

Podcast Producer

Podcast Producer II: Workflows

Slides: <http://macpres09.shownets.net>

Google Moderator: <http://bit.ly/Macworld-IT844>

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Justin Rummel

- Sr. Project Manager of Qivliq, Herndon, VA
 - Apple Professional Service Provider
 - Alaska Native Company (ANC)
- Over 10 Years Experience with Macs
- Apple Certifications: ACSA
- Other Certifications: PMP

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Google Moderator

- Please visit <http://bit.ly/Macworld-IT844>
- (IT844: Podcast Producer II)
- Post Questions
- Will answer at the end of the session

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Slides

- Slides are available at:
<http://macpres09.shownets.net>
- Please set all phones to vibrate,
Thanks!

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Agenda

Agenda

- Introduction
- Presentation Setup
- Workflow Security
- Workflow Development

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Presentation Setup

Presentation Setup

- Presentation Laptop
- Server Laptop
- Xgrid Client 1
- Xgrid Client 2
- Router & Switch



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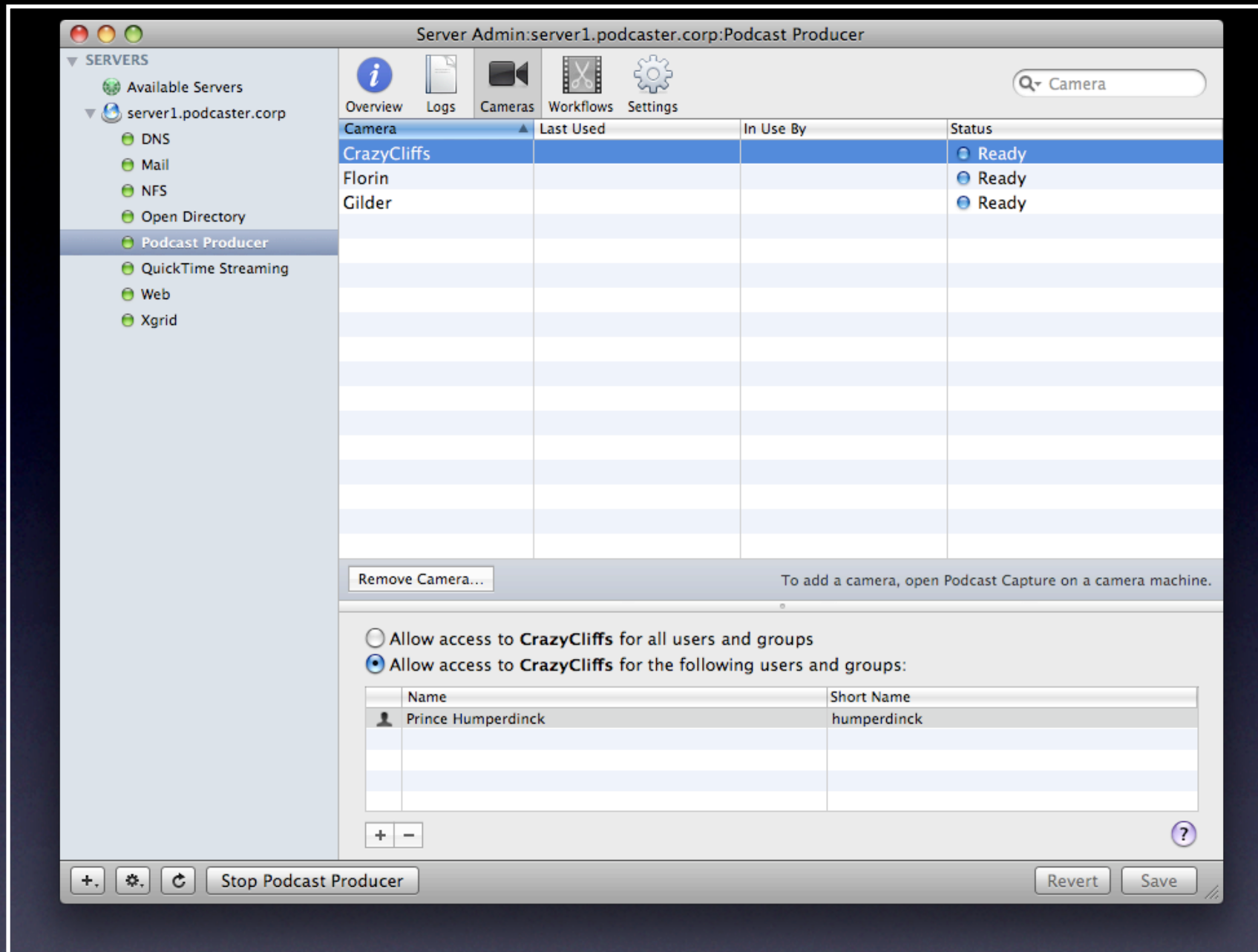
Additional Services

