

FDRPAS & FDRPASVM ANNOUNCEMENTS

Recommended maintenance to be applied before running FDRPAS

Last updated: April 12, 2016

CHANGES SINCE LAST UPDATE

Added: FDRPAS incompatibility with RTD from Interchip Software and marketed by Dino Software in the USA. See [“FDRPAS INCOMPATIBILITY WITH RTD” on page 2](#) for details.

SUPPORTED FDRPAS RELEASES

Version 5.4L80 of FDRPAS and higher are supported. You should not run earlier releases of FDRPAS.

The current release, as of this announcement, is FDRPAS Version 5.4L83.

Please check the link below for versions released after this announcement:
<http://www.fdr.com/osreq.cfm>

REQUIRED ZAPS FOR z/OS 2.2 SUPPORT

FDRPAS users who are running z/OS 2.2 will need to install a fix to correct a SOC4 abend in certain FDRPAS modules. See below for a complete description of the problem.

For FDRPAS users running FDRPAS Version 5.4L83, you will need to install fix P-54.8326. This fix will automatically be included in FDRPAS Version 5.4L83 Spin Level 03, which is GA as of Sept 30, 2015.

For FDRPAS users running FDRPAS Version 5.4L80, you will need to install fix P-54.8155.

PROBLEM:

ABEND SOC4 WHEN SWA=ABOVE IS IN EFFECT ON Z/OS 2.2.
QMAT VERSION 3 IS ABOVE THE BAR.

NOTE:

TO SHOW WHAT JOB CLASSES, IF ANY, ARE EXPOSED TO THIS PROBLEM, ISSUE THE COMMAND: **\$DJOBCLASS,SWA=ABOVE,SWA**

THE COMMAND RESPONSE MAY SHOW:

- BATCH JOB CLASSES
- JOBCLASS(STC), WHICH MEANS STARTED TASKS
- JOBCLASS(TSU), WHICH MEANS TSO USERS

IF THE RESPONSE IS: **\$HASP003 RC=(52) ...** NO SELECTABLE ENTRIES FOUND MATCHING SPECIFICATION THEN THE PROBLEM DOES NOT APPLY TO THAT SYSTEM.

CIRCUMVENTION:

SPECIFY **SWA=BELOW** OR EXECUTE IN A JOB CLASS WHERE **SWA=BELOW** IS SPECIFIED.

To request zap P-54.8326 or P-54.8155, click support@fdinnovation.com.

To request the latest version click <http://www.fdr.com/upgrade/exform.cfm>.

FDRPAS & FDRPASVM ANNOUNCEMENTS

FDRPAS INCOMPATIBILITY WITH RTD

INNOVATION has encountered a problem that can cause user data to be lost if the customer runs FDRPAS and RTD (RealTime Defrag), from Interchip AG of Munich, Germany, and marketed by Dino-Software in the USA, at the same time. FDRPAS customers who have RTD should install ZAP P-54.8172 for Version 5.4L80, or ZAP P-54.8368 for Version 5.4L83. These ZAPs will be included in source in FDRPAS Version 5.4L85, which will be available in May, 2016.

To obtain the zap, send an email to support@fdrinnovation.com indicating the level of FDRPAS you are running and the zap will be sent to you.

FDRPAS moves DASD volumes non-disruptively from one physical device to another, while the data sets and volumes are in use. FDRPAS copies allocated space (space that is represented by a format 1 or 3 or 8 DSCB). FDRPAS uses SYSDSN ENQs to find out which data sets are in use, and for those data sets it copies all of the data set's allocated tracks; for data sets that are not in use, it copies only the used tracks. FDRPAS also copies any tracks that are written to after it starts; this accounts for data sets that get allocated or opened while FDRPAS is running. FDRPAS did not expect that data would be written to unallocated space and then become part of a data set.

COMPAKTOR (CPK) from INNOVATION and DFSMSdss from IBM are other software products that combine data set extents and reduce free space fragmentation. These products use different techniques and do not have the same exposure.

To eliminate this exposure, when FDRPAS reads the VTOC, it will check whether the volume has the condition of space that is neither allocated nor free. If so, FDRPAS will copy all of the tracks on the volume, instead of only allocated tracks. In this case, FDRPAS will issue the message **FDR023 FREE SPACE ERROR- ENTIRE PACK WILL BE DUMPED** and will continue normally.

RECOMMENDED MAINTENANCE FOR ACC, MONITOR, AND DCC FROM DTS SOFTWARE

The system may hang at the end of a SWAP of a non-SMS volume if the Dynamic Install Facility (DIF) version 5.1.25 through 6.1.12 from DTS Software is installed. DIF is used by all DTS products. ZAP DTS61051 is available from DTS to fix this problem. To obtain this fix, go to http://www.DTSsoftware.com/support_article.php?id=DTS61051. The fix is included in DIF version 6.1.13.

