

eSOne ShadowLink

User Guide

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Introduction

eSOne is capable of interfacing with client side EHR and patient scheduling software using a variety of different formats. ShadowLink is a service level application used to facilitate a connection point between systems. Installed on a client server or workstation, ShadowLink connects to eSOne servers using a standard TLS/SSL encrypted connection. The eSOne servers will select the strongest encryption method that can be supported by the client workstation operating system during the connection pase.

ShadowLink authenticates with the eSOne servers using a login ID and password unique to the client. After authentication, data is transferred between the two systems.

For demographic, scheduling, or order interfaces, there are two methods of data transmission available. eSOne can accept patient demographics using the industry standard HL7 message. eSOne then converts these messages into database entries that are made available to medical transcriptionists and providers in real time. Alternately, ShadowLink can watch a specified file path containing flat files. The file is generated by the scheduling software and then transferred to the eSOne database as patient demographics in a batch format.

For a transcription interface, eSOne and ShadowLink can provide completed transcriptions in a wide variety of formats and interfacing with Electronic Health Record (EHR) systems. eSOne supports common formats such as PDF, Word, RTF, Text, and HL7 messages. If necessary, the eSOne interface team can develop custom formats, built to order.

eSOne ShadowLink is a service that transfers available patient demographic and schedule information to the medical transcriptionists to provide fast, accurate, and consistent medical transcriptions. Additionally, completed transcriptions are then automatically transferred back to the provider's EHR or another transcription repository. Medical providers send and receive patient documents and information with minimum user interaction. This allows medical providers to concentrate on providing medical services instead of clerical duties.



Requirements

For ShadowLink software to work properly within your Windows environment, the following software and hardware requirements must be met.

Note: Macintosh or Apple computers are NOT supported by eSOne.

Minimum Requirements:

- Windows 10

Note: eSOne supports any fully patched operating systems receiving Microsoft mainstream support. Please upgrade Windows before calling eSOne.

- RAM: 4 GB or more
- .Net Framework 4.7.2 (Our application will attempt to install this if not currently installed.)
- Hard Drive Free Space: 2 GB
- Internet Bandwidth: 3 Mbps download/1 Mbps upload

Recommended Requirements:

- Windows 11
- RAM: 4 GB or more
- .Net Framework 4.7.2 (Our application will attempt to install this if not currently installed.)
- Hard Drive Free Space: 2 GB
- Internet Bandwidth: 3 Mbps download/1 Mbps upload

Notes:

- Virtual machines are supported for use.
- Communicates over port 443 to https://shadowlink.escription-one.com and https://mobile.escription-one.com.
- Can be on the same server as ShadowPrint.
- Windows updates are managed by the customer. The customer is responsible for ensuring application is running after a reboot.

Local Resources

ShadowLink is a service application written using the Microsoft .NET framework, version 4.7.2, or higher. It runs as a service in the background, but also has a user interface for entering service account credentials. This interface can be used to monitor the service but is not required to be running.

During installation, the .NET framework version 4.7.2 will be installed on the workstation if it's not currently installed. Other than the .NET framework (20 MB), ShadowLink has a small footprint on the client workstation (less than 0.5 MB).



- It uses the local drive for logging and for temporary storage of data while the message is in transit. This temporary
 storage is cleaned up over time by the ShadowLink service, so space is conserved.
- It requires very little memory or CPU cycles.

Communication

ShadowLink communicates with the eSOne servers over a TLS connection. During the connection process, the Windows Operating System on the client's workstation requests a connection to the eSOne servers and specifies what encryption protocols it supports. The eSOne servers sends back a message saying it will communicate only using TLS v1.2 compatible ciphers. If the client machine does not support TLS v1.2 compatible ciphers, they will receive a connection error.

eSOne does not support SSL 1.0, 2.0, or 3.0.

eSOne does not support TLS versions earlier than 1.2.

All communication between the client and the eSOne Services uses standard TCP/IP (internet) technology, which includes a forward-error correction protocol (TCP) to detect and correct transmission errors.

Each ShadowLink connection request is authenticated with a service account login ID, client identifier, password, IP address, and workstation name using basic HTTPS authentication over a TLS session.

- For example, a typical request would be to post an HL7 message with patient information to the eSOne server. ShadowLink running on the client's workstation must successfully authenticate to the eSOne servers to do so.
- Likewise, the ShadowLink client will submit an HTTPS request frequently to the eSOne servers to see if any transcriptions are available for downloading. These requests also require authentication.

The authentication process also uses the workstation name from the workstation it is running on. This is compared to the workstation name that was recorded when ShadowLink was originally configured. This ensures that new instances of ShadowLink cannot be arbitrarily installed without the service account being reset by an authorized user.

ShadowLink was designed to encrypt information using TLS when transmitted to and from the eSOne servers. No SSL certificates are used on the client-side application; the certificates are used from eSOne's servers. The advantage of using this method is that all communications are performed using the secured TLS connection that was established inside of the client's network, either within the firewall or within the client's firewall DMZ zone.

Communication between ShadowLink and the client's EHR system is configurable and set up on a case-by-case basis. It has capabilities to transfer to the EHR using TCP or transferring to a folder or network path. There is a possibility of additional communication methods such as using web services, but these may require custom development. Any inquiries regarding this can be forwarded to your eSOne contact.

ShadowLink saves information on the workstation's local hard drive only while it is either waiting for the eSOne servers to respond that the patient or Associate information was successfully received, or while it is waiting for the EMR (or the file store) to respond that the transcription was successfully received. ShadowLink automatically removes all locally stored information.



New Interface Requests

Before installing ShadowLink, a new service must be created to prepare the eSOne interface for a new connection. Clients (clinics and hospitals) should request a new interface with the technical contact at the Transcription Company that manages the account.

ShadowLink Service

Downloading ShadowLink

ShadowLink is available for download for free from one of these links:

- Australia https://www.escription-one.com.au/Software/ShadowLink/
- Canada <u>https://www.escription-one.ca/Software/ShadowLink/</u>
- United States https://www.escription-one.com/Software/ShadowLink/

Run the executable. It is recommended that you perform this install as an administrator.

Choose to run the ShadowLink service as the local user or specify another local or domain user. A custom account may need to be used when ShadowLink needs to access a network path, or when the local system account does not have rights to start a windows service or access program files. This can be configured from the windows services screen at a later point in time if not configured up front.

Service Credentials	2
Select an account to run the ShadowLink service	Q
Plese select the windows account that you would like	to run the ShadowLink service.
 Local System (Recommended) 	
The Local System Account has access and can access any network shares the machine. If you need to access netwo	hat are shared with this ork shares that are restricted to
those resources and enter its credent	user with permission to access ials below.
those resources and enter its credent	
those resources and enter its credent © Custom Account:	
those resources and enter its credent © Custom Account: Account:	



8

Launching ShadowLink's Management Console

To open ShadowLink, select **ShadowLink Management Console** from the Windows startup menu, or search 'ShadowLink' in the Windows search box.

3		A	l Apps Documents Web Mor	re 🔫	R ···
rit.	Settings	Best	match	_	
-		0	ShadowLink Management Console		CS)
	ShadowLink Management Console	Soor	App ch the web		ShadowLink Management Console
			shadowlink - See web results	>	Арр
	ShadowPrint Configuration		shadowlink ster	>	📑 Open
S	Skype	Fold	shadowlink ios ers	>	Fo Run as administrator Image: Description of the location
8	Skype for Business		ShadowLink updated screenshots - in ShadowLink Manual ShadowLink Overview - in eScription One	>	-t= Pin to Start -t= Pin to taskbar III Uninstall
	Snagit 10 🗸 🗸 🗸		ShadowLink2 - in Emdat	>	
Ø	Snip & Sketch	<u>ę</u>	ShadowLink Manual - in eScription	> Manag	jement Console
Ś	Software Updates				

Once open, the ShadowLink Management Console icon appears in the system tray:



Selecting a Region

Upon launching the management console for the first time you will be prompted to select your region from the drop-down list. Choose the region that is appropriate for your client.

ShadowLink Region Selection	x
Please select your region below	
United States (US)	~
OK Cancel	



Entering a Service Login

Clients who have been provided with a Service Login ID and password can begin using ShadowLink immediately. One ShadowLink installation can run with one or more login IDs.

- To add a login ID, click the green "+" symbol.
- Fill in all 3 boxes: Login, Password, and Client, as provided by the managing Transcription Company or DeliverHealth. The value entered for Client should match the Client value for InSync and InQuiry.
- If you do not have a Login and Password, refer to the New Interface Requests section on page 7 of this manual.