- AFP has been started
- Sharing /Library/PodcastProducer/
- Sharing /podcasts/Recordings/

* Not Necessary, used for Presentation needs only

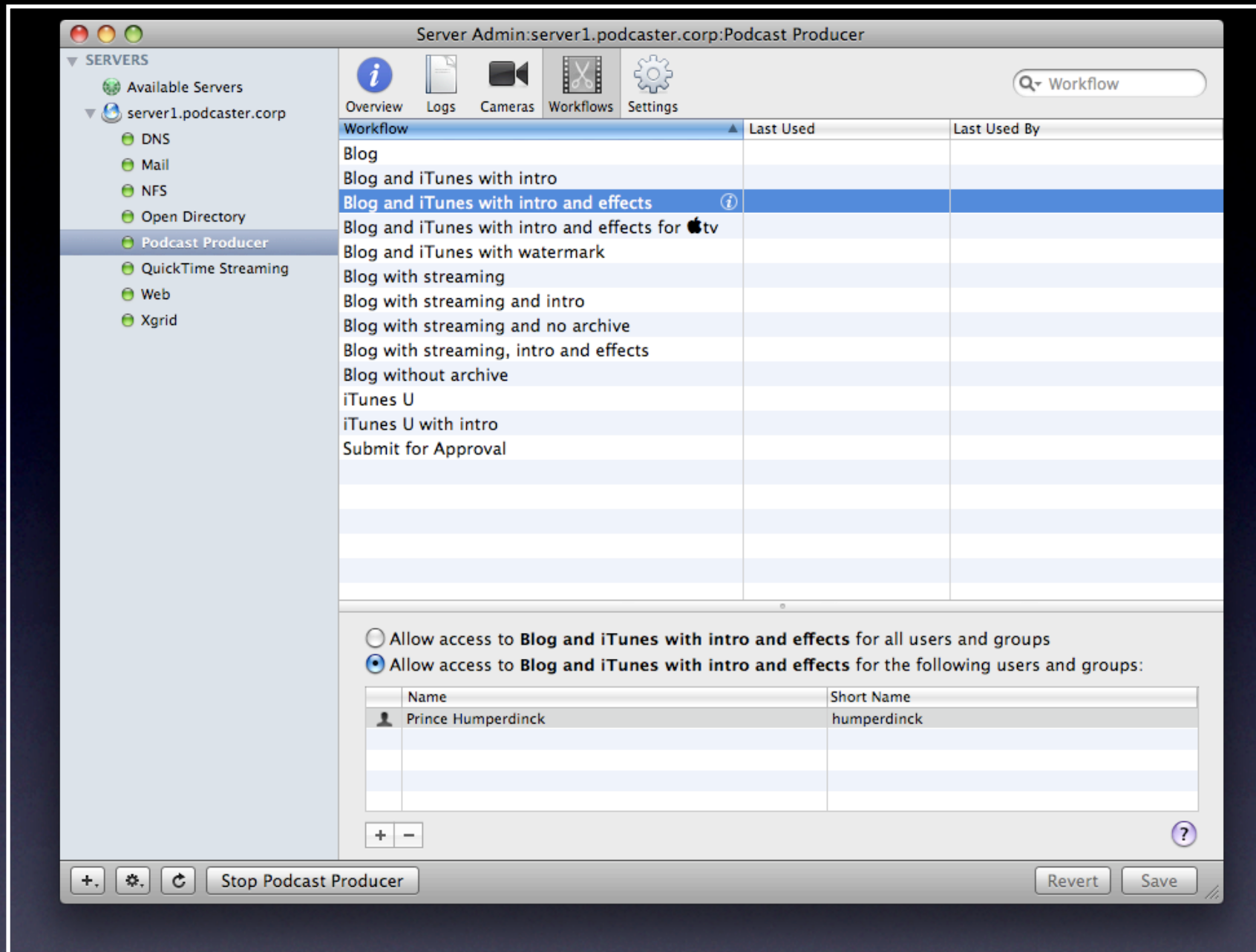
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Workflow Security



