Middleware File
Transport Services
(External)

Middleware Infrastructure (JCAPS)

Prepared by: Middleware
August 11, 2009
## Document Release History

<table>
<thead>
<tr>
<th>Version</th>
<th>Author/Contributor</th>
<th>Date</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.1</td>
<td>Nate Eckler</td>
<td>1/30/2009</td>
<td>Initial Draft</td>
</tr>
<tr>
<td>1.0</td>
<td>Nate Eckler</td>
<td>2/27/2009</td>
<td>Release V.1</td>
</tr>
<tr>
<td>1.1</td>
<td>Nate Eckler</td>
<td>3/24/2009</td>
<td></td>
</tr>
<tr>
<td>1.3</td>
<td>Shan Bains</td>
<td>06/02/2009</td>
<td>Rewrite</td>
</tr>
</tbody>
</table>

Printing any document or transferring it into another electronic format causes the document to become an uncontrolled copy, which might not be current.
TABLE OF CONTENTS

DOCUMENT RELEASE HISTORY...........................................................................................................2

1. PURPOSE..................................................................................................................................4

2. FILE TRANSPORT SERVICES EXTERNAL PROCESSING DEFINITIONS.4
   Inbound files to CalPERS:..................................................................................................................5
   Outbound files from CalPERS:..........................................................................................................5

A. FILE NAMING CONVENTION .................................................................................................6
1. Purpose

This document illustrates the File Transport Services (FTS). This document has been divided into individual sections that detail specific aspects of the FTS service.

Figure 1 - File Transport Services Logical Overview

2. File Transport Services External Processing Definitions

The following parameters describe the process for external partners:

For inbound only:

- External partner will be provided with one folder - prod-in
  - This folder will be used to retrieve files from CalPERS

For outbound only:

- External partner will be provided with one folder - prod-out
  - This folder is used for sending files to CalPERS

For bidirectional (inbound & outbound):

- External partner will be provided with two folders - prod-in & prod-out
  - The prod-in folder is used to retrieve files from CalPERS.
  - The prod-out folder is used for sending files to CalPERS.
**Inbound files to CalPERS:**

- Data files must be encrypted using any OpenPGP standard compliant software.
- Data files must be uploaded to the prod-out folder on CalPERS external ftp server using Binary mode.
- Data file names must be all lower case and will match the data file naming convention discussed later in this document.
- Two files must be provided for each transaction, one data file and one semaphore file.
  1. Data files will have a .pgp file extension.
  2. Semaphore files will have a .sem file extension. The semaphore file will have the same name as the data file but with a .sem file extension. The semaphore file is an empty file that indicates that the data file is complete and ready for further processing.
  3. Example of a file pair of files sent for each transaction. “filename.pgp and “filename”.sem

- The CalPERS File Transport Service will poll the prod-out folder for files at a pre-determined interval. The .pgp file and the matching .sem file will be deleted when successfully processed. Erroneous files that do not match the above naming requirements will not be processed.

**Outbound files from CalPERS:**

- Data files will be encrypted using GnuPG (GPG) based on the OpenPGP standard (applicable for FTS with encryption).
- Data will be uploaded to the prod-in folder on CalPERS external ftp server using Binary mode.
- Data file names will be all lower case and will match the data file naming convention discussed later in this document.
- Two files will be uploaded for each transaction, one data file and one semaphore file.
  1. Data files will have a .pgp file extension.
  2. Semaphore files will have a .sem file extension. The semaphore file will have the same name as the data file but with a .sem file extension. The semaphore file is an empty file that indicates that the data file is complete and ready for further processing.
  3. Example of a file pair of files sent for each transaction. “filename.pgp and “filename”.sem

- The CalPERS File Transport Service will upload encrypted data files to the FTP location at a pre-determined interval.
- The external partner will retrieve files from the FTP location at their own pre-determined interval.
- The external partner application will look for a filename with a .sem file extension. This will indicate that a data file with the same name and a .pgp extension is available for processing. At this point, the partner’s application can download the data file to the trading partner’s system.
Middleware File Transport Services

- After successfully downloading the data file, the trading partner’s process will rename the data file from a .pgp extension to a .fin extension. This renaming process will indicate that the files have been processed and can be deleted. The FTS cleanup service will delete the “filename”.fin and the “filename”.sem files.

### a. File Naming Convention

Both inbound and outbound files will adhere to the file naming convention described below.

The standard format for file names:

A) `yyyyymmddhhmiss_sss_p(n).xxx`

Where:

- `yyyy` is the year
- `mm` is the month
- `dd` is the day.
- `hh` is the hours using a 24 hour clock
- `mi` is the minutes
- `ss` is the seconds
- `sss` is the milliseconds, (use 000 if milliseconds can not be produced)
- `p(n)` application specific area of the file name (project defined)
- `xxx` is the file extension (.pgp) for data files