Login			
			4
			×
States (US)	change region		
🖳 Add Ser	vice Account	\times	
Login:			Stop
Password:			
Client:			
	Save	Cancel	View Logs
			Close
	Add Ser	Password:	Add Service Account ×



- After all three fields are filled in, click the Save button.
- 📎 ShadowLink Management Console \times ShadowLink Accounts Status Client Login ÷ Region: United States (US) change region \times 🖳 Add Service Account ShadowLink Serv Service version: Login: DemoUser Password: ••••• Service status: demo Machine name: Client: Cancel View Logs Machine IP Addre Save Close Advanced Ready

ShadowLink M	anagement Con	isole		×
ShadowLink Accou	nts Login DemoUser	Status Valid		
Region: United		ange region		
Service version: Service status:	v2.8.19070.34 Stopped	621	Start	Stop
Machine name: Machine IP Addres	BN s: 10.1.25.18	10		View Logs Close
Advanced				Close
Ready				.::

 If the login information entered is correct, ShadowLink displays the entry as "Valid."



Starting and Stopping the Service

Once a valid login has been entered, the service can be started, stopped, and restarted in two ways.

- First, the service can be turned on and off in the ShadowLink GUI (Graphical User Interface). To start the interface, navigate to the Programs Menu> eSOne folder> ShadowLink Management Console.

Client demo	Login DemoUser	Status Valid		+
Region: United S ShadowLink Service		ange region		
Service version: Service status: Machine name:	v2.8.19070.34 Stopped	621	Start	Stop
Machine IP Address	: 192.168.1.107	,		View Logs
				Close

Use the Start and Stop buttons to start, stop, and restart the service as needed.



	^	
	Name	Date modified
📌 Quick access	Defragment and Optimize Drives	4/11/2018 7:34
🤝 OneDrive	Disk Cleanup	4/11/2018 7:34
💄 This PC	Event Viewer	4/11/2018 7:34
	💑 iSCSI Initiator	4/11/2018 7:34
🐂 Libraries	📠 Local Security Policy	4/11/2018 7:35
Documents	🔂 ODBC Data Sources (32-bit)	4/11/2018 7:34
🜛 Music	🔂 ODBC Data Sources (64-bit)	4/11/2018 7:34
🛋 Pictures	Performance Monitor	4/11/2018 7:34
Videos	🚧 Print Management	4/11/2018 7:35
	necovery Drive	4/11/2018 7:34
学 Network	🔊 Resource Monitor	4/11/2018 7:34
	😹 Services	4/11/2018 7:34
	🛃 System Configuration	4/11/2018 7:34
	😰 System Information	4/11/2018 7:34
	🕀 Task Scheduler	4/11/2018 7:34
	🗊 Windows Defender Firewall with Advanced Sec	4/11/2018 7:34
	📷 Windows Memory Diagnostic	4/11/2018 7:34

- Alternately, you can start and stop the service using the Services applet in Windows Administrative Tools.



InCommand

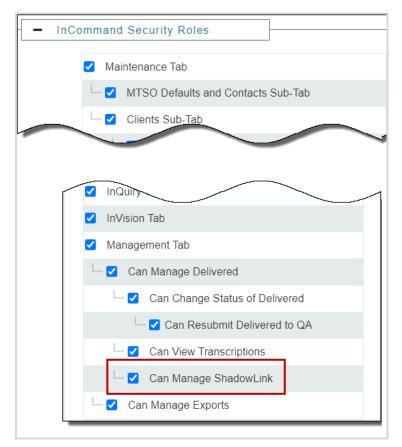
For the purposes of this manual, it is assumed that ShadowLink managers are already proficient with InCommand. If needed, the InCommand manual can be found here:

- Australia https://www.escription-one.com.au/Software/InCommand/
- Canada https://www.escription-one.ca/Software/InCommand/
- United States https://www.escription-one.com/Software/InCommand/

Access to ShadowLink Management

In InCommand, ShadowLink Management is granted through the Transcriptionist sub-tab of the Maintenance tab.

- Edit the selected transcriptionist account.
- Expand the section "InCommand Security Roles".
- Check the box "Can Manage ShadowLink".





ShadowLink Management

Access to ShadowLink Maintenance provides a drop-down menu under the Management tab called Advanced Management. Under Advanced Management, there is a ShadowLink menu with three options:

Advanced Management 🗸		ent 🗸 Options 🗸
Faxes 🕨		
ShadowLink 🕨		Services
		Patient, Associate & Document Deliveries
	8	Transcription Deliveries

- Services
- Patient, Associate & Document Deliveries
- Transcription Deliveries

All three options will present data related to the ShadowLink services. The data grids can be customized to present the information most relevant to you.

		M	< Page 1	of 1 🕨	M	Expand All 🛨 Collapse All 🖃	Choose Columns п	Clear Filters 🍸	Refresh 📿
Dra	g a column header here to gro	up by that column							
	Client	Name		Machine		Last Activity	Last Logout		Status
									~

Grouping: Click and Drag an available column from the grid or Column Chooser to the area above the grid to group reports by that column's criteria.

Sorting: Click on a column title to sort by that column. Columns can be added or removed using the Choose Columns button. Clicking on the same column title will toggle the sort order between ascending and descending. A white arrow appears in the column header to indicate ascending sort A and descending sort A. The search results can also be sorted by columns in the Field Chooser without adding the columns to the table.

Filtering Row: The Filtering row (with a red border in the picture above) is used to further refine a search. To search for a specific value, type or use a pull-down menu in the appropriate column. The results automatically refresh when your cursor is moved from that field.

Services

The Services option provides InCommand users with an overview of all ShadowLink services for clients of the transcription company. To help facilitate the smooth management of multiple interfaces, there is a column chooser function that allows you to customize the information presented. The default columns include:

- Client: The client that the service is set up under.
- Name: The name of the service.
- Machine: The name of the server or PC running the ShadowLink service.
- Last Activity: The last time the ShadowLink service communicated with the eSOne server.
- Last Logout: The last time the ShadowLink service was disconnected by the Client.



	Emdat EDEMO Managemen	t EDEMO Maintenance E	DEMO InVision ESODemo C	lient Maintenance InQuiry				
	Summary 🗸 Outstand	ding Jobs Delivered Trans	criptions Advanced Man	agement 🗸 Options 👻 Shadov	vLink Services			
			🙌 📢 Page 1 of 1	Expand All 🕀	Collapse All 🖃 Choose Columns 🔟 Cle	ar Filters 🝸 🛛 Refresh 😂		
Dra	prag a column header here to group by that column							
	Client	Name	Machine	Last Activity	Last Logout	Status 🔺		
	eso					~		
÷	ESODemo	ESOD (esodsl1)	Ref. Pro. 1 - A Charles of Street and	1/27/20 9:31 PM		Connected		
×	ESODemo	SLService1				Disconnected		
×.	ESODemo	Test Service 01				Disconnected		
×.	ESODemo	SLTest1				Disconnected		
F	ESODemo	Louis	1844 FEE 1. 1. 2010 R11 FEE	12/8/16 2:56 PM	12/8/16 2:56 PM	Disconnected		
×.	ESODemo	Test Sample				Disconnected		
×.	ESODemo	Test Service				Disconnected		
×	ESODemo	Blank User Upload	MARCOLLEGE (B)	2/21/17 2:29 PM		Unresponsive		
×	ESODemo	Alex- PC	HARDERS .	8/24/12 1:12 PM		Unresponsive		
•	ESODemo	Alex	MARY CRASH (B)	2/28/17 11:04 AM		Unresponsive		
×.	ESODemo	Win10SL	AND DESCRIPTION OF THE PARTY OF	10/14/15 10:21 PM		Unresponsive		
			🚧 < Page 1 of 1	Expand All 🛨	Collapse All 😑 Choose Columns 🔟 Cle	ar Filters 🝸 🛛 Refresh 😂		

 Status: The current state of the connection between the ShadowLink client service and the eSOne server. There are three states: Connected, Unresponsive, and Disconnected.

Patient, Associate, & Document Deliveries

This option allows InCommand users to search for and review Client Patient Demographic, Associate, and Document submissions to the eSOne server. This functionality is useful for determining if the client is submitting regular or complete patient demographics and associate files. InCommand users can download and viewed the files.

Users can also search files to see if they contain specified demographics or values. There are 10 searchable fields:

- Client: The client who uploaded the file. ShadowLink managers can search by all clients or a specific client.
- Service: Search by the specific service that uploaded the file. This option is useful when a client has multiple service logins at different locations. To use the Service drop-down menu, a client must be selected.
- Delivery Type: ShadowLink managers can search by Patient, Associate, and Document records.
- Delivery Method: If a client has more than one delivery method, the search can be narrowed down to Folders or TCP/IP connections.
- Format: Search by the format of the received file.
- Status: Search by the current status of the received file. Completed jobs have been received by the server and uploaded to the database. Partially completed files have only been partially accepted by the server. Pending files have been received by the server but are still in queue to be imported into the database. Failed files have been received by the server, but the server was not able to import the data.
- **Contains:** The Contains field is a key word search allowing ShadowLink managers to search through files for a value, such as a name, date, clinician, or any other word or number that could be contained in the patient or associate file.
- Date Created: The date the file was created within the client's network.
- Date Received: The date the eSOne server received the file from the client.



- Date Completed: The date the eSOne server completed uploading the file into the database.