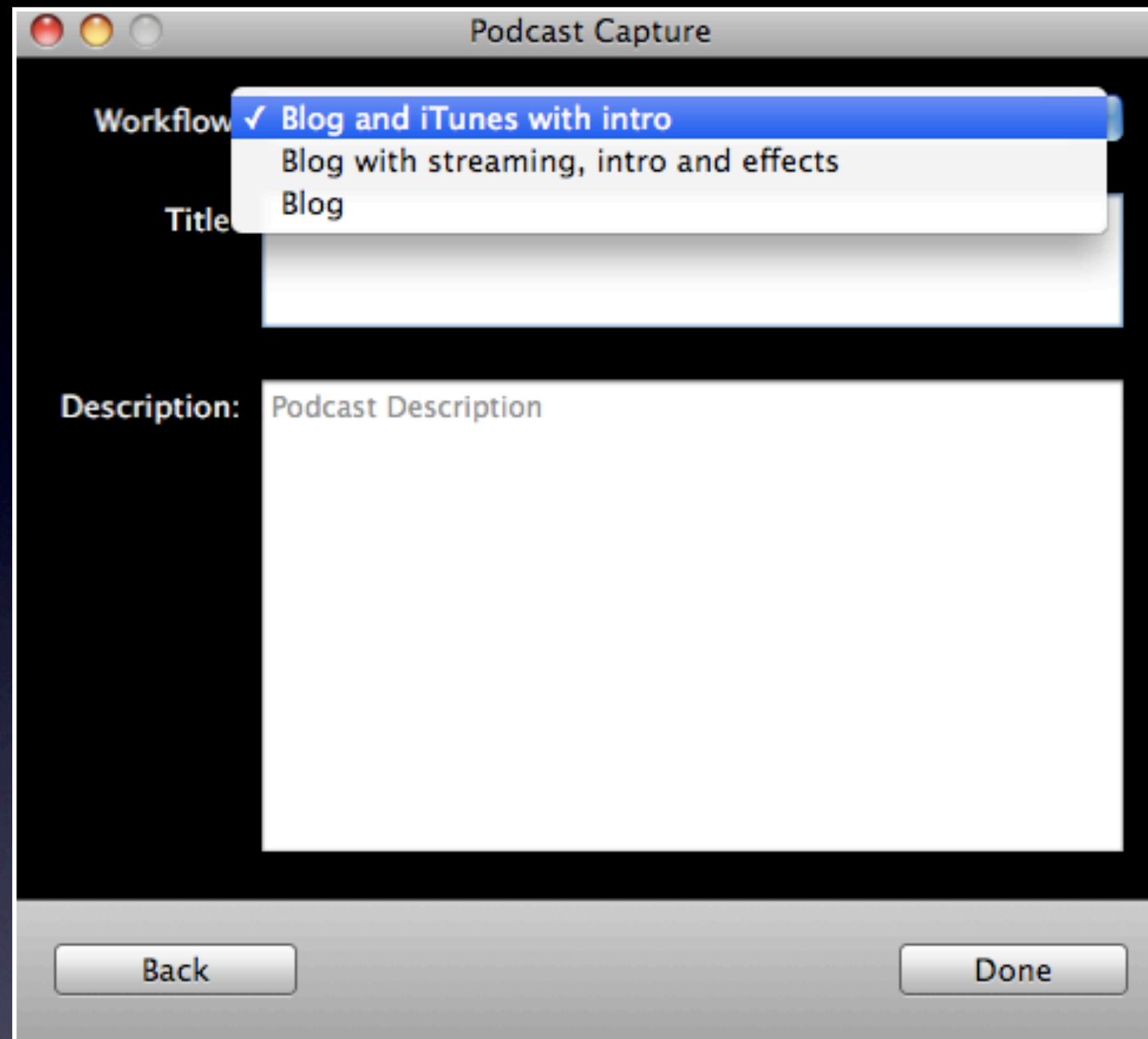
Camera ACLs

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Workflow ACLs

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Workflow ACLs

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Building PCP Workflows

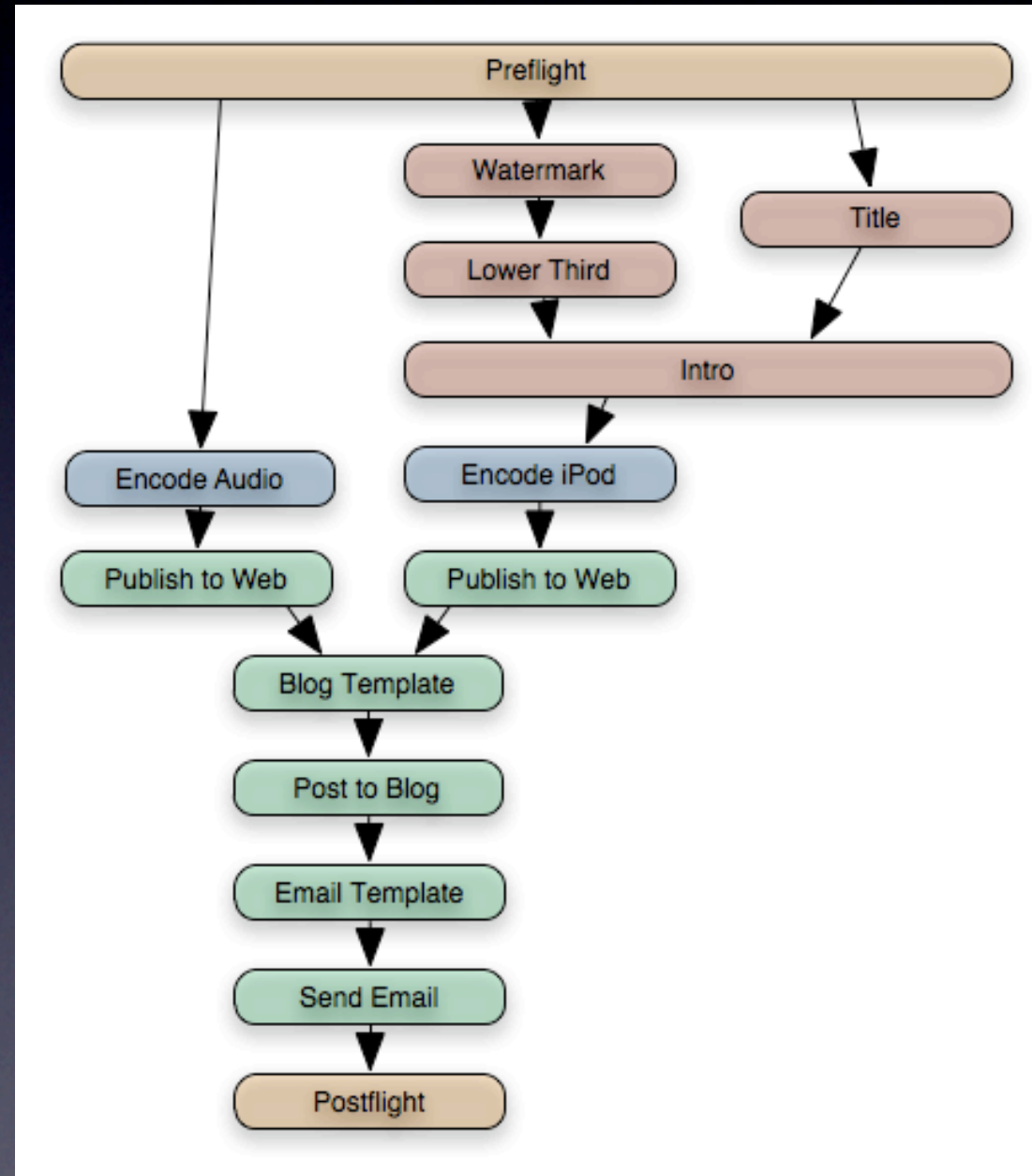
Workflow Tutorials

- Available at <http://connect.apple.com>
- Downloads => Mac OS X Server
- Search for “Podcast Producer Workflow Tutorial”
- DMG Contains:
 - Workflows
 - Lower Third.qtz Quartz Composer

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Workflow Terms Review

Today's Workflow



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Workflow Definitions

- Preflight - Runs the preflight script specified in Server Admin > Podcast Producer > Settings > Properties.
- Watermark - Adds a watermark to the input movie.
- Lower Third - Applies the lower third Quartz Composer

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Definitions Cont'

- Title - Renders the title of the submitted movie
- Intro - Adds the intro video containing the title of the movie