This problem involves inappropriate actions, such as WTO, that an exit may take when running under the Event Notification Facility (ENF), when FDRPAS calls ENF at the end of a SWAP. The current problem in DTF is not the first problem of this type (see IBM APAR OA35019 and FDRPAS ZAP P-54.7452, first discussed in the [December 21, 2010 FDRPAS ANNOUNCEMENTS](#)). FDRPAS ZAP P-54.8347 is now available for FDRPAS Version 5.4L83 to enable FDRPAS to recover from problems of this type. To request this ZAP, click here support@fdrinnovation.com to send a request. This fix will be included in FDRPAS Version 5.4L85, which will be available in May, 2016.

FDRPAS & FDRPASVM ANNOUNCEMENTS**RECOMMENDATION CONCERNING GDPS/PPRC**

The possible GDPS actions for PPRC primary disk problems are governed by the PRIMARYFAILURE policy option as specified in the GEOPLEX OPTIONS definitions. When an installation has HyperSwap, the PRIMARYFAILURE option is usually set to SWAP,xxxx. SWAP indicates that GDPS will perform a HyperSwap if a primary disk failure is detected and HyperSwap is enabled. The second part, xxxx, can be GO or STOP, and specifies the action to take if a primary disk failure is detected while HyperSwap is disabled. GO tells GDPS to freeze the secondary disks by suspending PPRC, and to allow the production systems to continue to run using the primary disks. STOP tells GDPS to freeze the secondary disks by suspending PPRC, and to stop all of the production systems.

The PRIMARYFAILURE policy option can be displayed and changed dynamically using the View/Alter Definitions panels of the GDPS 3270 or Web GUI without the need to change the System Automation policy database.

There is an IBM rule that a SWAP cannot be done while a volume is eligible for HyperSwap. Most installations want to maintain HyperSwap capability for as much of the time as possible. To support this requirement, section 320.6 FDRPAS AND IBM GDPS/PPRC HYPERSWAP in the FDRPAS manual supplies a procedure called the "special 4-step job". This procedure allows HyperSwap to remain enabled while the data is being copied to the target volumes, then disable HyperSwap during the actual UCB SWAPS, and then re-enable HyperSwap immediately afterwards.

It is possible that an I/O error could occur during the short time that HyperSwap is disabled. The I/O error would be a primary failure trigger. It's important to understand the implications of the PRIMARYFAILURE policy values in GDPS, and use one that will not produce undesirable results. For example, consider that the use of SWAP,STOP for PRIMARYFAILURE will result in a reset of all GDPS-managed systems (full sysplex outage) if a primary failure trigger occurs during the window where FDRPAS has temporarily disabled HyperSwap. Therefore, for installations that want to maximize HyperSwap protection while performing FDRPAS migrations, the use of SWAP,GO is recommended.

SWAP,GO is recommended over just GO, because SWAP,GO allows a HyperSwap if a primary failure trigger occurs during the copy phase, while HyperSwap is enabled. Although there is a possibility of a false trigger associated with FDRPAS processing, it is more likely that a trigger event would be a valid reason for a HyperSwap.

RECOMMENDED MAINTENANCE FOR OMEGAMON FROM IBM TIVOLI

The fix for APAR OA49210 for Omegamon should be applied to prevent a spin loop and re-IPL when the storage agent is restarted while a SWAP is running. Until the fix is installed, the circumvention is to not do a storage agent restart during a SWAP. There is no problem with restarting the storage agent after all SWAPS have completed.

FDRPAS & FDRPASVM ANNOUNCEMENTS**IMPORTANT WARNING ON zHPF**

All FDRPAS users who have installed or will install zHPF (High Performance FICON for System z) should install FDRPAS Version 5.4L80 or above.

RECOMMENDED MICROCODE ENHANCEMENT ON IBM DS8700, DS8800, AND DS8870 FOR QUERY HOST ACCESS

The Query Host Access (QHA) feature is available for the IBM DS8870, DS8800, and DS8700 control units at the following levels:

DS8880 and above - All levels

DS8870 - Release 7.1, released 6/07/2013

DS8800 - Microcode Bundle 86.31.95.0, released 12/13/2013

DS8700 - Microcode Bundle 76.31.79.0, released 12/13/2013

We urge all FDRPAS customers to install these microcode levels to support enhanced validation by FDRPAS.

Query Host Access gives FDRPAS a list of all the LPARs that have a source volume online, allowing FDRPAS to ensure that monitor tasks are running on all these LPARs. This eliminates the need to use EXCLUDE CPUID= commands for LPARs that are connected to a source volume but do not have the volume online.

For more information on Query Host Access, see sections 320.1, 305.1, and 310.4 in the FDRPAS manual.

NOTE: All EMC Symmetrix control units (except the 4xxx series) already provide comparable support.

RECOMMENDED MAINTENANCE FOR ADABAS FROM SOFTWARE AG

The recommended fixes below should be installed if you are running ADABAS V825 through V832. They fix a problem in which, during FDRPAS SWAP, ADABAS flooded the console with the message: **ADAI40 00011 ZHPF UNAVAILABLE -**

RETRYING I/O IN ECKD MODE

For ADABAS V825, fixes AI825045 and A0825042.

