CLEO COMMUNICATIONS

Technical Documentation Series

Streem CAP Interface

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Streem CAP Interface

Data interchange with Cleo's Streem system is based on the **Common Alerting Protocol** (CAP) 1.1 Standard. The full CAP specification is available at http://www.oasis-open.org/specs/index.php#capv1.1. The CAP standard is an XML-based data structure that has become an approved standard by OASIS. OASIS (Organization for the Advancement of Structured Information Standards) is a non-profit, international consortium that oversees the development, convergence, and adoption of e-business standards. More information on OASIS can be found at www.oasis-open.org. CAP was created as a means to standardize data for critical communications. This standard is in use by such organizations as NOAA (National Oceanic And Atmospheric Administration) and DMIS (Disaster Management Interoperability Services) to disseminate emergency/critical information.

XML files, in the CAP format, sent to the Streem system are handled by a Streem workflow named 'Streem-CAP-Interface.' On seeing a new CAP file, this workflow calls the Streem CAP Parser. The Parser extracts information contained in the CAP file and, if the information is complete and valid, reformats it into a file suitable for input to the Streem API. Streem API then uses this information to submit a job to the Streem system.

Streem-CAP-Interface Workflow

This workflow must be enabled for the entire process to work. Once enabled, it waits for a file to be dropped in the **{watch}** folder; {watch} is a workflow parameter and defaults to **<Streem_folder>\ftp\in**. Once a CAP file is detected in the watched folder, the workflow:

- Copies the CAP file to **<Streem_folder>\temp\ScCAP**
- Invokes the Streem CAP Parser by calling **<Streem_folder>\scripts\ScCAP\ScCAP.py**
- Runs a command file that copies attachments, if any, referenced in the CAP file to **<Streem_folder>\temp\ScSubmit**
- Invokes the Streem API to submit a job (that is then picked up and handled by Streem Center)

In case an error is encountered during any of the above steps, the workflow send an appropriate message to the Streem Event Monitor and quits.

Streem CAP Parser (ScCAP.py)

This is the component that actually processes the CAP file, extracting Streem job data from it. The Parser takes this data and creates:

- A *control* (.ctl) file in the format accepted by the Streem API
- A command (.cmd) file that contains commands to copy attachment files, if any, specified in the CAP file
- A recipient (.csv) file that contains a list of recipients specified in the CAP file
- A message (.out) file that contains the exit status number and message

Usage:

ScCAP.py -o output_ctl_file **-i** input_cap_file **-d** recipient_csv_file **–c** cmd_file **–m** msg_file
where

-o is required and specifies the path to the output .CTL file (in Streem API format)
-i is required and specifies the path to the input .XML file
-d is required and specifies the path to the .CSV file containing recipients
-c is required and specifies the path to the .CMD file (which copies attachments)
-m is optional and specifies the path to the .OUT status message file (default: %TEMP%\ScCAP.out)

Status (.out) file messages:

Note that output file will always be two lines:

1. first line contains the message number
2. second line contains the actual message

All possible messages are listed below:

Number	Message
0	Success
1	Error – General
51	Error - No input XML file specified
52	Error - No output CTL file specified
53	Error - No output CMD file specified
54	Error - No output CSV file specified
99	Debug - Early exit for testing

Streem API (ScSubmit.py)

This component processes the control and recipient files generated by the CAP Parser. The data specified in these files is packaged as Streem job data and entered into the Streem database.

Usage:

ScSubmit.py -o output_msg_file [**-i** input_ctrl_file] [**-m** msg_id | **-l** list_id] [**–u** user_id]
where

-o is required and specifies the path to the .OUT status message file
-i is needed for normal processing/submission of a job
when -i is specified the only other flag that is looked at is -o
-m and **-l** are exclusive meaning only one can be used at a time
-m is used to check if specified user has access to specified message
-l is used to check if specified user has access to specified distribution list
-u is only required if –m or –l is specified

Status (.out) file messages:

Note that output file will be two or three lines:

1. first line contains the message number
2. second line contains the actual message
3. third line contains the job number for the newly added job if the job was submitted successfully (**i.e.** the job number must only be used if the message number (first line) is 0)

