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November 2001

DEC/EDI Version V4.0
Release Notes

This document provides supplemental information about
DEC/EDI Version V4.0. This includes DEC/EDI Application
Client and Server for OpenVMS AXP and Tru64 Unix, DEC/EDI
Application Client for Sun Solaris, HP-UX, Windows NT and
RedHat Linux 6.2 and DEC/EDI Cockpit and CommandCenter for
use with OpenVMS and Tru64 Unix Servers. It includes notes
on restrictions, and known problems.

Software Version:	DEC/EDI for OpenVMS Version V4.0 and DEC/EDI for Tru64 UNIX Version V4.0
Required Operating System:	OpenVMS Version 7.2-1 Tru64 UNIX Version V5.1
Required Software:	TCP/IP Services for OpenVMS
Required Software:	Oracle RDB V7.0.3 Oracle 8.1.6.2.0 or 9.0.1
Required Software:	DECForms V3.0
Optional Software:	DECnet (Phase IV) or DECnet-Plus (PhaseV) V5.01
Optional Software:	MAILbus 400 MTA version 2.0C MAILbus 400 MTA version 2.0B
Optional Software:	Compaq X.25 for OpenVMS, V1.4

Compaq Computer Corporation

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Contents

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Chapter 1

Introduction

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1.1   Document Content

This document forms the release notes for the following
products:

o DEC/EDI for OpenVMS[TM] ALpha[TM], V4.0. This product
contains both application client and server components for
the OpenVMS Alpha platform.

o DEC/EDI for Tru64 Unix[TM], V4.0. This product contains
both application client and server components for the Tru64
Unix platform.

o DEC/EDI Cockpit, V4.0. This product contains the DEC/EDI
Cockpit and Access Control Editor for use with DEC/EDI for
Tru64 Unix and DEC/EDI for OpenVMS VAX and Alpha servers.

o DEC/EDI CommandCenter, V4.0. This product contains the
DEC/EDI Cockpit and CommandCenter applications for use with
DEC/EDI for Tru64 Unix and DEC/EDI for OpenVMS Alpha
servers, and online documentation in Adobe[TM] Acrobat [TM]
format.

All information in this document applies equally to all of
the above products unless specifically stated otherwise.

The information in Chapter 5 is common to all Application
Clients. In addition to the OpenVMS and Tru64 Unix
Application Clients DEC/EDI V4.0 also includes the
following:

o DEC/EDI for Sun[TM] Solaris[TM], V4.0. This product
contains the DEC/EDI application client for the Sun Solaris
platform.

o DEC/EDI for HP-UX[TM], V4.0. This product contains the
DEC/EDI application client for the HP-UX platform.

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1.2   New Users

If you are a new user of DEC/EDI, you should follow the
installation instructions for the product contained in
DEC/EDI: Installation. You are also recommended to read
DEC/EDI: Introduction which gives an overview of DEC/EDI
describing the main componentsof the system and explaining
how the system processes business data.

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1.3   Existing Users

If you are an existing user of DEC/EDI, you should follow

the installation instructions for the product contained in
DEC/EDI:Installation.

After the migration to DEC/EDI V4.0 if you need to use the
existing maps, these must be re-compiled and copied back to
the server. DEC/EDI V4.0 automatically stores the new
DEC/EDI version information inside the maps. This is a
mandatory step before issuing TRADE POST/FETCH commands.

DEC/EDI for OpenVMS Alpha, V4.0 supports installation over
previous OpenVMS Alpha versions of the product. Specifically
it may be installed over:

o DEC/EDI V3.2B

DEC/EDI for Tru64 Unix, V4.0 supports installation over
previous Digital Unix versions of the product. Specifically
it may be installed over:

o DEC/EDI V3.2B

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Chapter 2

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This chapter outlines the major new features introduced in
DEC/EDI V4.0 since the previous release.
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DEC/EDI V4.0 addresses the following major areas:

o   Availability
o   Scalability
o   Performance

Internal-node-name naming convention

One instance of DEC/EDI can now be started on each node of
the cluster. The first node to start DEC/EDI in the cluster
environment will internally acquire a distinct name ('A').
While this node is running DEC/EDI, if another instance of
DEC/EDI is started on a different node then it acquires the
next available and unused English alphabet letter ('B') and
so on.