For ADABAS V826, fixes AI826029 and A0826019.

For ADABAS V831, fixes AI831014 and A0831012.

For ADABAS V832, fixes AI832001 and A0832002.

The recommended fixes below should be installed if you are running ADABAS V822 through V825. They fix the problem described by SAG incident number 1051648, in which ADABAS built a channel program containing a Prefix command, but did not set the flag telling IOS not to add its own Prefix. The symptoms in FDRPAS are SWAP failures with messages **FDR234** SWAP ERROR REASON=C** and **REASON=E**.

A0822055 for ADA822

A0823030 for ADA823

A0824016 for ADA824

A0825015 for ADA825

FDRPAS & FDRPASVM ANNOUNCEMENTS

REQUIRED MICROCODE LEVEL FOR HITACHI VSP, HP P9500, AND HITACHI RAID700

Customers swapping to an HDS (Hitachi Data Systems) VSP or Raid700 storage system, or HP (Hewlett-Packard) P9500 Disk Array, must ensure that the microcode level is 70-01-28-00/00 (released 12/09/2010) or higher. At lower levels, FDRPAS may not be able to identify the systems connected to the control unit. FDRPAS may give message **FDR234 REASON=M** indicating that a system has failed to respond, with a serial number for a system that does not exist, and then fail the swap. If you try to put in EXCLUDE commands for the nonexistent CPUIDs, FDRPAS may give message **FDR262 MODULE FDRXCPU NOT FOUND OR IN ERROR**, and a **U0502 ABEND**.

CRITICAL AND RECOMMENDED IBM SOFTWARE MAINTENANCE FOR z/OS SYSTEMS

You may need to apply IBM maintenance in order to successfully swap disks with FDRPAS. Please check this matrix against your operating system level to see which IBM APARs may need to be applied to all of your systems before you attempt to use FDRPAS.

At the end of this document is information on using IBM's EPSPT tool to automate checking your system for these APARs. INNOVATION strongly recommends that you use EPSPT rather than manually checking all the APARs.

Brief descriptions of the APARs follow the matrix. Please review the descriptions of the applicable APARs to see if they must be applied to your system. IBM can provide detailed APAR descriptions and assist you in determining if a given APAR must be applied. Please note that failure to apply some of these APARs may result in system failures, application failures, or data corruption.

APARs that apply to OS/390 2.4-2.9 can be found in the May 2003 FDRPAS newsletter at: http://www.fdr.com/newsviaemail/nve_fdrpas_050103.cfm

APARs that apply to OS/390 2.10 and z/OS 1.1-1.3 can be found in the October 2005 FDRPAS newsletter at: http://www.fdr.com/newsviaemail/fdrpas/ann_100705.cfm

APARs that apply to z/OS 1.4-1.7 can be found in the December 2007 FDRPAS newsletter at: http://www.fdr.com/newsviaemail/nve_12112007.cfm

APARs that apply to z/OS 1.8-1.10 can be found in the May 2011 FDRPAS newsletter at: http://www.fdr.com/newsviaemail/pdf/FDRPAS_Announcement_05-12-2011.pdf

APARs that apply to z/OS 1.11 can be found in the May 2013 FDRPAS newsletter at: http://www.fdr.com/newsviaemail/FDRPAS_IBMThirdParty_Maintenance_053113.pdf

The January 2015 edition of this newsletter can be found at: http://fdr.com/newsviaemail/FDRPAS_IBM_ThirdParty_Maintenance_012014.pdf

FDRPAS & FDRPASVM ANNOUNCEMENTS

The June 5, 2015 edition of this newsletter can be found at:

[http://www.fdr.com/Manuals_CurrentVersion/FDRPASandFDRPASVM_Announcements\(06_2015\).pdf](http://www.fdr.com/Manuals_CurrentVersion/FDRPASandFDRPASVM_Announcements(06_2015).pdf)

The June 24, 2015 edition of this newsletter can be found at:

http://www.fdr.com/email_template_assets/15081_FDRPAS_FDRPASVM_NVE/FDRPAS_IBM_and_ThirdParty_Maintenance_06242015.pdf

The November 2, 2015 of this newsletter can be found at:

http://fdr.com/email_template_assets/15135_FDRPAS_FDRPASVM_NVE/FDRPAS_IBM_and_ThirdParty_Maintanance_11022015.pdf

The prior edition (February 12, 2016) of this newsletter can be found at:

http://www.fdr.com/email_template_assets/16030_FDRPAS_FDRPASVM_NVE/FDRPAS_IBM_and_ThirdParty_Maintanance_02122016.pdf

IBM APAR	-----z/OS-----			
	1.12	1.13	2.1	2.2
OA48948		R	R	R
OA47353			R	
OA42966*	R	R	R	
OA42277*	C	C	C	
OA41309*	R	R		
OA41057		R		
OA40119		C		
OA40091*	R	R		
OA39822*	C	C		
OA39804	R	R		
OA36129	R			
OA35902*	C			
OA34008*	R			

C = Critical - will apply to most installations and may result in system outages or data loss if not applied. All FDRPAS users should apply.