Management Ma	aintenance InVision	Client Maintenance InQuiry	InTrack	
Summary 🗸	Outstanding Jobs	Delivered Transcriptions	Advanced Management 🗸 Options 🗸	ShadowLink Patient, Associate & Document Deliveries
Client	Any	T	Status Any	Y
Service	Any	T	Contains	
Delivery Type	Patient	•	Date Created	thru search
Delivery Method	Any	▼	Date Received 6/26/2019 12:00:00	0 AM 🗍 thru 6/26/2019 11:59:59 PM 🗍 📃 clear
Format	Any	•	Date Completed	thru
			Results Per Page 50 V	Land Land



Transcription Deliveries

This tab allows InCommand users to search for and review Client Transcription Files that have been delivered to the client via ShadowLink. ShadowLink managers can use this tab to search for and troubleshoot Transcription deliveries. There are multiple export formats including Word documents, PDF documents, and HL7 messages.

ShadowLink managers can refine their searches using the following fields:

- Client: The client who uploaded the file. ShadowLink managers can search by all clients or a specific client.
- Rule: The ShadowLink Export rule that triggered the creation and delivery of the export files.
- Service: Search by the specific service that uploaded the file. This option is useful when a client has multiple service logins at different locations. To use the Service drop-down menu, a client must be selected.
- Delivery: If a client has more than one delivery method, the search can be narrowed down to the folder or other delivery method used.
- Job ID: The internal eSOne ID associated with creating an export.
- Transcription ID: The unique number associated with the specific job exported also known as TID or TID number.
- Status: The current status of the exported job:
 - **Error Cleared:** The export job originally had a rendering or delivery error but has since been cleared and possibly queued for export again.
 - o Retrieved: The client picked up the TID file, but it has not yet been delivered to the client's EHR or folder.
 - Delivered: The TID has been delivered to the configured delivery method destination.
 - Rendering Error: An error has occurred while creating the export file.
 - **Delivery Error:** An error has occurred while delivering the file to the client.
 - Rendered: The file has been created but has not been delivered or retrieved by the client.
- Date Created: The date the export file was triggered, and the record created.
- **Date Rendered:** The date the export file was created on the eSOne server.
- Date Retrieved: The date the export file was retrieved by the client.
- Date Delivered: The date the file was delivered to the configured delivery method destination.

Manageme	nt	Maintenance	InVision	Client Maintenance	InQuiry	InTrack				
Summary	•	Outstandi	ng Jobs	Delivered Transcrip	tions	Advanced M	lanagement 🗸	Options 👻	ShadowLink Transcription	Deliveries
Client	Any			•		Transcription ID				
Rule	Any			•		Status	Any		•	
Service	Any			•		Date Created		thru		🔍 seard
Delivery	Any			•		Date Rendered		thru		•
Format	Any			•		Date Retrieved		thru		🚍 clear
Job ID						Date Delivered		thru		
						Results Per Page	50 🔻			



Client Maintenance – Workflow

The Client Maintenance workflow must be enabled for ShadowLink Administrators by the eSOne Interfaces team. Under the Client Maintenance tab, ShadowLink Administrators have access to the Advanced Maintenance pull down menu, with the ShadowLink subfolder inside.

The Workflow option under the Client Maintenance tab provides a graphical overview of the services that ShadowLink can provide (see next page). In this manual, each of these distinct services is covered in its own section.

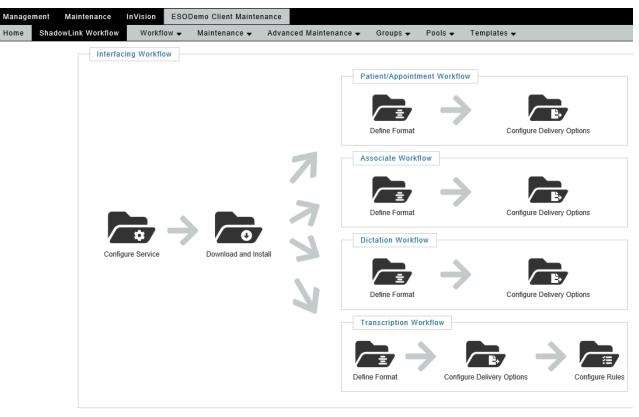
Users can access each service from the ShadowLink subfolder under the Advanced Maintenance pull down menu.

The submenu options are:

- Workflow: A visual display of the ShadowLink workflow with links to each maintenance page.
- Services: The login for the configured service account to be used on the installation. (See Services, p. 14.)
- Patient/Appointment Formats: Where administrators define the format of patient demographic files. (See Patient/Appointment Formats, p. 29.)
- Associate Formats: Where administrators define the format of Associates (Carbon Copies) files. (See Associate Formats, p. 38.)
- Document Formats: Where administrator define the format of documents to be imported to existing or new transcriptions.
- Dictation Formats: Where administrators define the format of audio files for upload to the eSOne server. (See Dictation Formats, p. 42)
- Transcription Formats: Where administrators define the format of completed documents that will be exported to the Client EHR or folder. (See Transcription Formats, p. 44.)
- Rules: Where administrators create the rules and triggers for document export. Rules determine which documents qualify for export and at what time. (See Rules p. 47.)



The ShadowLink Configuration and Installation process





Services

A ShadowLink Service is a unique set of login credentials that allows unique instances of the ShadowLink application installed on client side servers to connect to the eSOne interface servers and transmit data. Creating a service is the first step in creating an interface of any kind. There is no limit to the number of services that can be created and connected to the eSOne server. It is also possible to run all four kinds of data transmission from one ShadowLink service. Multiple services can be established to provide redundancy and to allow uploads from multiple physical or logical locations.

	Management	Maintenance	InVision	ESC)Demo Client Mair	ntenance
	Home Sha	dowLink Services	Workflo	ow 🗸	Maintenance 👻	Advanc
Ē	ShadowLink Service	ces				
	ESOD (esodsl1)					
	Win10SL					
	Show Inactive S	ervices				
	🕂 Add New Serv	vice				
	Edit ESOD (es	sodsl1)				
	or ESC 🗄 🗄	OD (esodsl1)				

ShadowLink Services

As shown in the graphic above, existing services are shown in the list on the left. To add a new service, click the "Add New Service" link. To edit an existing service, select it in the list and then click "Edit". The "Rules" link is a shortcut for the Transcription Export Rules associated with the service.

To display Services that have been previously inactivated, check the "Show Inactive Services" check box.

Service features include:

- Name: The name used to identify the service. The name allows ShadowLink Administrators to organize their services.
- Description: Where ShadowLink Administrators can make notes or expand on the name of the service to better describe what it is for or where it is located, or to add any other information that the administrator may need to maintain the service.
- Active: Services can be inactivated when they are no longer required, or if they need to be temporarily disabled. Recheck the box to turn inactive services back on.
- Login: The login ID used when connecting a client side ShadowLink service to the eSOne servers.
- Password: The password defined by the ShadowLink Administrator to authenticate valid ShadowLink connections.
- Notification Email Address: Enter an email address to receive notifications about ShadowLink statuses, including disconnections or inactivity.
- IP Address: Displays the IP address of the Server or PC that is currently using the Service.
- Local Workstation Name: The name of the computer that the ShadowLink service is connected to.



The Login ID, Password, IP Address, and Workstation Name are used every time the ShadowLink Service running on the client's workstation authenticates with the eSOne Servers. This means that two ShadowLink Services cannot be running on different client workstations using the same Service credential at the same time.

In order to log in to the service on another machine, the IP address and Workstation Name must be cleared using the clear button. This is only necessary if the Service is being moved to another computer.

Management Maintenance	InVision ES	SODemo Client Maintenance InQuiry InTrack	
Home ShadowLink Services	Workflow 🗸	Maintenance 🗸 Advanced Maintenance 🖌 Groups 🖌 Pools 🗸 Templates 👻	
- ShadowLink Services ESOD (esodsl1) Win10SL		Edit E SOD (esodsI1) Service Account Name ESOD (esodsI1) * Description	A A
Show Inactive Services Add New Service Edit ESOD (esodsl1) Kules For ESOD (esodsl1)	T	Active Login ESODSL1 *	
Delivery Methods For ESOD (esodsI1) Patient/Appointment Delivery		Password **** Notification Email Address admin@esodemo.com * IP Address 192.168.1.12	
CSV from file generator tool Epic ADT HL7 Generator Inpatients Add Z Edit	Celete	Local Workstation Name MAD-CHOWARD10 🗮 clear	
Document Delivery		Iast modified by ESODSL1 on 6/19/2019 9:58:03 AM	reset

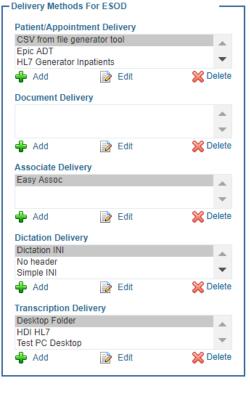
Delivery Methods

In the second part of the Services menu, ShadowLink Administrators assign duties to the selected Service. These include inbound Patient, Associate, Dictation, and Document files or outbound Transcription files. Delivery Methods determine where inbound files will be picked up and where outbound files will be delivered. File formats must be created using the steps defined in the sections on pages 29 through 44, before they can be added to a Delivery Method. Once created, they can be added to one or more ShadowLink Delivery Methods. It is possible to add more than one type of delivery method to a service. This includes adding more than one format to a specific type of delivery method. For example, one Service could be hosting 3 different kinds of Patient Formats.



