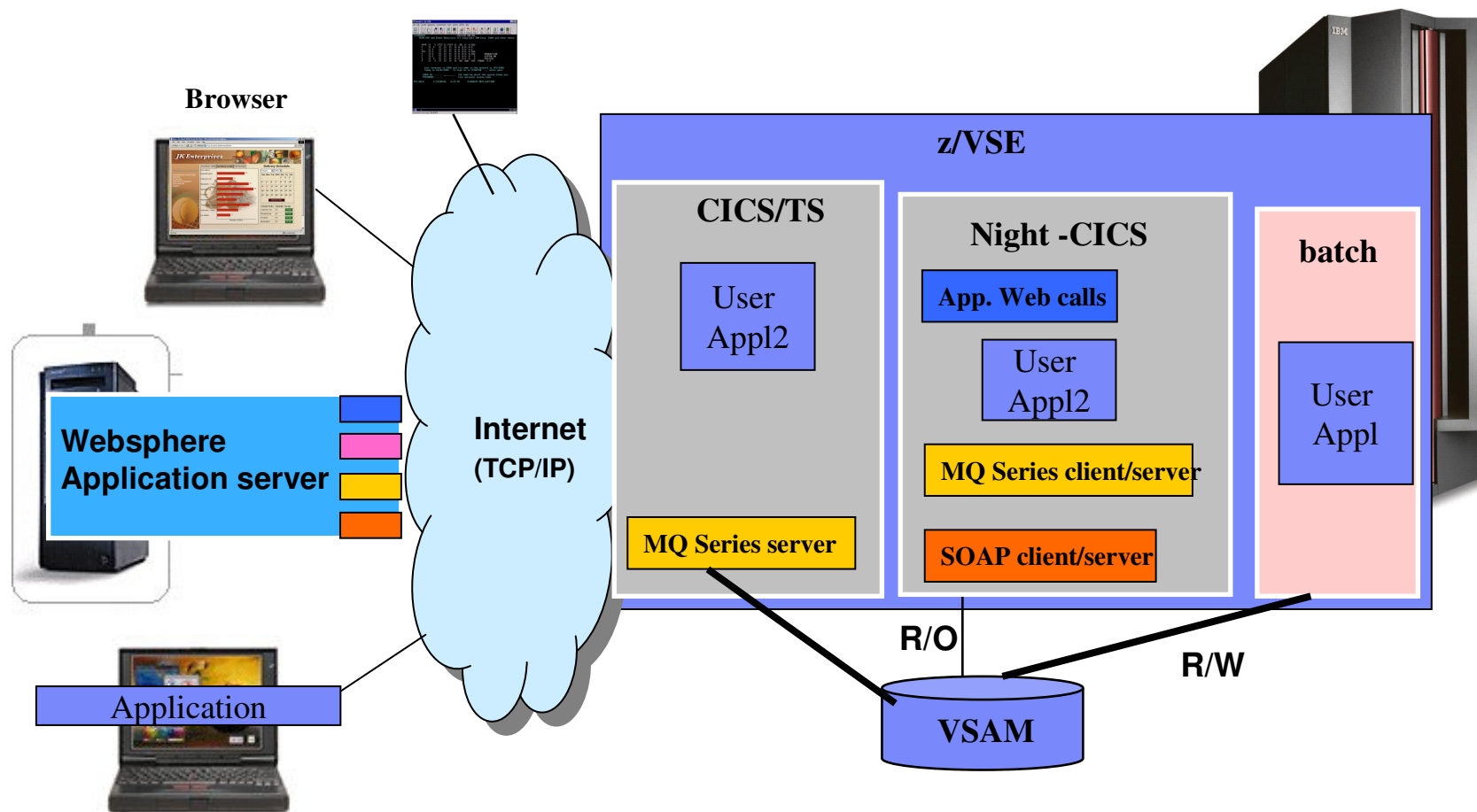
Solutions:

- 1. Increase Online time by changing VSAM files for multiple write SHR (4,4)**
- 2. Increase Online time with shadow CICS with R/O access to data**
- 3. Use separate CICS with Redirector to capture changes**
- 4. Use MQ Series to cumulate nightly changes**
- 5. For Web Applications with remote data access, enable access with connectors.**

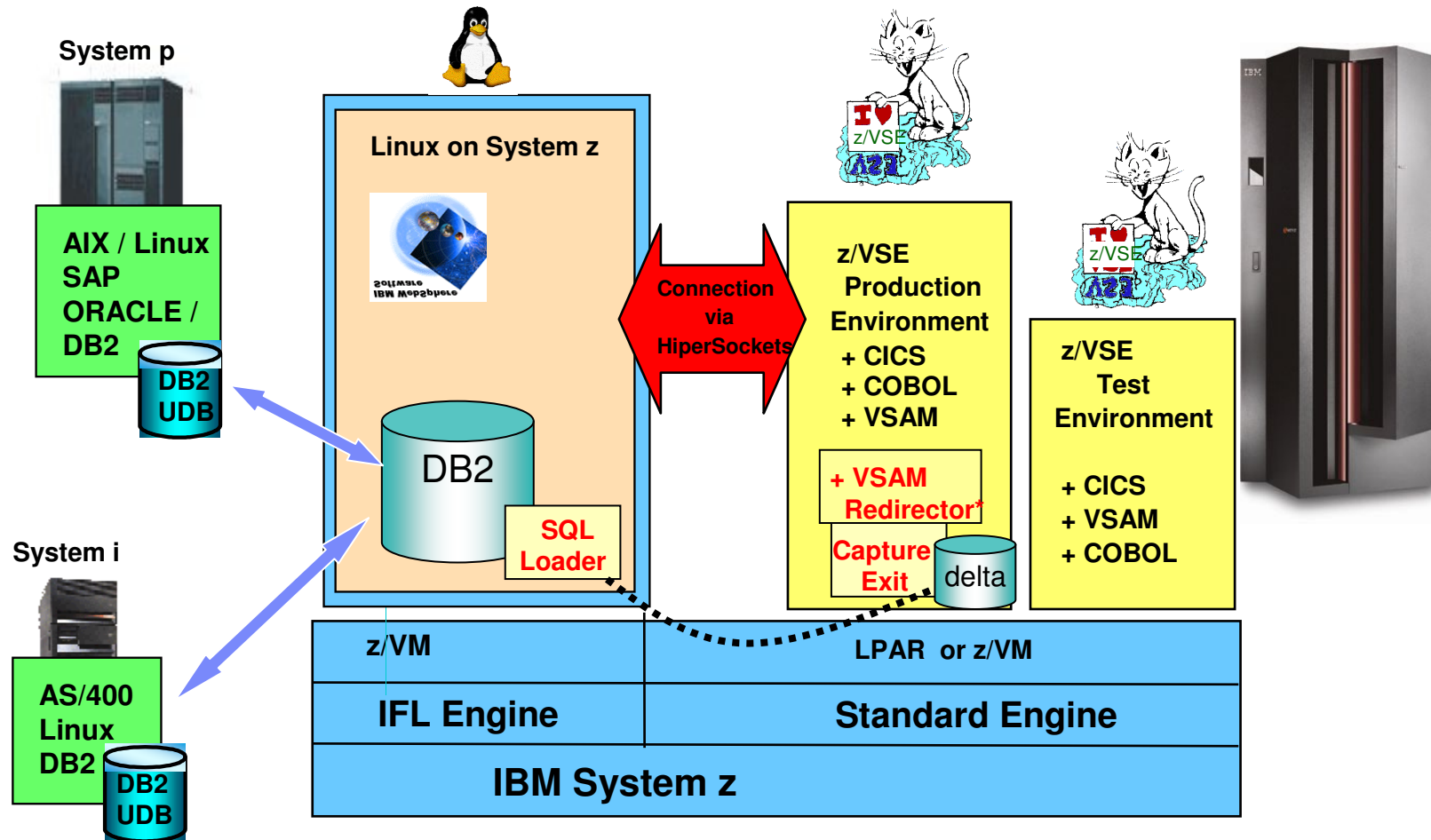
(1) Enable VSAM SHR(4,4) for parallel workload