R = Recommended - does not result in outage or data loss OR applies only to a limited number of installations with special circumstances. All FDRPAS users should review the descriptions and apply if they are critical for your environment.

* = an IPL is required to implement this fix.

Brief IBM APAR descriptions follow:

FDRPAS & FDRPASVM ANNOUNCEMENTS

OA48948: this recommended APAR should be applied to avoid corrupting ECS catalogs when re-enabling them after a SWAP. As documented in section 320.2 FDRPAS SPECIAL SOFTWARE CONSIDERATIONS, "If a volume that contains an ICF catalog that is enabled for Enhanced Catalog Sharing (ECS) is swapped, ECS sharing is disabled on that catalog." In order for the catalog to be re-enabled for ECS usage, the installation must issue a MODIFY CATALOG command after the SWAP. The command to re-enable the catalog must NOT be issued until the disable has completed on all systems, or the catalog may be corrupted. APAR OA48948 avoids this corruption by failing the re-enable if the disable has not completed on all systems.

However, if it is not convenient to install the PTF, you can avoid the problem just by making sure that the disable has completed on all systems before requesting the re-enable. To do this, issue the command MODIFY CATALOG,ECSHR(STATUS) on all systems sharing the catalog, and check that all systems show a status of 'Inact(NonECSAcc)'.

OA47353: this recommended APAR should be applied to avoid missing VVRs and unusable data sets after FDRMOVE to a new volume under z/OS 2.1 only. The problem occurs when the system implicitly creates a VVDS on a volume that did not already have one. If it is not convenient to install the fix, you can circumvent the problem by doing an explicit DEFINE for the VVDS before using the volume for FDRMOVE. **THIS APAR ONLY AFFECTS FDRMOVE AND NOT FDRPAS.**

OA42966: this recommended APAR should be applied if you specify ALLOWPAV=YES and you use HyperPAV. The fix avoids a possible delay of more than 30 seconds at the time of the actual UCB SWAP, which could interfere with application I/O and could cause the SWAP to fail. The fix also avoids an SOC4 ABEND in IOSVIRBD.

OA42277: See INNOVATION Technical Bulletin dated May 31, 2013.

OA41309: this recommended APAR marks the PTFs for APAR OA40697 as PE. These PTFs, UA67080, UA67081, and UA67082, create an incompatibility with FDRPAS. The PTFs for APAR OA41309 are the same code, but with a ++HOLD ACTION statement to indicate that before you apply the PTF, you must apply FDRPAS fix P-54.7818 for FDRPAS Version 5.4L78, or upgrade to FDRPAS Version 5.4L78 Spin=2 (available since March 13, 2013). Otherwise, the consequence may be I/O loops in CA-7 or other applications with BSAM log files, making it necessary to cancel the application.

Customers who are running lower levels of FDRPAS and do not upgrade, can circumvent the problem by issuing this console command on all SWAP and MONITOR systems before starting a SWAP:

```
DEVSERV QDASD,NORETRY=ALL or DS QD,NORETRY=ALL
```

This will only suppress retries for Command Reject (CMD), Invalid Track Format (ITF), and No Record Found (NRF).

If desired, when all swaps are finished, the above command can be reversed by:

```
DEVSERV QDASD,RETRY=ALL or DS QD,RETRY=ALL
```

FDRPAS & FDRPASVM ANNOUNCEMENTS

NOTE: PTF UA67080 for z/OS 1.11 is not actually marked as PE, and no new PTF is available, only because z/OS 1.11 was no longer supported when the problem was discovered. However, the considerations are the same; if you install UA67080, you must install the fix or upgrade for FDRPAS, or use the circumvention.

OA41057: this recommended APAR should be applied if you are using Hyperswap with the PTFs for OA37935 (UA64465) installed.

OA40119: this critical APAR should be applied if you have applied PTF UA64465 for APAR OA37935 and are using GDPS HyperSwap. Additionally, a SCOD-01 abend may occur in IOSVIRBA.

OA40091: this recommended APAR should be applied if you do SWAPs from or to devices that support zHPF (which most current devices do), and you have installed the PTFs for APAR OA33089 (UA63003 for z/OS 1.11 or UA63004 for z/OS 1.12) or are running z/OS 1.13. This APAR fixes a problem in which the SWAP completes successfully, but I/O errors and performance issues occur subsequently on the target volume. Note that we have not seen this at any customer site.

If you cannot install the fix, you can disable zHPF until the next IPL with the command: SETIOS ZHPF=NO .

OA39822: this critical APAR should be applied if you have applied the PTF for APAR OA37972, i.e. PTF UA64008 for z/OS 1.11, PTF UA64009 for z/OS 1.12, or PTF UA64010 for z/OS 1.13, and you use System Logger. Otherwise, Logger files for CICS or other applications may have their high-used RBA set to zero, causing FDRPAS (and other copy or backup programs) to treat them as empty and not copy the contents. CICS may be unable to restart.

