University of Missouri and
National Student Clearinghouse

beta project: e-Delivery of .pdf Transcripts

Overview of Service(s) Provided by NSC

- Ability to receive delivery request information and electronic PDF transcripts along with attachments from school

- Ability to add security features to school's PDF transcript (Watermarks, Digital Signature and Rights Management)

- Ability to deliver PDF transcript portfolio to recipient

- continued -

- Ability to notify Recipient/Requestor via email of the status of the electronic transcript
- Ability to send school periodic status updates
- Ability to receive a revoke request from school and perform revocation on rights managed electronic transcript

- continued -

- Ability for school users to review delivery request history
- Ability for school users to perform resend and revoke
- Ability for school users to run reports

MU's Role

To Send a transcript, MU will prepare (a couple unique files per student/request)

- **An official transcript** in .pdf format saved on our servers in a specific file name and location
- **A Transcript Delivery Request**: A request (.xml document) from the school to NSC to deliver an electronic transcript; it contains the following information:
  - School FICE code
  - Requester First, Last Name
  - Requester Email
  - Recipient Name
  - Recipient Email
  - School Tracking ID
  - School Sub Tracking ID (Optional , if a transcript is delivered to multiple recipients)
  - Transcript Filename and location
  - Attachment file names and location *(MU will not be using attachments at this time)*

MU’s Role - continued

- Perform an http post to the NSC connector which will point to the
  - delivery request file
  - pdf transcript

Example of a Delivery Request .xml File


```xml
<?xml version="1.0" encoding="UTF-8"?>
<DeliveryService>
<Request>
<OPEID>002516</OPEDID>
<RequestType>Create</RequestType>
<RequestTrackingID>000077280-01</RequestTrackingID>
<RecipientTrackingID></RecipientTrackingID>
<RequestorFirstName>Steven</RequestorFirstName>
<RequestorLastName>Winters</RequestorLastName>
<RequestorEmail>WINTERSS@MISSOURI.EDU</RequestorEmail>
<RecipientName>Schuyler Wheeler</RecipientName>
<RecipientEmail>WHEELERSF@MISSOURI.EDU</RecipientEmail>
</Request>
</DeliveryService>
```

Example of an HTTP Post .xml


```
<?xml version="1.0" encoding="UTF-8"?>
<mr:MessageRequest>
<mr:TransactionID>TR002516_2432701</mr:TransactionID>
<mr:TranscriptDeliveryRequest>
<mr:RequestDocumentLocation>/aspcore/output/STUDENT/MU/SR/TRANSCRIPTS/ED
ELIVERY-NSC/RPT/OUTBOUND-
STATUS//trnscrofedelivery_2432701_001.xml</mr:RequestDocumentLocation>
<mr:TranscriptDocument>
<mr:DocumentLocation>/um-
data/SARPT89C/xml/trnscrof_2432701_001.pdf</mr:DocumentLocation>
<mr:DocumentFormat>PDF</mr:DocumentFormat>
</mr:TranscriptDocument>
<mr:SupportingDocument></mr:SupportingDocument>
</mr:TranscriptDeliveryRequest>
</mr: MessageRequest>
```

NSC’s Role

- Notify the sending institution that a transcript has been received, either successfully or with an error (status updates) by placing a .xml file in the NSC Connector.

NSC’s Role - continued

If successful

- Inform the requester that a transcript has been received for delivery to the recipient and that the recipient is being notified.
- Send an email to the recipient informing them that there is a transcript to be downloaded and provide them key information to find that particular document.
- Inform the requestor that the transcript has been opened or downloaded and when.
- Send reminder emails to the recipient if the transcript file has not been opened