- Encode audio - Encodes the audio before it is published

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Definitions Cont'

- Encode iPod - Encodes the movie (see options)
- Publish to Web Server - Um... Copies Data
- Blog Template - Customizes the template of the blog

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Definitions Cont'

- Post to Blog - Um... POST
- Email Template - Customizes the template of the email
- Send Email - Um...

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Definitions Cont'

- Postflight - Runs the postflight script specified in Server Admin > Podcast Producer > Settings > Properties.

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Software

Software Tools

- Use a smart text editor (TextMate)
- OmniGraffle - “Visualize Workflow 3”
- Terminal

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Validate Workflows

```
sudo pcastconfig \  
--validate_workflow_at_path \  
<path_to_workflow>
```

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Xgrid Troubleshooting

```
xgrid -h <server_FQDN> \  
-auth Kerberos -job results \  
-id <xgrid_job_id>
```

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Repost failed attempts

- `/usr/bin/pcastaction encode \`
`--basedir=/podcasts/Recordings/<UUID> \`
`--input=<Original AUDIO/VIDEO>.mov \`
`--output=<FINAL NAME>.m4v \`
`--encoder=ipod`
- Or Drag and Drop to Podcast Capture

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Workflow Methodology

- Modify the workflow according to the instructions
- Submit a podcast to test the workflow
- If necessary, debug any failures or problems

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Workflow Files

Configuring Basic and Localized Info

- Workflow.pwf/Contents/Resources/en.lproj
 - InfoPlist.strings
- Workflow.pwf/Contents/
 - Info.plist

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InfoPlist.strings

```
Copyright = "Copyright © 2008, Apple Inc.,  
All Rights Reserved.";
```

```
Name = "Workflow 1";
```

```
Description = "This workflow sends an  
email.";
```

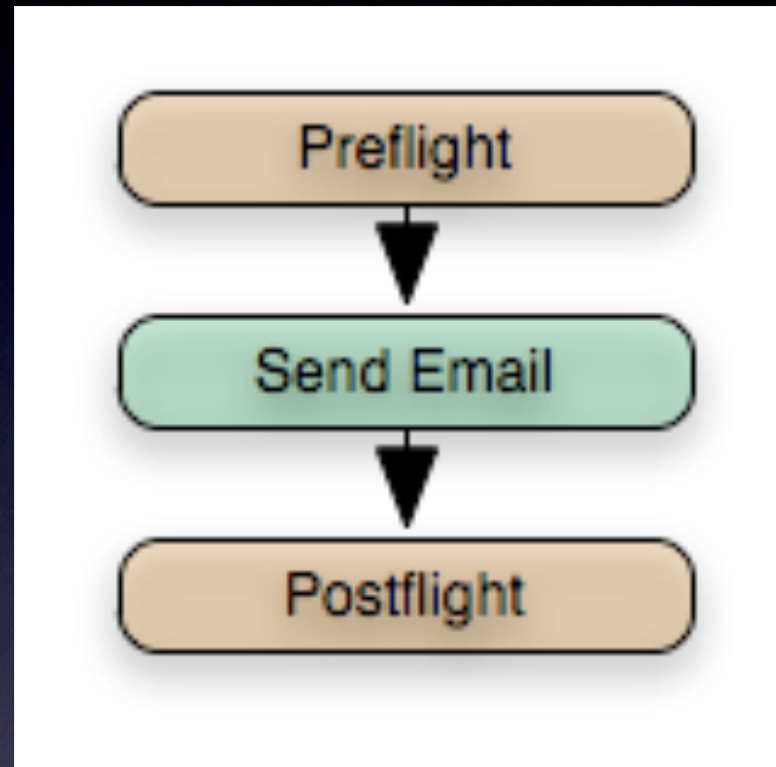
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Info.plist