For all delivery methods, there are three main functions available:

- Add: Creates a new delivery method.
- Edit: Allows ShadowLink Administrators to edit an existing Delivery Method.
- **Delete:** Removes the selected Delivery Method from the Service.



Patient/Appointment Delivery

Delivery methods for patient demographics and scheduling into the system are created, edited, and removed under this heading. Additionally, the specifics regarding file paths and the format created in Patient/Appointment Formats, p. 29, are selected here.

- Name: A unique name for the delivery method of the selected ShadowLink Service.
- Description: A general description of the delivery method, for reference purposes.
- Active: The On/Off switch for the delivery method.
- Source: Where Patient Demographics will be retrieved from. They can either be retrieved from a folder or received from a TCP server.
 - Folder Sources require a path to retrieve files from. Once it has been verified that eSOne has the file, the same file is removed from the current folder. Optionally, a Save Path feature that allows you to retain the files sent to eSOne, may also be specified. If the folder specified for eSOne to retrieve the files from has additional files, a file mask can be used to restrict the upload to specific file names or types. For additional information on how to use file masks, search Microsoft's documentation.
 - TCP Server Sources must specify a port number and whether or not the connection should disconnect after receiving the ACK (acknowledgement) packet. Some sending systems can be configured to not send start and end characters. We have an option to expect them by default.
 - Custom sources are other means of retrieving patient information not handled by the 2 types above. Contact your interface programmer for more information.



Description 1 Active		Demo Patient *		
		1st Patient Schedule		
		Folder V		
Path	C:\Schedules\	*		
Save Path				
File Mask				
Default Format		Patient1 *		

 Default Format: A default format must be selected from the drop-down menu. Patient formats are created in Patient/Appointment Formats, p. 29.



Document Delivery

Delivery method for document files that are sent from the client's system to be imported into the eSOne Platform are created, edited, and removed under this heading. Additionally, the specifics regarding file paths and the format created from Document Formats, are selected here.

- Name: A unique name for the delivery method of the selected ShadowLink Service.
- Description: A general description of the delivery method, for reference purposes.
- Active: The On/Off switch for the delivery method.
- Source: Where documents will be retrieved from. Documents can be retrieved from a folder on the client's workstation
 or network share, or sent to an IP address/port within the client network.
 - Folder Sources require a path where the file is sent to. Optionally, a Save path may be specified. A file mask can be used to restrict the upload to specific file names or types.
 - TCP Server Sources must specify a port number and whether or not the connection should disconnect after receiving the ACK (acknowledgement) packet. Some sending systems can be configured to not send start and end characters. We have an option to expect them by default.
- Format: A default format must be selected from the drop-down menu. Document formats are created in Document Formats, p. 34.

Name	*
Description	
Active	
Source	Folder v
Path	*
Save Path	
File Mask	
	Select a Format V

Associate Delivery

Delivery methods for Associate files being brought into the eSOne platform are created, edited, and removed under this heading. Additionally, the specifics regarding file paths and the format created from Associate Formats, are selected here.

- Name: A unique name for the delivery method of the selected ShadowLink Service.
- Description: A general description of the delivery method, for reference purposes.
- Active: The On/Off switch for the delivery method.



- Format: A default format must be selected from the drop-down menu. Associate formats are created in Associate
- Path: Where Associate files are retrieved from. This can be a local folder or UNC path.
- Save Path: A path where Associate files can optionally be backed up locally.
- File Mask: A file mask can be specified to filter out a specific file or file type. Asterisks (*) are used as wild card place holders.

Name	Easy Assoc *
Description	
Active	
Format	Associate Delim
Path	C:\Users\/ \ShadowLink\Associate
Save Path	C:\Users\c \ShadowLink\Associate\Process
File Mask	**

Dictation Delivery

Formats, p. 38.

Delivery methods for Dictation files being uploaded from a client's server to the eSOne platform are created, edited, and removed under this heading. Additionally, the specifics regarding file paths and the format created from Dictation Formats, are selected here.

- Name: A unique name for the delivery method of the selected ShadowLink service.
- Description: A general description of the delivery method, for reference purposes.
- Active: The On/Off switch for the delivery method.
- Format: A default format must be selected from the drop-down menu. Dictation formats are created in Dictation Formats, p. 42.
- Audio File Path: The name of a local folder or UNC path where the audio files are uploaded from.
- Audio File Mask: A file name mask can be specified to filter out a specific file or file type. Asterisks (*) are used as wild card place holders.
- Header File Path: The name of a local folder or UNC path. Some audio file creation software includes an additional file with patient or appointment information.
- Header File Mask: A file name mask can be specified to filter out a specific file or file type. Asterisks (*) are used as wild card place holders.
- Save Path: The name of a local folder or UNC path used to locally back up audio files that have been uploaded to the eSOne server. If no path is entered, a save file will not be created.



- Save Sent Dictations for: The number of days that ShadowLink should save files in the Save Path. Administrators can choose between 1 and 100 days, or Always.
- Reconcile Path: The name of a local folder or UNC path where an acknowledgement file can be saved for those systems that require one.

Edit Di	ictation INI Dictation Delivery	Method	?
	Name	Dictation INI *	
	Description	Dictation M	
	Active		
	Format	AuthPatAppt	
	Include Subfolders		
	Audio File Path	C:\Users\/ _ Desktop\ShadowLink\InT *	
	Audio File Mask	* ************************************	
	Header File Path	C:\Users\ Desktop\ShadowLink\InT	
	Header File Mask	*.ini	
	Save Path	C:\Users\/ _ Desktop\ShadowLink\InT	
	Save Sent Dictations for	Always 🔻	
	Reconcile Path		



Transcription Delivery

Delivery methods for Transcription files that are being sent from the eSOne platform to the client's EHR or other systems, are created, edited, and removed under this heading. The specifics regarding file paths are discussed here. The specifics of how the Transcription is delivered to the client are specified in Rules on p. 47.

- Name: A unique name for the delivery method of the selected ShadowLink service.
- Description: A general description of the delivery method, for reference purposes.
- Active: The On/Off switch for the delivery method.
- Source: There are three available source types that an export can be delivered to:
 - Folder: The name of a local folder or UNC path to deliver the documents to. (See screen shot below.)
 - **Path:** The name of a local folder or UNC path.

Name		HDI HL7 *	
Description		비미 비니	/
Active			
Source		Folder V	
Path	C:\Users\	Desktop\ShadowLink\In1 *	

- **TCP:** TCP delivery requires an IP address and a Port to deliver to. Administrators can also choose to disconnect after the ACK (acknowledgment) packet has been received. (See screen shot below.)
 - Address: The name of the address.
 - **Port:** The port number to send to.
 - Disconnect After ACK: The toggle On/Off switch.
 - Max NAK: The maximum number of NAK messages before a failure.
 - Ack Timeout (in seconds): The number of seconds to wait for an acknowledgement message before raising an error. The default is 60 seconds.
 - Start of Message Indicator: The sequence of bytes that indicates the start of the acknowledgement message, specified as a hexadecimal value. The default is 0x0B.
 - End of Message Indicator: The sequence of bytes that indicates the end of the acknowledgement message, specified as a hexadecimal value. The default is .0x1C.
 - Segment Delimiter: The sequence of bytes that indicates the end of an HL7 segment in the acknowledgement message, specified as a hexadecimal value. The default is 0x0D (carriage return).
 - Ack Code Position: The position in the HL7 acknowledgement message where the Acknowledgement Code is found. The default is MSA.1.



- Ack Accept Code: The value of the Acknowledgement Code that indicates a successful delivery. The default is AA.
- Ack Description Position: The position in the HL7 acknowledgement message where a description of the acknowledgement is found. This is primarily used for NAK reasons. The default is MSA.3.

Name				*
Description				
Active		v		
Source		TCP V		
Address			*	
Port			*	
Disconnect After ACK				
Max NAK	3			
Ack Timeout (in seconds) 60		*		
Start Of Message Indicator	0×0B			
End Of Message Indicator	0×1C			
Segment Delimiter	0×0D	*		
Ack Code Position	MSA.1	*		
Ack Accept Code	AA	*		
Ack Description Position	MSA.3	*		

• **Custom:** A delivery method specific to a system. It transmits the transcription export to the EHR using web services or other custom transmission method. Contact your interface programmer for more information.



Patient/Appointment Formats

Patient/Appointment Formats define the structure of the files that the client will be sending. When creating a patient schedule, the order and format are critical to ensuring that the database imports the correct information into the correct database fields. Incorrectly or inaccurately defining the Patient format will result in missing or incorrect demographics. Associate fields can also be defined within the patient/appointment file to be added to the Associate database.

