Electronic Access Conference
2000 GET CONNECTED

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Student Financial Assistance

Session 25

Mainframe Connectivity Session

Introductions

- Audience: Those who use a mainframe or midrange platform to send and receive data
- Evaluations: We appreciate your feedback
- Questions: Please hold questions till end of presentation

Session Description

This session reviews Student Financial Assistance (SFA) plans to move the Title IV WAN from a proprietary network to the Internet, and its impact on the user community.

Today's Agenda

- Comm-Press v4.4
- Internet Objectives
- Internet Requirements
- Current State
- Internet Solution
- How the Internet Solution Affects You

Today's Agenda

- Transition Strategy
- User Concerns
- Further Assistance
- Questions

Comm-Press v4.4

- Difference between v3.0.1 & v4.4
- Helpful hints for compression and decompression
- Distribution timeline
- Minimum platform requirements

Difference Between v3.0.1 & v4.4?

- State-of-the-art data compression techniques to reduce the size of data files by as much as 95%
- Enhanced DECOMP feature to write partial or corrupt files to DATAXX file
- USEREXIT is replaced with SECFILE

COMPRESS Difference

- Running v3.0.1:

```
//COMP301  EXEC PGM=COMPRESS,
//         PARM='UXLFCOMEXT,ASCII,CRLF'
```

- Running v4.4:

```
//COMP44   EXEC PGM=COMPRESS,
//         PARM='ASCII,CRLF,SECFILE=DSSECFILE'
```

COMPRESS Helpful Hints

- When executing COMPRESS the parameters of ASCII, CRLF and SECFILE are required
  - PARM='ASCII CRLF SECFILE=DD:SECFILE'
- ASCII - Causes COMPRESS to translate the data to ASCII or EBCDIC, if necessary, depending on the platform where the data is decompressed

COMPRESS Helpful Hints

- CRLF - Causes COMPRESS to convert delimiter characters (for example, line feeds or carriage return/line feed pairs) into record separators

- SECFILE - Replaces USEREXIT and causes COMPRESS to recognize header/trailer:

  HEADERLITERAL(O*N05) HEADERSTART(1);
  TRAILERLITERAL(O*N95) TRAILERSTART(1);
  LITERAL(O*N01) LITERALSTART(1);
  LITERAL(O*N99) LITERALSTART(1);

COMPRESS Helpful Hints

- Using the DD statement COMPLOG, defined as RECL=121,RECFM=FB,will provide additional information regarding the compression of the data

DECOMP Difference

- Running v3.0.1:

```
//DECOMP31 EXEC PGM=EDECOMP
```

- Running v4.4:

```
//DECOMP44 EXEC PGM=DECOMPRESS,
//         PARM='SAVEGRP=UNCOMPSCHEDULEDSCHED'
```

DECOMP Helpful Hints

- When executing DECOMP the parameters of SAFE CRLF UNCOMP and SECFILE are required
  - PARM='SAFE CRLF UNCOMP SECFILE=DD:SECFILE'
- SAFE - This option causes DECOMP to create a reject file (DATAXX) containing data that fails decompression. Only valid data is written to the output file(s)

DECOMP Helpful Hints

- CRLF - During decompression, the delimiter characters that are appropriate for the target platform replace the record separators

- UNCOMP - This option signals DECOMP that the input files contain valid uncompressed data in addition to compressed data. DECOMP will copy the uncompressed data to the output files as it decompresses

DECOMP Helpful Hints

- SECFILE - Replaces USEREXIT and causes DECOMP to recognize header/trailer:

  HEADERLITERAL(O*N05) HEADERSTART(1);

  TRAILERLITERAL(O*N95) TRAILERSTART(1);

  LITERAL(O*N01) LITERALSTART(1);
  LITERAL(O*N99) LITERALSTART(1);

- Partial files will be written, uncompressed, to the DATAXX file and not the DATAOT file with an invalid return code of 69

Distribution Timeline

- Beta conducted during October
- Production distribution of software during November:
  - CD-ROM includes software and documentation for your platform
  - Installation instructions
  - Mainframe user guide (includes Comm-Press v4.4 Guide)
  - User assistance information

