Solution Functional Checklist

This section provides an overview of the tools and applications used with Foreign System Interfaces (FSI). Tools and applications specific to ESI, ESO, and Open Engine are discussed.

ESI

SI Manager - ESI

SI Manager (SI_Manager.exe) is a front-end, graphical interface application used to establish the rules for each contributor system (sending application) that feeds data into the *Cerner Millennium* environment. SI Manager is used to set the tables that the CPM ESI server uses to control interpretation and validation of patient identifiers for the person Match and Reconcile process.

ESI_LOG

ESI_LOG is a *Discern Explorer* (CCL) based reporting utility that extracts information from the ESI_LOG table. It is used to determine which CPM ESI server processed a specific message, whether the message succeeded or failed, and provide statistical information about the transactions processed by the CPM ESI server. The level of logging done by the CPM ESI server and posted to the ESI_LOG table is configured by the logtable_flag property on the CPM ESI Server.

ESO

SI Manager - ESO

SI Manager also has the ability to manipulate ESO configurations. Users can set up triggers, routines, and routine arguments, define how code sets are handled by the contributor system, and hold certain transactions until the required identifier is sent. They can also flex aliases by contributor source and define server options much the same way as in ESI.

ESO_INIT_OUTBOUND

ESO_INIT_OUTBOUND is a *Discern Explorer* (CCL) based utility that incorporates the major ESO configuration options into one tool. Use this utility to configure system-level settings, enable or disable interface type settings, and configure outbound aliases. This utility has been engineered to be intuitive and user-friendly, helps minimize user manual entry errors, and includes *Discern Explorer* (CCL) Help options. This is the primary utility for setting up ESO.

Below is a brief summary of the actions that can be performed in the ESO_INIT_OUTBOUND utility.

- Define an outbound contributor_system.
- Toggle on or off each interface type, such as ADT outbound or ORU outbound.
- Build the ESO trigger reference database.
- Build the ESO server reference database.
- Access monitoring and performance reports from the ESO_INIT_OUTBOUND Reports menu. The performance reports focus on simply reporting the processing time of the FSI ESO server.
- The ESO_BUILD_CVO tool, accessible through ESO_INIT_OUTBOUND, provides a row-by-row editor to modify the CODE_VALUE_OUTBOUND (CVO) table. It also provides methods to populate the CVO table.
- The ESO_BUILD_CSI tool builds rules for processing and error handling methods for aliased fields with respect to each foreign system. If a code value and its respective alias were not found on the CVO table, then rules on the CSI table are not referenced.

Open Engine

OpenView

OpenView (OpenView.exe) is a graphical interface server application providing platform-independent interfacing between computer systems in a healthcare environment. OpenView supports data exchange among disparate computer systems, providing timely access to demographics, clinical results, and financial data.

With OpenView, facilitation of data exchange can include transactions from patient care systems to departmental and billing systems or vice versa. Major features include some of the following items:

- Flexible, user-controlled interface development
- Easy-to-use scripting environment for building and maintaining interfaces
- Debugging tools and test environments

- Complete system management

Query Client

The Query Client is the back-end version of the OpenView Controller screen, providing information regarding the interface's current states, as well as cumulative performance statistics. The statistical information can be imported into *Excel* as a comma-separated value (.CSV) file to generate performance graphs.

It is important to note that the Query Client does not exactly mirror the OpenView Controller. Rather, it displays information only for those outbound interfaces with queues currently being maintained by the Router. In its primary use (Brief mode), it provides some of the following information:

- Process Name and Process ID
- In Cycle Time
- Out Cycle Time
- Queue Count
- Creation Date

HL7 Test Tool

HL7 Test Tool is an Open Engine troubleshooting tool that allows users to play sample HL7 messages through the ESI interface. Through the graphical interface, they can select various message and trigger types, add optional segments, and manually enter data into the HL7 fields before playing the sample message. Saved messages can also be imported and tested. Additionally, the HL7 Test Tool can be used to create test sets, which, by default, are automatically saved to the HL7 Test Tool database.

OEN_MENU

OEN_MENU is a *Discern Explorer* (CCL) based utility that allows you to access to numerous troubleshooting and monitoring tools. The following table summarizes the options that are available in OEN_MENU:

Available Options	Functionality
Run OEN_PROC_VIEW to view or modify your comservers	Interface tools
Run OEN_SCRIPT_VIEW to open and edit any scripts you have written.	Interface tools
Run OEN_TXLOG_VIEW to view transactions you have received in your comservers.	Interface tools
Run OEN_REPLAY to replay any transactions.	Interface tools
Run QUERY_CLIENT to monitor your interfaces.	Interface tools
Import or export a comserver to the current domain.	Interface tools

Functionality	Available Options
Interface reports	List all the comservers that have been built.
	List all the scripts that have been written.
	Run a prune report, a transaction summary report, or a transaction detail report.
Maintenance options	Check the *Oracle* tables.
	View the CQM queues.
	Run CLEAR_REFRESH_SCP to sync up the SCP and the OEN_PERSONALITY table.
	Initialize the OEN CQM tables.

	Prune the CQM/TX/TE logs.
Troubleshooting tools	Check core functions.
	Check the protocol status for processes.
	Adjust logging on the OEN comserver (oen_srvcom.exe) while it is running.
	View server log files.
	Run several TCP/IP tools.

OEN_PROC_VIEW

OEN_PROC_VIEW is a *Discern Explorer* (CCL) based utility that allows users to view or modify an interfaces personality traits. OEN_PROC_VIEW makes any changes or viewing of traits easier. OEN_PROC_VIEW is accessible from the OEN_MENU utility.

OEN_TXLOG VIEW

OEN_TXLOG_VIEW is a *Discern Explorer* (CCL) based tool used to view transactions that were received from the foreign system. These transactions have not been manipulated by the custom interfaces on the Cerner side. OEN_TXLOG VIEW extracts information from the OEN_TXLOG table, which is a repository of the exact transactions received from the engine. OEN_TXLOG_VIEW is accessible from the OEN_MENU utility.

OEN_REPLAY

OEN_REPLAY is a *Discern Explorer* (CCL) based tool used to replay a single or multiple transactions. It may be necessary, due to a routing or formatting failure, to replay a transaction (or a number of transactions). In order for a transaction to be available for replaying, transaction logging must have been enabled on the interface that is to replay the transaction. That is, the transaction must reside in the transaction log. OEN_REPLAY uses the transaction log to identify transactions. OEN_REPLAY is accessible from the OEN_MENU utility.

Scripting

When a transaction is received from a sending system in a format not supported by the target system, it is necessary to reformat the transaction. To reformat the transaction, fields may be moved, joined, split, removed, or added. Delimiters may be changed. Before any reformatting can take place, the transaction type must be determined to verify that certain criteria are met.

For example, a foreign system is sending to another foreign system two types of transactions: ADTs and Orders; the sending foreign system sends the transactions in a fixed-length format. The receiving system requires the transactions to be in a dynamically delimited format.

First, the transaction must be investigated to identify the transaction type. Once the type has been determined and validated, then the transaction is formatted from its original fixed length format to a dynamically delimited format.

To investigate and possibly reformat the message, a scripting language is required. *Discern Explorer* (CCL) is Cerner's SQL-like scripting language used by Open Engine. CCL has numerous advantages as a scripting tool, including its English-like commands and functions, support of user-access routines (UARs), ability to access *Cerner Millennium* databases as well as other databases, and lack of a need for a compiler.