(2) A 'night'-CICS with R/O access

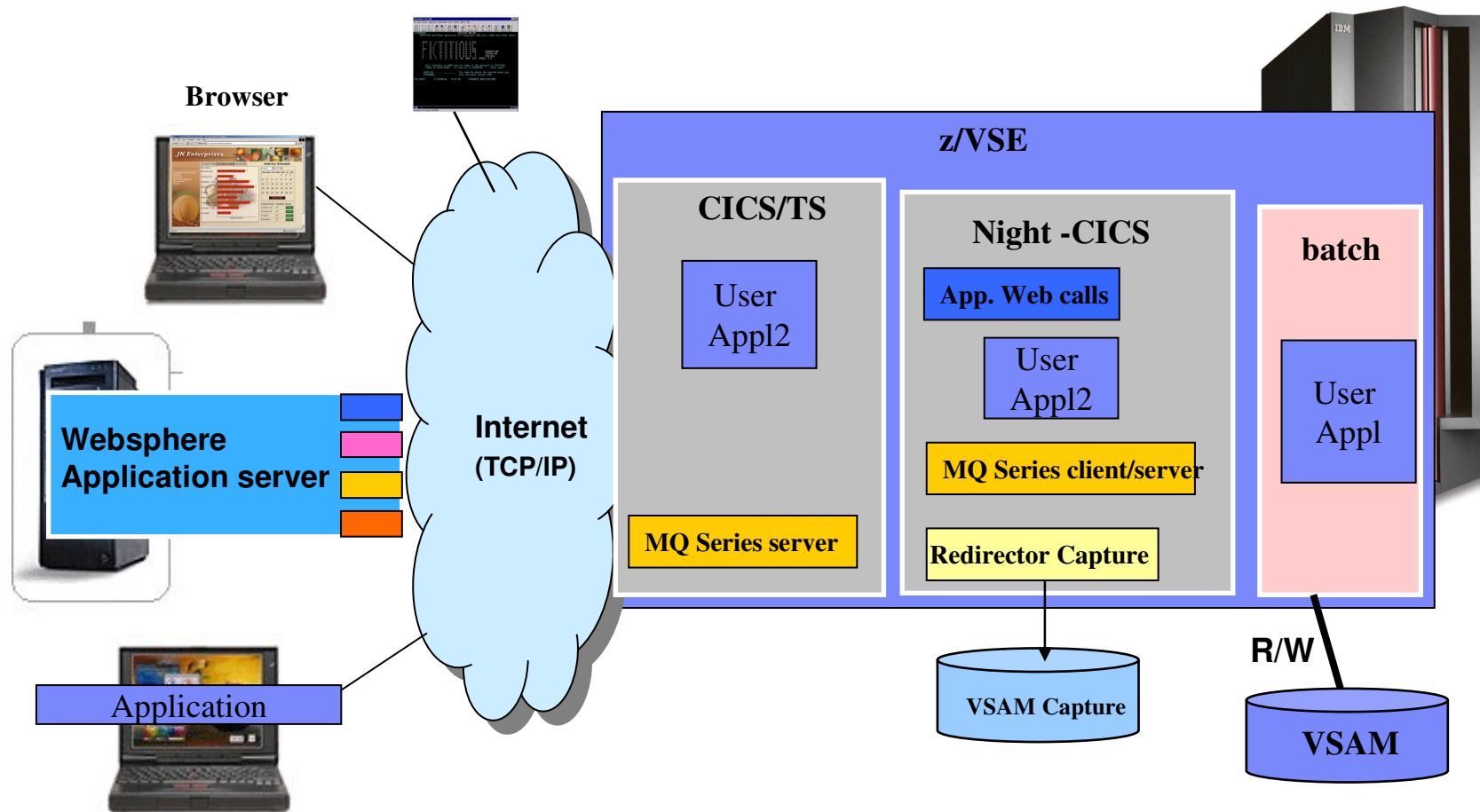


(3) VSAM Programs with DB2 UDB on Linux on System z

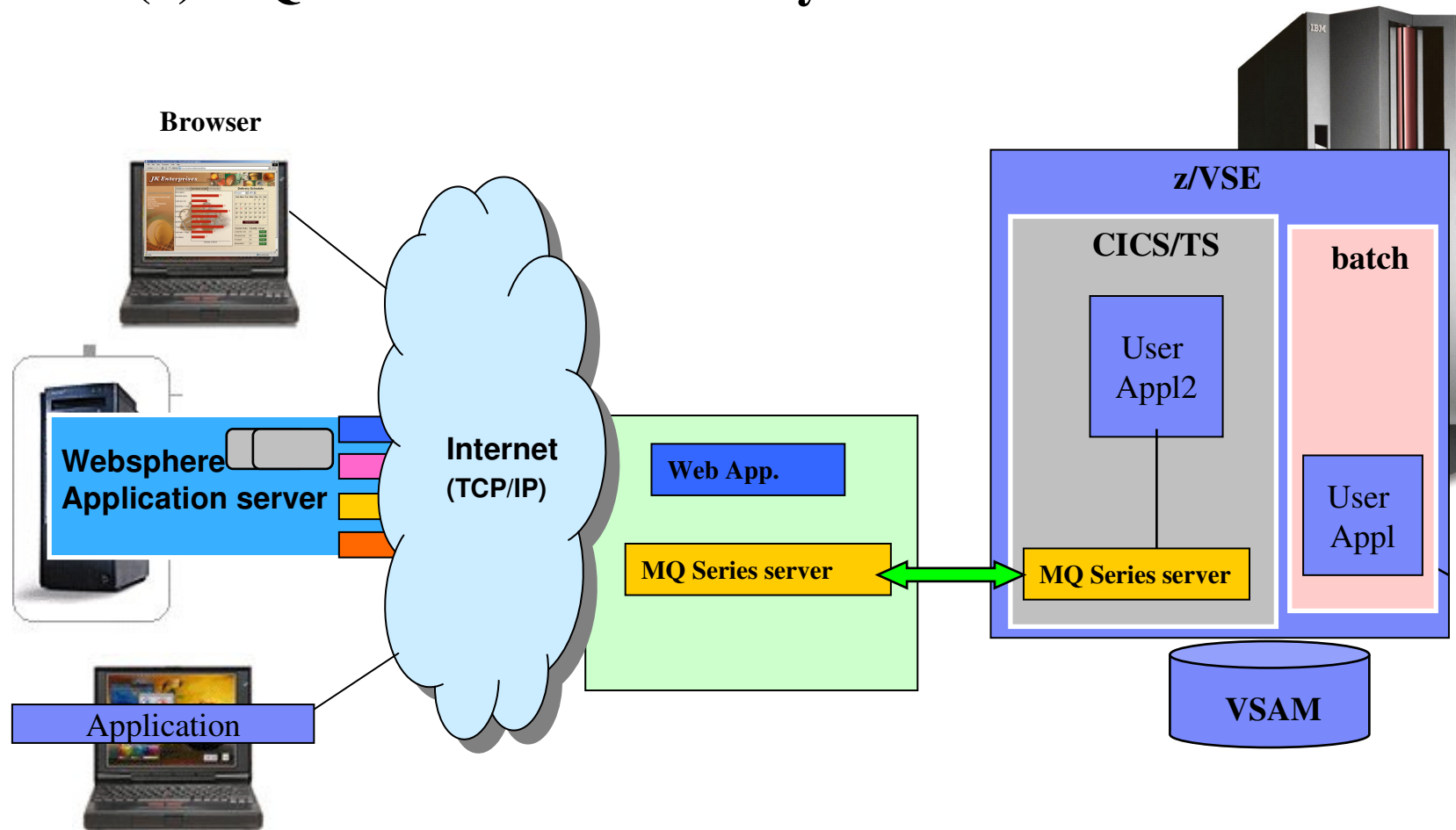


(*) VSAM Redirector – Common data store solution – with DB2 on Linux on zSeries Solutions without changes to VSAM programs