Minimum Platform Requirements

- Mainframe: OS/390 1.2
- Midrange: AIX 4.1, 4.2, and 4.3, HPUX 10.0, SunSolaris 2.6, DEC Alpha VMS 7.2, DEC Tru64 4.0, SCO Unix 3.2, and OS/ 400 3.7
- PC: Windows 95, 98, 2000 and NT

Internet Objectives

- Increase customer satisfaction by providing non-intrusive SFA solutions
- Reduce overall cost of delivering student aid
- Reduce operating costs through consolidation of operations / systems
- Increase schools' access to SFA databases within Privacy Act constraints and with appropriate security measures

Internet Requirements

- Move the transmission of Title IV data from the current proprietary network to the Internet
- Protect security & privacy of data
- Reduce costs
- Increase customer satisfaction
- Meet and/or exceed performance standards
- Support multiple platforms

Internet Requirements

- Support network header/trailer
- Support FTP, XML, TCP/IP, EDI traffic
- Support standard FTP ports (20 & 21)
- Support archive/restore
- Support audit tracking
- Support batch/API processes
- Single point of administration

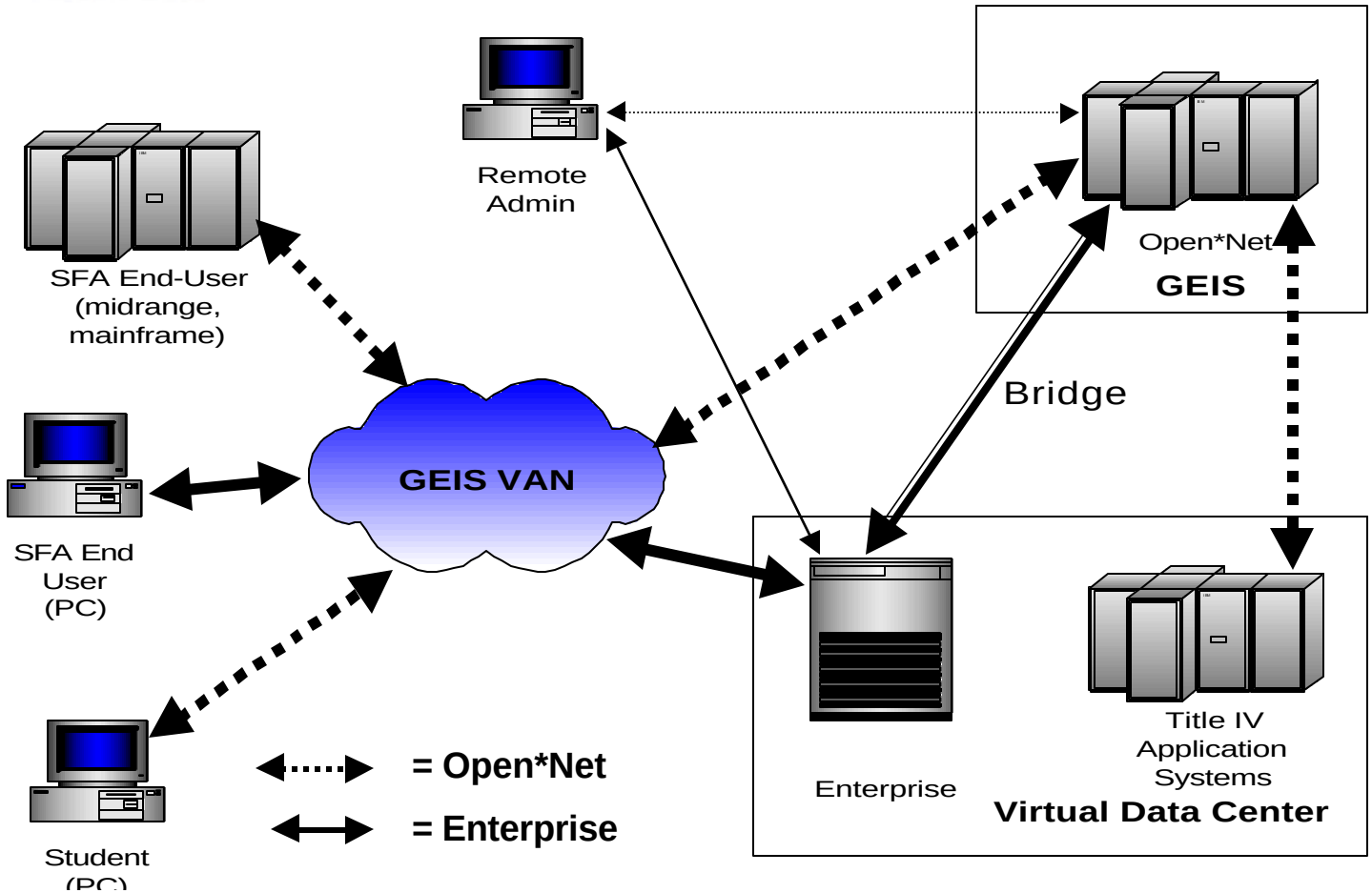
Current State

- Two store and forward systems:
  - Open*Net (non-PC, approximately 150, includes Title IV application systems)
  - Enterprise (PC, approximately 7,000)
- Redundant expenses and overhead:
  - GEIS data center (Open*Net)
  - VDC data center (Enterprise)