If you cannot install the fix, you can circumvent the problem by coding SELECT commands (not documented) with DATA=ALL for Logger files. You would also need to add the operand SELTERR=NO to the SWAP TYPE=FULL control statement to prevent FDR316 DID NOT FIND messages if a particular SWAP job did not include any of the specified data sets.

Example:

```
SWAP TYPE=FULL,SELTERR=NO,...
MOUNT VOL=_____,SWAPUNIT=_____
```

```
...
SELECT DSN=**.DFHLOG.** ,DATA=ALL      CICS logs
SELECT DSN=**.DFHSHUNT.** ,DATA=ALL    CICS logs
SELECT DSN=**.DFHLGLOG.** ,DATA=ALL    log of logs for CICS/VR, etc.
SELECT DSN=**.DFHJ++.** ,DATA=ALL      user journals
```

NOTE: There is no fix for APAR OA39822 for z/OS 1.11. If you have installed PTF UA64008, you must use the above circumvention.

OA39804: this recommended APAR should be applied if zHPF is set to OFF via the SETIOS command to prevent an S179 abend.

FDRPAS & FDRPASVM ANNOUNCEMENTS

OA36129: this recommended APAR should be applied if you have catalog entries with extended indirect volume serial numbers (&symbol instead of a specific volume). It fixes a problem in which MVS does not inform FDRMOVE of this special type of catalog entry, causing FDRMOVE to lose the symbolic serial and replace it with an ordinary specific serial. THIS APAR AFFECTS ONLY FDRMOVE AND NOT FDRPAS.

OA35902: this critical APAR should be applied by all customers. The problem is not likely to occur unless you are running hundreds of concurrent SWAPs or SWAPDUMPs, but it is highly time-dependent and could happen on any heavily loaded system, with or without FDRPAS. The original error is an SOC1 or SOC4 ABEND in CSECT IECVDERP, which results in an SVC DUMP or LOGREC record from CSECT IOSVIRBA. A channel program is not completed, and the data base or other file is not correctly updated. We have specifically seen this problem cause I/O errors in DB2 with reason code X'00C200C0' and ABEND S04E; the data base was corrupted.

OA34008: this recommended APAR should be applied if you use PPRC secondary devices in an alternate subchannel set (these devices are called special secondary devices or 3390D devices), and you make the secondary device(s) active by HyperSwap, or by an IPL with SCHSET 1 specified in PARMLIB member LOADxx, and you then use FDRPAS to SWAP the active device in the alternate subchannel set to another device.

This APAR fixes a problem in which IOS will mismanage its device look-up table under these conditions, causing commands such as D U and system services such as UCBLLOOK to give incorrect results.

CRITICAL AND RECOMMENDED IBM SOFTWARE MAINTENANCE FOR z/VM SYSTEMS RUNNING FDRPASVM

You may need to apply IBM maintenance to successfully swap z/VM disks with FDRPASVM. Please check this matrix against your operating system level to see which IBM APARs may need to be applied to all your systems before you attempt to use FDRPAS and FDRPASVM.

IBM	-----z/VM-----		
APAR	5.4	6.2	6.3
	None		

IBM EPSPT TOOL (FOR z/OS SYSTEMS)

Enhanced Preventive System Planning Tool (EPSPT) is an IBM program that automates checking your SMP/E CSI for required APARs and PTFs. You can download the EPSPT program at:

http://techsupport.services.ibm.com/390/psp_tool.html

FDRPAS & FDRPASVM ANNOUNCEMENTS

Once installed, you can run this job to check for missing APARs on the FDRPAS critical and recommended list. This includes APARs from OS/390 2.10 through the current z/OS. The EPSPT tool automatically will check whether the PTFs that apply to your MVS level (FMID) are installed.

This jobstream is also available on the INNOVATION FTP site. Go to <http://www.fdr.com/ftp/ftp.cfm> and enter your FDRPAS access code. The jobstream is in the "maintenance" directory with file name: FDRPAS-EPSPT-JOB.txt