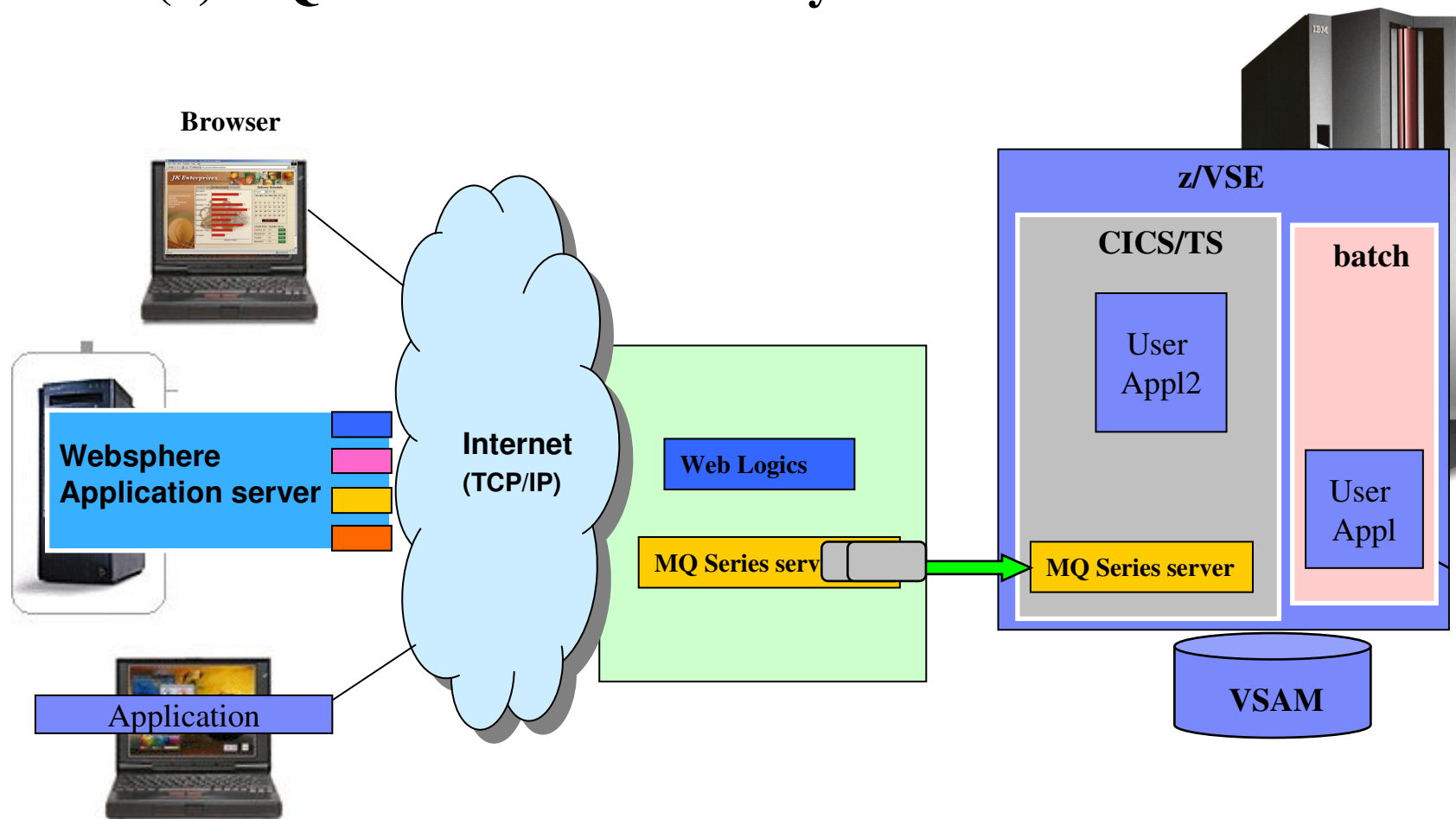
(3) A 'night'-CICS with R/O access



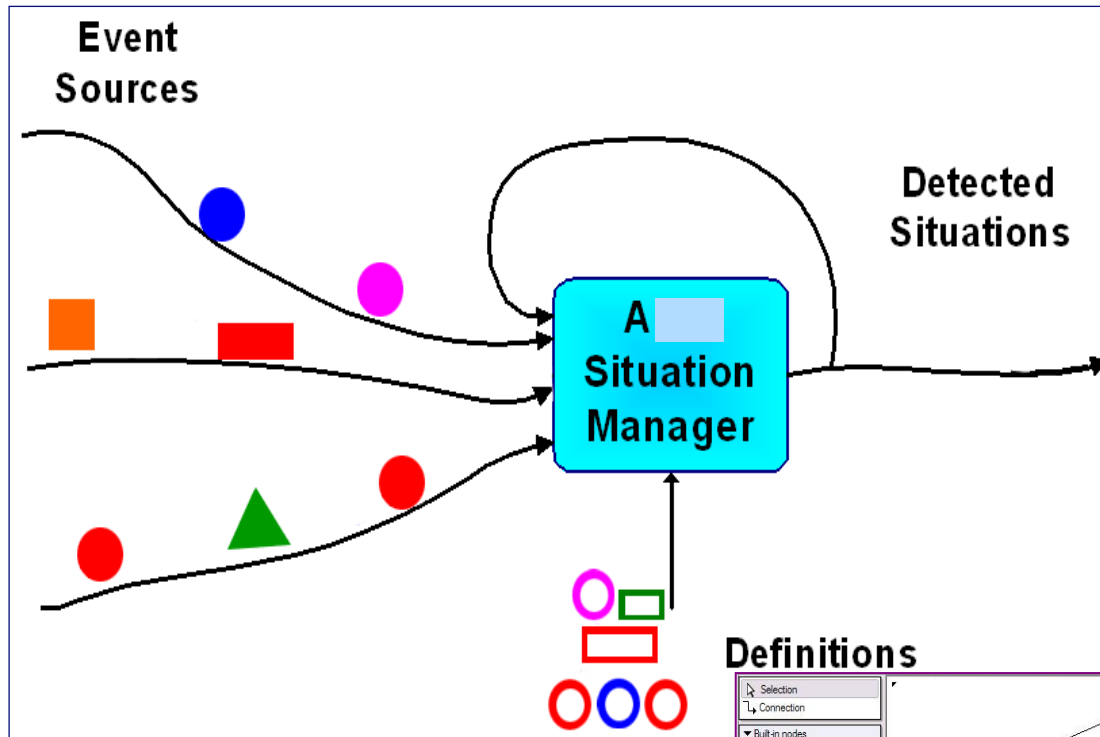
(4) MQ Environment with asynchronous work