- CFBundleGetInfoString
- CFBundleName
- CFBundleIdentifier

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Hello World



Workflow at a Glance

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Configure Workflow

- File layout
- Required Elements
- Task Specifications

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File Layout

- Starts with Parenthesis and will end with Parenthesis
- Brackets separated sections; be sure to open and close
- Semicolon for the end of lines

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Workflow Keys

Descriptions

- name - Specifies the name of the Xgrid job
- notificationEmail - Specifies the Xgrid job notification email
- artSpecifications - Specifies the arguments that are passed to the Agent Ranking Tool (ART)
- artConditions - Specifies the conditions for running the job
- taskSpecifications - tasks that are executed

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Require Elements

```
name = "$$Xgrid Job Name$$";
notificationEmail = "$$Administrator Email Address$$";
artSpecifications = {
    0 = {
        artPath = "$$Workflow Resource Path$$/Tools/art.rb";
        artArguments = ("$$Shared Filesystem$$", "$$Server UUID$$");
    };
};
artConditions = {0 = {artEqual = 1; }; };
```

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Task Specifications

```
preflight = {  
    command="/usr/bin/pcastaction";  
    arguments=(  
        preflight,  
        "--basedir=$$Base Directory$$");  
};
```

<Customized Section>

```
postflight = {  
    dependsOnTasks=();  
    command="/usr/bin/pcastaction";  
    arguements=(  
        postflight,  
        "--basedir=$$Base Directory$$");  
};
```

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Customize Hello World

```
email = {
  dependsOnTasks = (preflight);
  command = "/usr/bin/pcastaction";
  arguments = (
    mail,
    "--basedir=$$Base Directory$$",
    "--from=$$User Email Address$$",
    "--to=$$Audience Email List$$, $$User Email Address$$,
      $$Administrator Email Address$$",
    "--smtp=$$SMTP Server$$",
    "--body=Subject:Hello World!");
};
```

* Be sure to update your Postflight dependsOnTasks = (email);

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Now what?

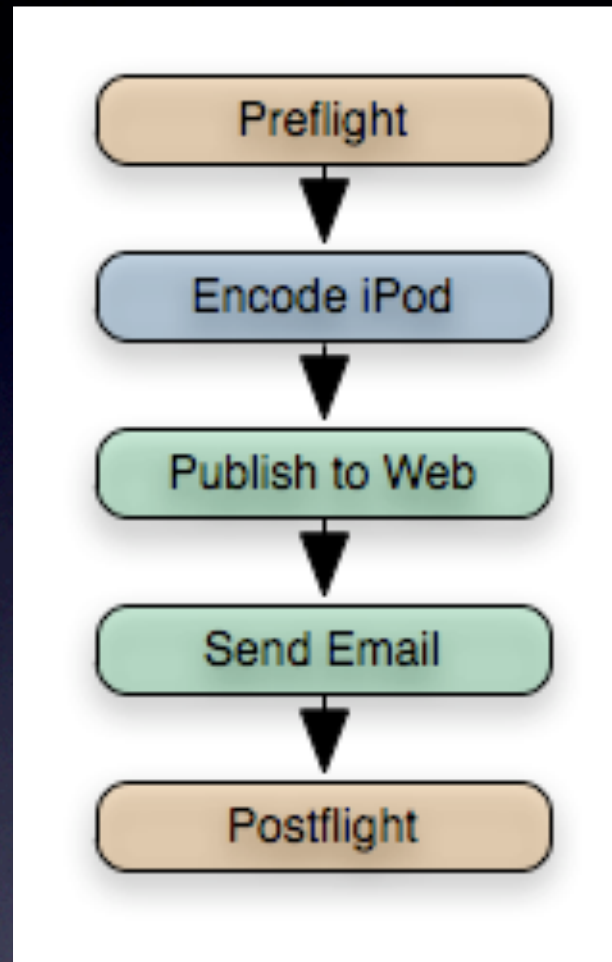
- Copy to `/Library/PodcastProducer/Workflows/` on your server
- Validate Workflow (on the server) by executing

```
sudo /usr/bin/pcastconfig  
--validate_workflow_at_path  
/Library/PodcastProducer/HelloWorld.pcf
```