This EPSPT job contains a cumulative list of all IBM APARs, not just those for the currently supported MVS levels.

```
//*****
//* SMP/E: RUN PSP COMPARE AND REPORT TOOL
//*****
//PASAPARS EXEC PGM=EPSPT,
//   PARM='MVST'          <== specify SMP/E target zone name
//SMPCSI DD DISP=SHR,
//   DSN=SMPE.GZOSR1B.CSI <== SPECIFY SMP/E CSI NAME
//OUTPUT DD SYSOUT=*
//OUTPUTL DD SYSOUT=*
//SYSIN DD DATA,DLM=$$
/* PREVENTIVE SERVICE PLANNING */
/* CHECK FOR RECOMMENDED AND CRITICAL IBM APARS FOR FDRPAS */
/* */
/* BCP AND DFSMS APARS FOR Z/OS 1.11 AND ABOVE */
/* */
APAR(AA48948) FMID(HDZ2220) FIX(UA80287) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA48948) FMID(HDZ2210) FIX(UA80286) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA48948) FMID(HDZ1D10) FIX(UA80285) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA47353) FMID(HDZ2210) FIX(UA79076) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA42966) FMID(HBB7790) FIX(UA71118) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA42966) FMID(HBB7780) FIX(UA71117) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA42966) FMID(HBB7770) FIX(UA71116) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA42277) FMID(HDZ2210) FIX(UA69276) UPG(FDRPAS) SUB(CRITICAL).
APAR(AA42277) FMID(HDZ1D10) FIX(UA69275) UPG(FDRPAS) SUB(CRITICAL).
APAR(AA42277) FMID(HDZ1C10) FIX(UA69274) UPG(FDRPAS) SUB(CRITICAL).
APAR(AA41309) FMID(HDZ1C10) FIX(UA68363) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA41309) FMID(HDZ1D10) FIX(UA68364) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA41057) FMID(HBB7780) FIX(UA67938) UPG(FDRPAS) SUP(RECOMMENDED).
APAR(AA40119) FMID(HBB7780) FIX(UA66389) UPG(FDRPAS) SUB(CRITICAL).
APAR(AA40091) FMID(HBB7780) FIX(UA66395) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA40091) FMID(HBB7770) FIX(UA66394) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA40091) FMID(HBB7760) FIX(UA66393) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA39822) FMID(HBB7780) FIX(UA64010) UPG(FDRPAS) SUB(CRITICAL).
APAR(AA39822) FMID(HBB7770) FIX(UA64009) UPG(FDRPAS) SUB(CRITICAL).
APAR(AA39804) FMID(HDZ1D10) FIX(UA66043) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA39804) FMID(HDZ1C10) FIX(UA66042) UPG(FDRPAS) SUB(RECOMMENDED).
APAR(AA39804) FMID(HDZ1B10) FIX(UA66041) UPG(FDRPAS) SUB(RECOMMENDED).
```

FDRPAS & FDRPASVM ANNOUNCEMENTS

APAR(AA36129) FMID(HDZ1C10) FIX(UA60230) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA35902) FMID(HDZ1B10) FIX(UA59486) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA35902) FMID(HDZ1C10) FIX(UA59487) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA34008) FMID(HBB7760) FIX(UA56908) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA34008) FMID(HBB7770) FIX(UA56909) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA27065) FMID(HBB7760) FIX(UA47256) UPG(FDRPAS) SUB(RECOMMENDED) .
 /* */
 /* ICKDSF APARS RELATED TO OS/390 2.10 THRU Z/OS 1.7 */
 /* */
 APAR(AQ92344) FMID(EDU1H01) FIX(UQ91568) UPG(FDRPAS) SUB(RECOMMENDED) .
 /* */
 /* APARS FOR TIVOLI OMEGAMON II FOR SMS V520 THRU V550 */
 /* (ALSO OMEGAMON XE FOR STORAGE V100 THRU V310) */
 /* */
 APAR(AA49210) FMID(HKS3510) FIX(UA77871) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA49210) FMID(HKS3520) FIX(UA80214) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA49210) FMID(HKS3530) FIX(UA80217) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA16333) FMID(AKDF520) FIX(UA26018) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA16333) FMID(AKDF540) FIX(UA26019) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA16333) FMID(HKDF550) FIX(UA26017) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA13206) FMID(AKDF520) FIX(UA20888) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA11384) FMID(AKDF540) FIX(UA17690) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA09836) FMID(AKDF540) FIX(UA15315) UPG(FDRPAS) SUB(RECOMMENDED) .
 /* */
 /* BCP AND DFSMS APARS FOR OS/390 2.10 THRU Z/OS 1.11 */
 /* */
 APAR(AA35902) FMID(HDZ1A10) FIX(UA59485) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA34008) FMID(HBB7750) FIX(UA56907) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA31956) FMID(HDZ1B10) FIX(UA52637) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA31956) FMID(HDZ1A10) FIX(UA52636) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA31956) FMID(HDZ1190) FIX(UA52638) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA34008) FMID(HBB7750) FIX(UA56907) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA29579) FMID(HDZ1A10) FIX(UA48402) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA29579) FMID(HDZ1190) FIX(UA48405) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA29579) FMID(HDZ1180) FIX(UA48404) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA28844) FMID(HDZ1B10) FIX(UA50362) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA28844) FMID(HDZ1A10) FIX(UA50361) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA28844) FMID(HDZ1190) FIX(UA50363) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA27065) FMID(HBB7760) FIX(UA47256) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA26237) FMID(HDZ1180) FIX(UA45327) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA26237) FMID(HDZ1190) FIX(UA45328) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA26237) FMID(HDZ1A10) FIX(UA45326) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA23211) FMID(HDZ11J0) FIX(UA38323) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA23211) FMID(HDZ11K0) FIX(UA38319) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA23211) FMID(HDZ1180) FIX(UA38320) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA23211) FMID(HDZ1190) FIX(UA38321) UPG(FDRPAS) SUB(CRITICAL) .
 APAR(AA20597) FMID(HBB7709) FIX(UA34276) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA20597) FMID(HBB7720) FIX(UA34277) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA20597) FMID(HBB7730) FIX(UA34278) UPG(FDRPAS) SUB(RECOMMENDED) .
 APAR(AA20597) FMID(HBB7740) FIX(UA34279) UPG(FDRPAS) SUB(RECOMMENDED) .