Format Information

- Name: Assign a unique name for this format. The name will be displayed on other screens to identify this type of patient format. If applicable, the name should represent the system the format was set up for.
- Description: Enter a descriptive summary of the format's purpose and specification.
- Is Active: Enable/Disable the format. Formats are never deleted; only inactivated.
- Format Type: Select the general type of message that this format will parse into database entries. There are 4 basic types: Custom, Delimited, Fixed Width, and HL7.

Edit Inpatient 2	
- Format Information	
Name	Inpatient 2 *
Description	Uses appointment date from file
Is Active	
Format Type	Delimited V

Custom Format Type

The Custom Format type for patient demographics includes anything that isn't covered by the other options, and requires eSOne to write custom code to interpret. Contact your support representative for custom format requests.



Delimited Format Type

Delimited formats have their values separated by a common symbol or character. The eSOne servers are able to parse the information into user-friendly database entries that are available throughout the system.

Additional Associate Appointment Associates CSV Basic CSV from patient file generator tool Epic ADT HIAWATHA ORM/ADT HL7 Generator Format - Inpatient

HL7 Generator Format - Outpatient

Show Inactive Formats
 Add New Format
 Edit Additional Associate
 Copy Additional Associate

Show ShadowLink Workflow

Inpatient 2 Inpatient CSV

Patient/Appointment Formats

- Configure Delimited Format Load from Template 🕀 load **Field Delimiter** Tab ~ Fields Action 🐽 Field Position 🗐 槹 Add Field Patient 🛃 Edit fx Function 💥 Delete Appointment Date and Time <<expr>> Bdit fx Function 💥 Delete PID 5 📄 Edit 🛛 f x Function 🛛 💥 Delete 6 Last Name Belit fx Function 💥 Delete First Name 7 📄 Edit 🛛 🏂 Function 🛛 💥 Delete Patient Gender 9 📄 Edit fx Function 💥 Delete Dictation ID 10 💠 Add Associate 💠 Add Scheduling Resource 💠 Add Physician 💠 Add Order

- Load from Template: eSOne maintains a library of commonly used delimited formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Field Delimiter: The field delimiter is the character used to separate the database entries. Comma, tab, and space are all common delimiters. Custom characters can also be selected with the Custom Character option.
- Fields: The Fields grid contains the fields that have been defined for the format. To add a new field, click the Add field button and enter a position (such as 1, 2, 3, 4, etc.). The position of the field indicates where in the data string the demographic feature is located. To apply more advanced functions to a field, click the Function button in that field's



row. Press the Microsoft Excel icon next to the Position column header to convert the position numbers to Excel spreadsheet column letters.

- Functions: Functions alter or omit data that does or does not meet criteria. The available functions include:
 - Substring Before: This function takes in two parameters: the position you want to apply this function to and the character you want to use. It will grab anything before that character in the position defined. For example, Substring Before on "Last, First" with a character of "," would result in a value of "Last".
 - To Proper Case: Ensures that the string in the specified location has "Proper Case" instead of "lower case" or "UPPER CASE."
 - Static Text: Place a hard coded value for any field.
 - **Substring:** The substring function will pull out and enter text into the database starting and ending at a specified character.
 - Normalize Space: Apply this function to remove unwanted leading or trailing spaces, or middle spaces where there is more than one.
 - Value of: Gives the value of a particular position and is used to append multiple values together.
 - Strip Double Quotes: Removes double quotes (") from the string.
 - Parse Date Time Exact: Use to import date and time formats that would not natively be imported into the system. For example, Thursday November 11, 2011 would not normally be accepted without the function to Parse Date Time Exact.
 - Get ASCII Character: Enter an ASCII non-standard character into a field.
 - Substring After: This function takes in two parameters: the position you want to apply this function to and the character you want to use. It will grab anything after that character in the position defined. For example, Substring After on "Last, First" with a character of "," would result in a value of "First".
 - **Current Date/Time:** Enters the Current Date and Time. For Patient Demographics that do not include an Appointment time, the Current Date and Time can be substituted.
 - **Remove Non-Numeric:** Removes all non-numeric values from the string. Useful for parsing phone numbers.
 - Current Date/Time Formatted: Format the Current Date and Time into a specified format.
 - **Is Valid Phone Number:** Returns true if it's a valid phone number of the specified length. This function is particularly useful for the fax number field.



Fixed Width Format Type

Fixed Width formats have specified column widths defined by the number of characters per field. The eSOne servers are able to parse the information into user-friendly database entries that are available in InScribe and InQuiry.

- Configure Fixed Width	Format				
					?
Load from Template	Pload				
Fields	Action 👧	Field	Start	Length	End
	No Fields have been defined.		1		
	💠 Add Patient 💠 Add Associate 💠 Add Scheduling Resource 💠 Add Physician 🖨 Add Order				

- Load from Template: eSOne maintains a library of commonly used Fixed Width formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Fields: The Fields grid contains the fields that have been defined for the format. Click the Add Patient or Add Associate button to add a new field. Then enter a field position (such as 1, 2, 3, 4, etc.) and length (number of characters). The position of the field indicates where in the data string the demographic feature begins. To apply more advanced functions to a field, click the Function button in that field's row.
- Functions: Fixed Width functions are the same as those specified in Delimited Format Type on p. 39.



HL7 Format Type

HL7 formats are used to parse HL7 files or messages received from external systems.

Load from Template	💭 load		
Start of Message Terminator	0x OB		
End of Message Terminator	0x1C		
Segment Delimiter	0x OD		
Delimiters	Automatically detect field delimiters Use these delimiters:		
Repeat On Segment	``		
Fields	Action 👧	Field	Position
	Patient		🕂 Add Field
	📝 Edit 🕺 Function 💥 Delete	PID	PID.3.1
	\overrightarrow{b} Edit fx Function \bigotimes Delete	Last Name	PID.5.1
	📄 Edit fx Function 💥 Delete	First Name	PID.5.2
	\overrightarrow{x} Edit fx Function \bigotimes Delete	Middle Initial	PID.5.3
	\overrightarrow{x} Edit fx Function 💥 Delete	Birthdate	PID.7
	\overrightarrow{x} Edit fx Function 💥 Delete	Patient Gender	PID.8
	Belit fx Function 💥 Delete	Address 1	PID.11.1

- Load from Template: eSOne maintains a library of commonly used HL7 formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Start of Message Terminator: Enter the Start of Message (SOM) Terminator in the textbox. The default is 0B (vertical tab). Note: Values must be entered as hexadecimal.
- End of Message Terminator: Enter the End of Message (EOM) Terminator in the textbox. The default is 1C (file separator). Note: Values must be entered as hexadecimal.
- Segment Delimiter: Enter the Segment Delimiter in the textbox. The default is 0D (carriage return). Note: Values must be entered as hexadecimal.
- Delimiters: Select whether to automatically detect the field delimiters or enter the custom field delimiters in the textbox.
- Fields: This grid lists the fields defined for this format. Click the Add Patient or Add Associate button and enter a position to define a new field. To apply more advanced functions to a field, click the Function button in that field's row.
- Functions: In addition to the functions available in <u>Delimited Format Type</u>, there is one more available to HL7 interface users:
 - **Raw XSL:** If any custom code is needed that is not covered by the other fields, eSOne can define it for the field.



Testing

A test file can be loaded to verify that the configured format is working correctly. Test files will not work with custom formats. Click the run test button to browse for the file, then press ok. The test results will display.

Note: Testing should always be done to ensure that there are no issues for the client later on.

– Testing			?
Test Click here to select a test file		in test	
	Field Display Name	Parsed Value	Mapped/Formatted Value
		To run a test, enter or select a data fil	le above and click the Test button.

- Field Display Name: The intended database field name.
- Parsed Value: The value that was read from the original file.
- Mapped/Formatted Value: The value that would be entered into the database after any functions are applied.

Document Formats

Document Formats allow the client to send back a previously unsigned document as a signed document. This allows eSOne to distribute the document as though the physician signed the document within the eSOne Platform.

Format Information

- Name: Assign a unique name for this format. The name will be displayed on other screens to identify this type of format. If applicable, the name should represent the system the format was set up for.
- Description: Enter a descriptive summary of the format's purpose and specification.
- Is Active: Enable/Disable the format. Formats are never deleted; only inactivated.
- Format Type: Select the general type of message that this format will parse into database entries. There is currently only HL7 format type.

Create New Transcription	
Finalized Transcriptions	
	Ŧ
Show Inactive Formats	Ŧ
Show Inactive Formats Add New Format	Ŧ
	Ŧ

Show ShadowLink Workflow



Add New Document Format		
- Format Information		
Name	*	
Description		
Is Active		
Format Type	HL7 V	

Configure HL7 Format

HL7 formats are sent in real time using the Industry Standard.

At a minimum, the format must be configured with these fields:

- Transcription ID identifies which transcription to edit and complete from the Preliminary workflow folder.
- Date Signed sets the date the transcription was signed within the sending system.