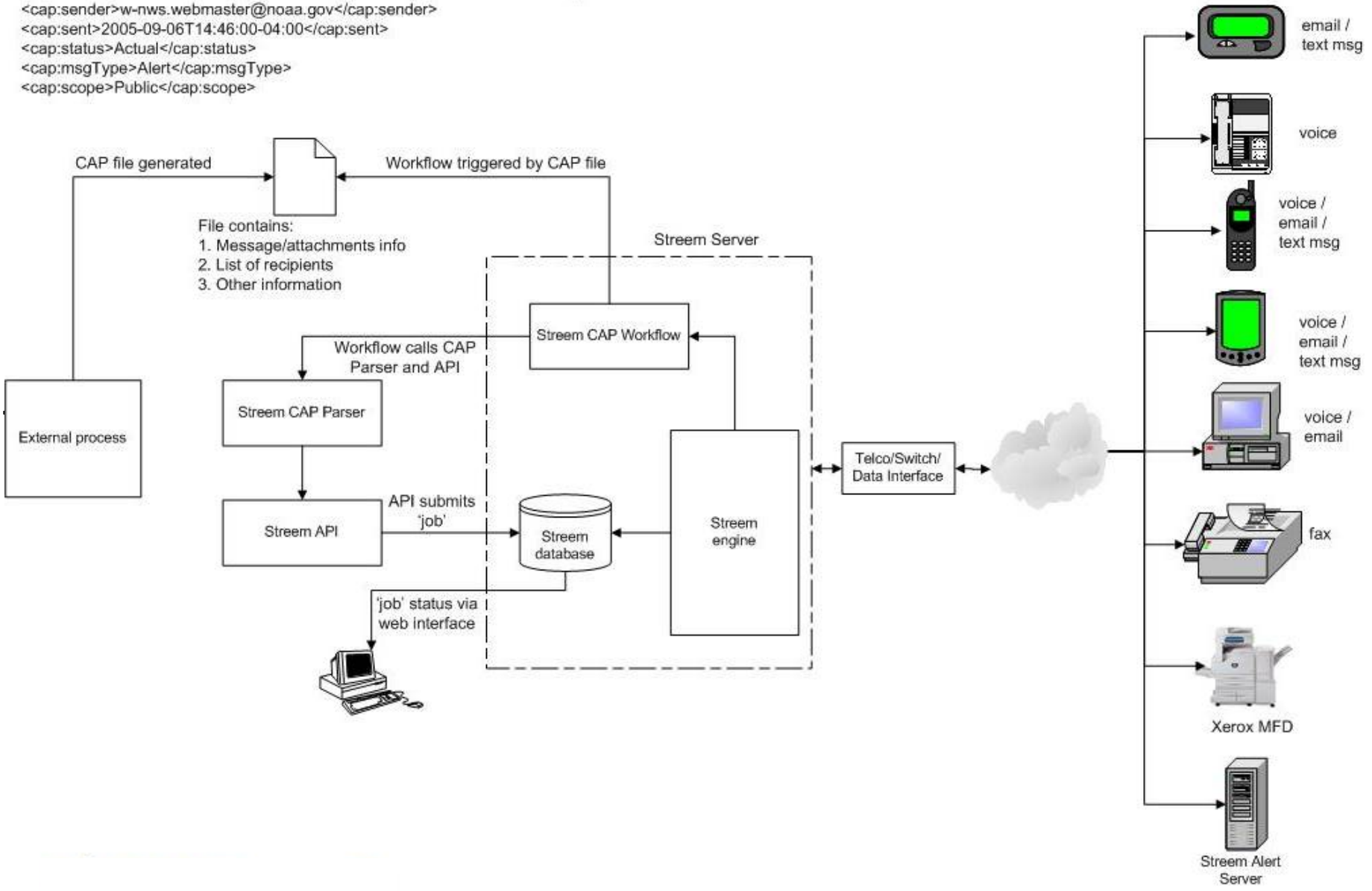
All possible messages are listed below:

Number	Message
0	Success
1	Error – General
2	Error - Text destination(s) selected but the message specified is voice only
3	Error - Voice destination(s) selected but the message specified is text only
4	Error – Specified user does not have access to the specified message
5	Error - Specified user does not have access to the specified distribution list
6	Error - Specified message not found
7	Error - Specified distribution list not found
51	Error - Specified User not found
52	Error - flags '-m' and '-l' are exclusive, only one can be specified at a time

Number	Message
53	Error - No output CMD file specified
54	Error - invalid combination of flags specified
99	Debug - Early exit for testing

