Using the Emulation-as-a-Service-Infrastructure (EaaSI) – Local Supplement

About This Document

This document serves to supplement official instructional documentation developed by the Emulation-as-a-Service-Infrastructure project team. Local practices such as file naming conventions are documented here. Note that references are drawn from the EaaSI User Handbook available on 2020-02-11. The Handbook refers to the EaaSI demo administration interface, which was provided for beta release starting in March 2019. This is the interface used for the Fostering a Community of Practice (FCoP) project. Thus, external documentation and version specific references will likely require review once a production version of EaaSI is available.

Why Use EaaSI?

The primary EaaSI use cases at Illinois at this time are the following:

- Quality control of legacy software preservation installation packages that does not operate in a contemporary computing environment.
- Rendering a specific legacy digital content format type that is dependent upon legacy software to:
 - o Create or QC a digital content format registry entry
 - o review and undertake preservation action such as migration or provide ad hoc access
- Reviewing a forensic disk image for preservation assessment and appraisal

Note that the interface is in beta release and is thus not stable nor guaranteed to persist. Therefore, it is not intended to be used for external research access to collections. Future versions may be used to meet this need. Procedures for using EaaSI as a public collections access portal will be developed later.

Before Using EaaSI

Before using EaaSI to install or QC software it is assumed that you have researched and included an entry in the software preservation worksheet located here (see). Information from the inventory spreadsheet and/or the software preservation packaging will be used – particularly the descriptive and technical information.

Getting Started with EaaSI

If you are unfamiliar with the EaaSI interface or general operation of the tool please refer the EaaSI User Handbook. As we at the U of I are not deploying an EaaSI environment, starting with the section Navigating and Using the EaaSI interface is recommended. The supplemental text below should following sequence with the user manual as published on 2020-02-11.

• EaaSi User Handbook

https://eaasi.gitlab.io/eaasi_user_handbook/index.html (accessed 2020-02-11)

Additional documentation and learning assets here.

https://osf.io/6mc4f/ (accessed 2020-02-11)

o Of particular note reference the Yale Software Configuration manual for an example of Yale's cataloging and software installation workflow: https://osf.io/rvakf/

Logging In to the beta interface

Note that this interface is provided to support the FCoP project. FCoP participants have been warned that environments created within EaaSI may not persist into the production environment. Thus, it is highly suggested that use is limited to testing procedures and workflows and should not be considered as a production level tool. As it is in beta, the interface is still subject to ongoing development and may not be as reliable as one would like. If there is an issue please contact the Digital Preservation Coordinator and Illinois FCoP project lead Tracy Popp. She will then review and submit a service ticket and/or provide additional instructions. At this time please only install software on available base environments. If you require an additional operating system base environment please document which OS you need, the related software package you're working with and send this in an email to Tracy.

University of Illinois EaaS Login Credentials:

URL: illinois.softwarepreservationnetwork.org

username: illinois_fcop
password: softpresnetwork3

Object Naming Convention

Use the naming convention established in the software preservation procedures documents. (see: \FINAL FCOP Documentation & Report\FCOP Cohort Final Documentation Share\University of Illinois\Worflows\SoftwarePreservation\2020_SoftPres_Procedures.docx. Current as of 2020-04-25)

Installing the Software in EaaSI

As you proceed through QCing and installing software within the EaaSI environment document your process using a copy of the **2019_SoftwareInstall_Workflow_BLANK.xlsx file**. Save a copy with the truncated software/object label in the BLANK section.

(see: \FINAL FCOP Documentation & Report\FCoP Cohort Final Documentation Share\University of Illinois\Worflows\SoftwarePreservation\2019_SoftwareInstall_Workflow_BLANK.xlsx Current as of 2020-04-25)

Document Version History

Date	Author	Version	Notes
2020-02-11	Popp, Tracy	0.01	First draft of doc

CHRISTINE'S NOTES:

2/21/2020

Tried to get one of Hembrough image disks running: PC Pro Tools Deluxe

Both DOS 6.0 and Win 3.11 were unable to load the program. Got the error there was no system folder, but the command sys x: unable to work since I was unable to determine what "port" the emulator had set for the floppy drive.

2/28/2020

Imaged Cakewalk Apprentice to test.

- Imported the .bin file as "Floppy" in EaaSI as "Cakewalk Apprentice"
- Received the message the file was successfully loaded
- Selected "Object details" from the object menu for Cakewalk_Apprentice and checked "Object is software"
- Clicking "Save" gives a server error message. This appears to be a common error that occurs the first time you try to do this. Went back and repeated the process, and save was successful.
- Went to software list and found Cakewalk_Apprentice Tried the Detect/find environments but nothing happened.
- Add environment = Win311 Winpcworld import. Ran environment. Got floppy disk error.
- Tried a different way: found Win311 and added software to it received same error:

```
SeaBIOS (version rel-1.12.0-0-ga698c8995f-prebuilt.qemu.org)

iPXE (http://ipxe.org) 00:03.0 C980 PCI2.10 PnP PMM+01F914B0+01EF14B0 C980

Booting from Floppy...

Non-System disk or disk error

Replace and press any key when ready
```

- Emptied the drive and had OS boot
- Replaced drive and tried moving to A:

```
C:\>C:\SB16\MIXERSET /P /Q
C:\>
C:\>A:
General failure reading drive A
Abort, Retry, Fail?
```

- A possible error is that the drive is low density and it is trying to read a high density diskette.
- •

- Imported the .iso file as "ISO" in EaaSI as "FinalePrintMusic"
- Located object from list and checked "object is software" then "save" Got the same error:

```
Server Error
   "message": "Internal error: Cannot create local copy of https://arizona.softwarepreservationnetwork.org/objectarchive/user_archiveillinois_fcop/b758a02d-fd89
 "config": {
   "method": "POST",
    "transformRequest": [
      null
    "transformResponse": [
   ],
"jsonpCallbackParam": "callback",
"jsonpCallbackParam": "callback",
   "url": "https://illinois.softwarepreservationnetwork.org/emil/EmilSoftwareData/saveSoftwareObject", "data": \{
      "licenseInformation": "",
      "allowedInstances": -1,
"isOperatingSystem": false,
      "nativeFMTs": [],
"importFMTs": [],
      "exportFMTs": [],
"objectId": "b758a02d-fd89-48f8-a642-e540945f2a94",
      "label": "FinalePrintMusic
       "archiveId": "user_archiveillinois_fcop"
     "headers": {
    "Accept": "application/json, text/plain, */*"
      "Content-Type": "application/json;charset=utf-8",
"Authorization": "Bearer eyJhbGciOiJIUzIlNiIsInR5cCIGIkpXVCJ9.eyJzdWIiOiJpbGxpbm9pc19mY29wIiwibmFtZSIGIkpvaG4gRG9lIiwiaWF0IjoxWTE2MjM5MDIyfQ.VAxzT0ONBaPUiT
 "statusText": "Internal Server Error",
"xhrStatus": "complete"
```

- Went back and did it again.
- Located FinalePrintMusic on the Software list, tried to Detect/find environments but nothing happened.
- Added environment, Mac OS X 10.3, and ran. Got an error, and was unable to find the program.

Win3.11: Moving from DOS to Windows type command:

win

Installing Windows:

cd Windows

setup.exe

Imported Cakewalk into DOSBOX and it worked: something is wrong with the setup for EaaSI's Windows3.1, for it gives an error every time you try to go from DOS to Windows. Moving forward, do I find another version of Win 3.11 to try and upload to EaaSI, or do I use DOSBOX?