Current State

- Proprietary network (kilo-character charges)
- Non-COTS solution

Current State



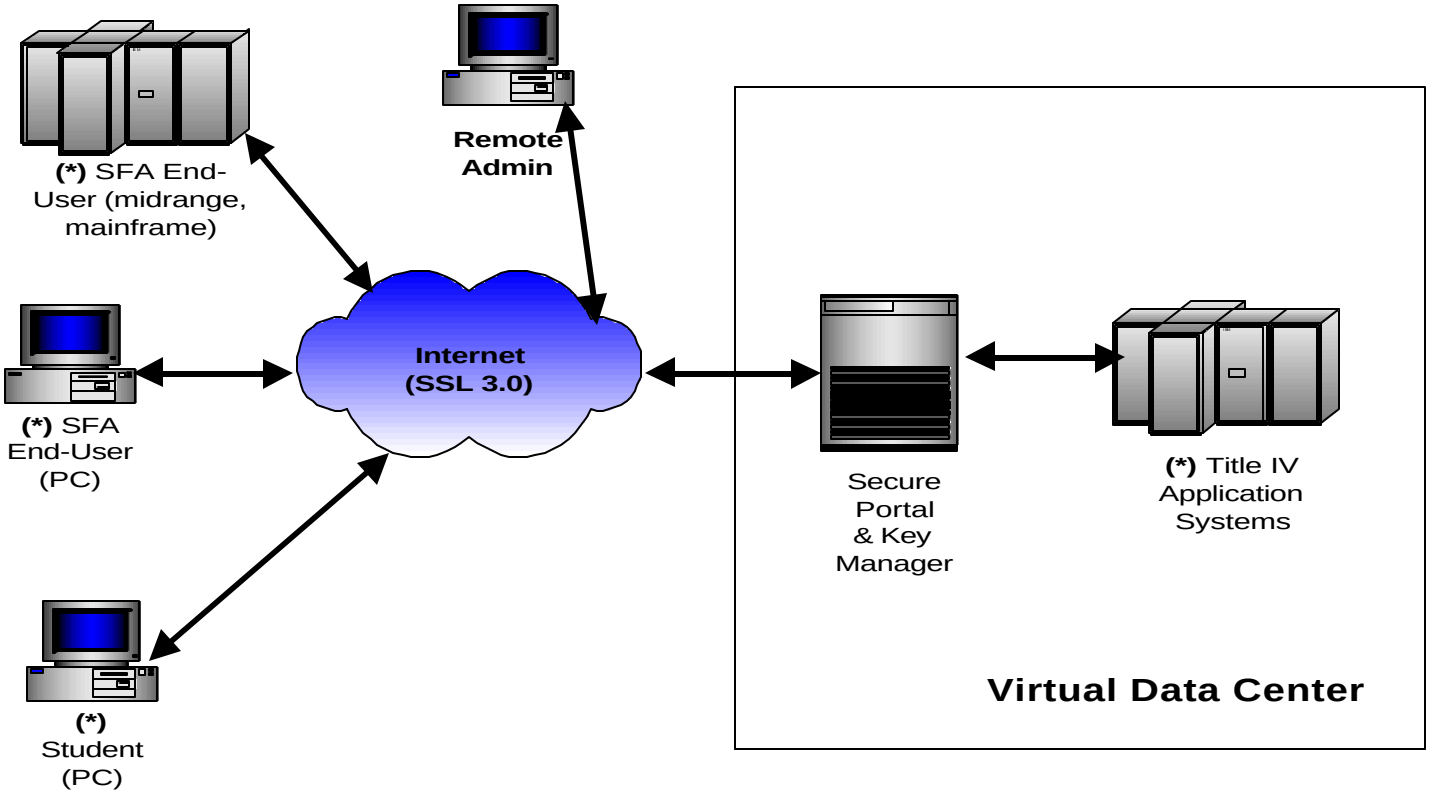
Internet Solution

- Consists of one store and forward system
- Consists of three components
- Supports mainframe, midrange, and PC platforms
- Supports secure TCP/IP-based FTP file transfers over Internet

Three Components

- **EasyAccess2000** - Client used by SFA end users and Title IV application systems to send / receive data
- **KeyManager2000** - Administrative system to perform mailbox management and other administrative duties
- **SecurePortal2000** - Store and forward system which replaces Open*Net and Enterprise

Proposed State



(*) SFA Constituents would use the EasyAccess Client to send/receive data.

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- PC: Windows 95, 98, 2000 and NT

Network Access Requirements

- Required TCP/IP libraries and assumes that the TCP/IP connection is available via a dedicated circuit or dial-up

How the Internet Solution Affects You

Impact Analysis:

- Install new software and update existing job streams
- Must have Internet connection to send/receive data

How the Internet Solution Affects You

Benefit Analysis:

- Reduced costs (no kilo-character charges)
- Supports diverse user platforms (PC, midrange, mainframe)
- Leverage already in-place Internet connection

How the Internet Solution Affects You

Benefit Analysis:

- Non-intrusive Internet solution (no hardware or software costs)
- Header/Trailer, Batch number supported