- Test

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Encode Media



Workflow at a Glance

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Encode Media Update

- Duplicate current workflow and archive
- Update Info.plist
- Update InfoPlist.strings

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Customize Encode Media

```
encode_ipod = {  
    dependsOnTasks = (preflight);  
    command = "/usr/bin/pcastaction";  
    arguments = (  
        encode,  
        "--basedir=$$Base Directory$$",  
        "--input=$$Content File Basename$$$$Content File Extension$$",  
        "--output=$$Content File Basename$$-ipod.m4v",  
        "--encoder=ipod");  
};
```

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Customize Publish Media

```
publish_ipod = {  
  dependsOnTasks = (encode_ipod);  
  command = "/usr/bin/pcastaction";  
  arguments = (  
    publish,  
    "--basedir=$$Base Directory$$",  
    "--web_root=$$Web Document Root$$",  
    "--web_url=$$Web URL$$",  
    "--date=$$Date_YYYY-MM-DD$$",  
    "--title=$$Title$$",  
    "--format=ipod",  
    "--type=video/mp4",  
    "--file=$$Content File Basename$$-ipod.m4v",  
    "--outfile=ipod_publish_description_file.yaml");  
};
```

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Domino Effect

- Update email(= dependsOnTasks=(publish_ipod) "--body_file=ipod_publish_description_file.yaml"
- Update postflight() ?

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Now what?

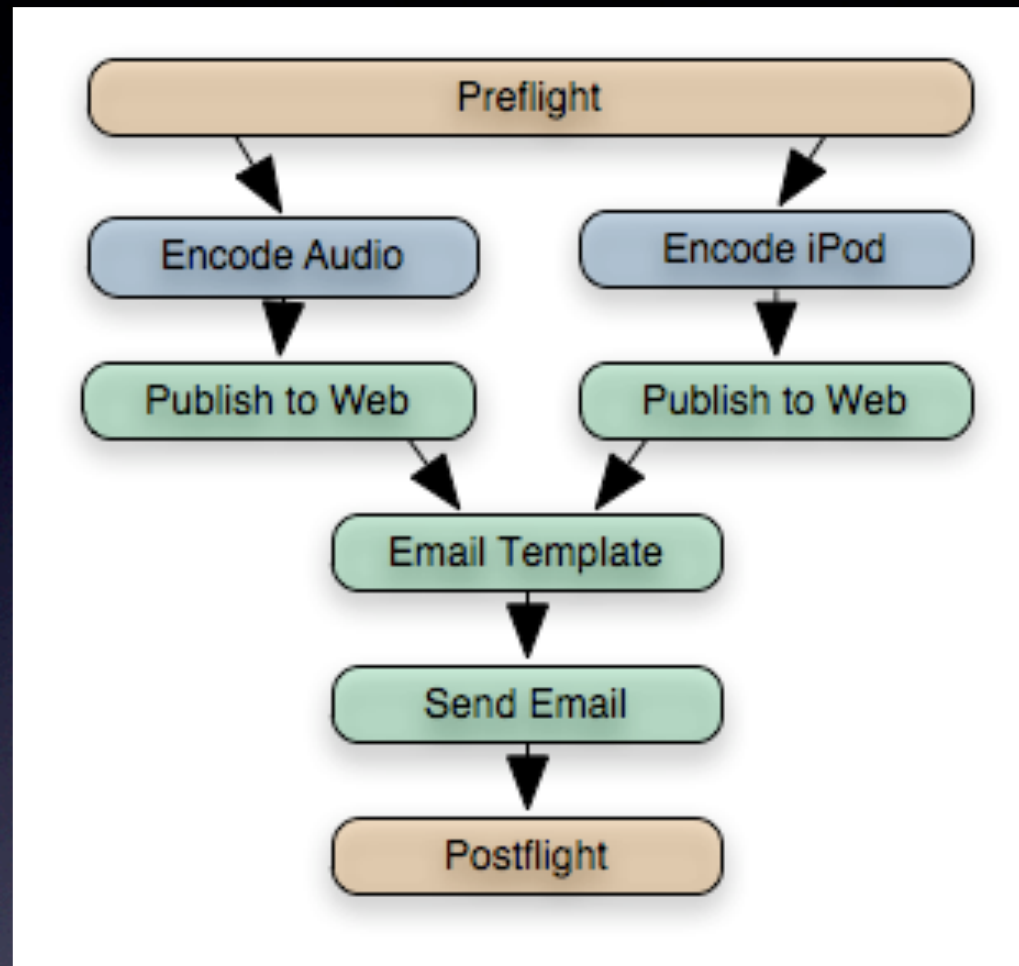
- Copy to `/Library/PodcastProducer/Workflows/` on your server
- Validate Workflow (on the server) by executing

```
sudo /usr/bin/pcastconfig  
--validate_workflow_at_path  
/Library/PodcastProducer/EncodeMedia.pcf
```