(4) MQ Environment with asynchronous work



Use WMQ Broker for intelligence on the net and reduce batch

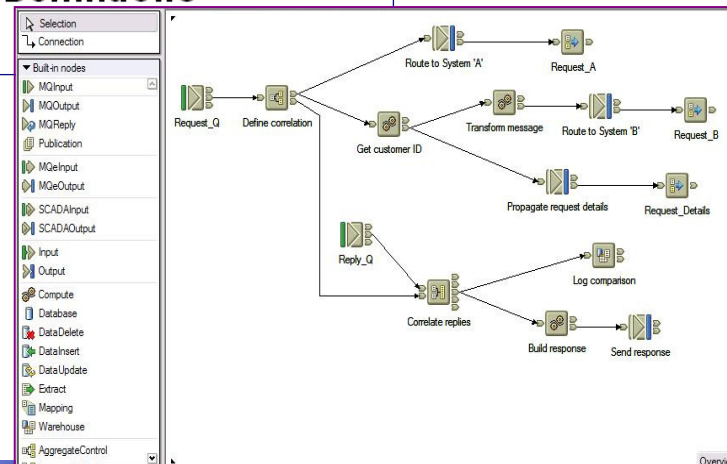


1. A framework for processing MQ messages

2. A robust hosting environment for:

- ✓ Transforming data
- ✓ Enriching data
- ✓ Interacting with databases
- ✓ Routing messages based on content
- ✓ Detecting complex combinations of messages
- ✓ Interacting existing applications with Web Services

Definitions



WebSphere ESB and WebSphere Message Broker

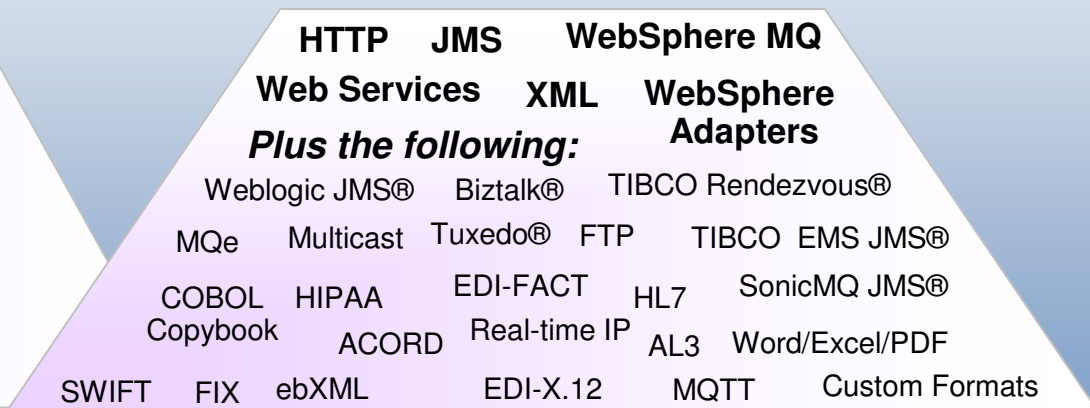
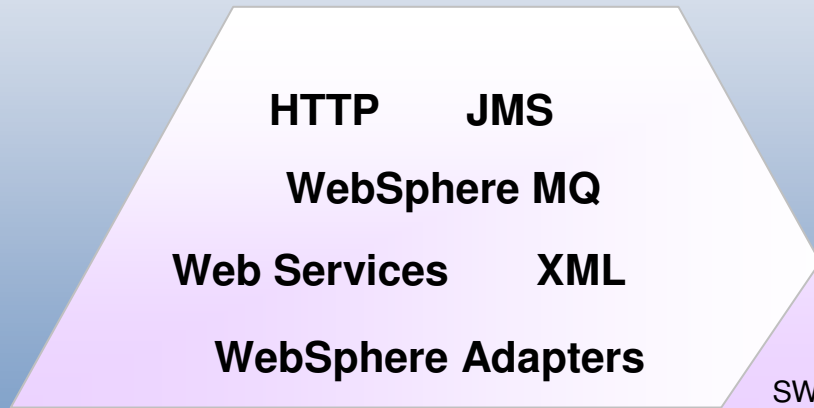
**ESB:
WebSphere ESB**

**Advanced ESB:
WebSphere Message Broker**

**Web Services connectivity
and data transformation**

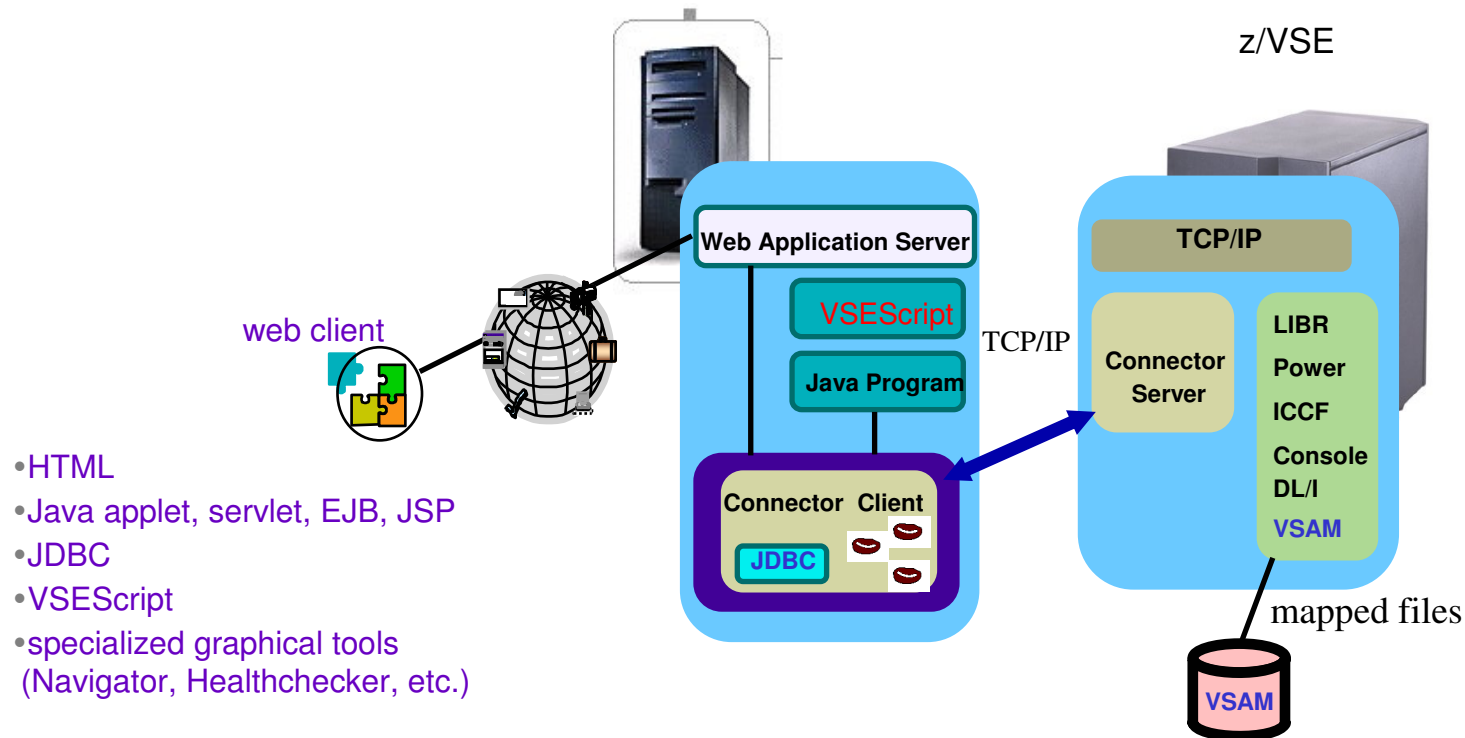


**Universal connectivity
and data transformation**



Customers face a range of ESB requirements. As a result, any given project might require an ESB or an Advanced ESB... OR BOTH.

(5) Real Time access to z/VSE resources with Java-Based Connector



- HTML
- Java applet, servlet, EJB, JSP
- JDBC
- VSEScript
- specialized graphical tools (Navigator, Healthchecker, etc.)