- Continue to use existing processes with minimal changes

A Closer Look At "Non-PC" Users

Current 'RECEIVE' takes three steps:

1. BPARSER:
   - Connect
   - Receive
   - Disconnect
2. ONVTAM62 (Open*Net Communication)
3. Decompress

A Closer Look At "Non-PC" Users

Proposed 'RECEIVE' takes one step:

1. PGM=EA2KMVSC, PARM='CMDFILE'
   - The CMDFILE contains the RECEIVE command-line to be executed
   - In one step, the EA2KMVS PGM will:
     - Connect
     - Receive & Decompress
     - Disconnect

A Closer Look At "Non-PC" Users

- EA2KMVSC is highly robust and supports 92 keywords and commands
- Examples:
  - SEND
  - SENDCLASS
  - RECEIVE
  - RECEIVECLASS
  - FTPPASSWD

A Closer Look At "PC Users"

- PC users download and install new version of EDconnect from SFAdownload.ed.gov
- Continue to use EDconnect software to SEND and RECEIVE data

Transition Strategy

- Engage all constituents up-front
- Get buy-in from SFA user community early on
- Leverage best practices from prior network migrations
- Develop aggressive, yet prudent transition plans

Transition Strategy

- Include “Quick Hit Plan” to move high volume users first
- Conversion to Internet will begin 2001

User Concerns

- What if my platform isn't supported under the Internet solution?
- How can I plan for the Internet transition?
- How can I participate in the Internet beta?

Further Assistance

We appreciate your feedback and comments!

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Questions

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