If DEC/EDI is brought down on any of the intermediate nodes,
the corresponding internal-node-name (English alphabet) is
released. Any subsequent node starting DEC/EDI in the
cluster will obtain the first available and unused internal-
node-name. The internal-node-names are used to create a
unique lock name. Consequently, any cluster can run a
maximum of only 26 DEC/EDI servers.

DEC/EDI supports clustering on both OpenVMS using standard OpenVMS Clustering facilities and Memory Channel based TruCluster Server environment on Compaq Tru64 UNIX.

Availability

DEC/EDI V4.0 can now be run in a clustered environment. It can be started selectively on each node in the cluster. When DEC/EDI shutdown is performed on a node 'A', the other instance of DEC/EDI running on node 'B' automatically takes over the load from node 'A'. This ensures high availability of the DEC/EDI system for maintenance and upgradation activities.

Scalability

Additional nodes can be added to the cluster as and when required and DEC/EDI can be started on it. The performance of DEC/EDI can be scaled in this manner. The maximum number of nodes on which DEC/EDI V4.0 can run in a clustered environment is 26 (each node is logically named starting from 'A' to 'Z').

Performance on OpenVMS

Each process in DEC/EDI V4.0 with the exception of DECEDI$DS (Data Server), DECEDI$PS (Port Server) and Gateways can run in multiple instances. For example, 2 or more EDIFACT converters can run simultenaously on each node. The process names would be listed as DECEDI$CNV_E_1 and DECEDI$CNV_E_2. The maximum number is defined using the logical DECEDI$N_EDIF_CNV_MAX = "5". Few intermediate database updates and processes have been removed in this version. The ability of run multiple instances of processes on a node improves the performance and throughput of the system.

Performance on Tru64 UNIX

Performance on Compaq Tru64 UNIX systems has been enhanced by adding memory resident work queues. Previous versions of DEC/EDI used database polling techniques to discover any work that was required of them. By removing this polling technique into memory, database contention has been significantly reduced as has the need for the frequency of updates to the database reducing the IO bandwidth requirements.

In addition to this, DEC/EDI has been redesigned to allow multiple instances of several key processes to exist on the same system simultaneuosly. See the appendix on environment variables in the DEC/EDI Tru64 UNIX Users Guide and the following sections for more information.

TruCluster Server Support on Tru64 UNIX

The introduction of TruCluster Server support and the use of
the Memory Channel technology has allowed these performance
improvements to be carried over to the scalability and
availability of the TruCluster Server environment. However
DEC/EDI currently only supports Memory Channel based TruCluster
Server instances.

2.1   Transmission File Builder (one-low priority, multiple
       high-priority). OpenVMS and Tru64 UNIX.

DEC/EDI V4.0 now has the ability to run multiple
instances of transmission file builders. The first TFB
started will excusively process the low priority documents.
It also keeps track of the build intervals, etc. All
other TFBs will process only high priority documents.
When the first TFB is terminated, the next TFB in line
will start processing the low priority TFB and takes
over all the pending jobs of the terminated TFB.

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2.2   Communication Controller (One-Scheduler, multiple
       inbound comms-controller). OpenVMS and Tru64 UNIX.

DEC/EDI V4.0 on OpenVMS now has the ability to run multiple
instances of Communication Controller (CC). The first
CC started will additionally assume the role of a
scheduler. If more than one CC is started each
instance will process only inbound connections. Incase
the first CC is shutdown, one of the CC processing inbound
communications will takeover the role of the scheduler.

DEC/EDI V4.0 on Tru64 UNIX also has the ability to operate
multiple Communications Controllers on each system. Each
Communications Controller polls the central in-memory
work queues to discover the next inbound transmission file
that requires processing allowing them to quickly and
efficiently process all outstanding work in parallel.

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2.3   Transmission File Splitter (Process seperate
       Interchanges simultaneously). OpenVMS and Tru64 UNIX.