- Real Time access to z/VSE Resources from remote or Web applications
 - Real Time access for VSAM data, Librarian, Console, DL/I, Power
 - Monitor and analyze using the Console Java API

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Restriction: Batch workload from 10:00 PM – 5:00 AM

- Backup from 10 PM till 11 PM**
- NO batch workload after 5:00 AM**
 - Because CICS workload started and files are opened for write in CICS

Solutions:

- a. Decrease Backup time with Flashcopy or VTS**
- b. Enable multiple write SHR (4,4) for VSAM for parallel CICS Workload**
- c. With VSAM SHR (4,4), Online and batch workload can run parallel during the day - > reduced or no need for nightly batch anymore**
- d. Use EXCI to write all changes through CICS**
- e. Consolidate data on a 24X7 data store in DB2 V9 on Linux**
- f. For Web Applications with remote data access, enable access with connectors.**

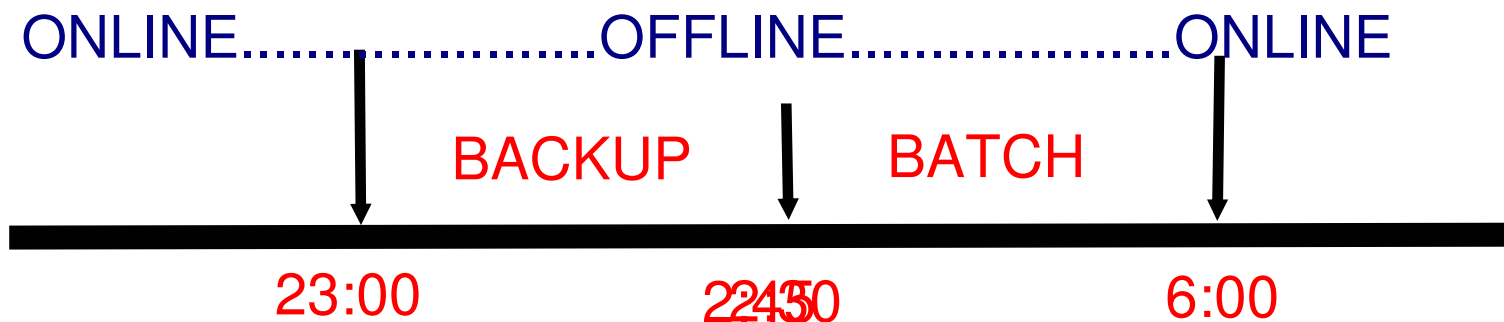
(a) Decrease backup time with Flashcopy

✘ inhibitors of **online** processing time

☞ backup-window

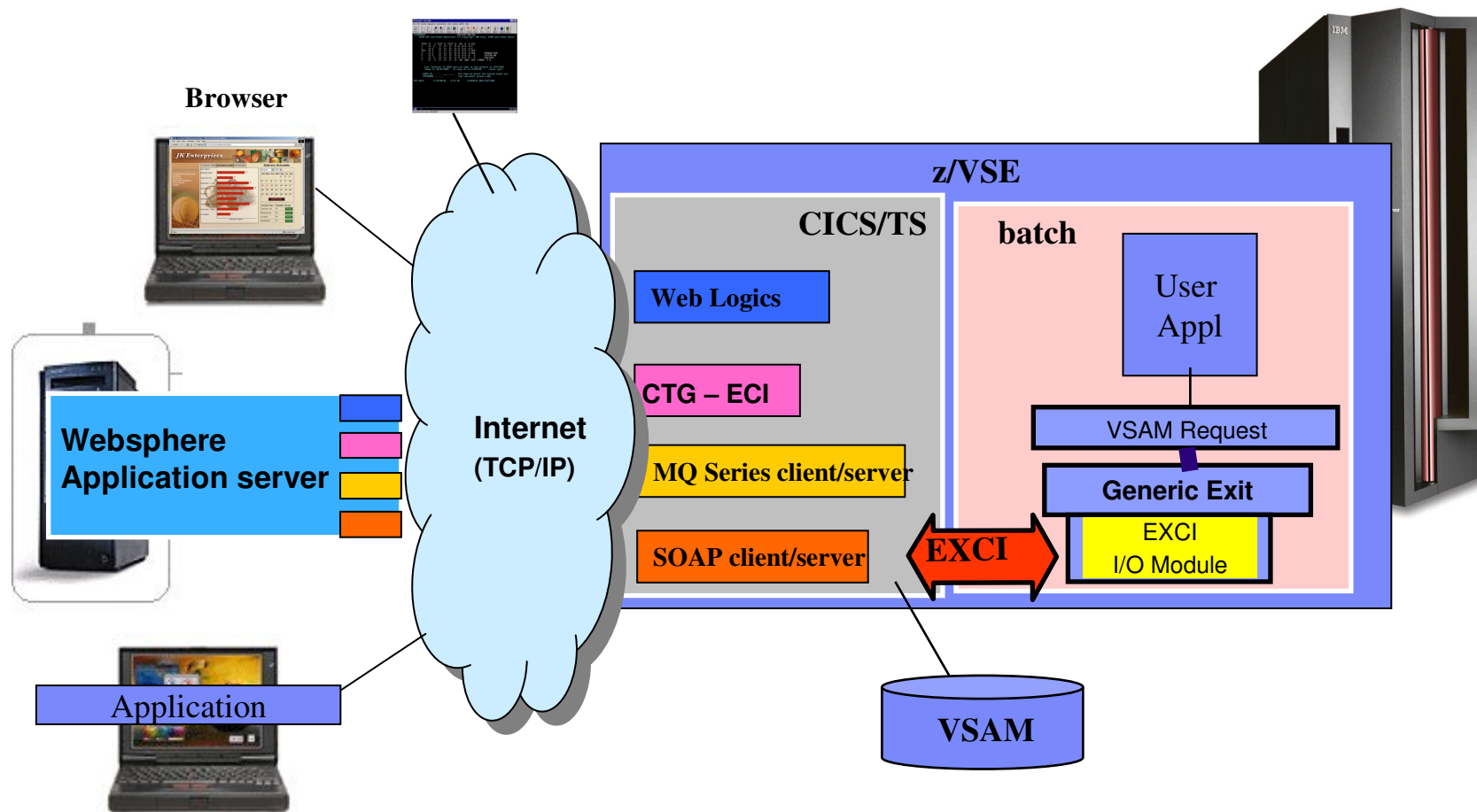
☞ batch-window

Typical processing time-line:



BACKUP process (after Flashcopy) running in parallel to batch from Flashcopied volumes