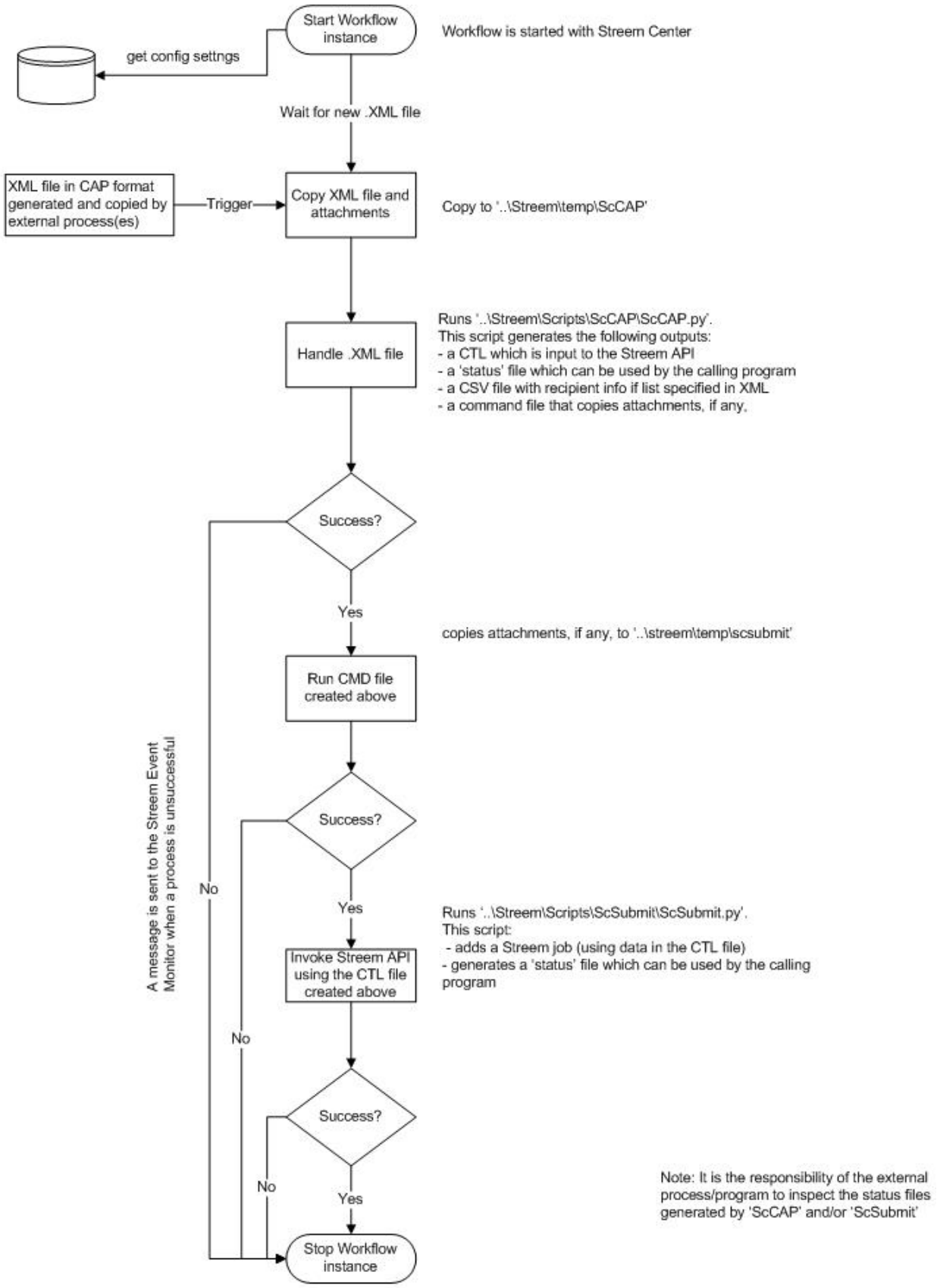
SAMPLE CAP FILE:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<cap:alert>
<cap:identifier>NOAA-NWS-ALERTS Illinois 2005-09-06T14:46:00-04:00</cap:identifier>
<cap:sender>w-nws.webmaster@noaa.gov</cap:sender>
<cap:sent>2005-09-06T14:46:00-04:00</cap:sent>
<cap:status>Actual</cap:status>
<cap:msgType>Alert</cap:msgType>
<cap:scope>Public</cap:scope>
```



Streem Alert - CAP Interface

Tuesday, May 20, 2008


Start Workflow instance
Workflow is started with Streem Center
get config settngs
Wait for new .XML file
XML file in CAP format generated and copied by external process(es)
Trigger
Copy XML file and attachments
Copy to '..\Streem\temp\ScCAP'
Handle .XML file
Runs '..\Streem\Scripts\ScCAP\ScCAP.py'.
This script generates the following outputs:
- a CTL which is input to the Streem API
- a 'status' file which can be used by the calling program
- a CSV file with recipient info if list specified in XML
- a command file that copies attachments, if any.
Success?
Yes
copies attachments, if any, to '..\streem\temp\scsubmit'
Run CMD file created above
Success?
No
Yes
Runs '..\Streem\Scripts\ScSubmit\ScSubmit.py'.
This script:
- adds a Streem job (using data in the CTL file)
- generates a 'status' file which can be used by the calling program
Invoke Streem API using the CTL file created above
No
Success?
No
Yes
Stop Workflow instance
A message is sent to the Streem Event Monitor when a process is unsuccessful
Note: It is the responsibility of the external process/program to inspect the status files generated by 'ScCAP' and/or 'ScSubmit'