Each TFS will receive an Interchange from inbound CC
and split them into individual documents. These are
then passed on to individual translators for further
processing. If an Interchange or a docment within an
interchange requires an acknowledgement, a single
translator will process all documents corresponding to
this interchange. If acknowledgements are not
required, then multiple translators can process these

documents.

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2.4   Application File Server (Removed). OpenVMS and Tru64
      UNIX.

All documents were passed through the application file
server (AFS) process in the inbound direction. This
used to form a bottleneck in a high transaction
environment.

On OpenVMS, all translators now write the document
information to an AVAIL_TABLE table in the inbound
direction. The application clients can fetch directly
from the AVAIL_TABLE table.

On Tru64 UNIX, all translators now add the documents to the
in-memory queue of available documents allowing the clients
to directly scan the queue to discover which documents are
available.

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2.5   Translator (Writing to AVAILABLE table). OpenVMS only.

Each translator writes information on successfully
processed documents to an AVAIL_TABLE table in audit
database. This information was previously being
maintained by AFS process in an internal linked-list.
All application client accesses were serialized
through the AFS process thus impacting the speed of
execution. With the introduction of new AVAIL_TABLE,
the AFS process has been removed which was a cause for
bottleneck in the system.

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2.6   CSF (Read from AVAILABLE table on FETCH). OpenVMS and
      Tru64 UNIX.

On OpenVMS, each CSF process now fetches the documents by
reading the entries in the AVAIL_TABLE table matching the
selection criteria. Consequently, the Application File
Server (AFS) process has been removed completely from
the system, which was found to be a bottleneck in the
processing speed.

On Tru64 UNIX, each CSF process now scans the in-memory
Available To Fetch work queue matching the selection
criteria. Consequently, the Application File Server (AFS)
process has been removed completely from the system, which
was found to be a bottleneck in the processing speed.

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2.7   TFB (Writes directly to gateway). OpenVMS and Tru64
      UNIX.

Each TFB process now writes directly to the gateway
process after building the transmission file. If the
priority of the transmission file is high or the gateway
is not batch driven, then the gateway processes the
transmission file immediately. If the priority is normal
and the gateway is batch driven (Import/Export, 3780 and,
on OpenVMS, X.25) the gateway will not be notified.

Previously, all outbound transmission files were being
passed through Communications Controller thus overloading
it. Now, Communications Controller will only perform
scheduling (OpenVMS only) and processing inbound
transmissions.

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2.8   DECEDI$STARTUP (Now performs full startup). OpenVMS
       only.

DEC/EDI V4.0 startup process on each node is now
performed in full mode. Each node now has a node-
specific startup file, which can specify the maximum
instances of DEC/EDI processes allowed to run on that
node. Apart from Port Server (PS) and Data Server
(DS), all processes can be shutdown from interchange
allowing for partial shutdown feature. In this mode,
few housekeeping functions like RECOVER can run.
Except for the DECEDI$CS* processes, the maximum
instance of all BUILDERS, CONVERTERS, TRANSLATORS,
SCHEDULERS and ARCHIVE SERVERS is 10 on each node of
the cluster, even if the MAX logicals and MAX_PERSTART
logicals are set above 10. However, the maximum number
of TRANSLATORS is restricted to only 9 per node. This
limitation is due to the process name size on VMS,
which is limited to a maximum of 15 characters. The other
options to start mapper only and GUI only are no longer
suported from V4.0 onwards. In order to perform a partial
shutdown, all the other processes can be shutdown fmom
interchange.

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2.9   Filebridge database (Removed). OpenVMS only.

Filebridge database has now been removed from DEC/EDI.
Filebridge tables are now contained in the decedi$audit_db
database. Consequently, filebridge send/receive/define, etc
commands are no longer available. To send and receive files
the trade post and trade fetch functions should be used. To
edit mapping tables, use the INTERCHANGE EDIT MAP command.

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2.10   Intermediate status (Removed). OpenVMS and Tru64 UNIX.

The following transient statuses are removed from

DEC/EDI for faster database accesses and processing.

1.   CONVERTING
2.   TRANSLATING
3.   SEPERATING
4.   IDENTIFYING
5.   RECEIVING

Additionally, on Tru64 UNIX only, the following statuses
have been removed. These statuses were used by DEC/EDI to
drive DEC/EDI's work list which has now been moved into
shared memory.