Configure HL7 Format		
Load from Template	💭 load	
Start of Message Terminator	0x 0B	
End of Message Terminator	0x 1C	
Segment Delimiter	0x OD	
Delimiters	Automatically detect field delimiters Use these delimiters:	
Fields	Action 🕎 Field Position	
	No Fields have been defined.	
	Add Document 🖶 Add Associate	

- Load from Template: eSOne maintains a library of commonly used delimited formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Start of Message Terminator: Enter the Start of Message (SOM) Terminator in the textbox. The default is 0B (vertical tab). Note: Values must be entered as hexadecimal.
- End of Message Terminator: Enter the End of Message (EOM) Terminator in the textbox. The default is 1C (file separator). Note: Values must be entered as hexadecimal.
- Segment Delimiter: Enter the Segment Delimiter in the textbox. The default is 0D (carriage return). Note: Values must be entered as hexadecimal.



- Delimiters: Select either "Automatically detect field delimiters" or "Use these delimiters". If you choose "Use these delimiters", enter the delimiters in the textbox.
- Functions: Functions alter or omit data that does or does not meet criteria. The available functions include:
 - Substring After: This function takes in two parameters: the position you want to apply this function to and the character you want to use. It will grab anything before that character in the position defined. For example, Substring After on "Last, First" with a character of "," would result in a value of "First".
 - To Upper Case: Ensures that the string in the specified location is in all "UPPER CASE" instead of "lower case" or "Proper Case".
 - Substring Before: This function takes in two parameters: the position you want to apply this function to and the character you want to use. It will grab anything before that character in the position defined. For example, Substring Before on "Last, First" with a character of "," would result in a value of "Last".
 - **Normalize Space:** Apply this function to remove unwanted leading or trailing spaces, or middle spaces where there is more than one.
 - Value of: Gives the value of a particular position and is used to append multiple values together.
 - Raw XSL: If any custom code is needed (code that is not covered by the other fields), eSOne can define it for the field.
 - To Proper Case: Ensures that the string in the specified location has "Proper Case" instead of "lower case" or "UPPER CASE."
 - **Substring:** The substring function will pull out and enter text into the database starting and ending at a specified character.
 - Parse Date Time Exact: Use to import date and time formats that would not natively be imported into the system. For example, Thursday November 11, 2011 would not normally be accepted without the function to Parse Date Time Exact.
- Text Body Format: Select the format of the expected text body.

Configure ACK

When the client sends eSOne an HL7 message for patient information **through a TCP connection**, their EHR is looking for an acknowledgement from the ShadowLink Client to ensure that it was received.

Note: The Configure ACK is not needed when looking within a folder at the client site.

- Load from Template: Warning: Loading from a template will overwrite the currently defined ack. Choosing a template
 format could save time over creating a format from scratch. Templates that do not match the required format can still be
 edited and adjusted to suit.
- Start of Message Terminator: Enter the Start of Message (SOM) Terminator in the textbox. The default is 0B (vertical tab). Note: Values must be entered as hexadecimal.
- End of Message Terminator: Enter the End of Message (EOM) Terminator in the textbox. The default is 0D1C0D (file separator). Note: Values must be entered as hexadecimal.
- Segment Delimiter: Enter the Segment Delimiter in the textbox. The default is 0D (carriage return). Note: Values must be entered as hexadecimal.



- Delimiters: This field must be filled in. The default is |^~&\.
- Ack: This tree view lists the message segments and fields for the acknowledgement that will be sent to the sending system.

– Configure ACK						
						?
Load from Template	<mark>.,</mark> ∎load					
Start of Message Terminator	0x 0B					
End of Message Terminator	0x 0D1C0D					
Segment Delimiter	0x OD					
Delimiters	^~&\					
Ack	HL7 Message Ack 🐽					
	Add Child Node	📝 Edit	💥 Delete	🔶 Move Up	Move Down	
	HL7 Segments					

Testing

A test file can be loaded to verify that the configured format is working correctly. Click the run test button to browse for the file, then press ok. The test results will display, including the parsed body result.

Note: Testing should always be done to ensure that there are no issues for the client later on.

- Testing Test	Click here to select a test file 😿 run test		2
	Field Display Name	Parsed Value un a test, enter or select a data file above a	Mapped/Formatted Value

- Field Display Name: The intended database field name.
- Parsed Value: The value that was read from the original file.
- Mapped/Formatted Value: The value that would be entered into the database after any functions are applied.



Associate Formats

Associate Formats define the structure of the files that the client will be sending. When creating an associate file, the order and format are critical to ensuring that the database imports the correct information into the correct database fields. Incorrectly or inaccurately defining the Associate format will result in missing or incorrect entries.

Format Information

- Name: Assign a unique name for this format. The name will be displayed on other screens to identify this type of associate format. If applicable, the name should represent the system the format was set up for.
- Description: Enter a descriptive summary of the format's purpose and specification.
- Is Active: Enable/Disable the format. Formats are never deleted; only inactivated.

Associate Delim	
Associate Fixed	
Regional Associate Testing	
	-
Show Inactive Formats	
中 Add New Format	
Edit Associate Delim	
Copy Associate Delim	

Format Type: Select the general type of message that this format will
parse into database entries. There are 3 basic types: Custom, Delimited, and Fixed Width.

Edit Associate Delim				
- Format Information				
Name	Associate Delim *			
Description	Demo Associate			
Is Active				



Custom Format Type

The Custom Format type for patient demographics includes anything that isn't covered by the other options, and requires eSOne to write custom code to interpret. Custom formats can be requested by contacting support.

Delimited Format Type

Delimited formats have their values separated by a common symbol or character. The eSOne servers are able to parse the information into user-friendly database entries that are available in InScribe and InQuiry.

- Load from Template: eSOne maintains a library of commonly used delimited formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Field Delimiter: The field delimiter is the character used to separate the database entries. Comma, tab, and space are all common delimiters. Custom characters can also be selected with the Custom Character option.
- Fields: The Fields grid contains the fields that have been defined for the format. To add a new field, click the Add field button and enter a position (such as 1, 2, 3, 4, etc.). The position of the field indicates where in the data string the demographic feature is located. To apply more advanced functions to a field, click the Function button in that field's row.
- Functions: Functions will alter or omit data that does or does not meet criteria. The available functions include:
 - Substring Before: This function takes in two parameters: the position you want to apply this function to and the character you want to use. It will grab anything before that character in the position defined. For example, Substring Before on "Last, First" with a character of "," would result in a value of "Last".
 - To Proper Case: Ensure that the string in the specified location has "Proper Case" instead of "lower case" or "UPPER CASE".
 - Static Text: Place a hard coded value for any field.
 - **Substring:** The substring function will pull out and enter text into the database starting and ending at a specified character.
 - **Normalize Space:** Apply this function to remove unwanted leading or trailing spaces, or middle spaces where there is more than one.
 - Value of: Gives the value of a particular position and is used to append multiple values together.
 - Strip Double Quotes: Removes double quotes (") from the string.
 - Parse Date Time Exact: Use to import date and time formats that would not natively be imported into the system. For example, Thursday November 11, 2011 would not normally be accepted without the function to Parse Date Time Exact.
 - o Get ASCII Character: Enter an ASCII non-standard character into a field.
 - **Substring After:** This function takes in two parameters: the position you want to apply this function to and the character you want to use. It will grab anything after that character in the position defined. For example, Substring After on "Last, First" with a character of "," would result in a value of "First".
 - **Current Date/Time:** Enters the Current Date and Time. For Patient Demographics that do not include an Appointment time, the current Date and Time can be substituted.



- **Remove Non-Numeric:** Removes all non-numeric values from the string. Useful for parsing phone numbers.
- Current Date/Time Formatted: Format the current Date and Time into a specified format.
- **Is Valid Phone Number:** Returns true if it's a valid phone number of the specified length. This function is particularly useful for the fax number field.

- Configure Delimited For	rmat		
Load from Template	🛃 load		
Field Delimiter	Comma V		
Fields	Action 🚯	Field	Position 🗃
	Edit fx Function 💥 Delete	Client Code	1
	\overrightarrow{fx} Edit fx Function 💥 Delete	First Name	4
	Edit fx Function 💥 Delete	Middle Initial	5
	\overrightarrow{b} Edit $f_{\mathcal{X}}$ Function 💥 Delete	Last Name	6
	\overrightarrow{fx} Edit fx Function 💥 Delete	Business Name	7
	\overrightarrow{b} Edit $f_{\mathcal{X}}$ Function 💥 Delete	Specialty	8
	Edit fx Function 💥 Delete	Address 1	11
	Belit fx Function 💥 Delete	Address 2	12
	Edit fx Function 💥 Delete	Address 3	13
	Belit fx Function 💥 Delete	City	14
	\overrightarrow{b} Edit $f_{\mathcal{X}}$ Function 💥 Delete	State	15
	Edit fx Function 💥 Delete	Zip Code	16
	🕞 Edit - free Europtian - 🥺 Delata	AutoFox	10

Fixed Width Format Type

Fixed Width formats have specified column widths defined by the number of characters per field. The eSOne servers are able to parse the information into user-friendly database entries that are available in InScribe and InQuiry.