NSC’s Role - continued

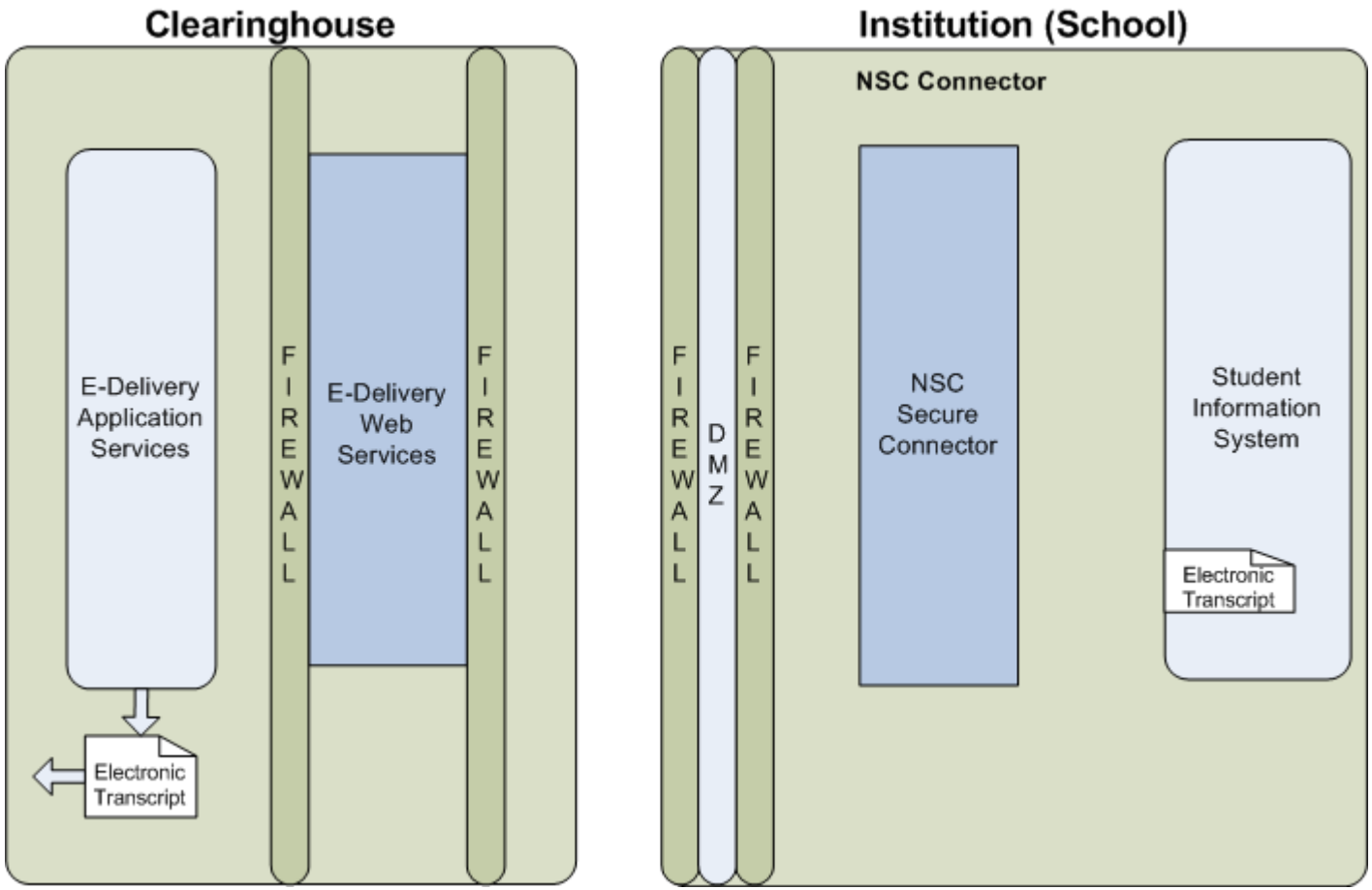
If in error

- Indicate to the sending institution what part of the process or document failed