FDRPAS & FDRPASVM ANNOUNCEMENTS

APAR(AA19965) FMID(HDZ11J0) FIX(UA37520) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA19965) FMID(HDZ11K0) FIX(UA37521) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA19965) FMID(HDZ1180) FIX(UA37522) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA19965) FMID(HDZ1190) FIX(UA37523) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA16358) FMID(HDZ11K0) FIX(UA28375) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA16358) FMID(HDZ1180) FIX(UA28376) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA14861) FMID(HBB7707) FIX(UA24300) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14861) FMID(HBB7708) FIX(UA24301) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14861) FMID(HBB7709) FIX(UA24302) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14861) FMID(JBB7717) FIX(UA24304) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14861) FMID(HBB7720) FIX(UA24303) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14558) FMID(HDZ11G0) FIX(UA24364) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14558) FMID(HDZ11H0) FIX(UA24365) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14558) FMID(HDZ11J0) FIX(UA24366) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14558) FMID(HDZ11K0) FIX(UA24367) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA14248) FMID(HBB7707) FIX(UA24291) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA14248) FMID(HBB7708) FIX(UA24292) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA14248) FMID(HBB7709) FIX(UA24293) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA14248) FMID(JBB7717) FIX(UA24295) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA14248) FMID(HBB7720) FIX(UA24294) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA13807) FMID(HDZ11H0) FIX(UA22327) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA13807) FMID(HDZ11J0) FIX(UA22328) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA13458) FMID(HDZ11H0) FIX(UA22310) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA13458) FMID(HDZ11J0) FIX(UA22311) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA13458) FMID(HDZ11K0) FIX(UA22312) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA10139) FMID(HDZ11G0) FIX(UA15990) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA10139) FMID(HDZ11H0) FIX(UA15991) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA10139) FMID(HDZ11J0) FIX(UA15992) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA09675) FMID(HBB7720) FIX(UA24486) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA09675) FMID(HBB7707) FIX(UA24483) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA09675) FMID(HBB7708) FIX(UA24484) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA09675) FMID(HBB7709) FIX(UA24485) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA09675) FMID(JBB7717) FIX(UA24487) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AA07355) FMID(HDZ11G0) FIX(UA11009) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07355) FMID(HDZ11H0) FIX(UA11010) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07355) FMID(HDZ11J0) FIX(UA11011) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07006) FMID(HBB7705) FIX(UA12519) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07006) FMID(HBB7706) FIX(UA12520) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07006) FMID(HBB7707) FIX(UA12521) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07006) FMID(HBB7708) FIX(UA12522) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07006) FMID(HBB7709) FIX(UA12523) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA07006) FMID(JBB7717) FIX(UA12524) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA06935) FMID(HJS7705) FIX(UA11274) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA06935) FMID(HJS7707) FIX(UA11275) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA06935) FMID(HJS7708) FIX(UA11276) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA05722) FMID(HDZ11F0) FIX(UA07576) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA05722) FMID(HDZ11G0) FIX(UA07577) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA05722) FMID(HDZ11H0) FIX(UA07578) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA05403) FMID(HBB7703) FIX(UA12186) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AA05403) FMID(HBB7705) FIX(UA12187) UPG(FDRPAS) SUB(RECOMMENDED) .