6.   CONVERTED
7.   BUILDING
8.   BUILT
9.   SENDING
10.   IDENTIFIED
11.   PROCESSING

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2.11 Addition of "year_s" field. OpenVMS and Tru64 UNIX.

Documents names are generated in DEC/EDI based on date and
time upto an accuracy of microsecond. The date does not
include the year due to the size limitation of the 10 digit
document count. In a rare case, if 2 documents are generated
with similar names but in different years, then the archiver
may not uniquely identify the documents. To overcome this
situation, another field, the year of creation, has been
added to the archive database document tables. While
migrating from V3.2B to V4.0, the above mentioned tables are
appropriately modified.

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2.12 Transmission Filename format & document ID (Modified).
      OpenVMS and Tru64 UNIX.

The transmission filename and document IDs have been
modifed to include the cluster member letter ('A' to 'Z')
to uniquely identify the document or transmission file in
DEC/EDI. The format for the document ID is
Cluster_Member_Letter(1) + seconds(5) encoded to base36 +
nanoseconds(4) encoded to base36. For example the document
count on node 'A' would look like 'ALABDCGJV0'. The format
for transmission file is Year(4) + Month(2) + Date(2) +
HHMMSS + Cluster_Member_Letter(1) + nanoseconds(5) encoded
to base36. For example transmission file one node 'B'
would look as '20010907010847B280F2'.

Note that the dates and times used are all based on the GMT
timezone so that changes in Daylight Savings times do not
result in duplicate names being generated.

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2.13 Port-id changes (decedi_servers.dat file). OpenVMS
      and Tru64 UNIX.

Application clients always refer to services file
in order to obtain the port numbers of the CSF and the CST
processes on the server. The clients connecting to
multiple servers (eg: production and test server) may
have CSF and CST running on different ports. To access
both these servers, from the same client, the services
file on the client needs to be changed on each access.
To overcome this issue decedi_servers.dat file has
been modified to include the port-id of the processes
(CSF & CST) against each application-id and server-
name combination. Refer to decedi_servers.template for
the format specification.

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2.14 DHCP support (Modified the IP address registration to
      fully qualified domain name). OpenVMS and Tru64 UNIX.

CommandCenter and Cockpit users are no longer validated by
requiring their TCP/IP addresses to be registered in the
local hosts database or on a remote DNS server. This
feature will enable the users to configure the PC clients
with DHCP addresses.

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2.15 Node-specific connections (New Node-name table).
      OpenVMS and Tru64 UNIX.

Every connection-id can be limited to run on specific
nodes only by specifying the node-name to run in the
connection details. By default all connection-ids will
run on all nodes. This will enable users to
install/configure specific gateways on designated
nodes only.

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2.16 Mailbox to ICC Conversion (Interprocess communication
process). OpenVMS only.

In previous versions of DEC/EDI, VMS mailboxes were used for
Interprocess communication. In DEC/EDI V4.0, these have
been replaced with the cluster-aware Intra Cluster
Communication (ICC) services in all the processes except the
Data Server process.

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2.17 Node specific startup file. OpenVMS and Tru64 UNIX.

DEC/EDI uses a new node specific startup file suffixed with
node_name. This file contains the environment logicals that

govern the processing on this node. The startup file
automatically determines the node-name on which it is being
started in the cluster environment and copies a template
file to node-specific file.

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2.18   In-memory queue viewer. Tru64 only.

  DEC/EDI V4.0 on Tru64 platform maintains the status of all
  documents in memory. Consequently, Cockpit has been enhanced
  to display the various memory queue contents attached to
  each process.

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  Chapter 3

  Known Problems

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  This chapter lists the known problem in DEC/EDI V4.0
  at the time of its release.

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  3.1   Problem with Oracle RDB version 3.00.01.00

  The latest release of Oracle RDB driver version
  3.00.01.00 has a problem accessing the date fields. It
  is recommended to use an earlier version (2.10.17.00),
  which is found to be working correctly with DEC/EDI
  V4.0.

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3.2   Problem in assigning value to PEDI Subject field(Open VMS).