- Load from Template: eSOne maintains a library of commonly used Fixed Width formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Field Delimiter: The field delimiter is the character used to separate the database entries. Comma, tab, and space are all common delimiters. Custom characters can also be selected with the Custom Character option.
- Fields: The Fields grid contains the fields that have been defined for the format. Click the Add Patient or Add Associate button to add a new field. Then enter a field position (such as 1, 2, 3, 4, etc.) and length (number of characters). The position of the field indicates where in the data string the demographic feature begins. To apply more advanced functions to a field, click the Function button in that field's row.
- Functions: Fixed Width functions are the same as those specified in Delimited Format Type.



– Configure Fixed Width F	Format				
Load from Template	🔑 load				
Fields	Action 👧	Field	Start	Length	End
	Edit fx Function 💥 Delete	Address 1	1	1	1
	$$ Edit fx Function \bigotimes Delete	Business Name	2	1	2
	Bdit fx Function 💥 Delete	Client Code	3	1	3
	\Rightarrow Edit fx Function $>$ Delete	Company	4	1	4
	Bdit fx Function 💥 Delete	First Name	5	1	5
	\overrightarrow{fx} Edit fx Function 💥 Delete	Last Name	6	1	6

Testing

A test file can be loaded to verify that the configured format is working correctly. Test files will not work with custom formats. Click the run test button to browse for the file, then press ok. The test results will then be displayed.

Note: Testing should always be done to ensure that there are no issues for the client later on.

– Testing			?
Test	Click here to select a test file	run test	
	Field Display Name	Parsed Value	Mapped/Formatted Value
		To run a test, enter or select a data fi	ie above and click the Test button.

- Field Display Name: The intended database field name.
- Parsed Value: The value that was read from the original file.
- Mapped/Formatted Value: The value that would be entered into the database after any functions are applied.



Dictation Formats

Dictation Formats define the structure of the files the client will be sending. When creating a Dictation file format, the order is critical to ensuring that the database imports the correct information into the correct database fields. Incorrectly or inaccurately defining the Dictation format will result in missing or incorrect entries.

Di	rtat	ion	For	mat	e
		IUII	1.01		

AuthPatAppt	
Blank	
INI No Dates	
MP3	
No Header	
Simple INI	
Simple INI with Dates	
XML 1	
	-
Show Inactive Formats	
🖶 Add New Format	
Edit AuthPatAppt	
Copy AuthPatAppt	
Show ShadowLink Workflow	

Format Information

- Name: Assign a unique name for this format. The name will be displayed on other screens to identify this type of dictation format. If applicable, the name should represent the system the format was set up for.
- Description: Enter a descriptive summary of the format's purpose and specification.
- Is Active: Enable/Disable the format. Formats are never deleted; only inactivated.

Edit test format				
- Format Information				
Name	test format *			
Description				
Is Active				



Configure Dictation Format

- Load from Template: eSOne maintains a library of commonly used dictation formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Header File Type: The options in this drop-down define the type of dictation format to be configured.
 - **Dictaphone:** This header file type can be configured to parse information out of the embedded WAV header. Note: There is a template that can be loaded in as a starting point.
 - **DSS Header:** This option allows information to be parsed out of a DSS file header. Note: This functionality depends on InSync v5 or later being installed alongside ShadowLink on the same machine.
 - o **ID3 Tags:** This option allows data to be extracted from an MP3 ID3 tag.
 - **INI:** If there is a corresponding text file in an INI style format paired with the audio file, select this option to parse information out of the INI/TXT file.
 - No Header File: If there is not a paired data file with the audio file, and none of the other header file type options is appropriate, select this option. This option allows you to parse information out of the filename or folder structure, or just upload basic audio files.
 - XML: If there is a corresponding XML file paired with the audio file, select this option to parse information out of the XML file.
- File Path Delimiters: Enter the delimiters that will be used to extract fields from the dictation file path.
- Dictation Fields: Define the fields that will be associated with the file.
 - Fields include: Client, Comment, Date Dictated, Dictation Length, Document Type, Document Type Dictation ID, Location ID, Order Number, Patient ID, STAT, User Name, User Dictation ID, and User Fields 1 through 5.
- Appointment Fields: These fields are used to create a patient and potentially an appointment from the data included with the audio file. If the audio file with data contains more information than would be received from a supplemental patient interface, this is a good option to take advantage of.
 - Fields include: Action, Address 1 & 2, City, State, ZIP Code, Admit Date, Appointment Date, Birthdate, Dictation ID, Discharge Date, First Name, Last Name, Middle Initial, Home Phone, Work Phone, Location ID, Order #, Gender, Patient ID, Physician, Primary Associate ID, Primary Associate Type, Referring Client, and User Fields 1 through 5.
- Client Mappings: Maps audio files and patient demographic information from the audio file to another client. The Client field under Dictation Fields must be present to use this function. The clients listed in the mapping section are displayed based on referral relationships.
- Acknowledgement Format: Some systems ask that an acknowledgement file be sent from ShadowLink to a folder, as confirmation that the audio file was received. This drop-down allows you to configure your format to support this functionality.



- Configure Dictation Format					
				?	
Load from Template	₽load	load			
Header File Type	Dictaphone V	ictaphone v			
File Path Delimiters	<u>_</u> .]			
Dictation Fields	Action 📀	Field	Value		
	📄 Edit 💥 Delete	Date Dictated	ParseDateTimeExact(\$File/Parts[8], 'yyyyMM	lddHHmmss')	
	📄 Edit 💥 Delete	Document Type Dictation ID	\$File/Parts[9]		
	📄 Edit 💥 Delete	Location Client Code	\$File/Parts[10]		
	📄 Edit 💥 Delete	User Dictation ID	\$File/Parts[11]		
	📄 Edit 💥 Delete	PID	\$File/Parts[12]		
	📄 Edit 💥 Delete	Order Number	\$File/Parts[13]		
	📄 Edit 💥 Delete	Stat	\$File/Parts[14]		
	📄 Edit 💥 Delete	Appointment Date	ParseDateTimeExact(\$File/Parts[16], 'yyyyMM	VddHHmmss')	
	🖶 Add Field				
Appointment Fields	Action 💿		Field	Value	
	No Fields have been defined.				
	槹 Add Field				
Client Mappings	Action 📀		External Client Name	Maps To	
		No	o Client Mappings have been defined.		
	Add Client Mapping				
	P				
Acknowledgement Format	None 🗸				

Transcription Formats

Transcription Formats define the structure of the files sent to the client. When creating a Transcription Format, the client should provide ShadowLink Administrators with specifications and a sample of the format they want to receive. This will ensure that the format can be created accurately. eSOne can export files in PDF, DOC, DOCX, HL7, Plain Text, RTF, and TIFF formats.

Transcription Formats	
DOCX 2	
Export structured CDA	
HL7	
HPI Placeholder AllScripts HL7	
PDF Format	
	-
Show Inactive Formats	
🖶 Add New Format	
Edit DOCX 2	
Copy DOCX 2	
—	

Show ShadowLink Workflow



Format Information

- Name: Assign a unique name for this format. The name will be displayed on other screens to identify this type of transcription format. If applicable, the name should represent the system the format was set up for.
- **Description:** Enter a descriptive summary of the format's purpose and specification.
- Is Active: Enable/Disable the format. Formats are never deleted; only inactivated.

Edit Test - Format Information	
News	T
Name	*
Description	Test
Active	

Configure Format

All seven format types are configured using the same criteria.

- Load from Template: eSOne maintains a library of commonly used formats. Choosing a template format could save time over creating a format from scratch. Templates that do not match the required format can still be edited and adjusted to suit.
- Use Print Template: The associated document type Print Template will be used to build the export. The exported
 documents will appear the same as they do in InQuiry.
- File Path: When files are delivered to the Client via ShadowLink, they will be created with a filename specified by the Client. ShadowLink Administrators can build a filename with data from the transcription header and with static text. For example, if each Transcription should be saved with the Patient ID, a space, the Date of Service, and then the file extension, it can be defined with fields and text elements. Received Transcriptions can also be delivered to subfolders on the local system or UNC file path by separating the file path built to appear as follows. For example:

[Document Type]\[Transcription ID]_[Patient ID].PDF

would be delivered to the Client as: C:\My Files\Chart\1234_5678.PDF



 Configure Transcription Fo 	rmat	
Load from Template	₽load	
Format Type	PDF V	
Use Print Template		
Preserve Section Codes		
File Path	[Transcription ID].PDF	
	Action 📀	
	📄 Edit 💣 Move Up 🚚 Move down 💥 Delete	[Transcription ID]
	📝 Edit 💣 Move Up 📮 Move down 💥 Delete	.PDF
	🖶 Add	
Rendering Info	<pre></pre>	

Testing

A test file can be requested for delivery to the local PC to verify that the configured format is working correctly. Enter a TID number and use the test button to render and download a sample file.

Note: Testing should always be done to ensure that there are no issues for the client later on.

– Testing	
Transcription ID	test 😽 get document



Rules

Rules define how and when an export is triggered. Use the criteria below to generate and customize exports.