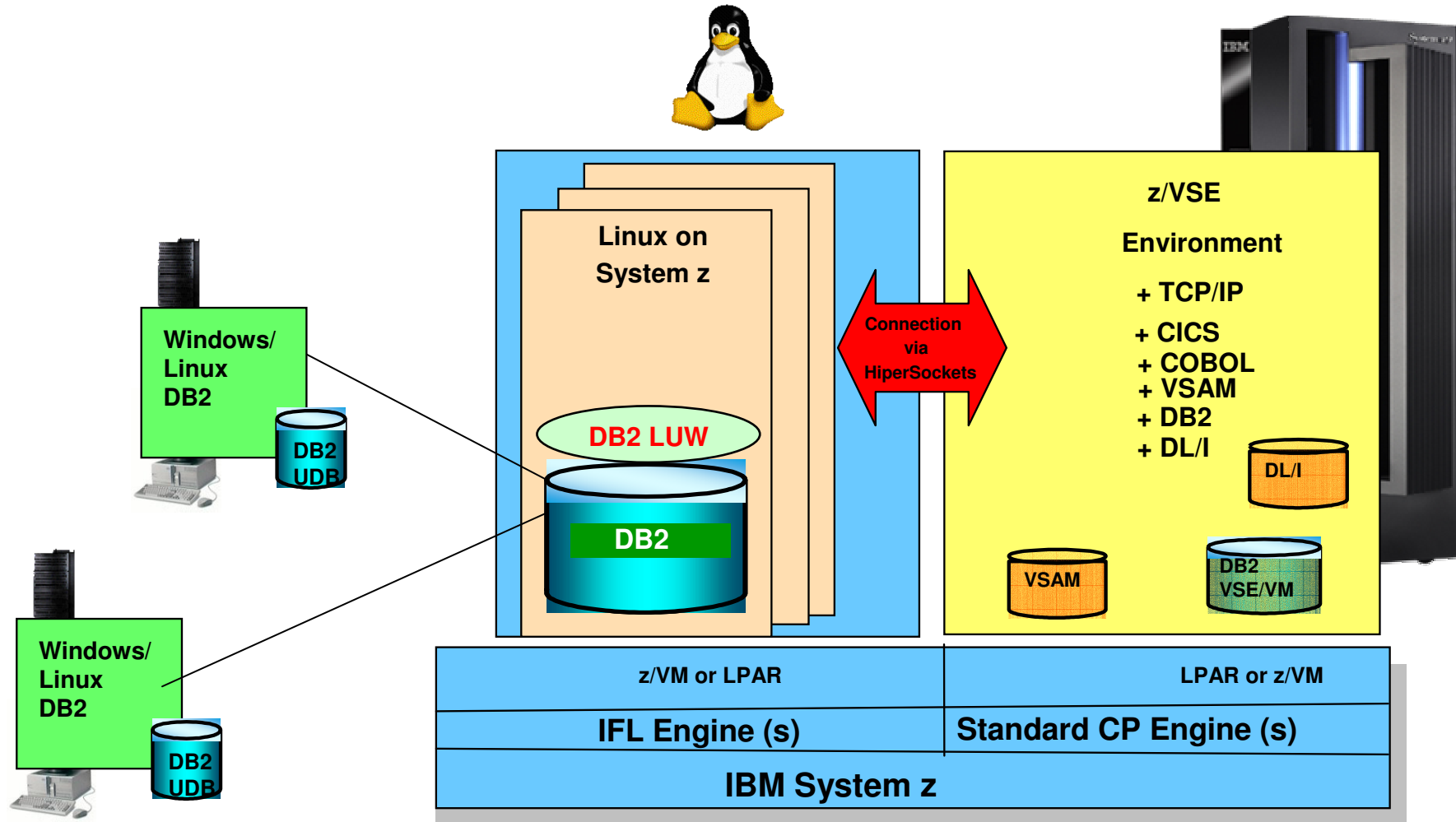
(d) Inter-Communication with z/VSE Applications



(e) Consolidate data on a 24X7 data store in DB2 V9 on Linux

Data Integration – the Base for the future and BI

- eliminate batch workload through DB2 referential conditions



z/VSE 24 X 7

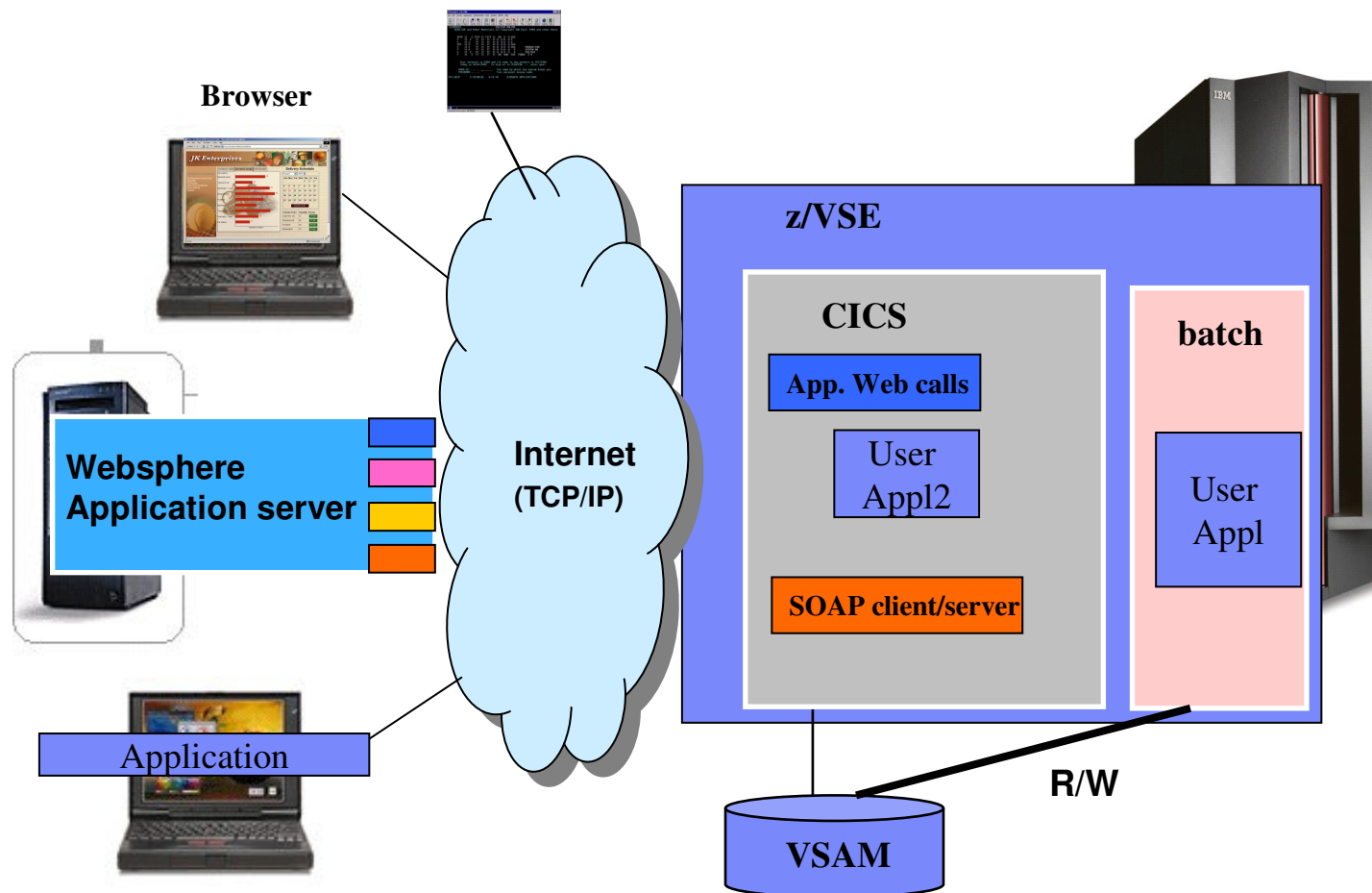
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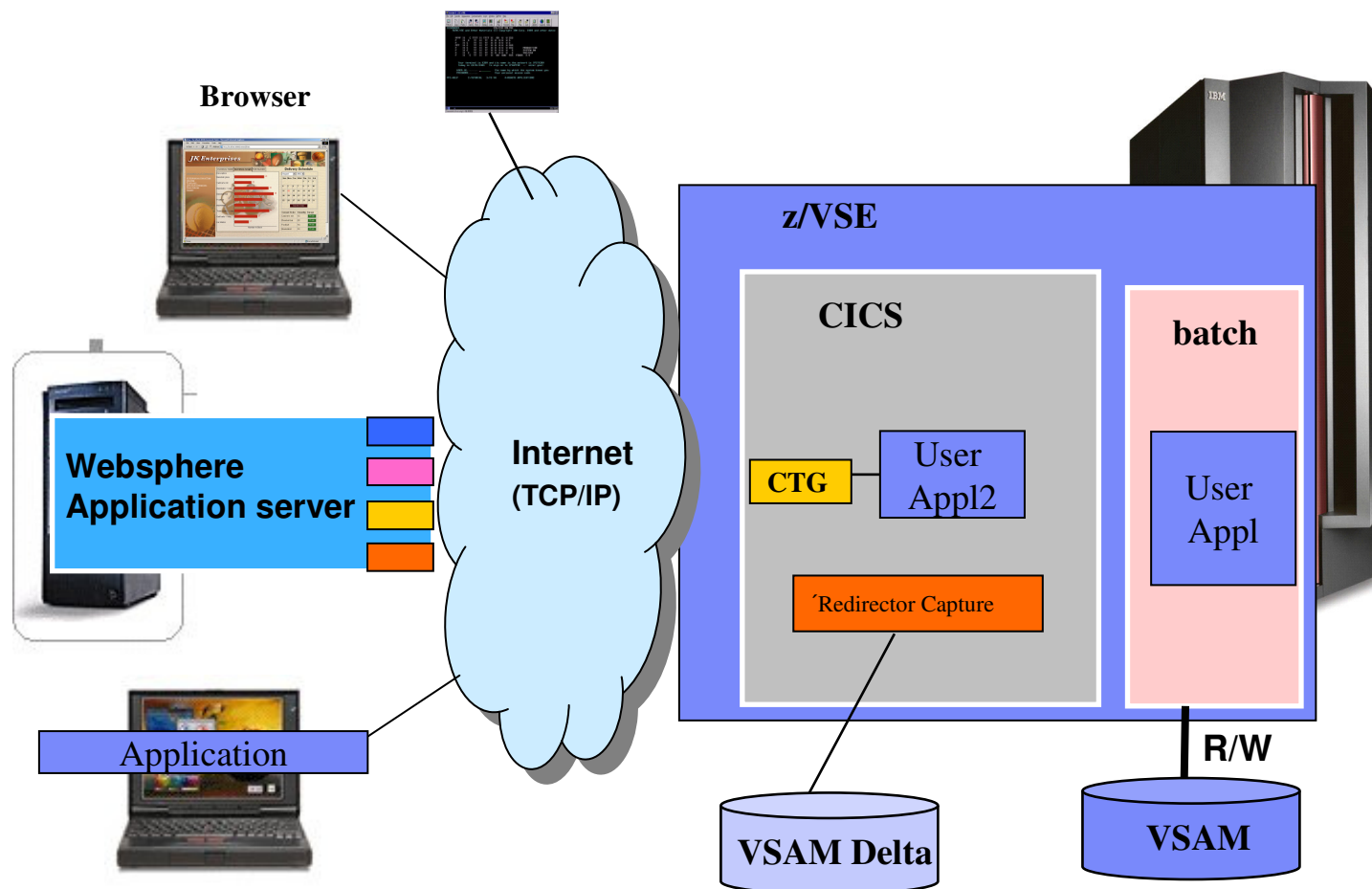
Solutions:

- 1. Increase Web application online time by using a data management system like DB2 with 24X7 availability**
- 2. Access to CICS Online applications with SOA – decoupled from batch data access**
- 3. Use CTG to access CICS and Redirector to capture changes**
- 4. Use Web applications and MQ Series to cumulate nightly changes**
- 5. For Web Applications with remote data access, enable access with connectors (JDBC/VSAM, Java access to DL/I).**
- 6. Convert nightly batch work to relational constraints or UDFs**

(2) Access applications with SOA

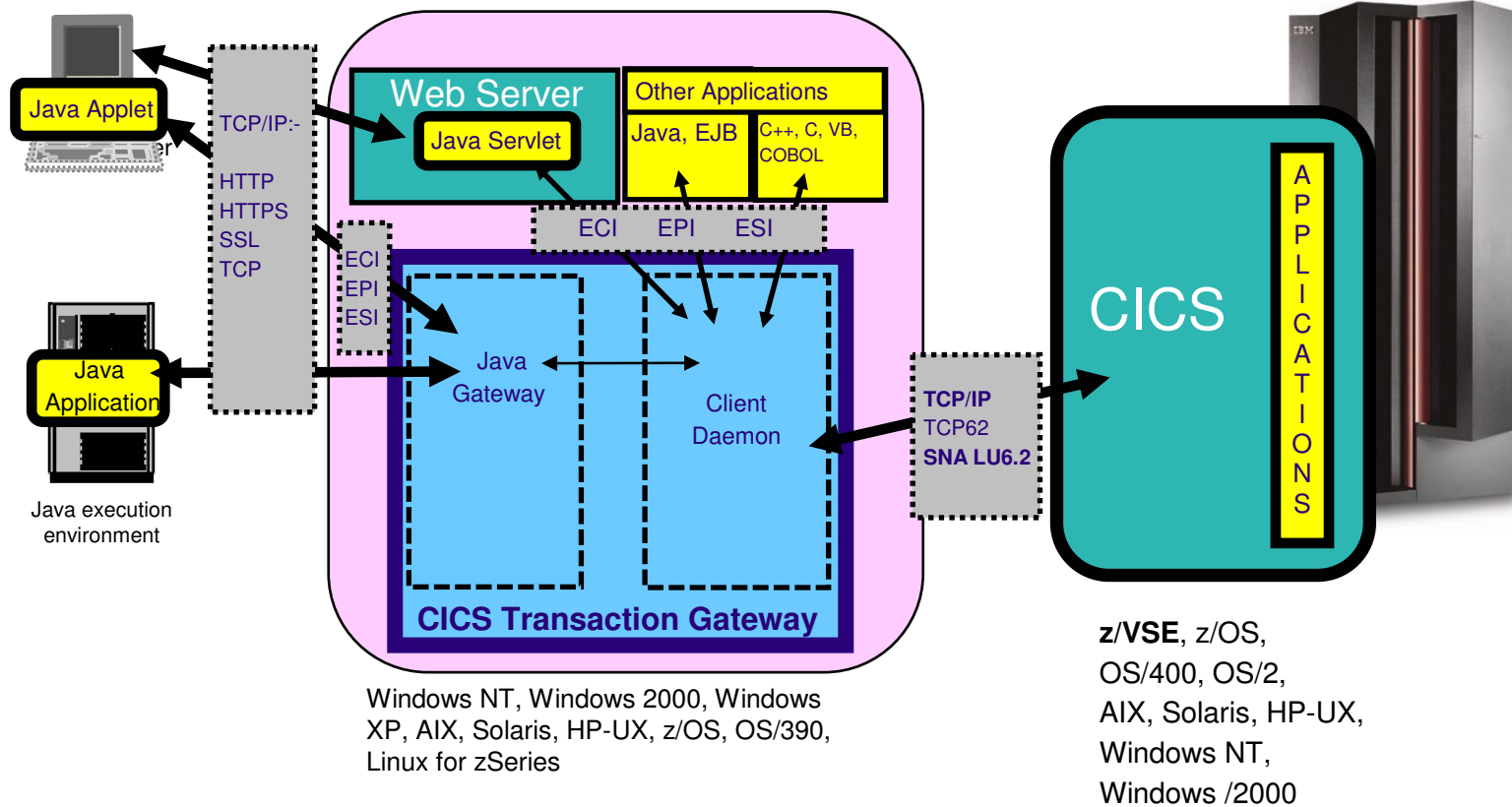


(3) Access CICS with CTG and capture night-changes