The Qualifier connection_data in trade post command for PEDI
connection, supposed to fill the value for PEDI Subject
field. But when an in house file is posted with connection_data
qualifier this value is not filled in PEDI subject.

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3.3   Problem in PS startup, when tracing is enabled(Open VMS).

In clustered environment, when trace is enabled(DECEDI_TCP_TRACE).
The following error is displayed.

%DECEDI-E-ERROR, unsuccessful completion
-DECEDI-E-ERROPENFILE, Error opening the file
DECEDI$DATA:DECEDI_CS_TRACE.GS
-RMS-E-FLK, file currently locked by another user
-DECEDI-I-CONDLOGGED, condition logged by DECEDI$PS on node

DEC/EDI users are advised not to enable the trace. In stand
alone machine it is not a problem.

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Chapter 4

Problems with Solutions

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This chapter lists the problems with solutions/work-arounds
in DEC/EDI V4.0 at the time of its release.

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4.1   Problem in archiving purgeable documents after
       fetching(Open VMS).

After fetching the documents, some documents struck in
purgeable state in the audit database. Those documents are not
moved to archive database. There are no error log information.
For 10000 documents fetching, approxmatly 5 documents will
struck in audit Database.

Workaround: Run "DECEDI$TOOLS:DECEDI$RECOVERY.COM" to move
purgeable documents from audit database to archive database.
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4.2   Problem in shutting down TFB when batch document building
       in progress(Open VMS).

When batch document in building state, if you shutdown and
restart the dec/edi the following error is logged,

%DECEDI-I-INFO, Logged by DECEDI$$TFB_GEN_RESET_BATCHES
-DECEDI-E-EDIPROCERR, error returned by DECEDI$$GEN_DELETE_FILE
service routine
-DECEDI-E-ERROR, unsuccessful completion
-RMS-E-FLK, file currently locked by another user

   Workaround: DEC/EDI Users are adviced to ignore this error.
This error does not cause any problems in the behavior.
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4.3   Problem in interchange cancel batch(Open VMS).

"Interchange cancel batch" command to cancel any X12 document
in a batch which has failed during conversion. The remaining
documents in the batch will stuck in "building" state waiting
for the failed document to get reprocessed successfully. If
you happen to cancel this batch "building" docs get stuck in that
state itself.

Workaround: The documents need to be canceled explicitly. This
Problem is occuring intermittently.
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4.4   Problem in reprocess/cancel failed doc in
       cockpit(Open VMS).

When reprocess/cancel any failed document the display window
shows "<document-id>:Request Invalid".

Workaround: The document reprocesed/canceled successfully.
Only the display message is misguiding. It is advised to
Ignore this error.

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Chapter 5

Application Client Release Notes

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This chapter describes the release notes on DEC/EDI V4.0
Application Client.

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5.1   Application Client on RedHat Linux 6.2

DEC/EDI V4.0 application client is now available on
RedHat Linux version 6.2. This client supports all the
TRADE POST, FETCH and TRACK features and can be used as
remote client to DEC/EDI server running on Tru64 UNIX
and OpenVMS Alpha.

5.2   Application Client on Windows NT with limited TRACK
       functionality

DEC/EDI V4.0 application client is now available on
Windows NT with limited TRACK functionality. The
client has 2 separate modules that work in conjunction
called Application Client Interface and Application
COM Interface. The COM Interface exposes 4 methods,
namely POST, FETCH, TRACK & RESET and several object
properties before the method is invoked. The Client
Interface provides a user-interface to set the
properties and invoke these methods. The selected
properties can be stored as a profile for reuse later.
The COM object can be used from any COM-aware program
script/language.

5.3   Application Client on Sun Solaris

DEC/EDI V4.0 application client is also available on
SUN Solaris platform. The client supports all the TRADE
POST, FETCH and TRACK commands and can be used as a remote
client to DEC/EDI server running on Tru64 UNIX or OpenVMS
Alpha systems.

5.4   Application Client on HP-UX

DEC/EDI V4.0 application client is also available on
HP-UX platform. The client supports all the TRADE
POST, FETCH and TRACK commands and can be used as a remote
client to DEC/EDI server running on Tru64 UNIX or OpenVMS
Alpha systems.

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