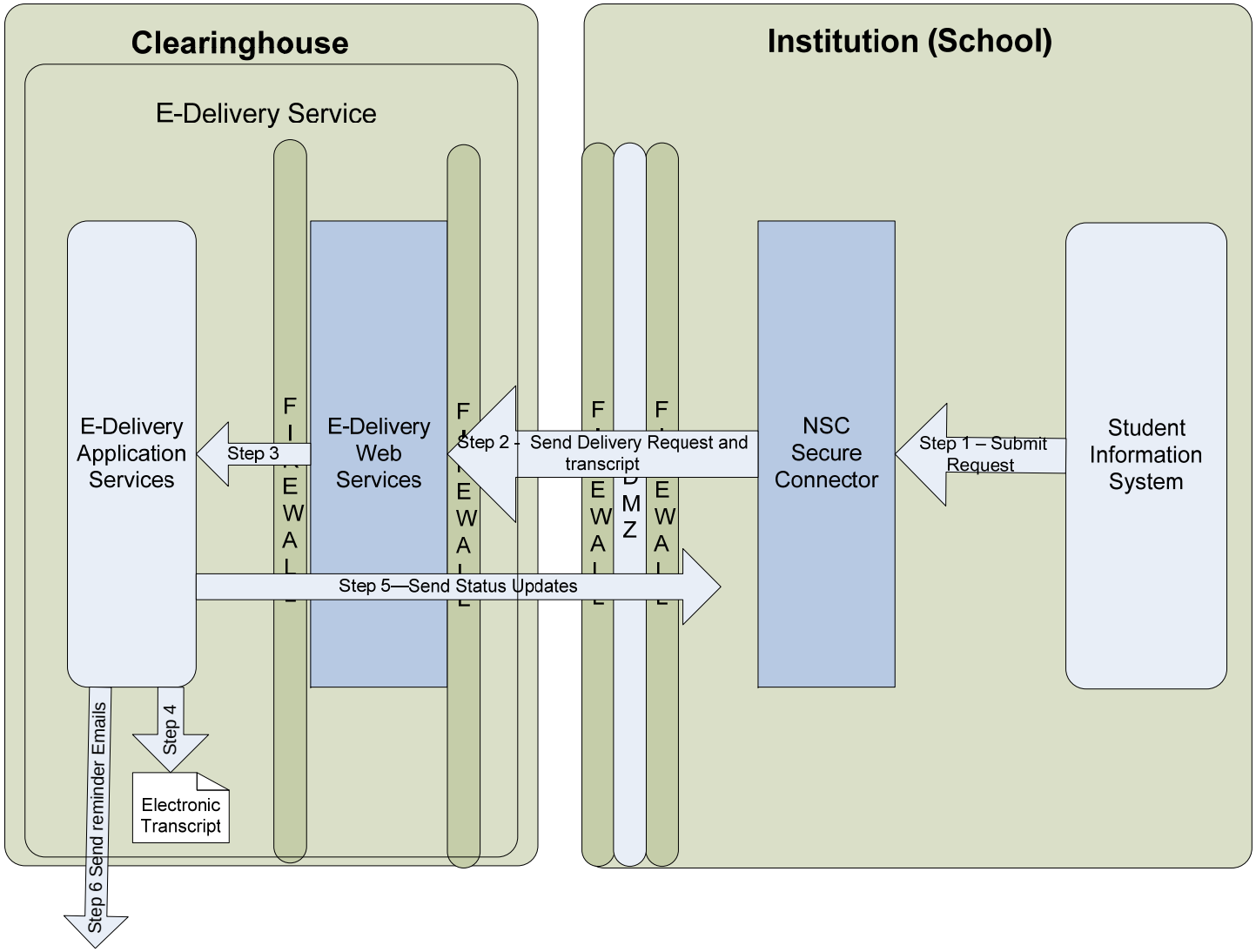
continued

- NSC will store the documents on there servers for a period of time agreed to between NSC and the school. After that time they are purged

High Level Architecture



Process Overview



How we got here

- Conversion of Jetforms to .pdf 2010-2011 for printed output. All .pdf rendering done at local institution.
- We could now interrupt the flow of delivery to a printer and go instead to routing .pdf electronic transcript to the NSC

Today’s Print Flow

- Generate Request for Transcript
- Run the transcript program
- Generate .xml data file with SSN in

  xxx-xx-#### format
- Merge with template to render .pdf
- Move .pdf file to printer

Early E-Delivery Model

- Generate Request for Transcript
- Run the transcript program
- Generate .xml data file (with SSN xxx-xx-####)
- Merge with template to render .pdf
- Move .pdf file to a location on the NSC Secure Connector
- Generate .xml Transcript Request File and save it to a location on the NSC Secure Server
- Perform an HTTP Post to the NSC Secure Server

Now we can add SSN remediation

- Generate Request for Transcript
- Run the transcript program
- Generate .xml data file with “Alternate SSN”
- Send .xml data file to SSN vault
- Alternate SSN gets converted back to XXX-XX-#### format of real SSN
- Send .xml data file back to secure file storage on campus

A new deamon runs to look for files that have been remediated

- Merge with template to render .pdf
- Move .pdf file to a location on a server
- Generate .xml Transcript Request File and save it to a location on a server
- Perform an HTTP Post to the SNC Secure Server

Source

- Most of the information for this series of slides comes form NSC documents sent to MU, NSC Secure Connector.docx and sample xml files produced for testing by the University of Missouri

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