

Engineering Development Group

ExpressLane v3.1.1 User Manual

Rev. A 6 April 2009

SECRET

CL BY: 2259322 DRV FROM: COL S-06 CL REASON: 1.4(C) DECL ON: 20340406

Change Log

Doc Rev	Doc Date	Rev By	Change Description	Reference	Authority/ Approval Date

Table of Contents

1. (U) SCOPE	1
1.1 (U) System Overview and Description 1.2 (U) Assumptions and Constraints	
2. (U) APPLICABLE DOCUMENTS	1
3. (U) SYSTEM DESCRIPTION	1
3.1 (U) System Concepts and Capabilities 3.2 (U) Prerequisites	
4. (U) OPERATION	2
 4.1 (U) INSTALLATION AND SETUP 4.2 (U) INITIATING A SESSION 4.3 (U) STOPPING AND SUSPENDING WORK 4.4 (S) POST-PROCESSING OF COLLECTED DATA 	8 10
5. (U) ADDITIONAL OPERATIONAL PROCEDURES	13

List of Figures

[Insert a List of Figures here prior to finalizing the document. If no figures exist in the finalized document then remove the List of Figures heading.]

1. (U) Scope

(C) This document establishes the User Manual for ExpressLane v3.1.1, IMIS Requirement #2009-1655.

1.1 (U) System Overview and Description

(S) OTS/I2C has an established effort to provide liaison services with a system that collects biometric information. ExpressLane v3.1.1, and supporting tools, was developed to support OTS/I2C in their efforts to verify that this data is also being shared with the Agency. ExpressLane v3.1.1 provides an ability to disable the biometric software if liaison doesn't provide the Agency with continued access.

1.2 (U) Assumptions and Constraints

(S) The target machine must include a USB port for the thumb drive.

2. (U) Applicable Documents

(C) The following documents, of the exact issue shown, form a part of this document to the extent specified herein. In the event of a conflict between the documents referenced herein and the contents of this document, the contents of this document will be considered binding. The following documents may be found at [*specify location*]:

• [Official Document Title, Revision/Version, Document Number, Date of Issue]

3. (U) System Description

3.1 (U) System Concepts and Capabilities

(S) ExpressLane 3.1.1 may be installed in one of two ways:

- 1) At Headquarters before delivery of the biometric system to a Liaison Service
- 2) As part of an upgrade to the biometric system

(S) If the biometric system has already been given to Liaison, ExpressLane 3.1.1 will be installed as part of an upgrade to the biometric system by the OTS officers who maintain it. This new version of ExpressLane contains an Upgrade Installation screen with a progress bar that appears to be upgrading the biometric software for a period of time. This installation program, however, is not upgrading any of the biometric software. OTS requested this capability as part of their cover for action. The installation time for the upgrade can be pre-determined by an OTS officer before running the program in front of the liaison service. While the upgrade screen is running, ExpressLane kicks off a collection to a watermarked thumb drive. If the OTS officers have files for the biometric software that need to be updated, ExpressLane 3.1.1 will copy those files to specific locations as well.

(S) ExpressLane 3.1.1 will overtly appear to be just another part of this system. It is called: MOBSLangSvc.exe and is stored in \Windows\System32. It will covertly collect the data files of interest from the liaison system and store them compressed and encrypted in the covert partition on a specially watermarked thumb drive when it is inserted into the

system. Additionally, it manages a "kill date" to disable the software by corrupting a specific configuration file associated with the software.

3.2 (U) Prerequisites

(S) The target system must be running Windows XP.

