

CAPD Mediator User Guide

*Revision: 3.0*

*CLU Services Base: 1.8.3-226*

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**Change Record**

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| --- | --- | --- | --- |
| Version | Date | Responsible Person | Description of Change |
| 1.0 | 9/9/2011 | Scott Abrutyn | Initial draft. |
| 2.0 | 12/20/11 | “ | Added support for amendment handling and custom authors |
| 3.0 | 8/23/13 | “ | Reflect upgrading support for CAS services relative to 1.8.3-227 based interfaces |

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# Overview

The Mediator is a process that allows submitting document text for Meaningful Use (MUSE) fact extraction and Computer-Aided Physician Documentation (CAPD) clarification extraction/analysis. The mediator is a Java-based client tool supported on Windows and Linux platforms for remote document processing for MUSE and CAPD services. It is a long-running process accepting documents for near-real-time processing relative to an input directory customizable monitoring period. MUSE services will process a CDA result document containing fact extractions. CAPD services will produce a proprietary XML containing clarification extractions.

# Installation and Configuration

## Data Pre-requisites

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Type | Optional | Dependency | Description |
| mrn | String | N | In-line input file key/value | The patient MRN specified as “mrn=X” as the first line in any input file. |
| visitcode | String | N | In-line input file key/value | The patient’s visit code specified as “visitcode=X” as the second line in any input file. Each input file should be associated with a unique visitcode. |
| authorid | String | N | In-line input file key/value | The author ID specified as “authorid=X” as the third line in any input file. Each input file should be associated with an author. This is an author username (login) that will be auto-provisioned if it doesn’t exist. |
| correlationid | String | Y | In-line input file key/value | The external document identifier correlating this document to a previous version to imply the current request is a document. The “correlationid=” line must exist as the fourth metadata line. For source/original documents the ‘X’ value may be empty. Any documents external identifier is the filename of the submitted import data document. |
| cluBaseInstitutionEndpointUrl | String | N | Mediator command line argument | 1st argument to the mediator execution. Base institution specific destination URL for submitting documents.  Example: https://test.nuanceunderstanding.com/{instUrlPrefix} |
| businessEntityShortName | String | N | Mediator command line argument | 2nd argument to the mediator execution. A facility/department within an institution. |
| monitorWaitSecs | Int | Y | Mediator command line argument | Optional 3rd argument for the period to wait between monitoring the input directory for new files to submit |
| worktypeCode | String | N/A | Mediator command line argument | 3rd argument to the mediator execution applied to each document submitted. History&Physical worktypeCode should be sufficient for any document type. For MUSE execution this value is a provisioned worktype code, such as ‘03’. For CAPD execution this is provisioned mapped worktype description, such as ‘consultation’. |

## Installation

The mediator is packaged as a single zip file that may be extracted to any root installation directory. Upon zip extraction the mediator can be executed after modifying the mediator.bat file with applicable argument dependency updates.

[INSTALLATION\_ROOT] – directory to hold the [MEDIATOR\_ROOT]

[MEDIATOR\_ROOT] – [INSTALLATION\_ROOT]/mediator

1. cd [INSTALLATION\_ROOT]
2. Unzip the mediator.zip

../mediator/🡪

|  |  |
| --- | --- |
| input | Client location to place documents pre-pended with metadata parameters |
| output | Mediator location to place processed result documents that match the same name as the source input file |
| classes | Mediator binaries |
| lib | Mediator execution dependencies |
| bin | Mediator executable and execution location dependency |
| data | capd-queries-document.xsd, example capd output |

## Configuration

1. cd [MEDIATOR\_ROOT]\bin
2. Edit the mediator.bat
   1. Replace the java command as applicable to the local host. The Java/JVM version should be 1.6.0\_18 or higher.
   2. Update the mediator arguments with applicable deployment specific data pre-requisites agreed with Nuance

i.e. … com.nuance.clu.server.sdk.client.Mediator https://hce.escriptionasp.com/{instUrlPrefix} Training 41 5

see [Mediator Execution](#_Mediator_Execution) section for details

# Mediator Execution

1. cd [MediatorRoot]\bin
2. mediator.bat

The mediator may fail startup with the following exit codes:

1 – Destination URL unknown host

2 – System error

3 – Invalid arguments

*Usage:Mediator cluBaseInstitutionEndpointUrl businessEntityShortName worktypeCode [monitorWaitSecs];*

*i.e. Mediator http://localhost:8080/{instUrlPrefix} training 41 5;*

# Submitting Documents

Documents may be submitted for processing to either MUSE or CAPD services. Documents text must be in the following format:

mrn=xxxx

visitcode=yyyy

authorid=zzzz

correlationid=[previousDocumentFilename]

lastName=smith

firstName=john

dateOfBirth=2012-01-31

gender=M

visitStart=2012-01-31 01:02:03

*actualtextbody*

The mrn and visitcode are case sensitive key/value pairs. For CAPD the same visitcode should not be reused unless the intent is to test multiple documents within and relative to a single case/encounter. This should be bounded by some small, realistic number of documents in the visit.

Document to be submitted for MUSE processing should be placed in the [MediatorRoot]\input directory as filenameidentifier\_muse.txt and for CAPD processing as filenameidentifier\_capd.txt. When the files have completed copying and are ready for processing they should be renamed with a .txt file extension. The filenameidentifer may be any client specified name that should ensure uniqueness across all documents.

As the files are processed by the mediator their results will be copied to the [MediatorRoot]\output directory with the same filename. The source input file will be removed from the input directory. Cleaning the output directory is the client’s responsibility. If an input fails processing due to input file formatting or remote service errors the input file will remain and will be retried. Errors will be written to the mediator console, which may be redirected to a file to allow sending content to administrators for troubleshooting, etc. The error must be resolved for the file to stop retrying or the file must be removed manually. MUSE or CAPD file processing may be submitted in any order.

The external identifier of a document is the document’s filename (i.e. fileid1\_capd.txt). The document correlationid= line specifies the external identifier of its previous version if the document is an amendment. The value is the document filename of the previous document. If the document is a source document, then this line must be specified, but with an empty value.

## Example Mediator Output

*[startup]*

CAPD Destination URL=https://hce.escriptionasp.com/Rockingham/clu/capd/importdetail

MUSE Destination URL=https://hce.escriptionasp.com/Rockingham/clu/muse/importdetail

(any log4j warnings can be ignored)

*[file monitoring]*

Check input directory for files to process - total files=1

Submitting CAPD for input file fileid2\_capd.txt, MRN=ZMRN0001199, visitCode=DV4558000001, authorID=msmith, correlationID=fileid1\_capd.txt

Result status=OK, cluDocumentID=27858

Remote server processing timing for file fileid2\_capd.txt took 6secs

Result document size=4123

End-end processing timing for file fileid2\_capd.txt took 6secs

Check input directory for files to process - total files=0