Prelim		
Review		
		_
		· ·
Show Rules for Service	All Services	•
Show Inactive Rules		
🕂 Add New Rule		
🛃 Edit Prelim		
Copy Prelim		

Rule Information

- Name: Assign a unique name for this rule. The name will be displayed on other screens to identify this rule.
- Description: Enter a descriptive summary of the rule triggers and other helpful information.
- Include All Linked Documents: Check this box to include all appended documents in the document set available for rendering and data usage. Checking this option also means that all documents that are appended to one another must all pass the rule in order for the rule to trigger.
- Is Active: Enable/Disable the format. Formats are never deleted; only inactivated.

Edit Rule 1	
 Rule Information 	
Name	Rule 1 *
Description	Exports all TIDs completed from Prelim
Include All Linked Documents	
Is Active	



Transcription Delivery Method

This section provides a top down overview of which services are responsible for exporting the various Transcription formats. The Export must be linked to a service, delivery method, and format for a successful export.

Note: Transcriptions can trigger once for a rule and send to multiple service account and delivery method combinations using different formats.

Note: If you are using an inactive delivery method on your rule, the rule will not pass.

	 Transcription Delivery Method 	
Service Accounts	Service Accounts	
 DRWSTH testex - Format DRW: test 	<u></u>	

Workflow Trigger

Select one or more workflow positions to trigger an export when the transcription leaves that position. If there are multiple folders in a single position in the workflow, a single export will be triggered when the transcription has left both folders. Folders that are not in use will not be displayed. Note that the name displayed for the folders will reflect the name set up for the client's workflow folders.

- Dictation Received: Check this box if you want the transcription to process after the dictation has been received. This
 is used in very rare circumstances, as there is no transcription content available at the time, only data related to the
 transcription.
- Delivered: Check this box if you want the transcription to process after it has been typed and finished.
- Completed from Marked For Review and Marked For Review 2: Check this box if you want the transcription to process once it is past this point in the workflow. If the transcription is not marked for these folders, it will process upon delivery instead. If it is marked for one or both of these folders, it will wait until completion from both folders.
- Completed from Preliminary Check this box if you want the transcription to process once it is past this point in the workflow. If the client is signing within eSOne, you would likely want to process the transcription to send via this option.
- Completed from Final and Final 2: Check this box if you want the transcription to process once it is past this point in the workflow.
- Edited: Check this box if you want to process a transcription to send through any time it is edited after the first trigger point.



- Workflow Trigger	
Dictation Received	$\begin{array}{c} \hline \\ \hline $
Folders Triggered	Dictation Received Dictation Review-1 and Review 2 Approvals in Preliminary Completed from Preliminary Completed from Final 1.0 and Final 2.0

Document Types

- Include All Document Types: Check this box to enable this rule for all document types. If unchecked, more options
 will appear, allowing you to customize which document types are enabled for this rule.
- Require Client Code: Check this box to require that the Client Code field be populated in order for an export to be generated. Note: This should be used sparingly, as there is no holding bin on our end for transcriptions that do not have these values.
- Require Dictation ID: Check this box to require that the Dictation ID field be populated in order for an export to be generated. Note: This should be used sparingly, as there is no holding bin on our end for transcriptions that do not have these values.
- Document Types: Select the document types that should generate exports for this rule. This option only applies if the "Include All Document Types" box is unchecked.

– Document Types					
Include All Document Types					
Require Client Code					
Require Dictation Id					
Document Types	Document Type	Document Description	Client Code	Dictation Id	Included 📀
					~
	001	001			
	002	002			
	112	112			
	114	114			
	A1	A1			
	A1-CC	A1-CC			
	A2	A2			
		84	A Page 1 of 5 ▶ ▶		R. 42



Locations

- Include All Locations: Check this box to enable this rule for all locations. If unchecked, more options will appear, allowing you to customize which locations are enabled for this rule.
- Require Client Code: Check this box to require that the Client Code field be populated in order for an export to be generated. Note: This should be used sparingly, as there is no holding bin on our end for transcriptions that do not have these values.
- Require Dictation ID: Check this box to require that the Dictation ID field be populated in order for an export to be generated. Note: This should be used sparingly, as there is no holding bin on our end for transcriptions that do not have these values.
- Location Groups: Select the location groups that should generate exports for this rule. This option only applies if the "Include All Locations" box is unchecked.
- Location Overrides: Select overrides for locations that should not obey the settings set by group. This option only
 applies if the "Include All Locations" box is unchecked.

 Locations 							
							?
Include All Locations							
Require Client Code							
Require Dictation Id							
Location Groups	All Locations Cardio Loc-01 Ortho Department Scan US-Location Groups 1 X-Ray Dept	for Location-1					
Location Overrides	Location	Location Code	Client Code	Dictation Id	Result	Group	Override 🚸
					~	~	~
	31509 Office	East Side Office	11	1			
	31509 Office	East Side Office					
	31509 Office	East Side Office					
	31509 Office-copy-pr	East Side Office					
	31509 Offices	East Side Office					
	32101 Office	312101 Office		1			
			🛯 🍕 Page 1	of 3 👂 🕅			S 🕸



Users

- **Based On:** Select which type(s) of users will trigger exports:
 - o Dictating User
 - o Authenticating User
 - o Dictating OR Authenticating User
- Include All Users: Check this box to enable this rule for all users. If unchecked, more options will appear, allowing you
 to customize which users are enabled for this rule.
- Require Client Code: Check this box to require that the Client Code field be populated in order for an export to be generated. Note: This should be used sparingly, as there is no holding bin on our end for transcriptions that do not have these values.
- Require Dictation ID: Check this box to require that the Dictation ID field be populated in order for an export to be generated. Note: This should be used sparingly, as there is no holding bin on our end for transcriptions that do not have these values.
- User Groups: Select the user groups that should generate exports for this rule. This option only applies if the "Include All Users" box is unchecked.
- User Overrides: Select the overrides for users that should not obey the settings by group. This option only applies if the "Include All Users" box is unchecked.

- Users							
Based on	Dictating User	~					
nclude All Users							
Require Client Code	0						
Require Dictation Id							
User Groups	Cardio Cardio Default Settings Dictators E1 Group Test						
	 □ Group Test □ InQuiry □ MTSO □ Radiologist 						
User Overrides	InQuiry	Username	Client Code	Dictation Id	Result	Group	Override 🧔
Jser Overrides	☐ InQuiry ☐ MTSO ☐ Radiologist	Username	Client Code	Dictation Id	Result	Group	
Jser Overrides	☐ InQuiry ☐ MTSO ☐ Radiologist	Username UN1	Client Code	Dictation Id			
Jser Overrides	InQuiry MTSO Radiologist User		Client Code	Dictation Id			
Jser Overrides	InQuiry MTSO Radiologist	UN1	Client Code	Dictation Id			
Jser Overrides	□ InQuiry □ MTSO □ Radiologist User □ INew01, IUser &```><, &```><	UN1 @#	Client Code	Dictation Id			
Jser Overrides	□ InQuiry □ MTSO □ Radiologist User □ INew01, IUser &```><, &```>< 001, 001	UN1 @# 001	Client Code	Dictation Id			
Jser Overrides	□ InQuiry □ MTSO □ Radiologist User □ INew01, IUser &```><, &```>< 001, 001 002, 002	UN1 @# 001 002	Client Code	Dictation Id			
Jser Overrides	□ InQuiry □ MTSO □ Radiologist User INew01, IUser &```><, &```>< 001, 001 002, 002 003, 003	UN1 @# 001 002 003	Client Code	Dictation Id			



Custom Filters

Custom filters ensure that transcriptions that meet some criteria pass the rule, while those not meeting the criteria, do not pass the rule. Custom filters are created by the interface team when the criteria built into the UI does not meet the client's need, or is not specific enough.

- Click Add Filter to include any filter that has been created for the client by an eSOne Interfaces team member.

- Action: choose to Save or Undo changes made to the custom filter.
- **Field:** choose a field that has been created for the client.
- **Operator:** choose Equals or Does not Equal.
- Value: the value that the field should or should not equal.

Testing

You can test your rule settings against a particular Transcription ID to ensure that it passes or does not pass, based on the settings.

Transcription ID 360	34462	🖁 test				
Results		T	ranscription St	atus: 🗸 Pass		
	Field Name		Field Value		Status	Reason
	Transcription ID: 36034	462				
	Excluded from future ex	cports	No		✓ Pass	
	Workflow		SearchAll		✓ Pass	
	Document Types				✓Pass	
	Locations		Warrenville Of	Warrenville Office		
	Dictating User	Dictating User				
	Authenticating User	Authenticating User				
	Custom Criteria				✓ Pass	
	Custom Filter	Expected Value	Operator	Actual Value	Status	Reason
	Transcription ID: 36034	462				
	Location Client Code	11	Equals		✓ Pass	



Support

Get assistance for the eSOne ShadowLink application, and all other eSOne applications, here:

- Phone Support: 1-800-858-0080 or 61-2-9434-2340 in Australia.
- Support Email: esone.support@DeliverHealth.com