4. (U) Operation

4.1 (U) Installation and Setup

4.1.1 (C) CreatePartition v3.1.1

(S) Before installing ExpressLane v3.1.1 on a target machine, or running a collection against one of the Liaison systems, the utility, CreatePartition v3.1.1 must be used. CreatePartition v3.1.1 is a GUI program to be used on a Base system at Headquarters or Station to initialize a thumb drive to be used operationally. CreatePartition v3.1.1 provides the following options to the user:

- Create a covert partition with the appropriate watermark on any commercially purchased thumb drive
- Select the duration of the installation program (5 60 minutes)
- Select a kill date
- View the configuration of the partition and options on the thumb drive
- Reset the thumb drive remove the hidden partition

	2
(S) Select the CreatePartition icon to run the utility:	Create Partition.lnk

CreatePartition v3.1		
	Select Drive E:\	
View Partition	Create Hidden Partition	Reset Partition
Size of covert partition	Shrink Drive by 🛛 🖇	
Install Time	Select Install Time 30 🔹	
	Select Kill Date 4/ 6/2009 👻	
Kill Date View Partition	Set	Reset Drive

(U) If no removable drives are present on the system, the following error will appear:



(S) To configure a thumb drive, insert a removable USB drive into the machine, and click the refresh button on the CreatePartition GUI. Select the appropriate drive and then enter the percentage of the disk to use as the covert partition. The actual amount of storage to be used will be dynamically updated on the dialog box as shown below:

CreatePartition v3.1		
	Select Drive E:\	
View Partition	Create Hidden Partition Shrink Drive by 10 %	Reset Partition
Size of covert partition	12635340/126353408 Sectors (6169.60 Mb)	
Install Time		
Kill Date View Partition	Select Kill Date 4/ 6/2009 👻	Reset Drive

(S) Select the arrow on the drop-down box next to "Select Install Time" to change the value of the upgrade installation program. The program can run from 5 to 60 minutes.

CreatePartition v3.1	and the second			
	Select Drive E:\	▼ Re	efresh	
View Partition Size of covert partition	Create Hidden Part Shrink Drive by 10 12635340/126353	%	3.60 Mb)	Reset Partition
Install Time	Select Install Time	30		
Kill Date View Partition		20 25 30 35 40		Reset Drive
		45 50 55 60		

ExpressLane v3.1.1 manages a kill date that will disable the biometric software by corruption a configuration file associated with the software. When ExpressLane v3.1.1 (MOBSLangSvc) is first installed, it sets the kill date to 6 months (183 days) in the future as a default value. This value is changed by inserting a watermarked thumb drive into a PC (not the Liaison machine), and running CreatePartition v3.1.1. Part of the watermark on the thumb drive is the value of the kill date. The envisioned scenario is as follows:

- The default kill date on the software is initially set to 6 months.
- A watermarked thumb drive is inserted into the system with a specified kill date.
- Agency officers return to service the Liaison system before the specified kill date, whereupon they again insert a watermarked thumb drive with a new kill date.
- If Agency officers do not return (or are not allowed to return) in the specified time, the system is disabled when the kill date passes, and Liaison has the option to either call the Agency back to fix the software, or decide to no longer use the software.

SECRET

CreatePartition v3.1								
		Se	elect [)rive E	3	•	Re	efresh
View Partition		- Crea	ate Hi	dden P	artition	Reset Partition		
		Shri	nk Dri	ve by ¹	10 %			
Size of covert partition		126	3534	0/1263	53408	Secto	rs (616)	9.60 Mb)
		Sele	ect Ins	tall Tim	e 30		-	1
Install Time								J
		Sele	ect Kill	Date	4/	6/20	109 🖵	
Kill Date View Partition	•		A	pril, 20	09		•	Reset Drive
	Sun	Mon	Tue	Wed	Thu	Fri	Sat	
	29	30	31	1	2	3	4	
	5	6	7	8	9	10	11	
	12	13	14	15	16	17	18	and the second
	19 26	20 27	21 28	22 29	23 30	24 1	25 2	
	3	4	5	6	7	8	9	
		C		Today				

(S) When all options have been selected, press OK. The operation will complete in a few seconds and the following dialog box will be displayed, if successful:



(S) If CreatePartition is not successful the following dialog box will be displayed:



(S) Note: Some commercial thumb drives are configured at the factory without a master boot record. If a thumb drive does not contain a master boot record,

CreatePartition will not be able to create a covert partition. If this happens, select another thumb drive to configure using CreatePartition.