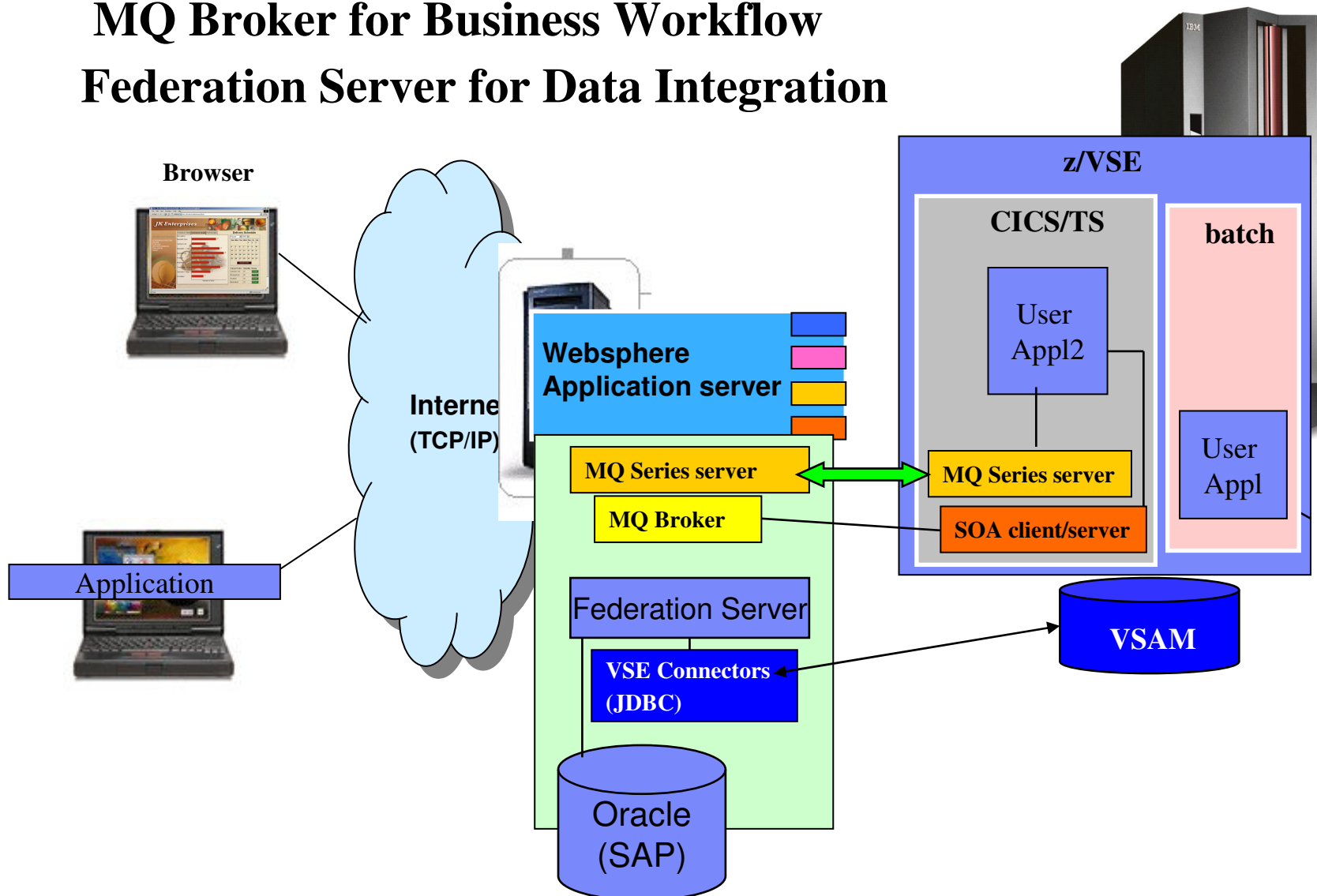


Integration of transactions

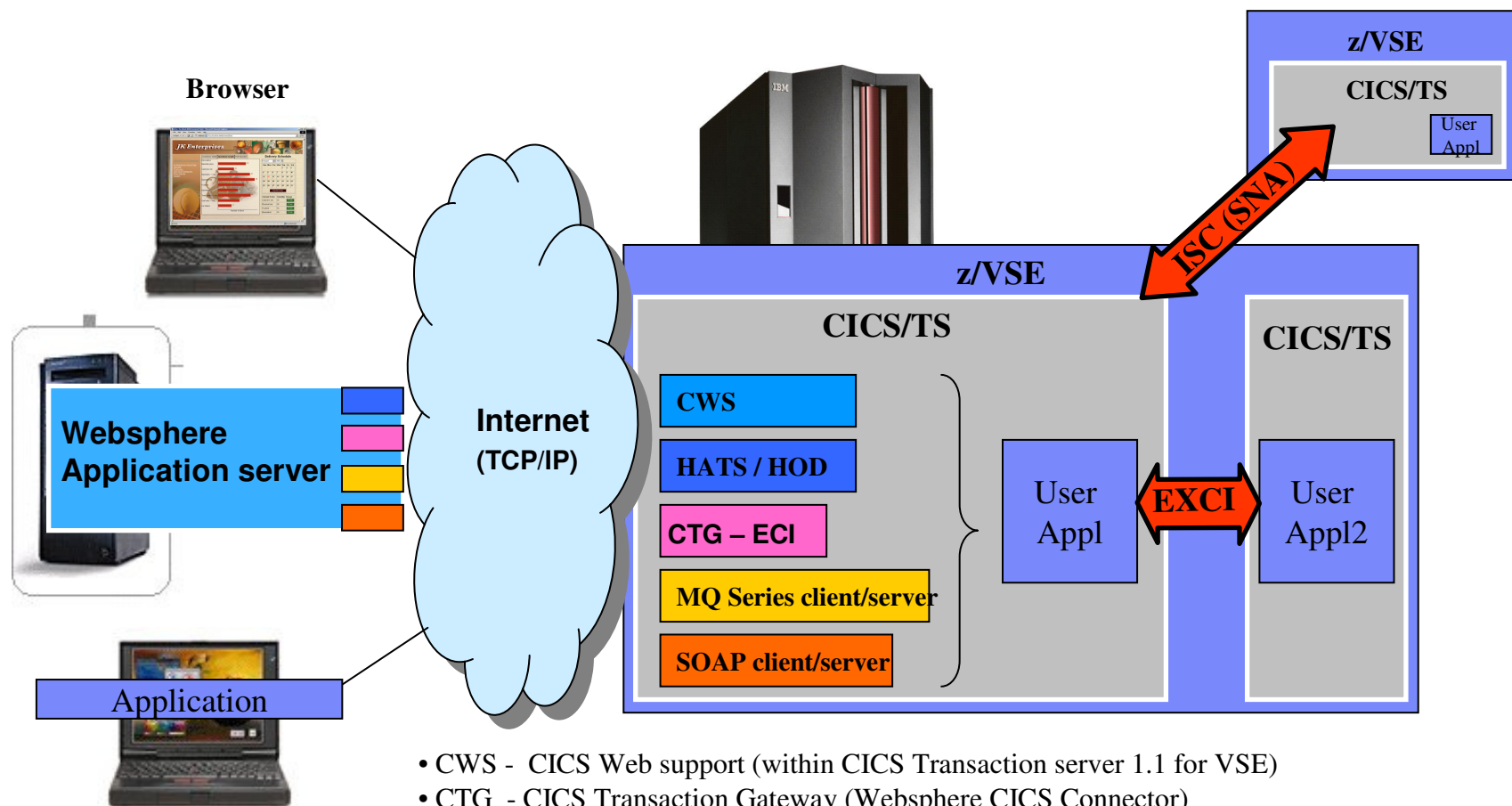
CICS Transaction Gateway (CTG) - Components



Workflow: Connectors for Validation, MQ Broker for Business Workflow Federation Server for Data Integration



Inter-Communication mit VSE Applications



- CWS - CICS Web support (within CICS Transaction server 1.1 for VSE)
- CTG - CICS Transaction Gateway (Websphere CICS Connector)
- HATS – Host Access Transformation Server (no VSE software component required)
- HOD - Host OnDemand (Websphere Host Integrator)
- SOAP - Simple Object Access Protocol (Web Services based with XML data)

Questions ?