FDRPAS & FDRPASVM ANNOUNCEMENTS

APAR(AA05403) FMID(HBB7706) FIX(UA12188) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AA05403) FMID(HBB7707) FIX(UA12189) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AA05403) FMID(HBB7708) FIX(UA12190) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AA05403) FMID(HBB7709) FIX(UA12191) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AA05403) FMID(HBB7713) FIX(UA12192) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AA05403) FMID(HBB7717) FIX(UA12193) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW57711) FMID(HDZ11E0) FIX(UA02104) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW57711) FMID(HDZ11F0) FIX(UA02105) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW57711) FMID(HDZ11G0) FIX(UA02106) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW57552) FMID(HDZ11E0) FIX(UA00818) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW57552) FMID(HDZ11F0) FIX(UA00819) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW57552) FMID(HDZ11G0) FIX(UA00820) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW56156) FMID(HBB7703) FIX(UA00263) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW56156) FMID(HBB7705) FIX(UA00264) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW56156) FMID(HBB7706) FIX(UA00265) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW56156) FMID(HBB7707) FIX(UA00266) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW55469) FMID(HDZ11E0) FIX(UW93754) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW55469) FMID(HDZ11F0) FIX(UW93755) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW55469) FMID(HDZ11G0) FIX(UW93756) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54976) FMID(HBB6608) FIX(UW94401) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54976) FMID(HBB7703) FIX(UW94402) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54976) FMID(HBB7705) FIX(UW94403) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54976) FMID(HBB7706) FIX(UW94404) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54976) FMID(HBB7707) FIX(UW94405) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54976) FMID(HBB7713) FIX(UW94406) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW54200) FMID(HDZ11G0) FIX(UW88036) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW53761) FMID(HDZ11E0) FIX(UW92136) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW53761) FMID(HDZ11F0) FIX(UW92137) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW53761) FMID(HDZ11G0) FIX(UW92138) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW53222) FMID(HDZ11F0) FIX(UW87452) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW53222) FMID(HDZ11G0) FIX(UW87453) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52631) FMID(HBB6608) FIX(UW83918) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52631) FMID(HBB7703) FIX(UW83919) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52631) FMID(HBB7705) FIX(UW83920) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52631) FMID(HBB7706) FIX(UW83921) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52631) FMID(HBB7713) FIX(UW83922) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52614) FMID(HDZ11E0) FIX(UW85966) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52614) FMID(HDZ11F0) FIX(UW85967) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52614) FMID(HDZ11G0) FIX(UW85968) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52422) FMID(HDZ11E0) FIX(UW85956) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52422) FMID(HDZ11F0) FIX(UW85957) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52422) FMID(HDZ11G0) FIX(UW85958) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW52127) FMID(HBB7703) FIX(UA04094) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52127) FMID(HBB7705) FIX(UA04091) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52127) FMID(HBB7706) FIX(UA04092) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW52127) FMID(HBB7707) FIX(UA04093) UPG(FDRPAS) SUB(RECOMMENDED).
 APAR(AW51840) FMID(HDZ11E0) FIX(UW85077) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW51840) FMID(HDZ11F0) FIX(UW85078) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW51840) FMID(HDZ11G0) FIX(UW85079) UPG(FDRPAS) SUB(CRITICAL).
 APAR(AW51461) FMID(HDZ11E0) FIX(UW83782) UPG(FDRPAS) SUB(CRITICAL).

FDRPAS & FDRPASVM ANNOUNCEMENTS

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APAR(AW51461) FMID(HDZ11F0) FIX(UW83783) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AW49783) FMID(HBB7703) FIX(UW82457) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW49783) FMID(HBB7705) FIX(UW82458) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW49672) FMID(HDZ11F0) FIX(UW80062) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AW46936) FMID(HDZ11E0) FIX(UW75954) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW46936) FMID(HDZ11F0) FIX(UW75955) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW46459) FMID(HBB6608) FIX(UW77968) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AW46459) FMID(HBB7703) FIX(UW77969) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AW46459) FMID(JBB7713) FIX(UW77971) UPG(FDRPAS) SUB(CRITICAL) .
APAR(AW46101) FMID(HBB6608) FIX(UW79015) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW46101) FMID(JBB6609) FIX(UW79021) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW46101) FMID(HBB7703) FIX(UW79016) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW45683) FMID(HBB6608) FIX(UW77247) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW45683) FMID(HBB7703) FIX(UW77248) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW44548) FMID(HDZ11E0) FIX(UW71066) UPG(FDRPAS) SUB(RECOMMENDED) .
APAR(AW44548) FMID(HDZ11F0) FIX(UW71067) UPG(FDRPAS) SUB(RECOMMENDED) .
/* END OF FDRPAS APAR LIST */
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INNOVATION CORPORATE OFFICES**INNOVATION DATA PROCESSING**

Corporate Headquarters: 275 Paterson Avenue, Little Falls, NJ, 07424
Tel: 973-890-7300, Fax: 973-890-7147
E-Mail Support: support@fdrinnovation.com
E-Mail Sales: sales@fdrinnovation.com
WEB Site: <http://www.fdr.com>

EUROPEAN OFFICES:**France:**

INNOVATION DATA PROCESSING S.A.R.L, 191 Avenue Aristide Briand,
94230 Cachan, France
Tel: 01-49-69-94-02, Fax: 01-49-69-90-98
E-Mail Support: frsupport@fdrinnovation.com
E-Mail Sales: frsales@fdrinnovation.com

Germany:

INNOVATION DATA PROCESSING International Ltd.,
Orleansstrasse 4a,
D-81669 Muenchen, Germany
Tel: 089-489-0210, Fax: 089-489-1355
E-Mail Support: desupport@fdrinnovation.com
E-Mail Sales: desales@fdrinnovation.com

Netherlands:

INNOVATION DATA PROCESSING, Brouwerstraat 8,
1315 BP Almere, Netherlands
Tel: 036-534-1660, Fax: 036-533-7308
E-Mail Support: nlsupport@fdrinnovation.com
E-Mail Sales: nlsales@fdrinnovation.com

United Kingdom:

INNOVATION DATA PROCESSING Ltd., Clarendon House, 125 Shenley Road,
Borehamwood, Herts, WD6 1AG, England
Tel: 0208-905-1266, Fax: 0208-905-1428
E-Mail Support: uksupport@fdrinnovation.com
E-Mail Sales: uksales@fdrinnovation.com