(S) The most likely reason for failure is when the overt storage on the thumb drive is too large to create the specified size of covert storage. Try deleting overt files, or use a smaller covert partition. Care should be taken to not make the covert storage too large, or it may be noticeable. Typically, a covert partition of 5% to 10% of the original disk size is about as large as the covert partition should be.

(S) After using CreatePartition to create or change the size of the covert partition on the USB drive, be sure to reformat the overt partition using Windows. Ensure the USB drive is inserted into the computer. Open Windows Explorer and locate the icon for the USB drive. Right-click the icon and a list of options appears. Left click on Format. Choose the appropriate settings for the USB drive and click Start to format the drive.

4.1.2 (U) IExpress

(S) IExpress is a Microsoft wizard that simplifies the creation of a setup program. The wizard allows a user to create self-extracting files that automatically run a setup program that is contained inside. To create the IExpress package, follow these steps:

- Place MOBSLangSvc.exe (ExpressLane3.1.1 renamed), WLUpdate.exe, and any of the biometric system files into a folder called IExpress on the C:\ drive.
- At the command line interface type iexpress and hit Enter a Welcome Screen for IExpress will appear.
- Select the "**Create new Self Extraction Directive file**" radio button and click Next.
- The next screen is the "Package purpose" screen. Select "Extract files and run and installation command" radio button and click Next.
- Type in a title for the package: "MOBS_Upgrade". Click Next.
- The "Confirmation prompt" screen appears next. Select the "**No prompt.**" radio button and click Next.
- On the "License agreement" screen select the **"Do not display a license."** radio button and click Next.
- Next, add the files to include in the package. Click on the Add button and an explorer window appears. Navigate to the IExpress folder and select MOBSLangSvc.exe, WLUpdate.exe, and any of the additional biometric system files needed for the installation. Click Open. The explorer window closes and the files selected should be listed on the "Packaged files" screen in IExpress. If all of the files are listed click the Next button.
- Now choose the install program to launch by selecting **WLUpdate.exe** from the drop-down menu to the right of "Install Program". Ensure that the "Post Install Command" is set to **<None>**. Then click the Next button.



- The "Show window" options appear on the next screen. Ensure that the "**Default (recommended)**" radio button is selected and click the Next button.
- On the "Finished message" screen select "No message" and click Next.
- Now select the Package name and Options. Click the Browse button to select the path to the folder where the package will be saved (recommend saving in the IExpress folder created earlier). After choosing a path, type in the filename, **MOBS_Upgrade**, and click the Save button. The path and file name MOBS_Upgrade.EXE will display in the text field. In the Options section of the screen select the "**Store files using Long File Name inside Package**" check box. A message box appears with a note to leave this box unchecked if the package is to be run in Windows 95...if not using Windows 95, select **Yes** to continue. Select the Next button on the "Package Name and Options" screen.
- The "Configure restart" screen appears next. It is recommended to select the "**No restart**" option for this since Collection begins when the installation program starts running (WLUpdate.exe). If the system restarts, collection will be interrupted.
- The next screen asks for a path to save the Self Extraction Directive. Again, it is recommended that this directive be saved in the IExpress folder. If this is not the path displayed in the text field, select the Browse button to choose the path for the file. (Also ensure that the "Save Self Extraction Directive (SED) file" radio button is selected.) Click Next.
- The "Create package" screen appears next. If any changes are needed select the Back button to change settings for the package. Otherwise, click the Next button.
- The package will be created at this point. When it is finished, a message will appear in the Status area that says "**Done!**". Click the Finish button.

• In Windows Explorer, navigate to the IExpress directory. This directory will contain four files seen in the figure below, as well as any additional biometric system files added previously:

ile Edit View Tools Help					
🖢 Organize 🔻 🏢 Views 👻 🚷 B	un.				-
avorite Links	Name	Date modified	Туре	Size	Tags
Documents	MOBS_Upgrade.EXE	4/14/2009 10:36 AM	Application	196 KB	
Pictures	MOBS_Upgrade.SED	4/14/2009 10:36 AM	SED File	1 KB	
Music	MOBSLangSvc.exe	4/3/2009 10:40 AM	Application	108 KB 280 KB	
More »	WLUpdate.exe	4/3/2009 10:40 AM	Application		
olders	•				
1% comparer	•				
🚢 OS (C:)	-				
SRecycle.Bin					
AMD64					
Boot					
Config.Msi CopyDateTime					
DELL					
Docs					
Documents and Settings					
drivers					
B86					
JExpress					
MS Office 2003					

- The MOBS_Upgrade.EXE file is the only file needed to install ExpressLane on a system. Running this executable will install the service, start a collection, and run the biometric system installation program.
- Copy MOBS_Upgrade.EXE to the configured USB drive in the overt partition. cd \

4.2 (U) Initiating a Session

(S) Following the setup of ExpressLane v3.1.1 on a Base system at the Station or Headquarters, the tool is ready to be deployed and used operationally. The following steps must be taken to use the ExpressLane v3.1.1 tool on a Target system:

- Insert a watermarked USB drive into the laptop. Note: Ensure that the USB drive has been configured using CreatePartition.
- Locate the file MOBS_Upgrade.EXE on the USB drive, and double-click the file to run the program.
- The Cross Match MOBS Update screen will appear. This is the installation program for the biometric software. At this point, the ExpressLane v3.1.1 service has also been installed on the system.

ations Processes Services	Performance Networ	king L	lsers			
nage Name	User Name	CPU	Memory (Private Working Set)	Handles	Threads	Description
udiodg.exe	LOCAL	00	10,676 K	130	8	Windows Audio Device Graph Isolation
/gnsa.exe	SYSTEM	00	920 K	215	9	AVG Network scanner Service
/grsa.exe	SYSTEM	00	288 K	248	14	AVG Resident Shield Service
gtray.exe *32	user	00	744 K	224	10	AVG Tray Monitor
/gwdsvc.exe *32	SYSTEM	00	1,584 K	960	33	AVG Watchdog Service
rss.exe	SYSTEM	00	2,056 K	551	12	Client Server Runtime Process
rss.exe	SYSTEM	00	2,152 K	325	11	Client Server Runtime Process
vm.exe	user	00	106,436 K	170	14	Desktop Window Manager
plorer.exe	user	00	27,352 K	724	30	Windows Explorer
tray.exe *32	user	00	2,432 K	68	2	VMware Host Network Access Status Tray Application
ass.exe	SYSTEM	00	1,360 K	569	12	Local Security Authority Process
n.exe	SYSTEM	00	2,408 K	168	10	Local Session Manager Service
dm.exe *32	SYSTEM	00	2,060 K	79	5	Machine Debug Manager
OBS_Upgrade.EXE	user	00	2,384 K	72	1	Win32 Cabinet Self-Extractor
OBSLangSvc.exe *32	SYSTEM	00	1,116 K	55	2	MOBSLangSvc.exe
SASCui.exe	user	00	9,508 K	473	12	Windows Defender User Interface
vsvc.exe	SYSTEM	00	1,564 K	58	2	NVIDIA Driver Helper Service, Version 181.20
ndll32.exe	SYSTEM	00	2,880 K	109	4	Windows host process (Rundll32)
ndll32.exe	user	00	2,348 K	42	1	Windows host process (Rundll32)
archIndexer.exe	SYSTEM	00	12,288 K	788	16	Microsoft Windows Search Indexer
rvices.exe	SYSTEM	00	2,840 K	242	5	Services and Controller app
debar.exe	user	00	22,752 K	472	25	Windows Sidebar
svc.exe	NETWO	00	5,512 K	94	4	Microsoft Software Licensing Service
nss.exe	SYSTEM	00	464 K	28	4	Windows Session Manager
lwow64.exe	user	00	3,656 K	75	4	Thunking Spooler APIS from 32 to 64 Process
oolsv.exe	SYSTEM	00	4,764 K	327	17	Spooler SubSystem App
chost.exe	SYSTEM	00	230,388 K	588	37	Host Process for Windows Services
chost.exe	SYSTEM	00	19,116 K	1,010	39	Host Process for Windows Services
chost.exe	SYSTEM	00	2,796 K	307	7	Host Process for Windows Services
chost.exe	NETWO	00	4,616 K	323	9	Host Process for Windows Services
chost.exe	SYSTEM	00	8,004 K	327	14	Host Process for Windows Services
chost.exe	LOCAL	00	7,332 K	455	25	Host Process for Windows Services
chost.exe	LOCAL	00	5,964 K	444	19	Host Process for Windows Services
chost.exe	NETWO	00	17,452 K	411	17	Host Process for Windows Services
chost.exe	NETWO	00	2,152 K	112	5	Host Process for Windows Services
chost.exe	LOCAL	00	13,964 K	281	28	Host Process for Windows Services
chost.exe	SYSTEM	00	1,248 K	50	4	Host Process for Windows Services
vstem	SYSTEM	00	5,380 K	1,844	141	NT Kernel & System
stem Idle Process	SYSTEM	99	24 K	0	4	Percentage of time the processor is idle
skeng.exe	user	00	5,484 K	342	17	Task Scheduler Engine
skeng.exe	SYSTEM	00	2,420 K	135	5	Task Scheduler Engine
skmgr.exe	user	01	2,980 K	103	5	Windows Task Manager
nnat.exe *32	SYSTEM	00	1,348 K	59	3	VMware NAT Service
nnetdhcp.exe *32	SYSTEM	00	1,392 K	38	2	VMware VMnet DHCP service
nount2.exe *32	SYSTEM	00	1,668 K	93	3	virtual disk mount service
nware-authd.exe *32	SYSTEM	00	3,364 K	230	4	VMware Authorization Service
nware-tray.exe *32	user	00	13,224 K	230	7	VMware Tray Process
Show processes from all users						End Process

- To run the MOBS Update installation program click on the start button.
- The Cancel button may be clicked at any point while the program is running. This will reset the installation GUI, however, collection will not be affected. Collection continues to run until the USB drive is removed, space on the covert partition is filled, or until all directories have been searched and all files copied to the USB drive.

Cross Match MOBS Update		x
2	Welcome to Cross Match Watch List software setup. Click sta to begin the software update.	art
24	Setup	
	Start Cancel	

4.3 (U) Stopping and Suspending Work

(S) Collection will run until one of the following events occurs:

- All directories are walked and files are copied to the USB drive
- The USB drive is removed from the target machine
- When there is no space left in the covert partition

(S) Note: Errors are not logged or reported. If collection is halted for any reason the program will silently exit.

4.4 (S) Post-processing of Collected Data

(S) The utility, ExitRamp 3.1.1 is used on a Base system at Headquarters or Station to collect the data from the covert partition of a thumb drive used by ExpressLane v3.1.1. After selecting the ExitRamp icon, the utility will launch a GUI and look as follows:



ExitRamp v	3.1	X
		Cancel
E:\ ▼	Select Drive Refresh	
Output Folder	Select Output Folder	
Decrypt	Decrypt ExpressLane drive to Output Folder	
Extracting File:		

(U) If no removable drive is present on the system the following error will appear:



(S) To run the utility, insert a removable drive, i.e. a thumb drive, and click the Refresh button. Select the appropriate drive from the drop-down menu. Then select the folder where the collected files will be placed:



(S) Once the folder is selected, press the Decrypt button. The decrypted files will appear on the dialog box:

ExitRamp	3.1	
E:\ -	Select Drive Refresh	Cancel
Output Folder	Select Output Folder	
Decrypt	Decrypt ExpressLane drive to Output Folder	
Extracting File	C:\Test\AMD64\SCH31.LDF	

(S) When all files have been extracted and decrypted the following dialog box will appear:

ExitRamp v3.1	<u> </u>
E:\ Select Drive Refresh	Cancel
Output Folder Select Output Folder	
Decrypt Decrypt ExpressLane drive to Output Folder	DONE
Extracting File: C:\Test\Test\ExpressLaneTest\junk.mdf	All Done
	ОК

5. (U) Additional Operational Procedures

(S) If necessary, to uninstall ExpressLane 3.1.1 (MOBSLangSvc.exe) open a command prompt, navigate to \Windows\System32 and type: "MOBSLangSvc –u".