- Test

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Parallel Tasks & Mail Templates



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Parallel Tasks Update

- Duplicate current workflow and archive
- Update Info.plist
- Update InfoPlist.strings

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Customize Parallel Tasks

```
encode_audio = {  
    dependsOnTasks = (preflight);  
    command = "/usr/bin/pcastaction";  
    arguments = (  
        encode,  
        "--basedir=$$Base Directory$$",  
        "--input=$$Content File Basename$$$$Content File Extension$$",  
        "--output=$$Content File Basename$$-audio.m4a",  
        "--encoder=mp4_audio_high");  
};
```

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Customize Publish Parallel Tasks

```
publish_audio = {  
  dependsOnTasks = (encode_audio);  
  command = "/usr/bin/pcastaction";  
  arguments = (  
    publish,  
    "--basedir=$$Base Directory$$",  
    "--web_root=$$Web Document Root$$",  
    "--web_url=$$Web URL$$",  
    "--date=$$Date_YYYY-MM-DD$$",  
    "--title=$$Title$$",  
    "--format=audio",  
    "--type=audio/mp4a-latm",  
    "--file=$$Content File Basename$$-audio.m4a",  
    "--outfile=audio_publish_description_file.yaml");  
};
```

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Domino Effect

- Need to create a second email(), how will users find the audio?

OR

- Need something to collect ipod and audio information together

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Customize Mail Template

```
template_mail = {  
  dependsOnTasks = ( publish_audio, publish_ipod );  
  command = "/usr/bin/pcastaction";  
  arguments = (  
    template,  
    "--basedir=$$Base Directory$$",  
    "--template=$$Workflow Resource Path$$/Templates/mail.txt.erb",  
    "--output=mail.txt");  
};
```

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Mail Templates Info

- To properly format mail messages, you will write an Embedded Ruby (ERB) template file.
- Lines starting with `%#` are comments.
- Lines starting with `%` are lines of Ruby code.
- A Ruby expression is enclosed between `<%=` and `%>`.

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Mail Templates ERB Functions

- `quotify: def self.quotify(string)
 '""' + string + '""'
end`
- `braketify: '<' + string + '>'`
- `emailify: quotify(name) + ' ' + braketify(address)`
- `localized_date: date formatted based you locale`

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Domino Effect

- Add mail.txt.erb
- Update email()
dependsOnTasks = (template_mail);
"--body_file=mail.txt"
- Update postflight() ?

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Now what?

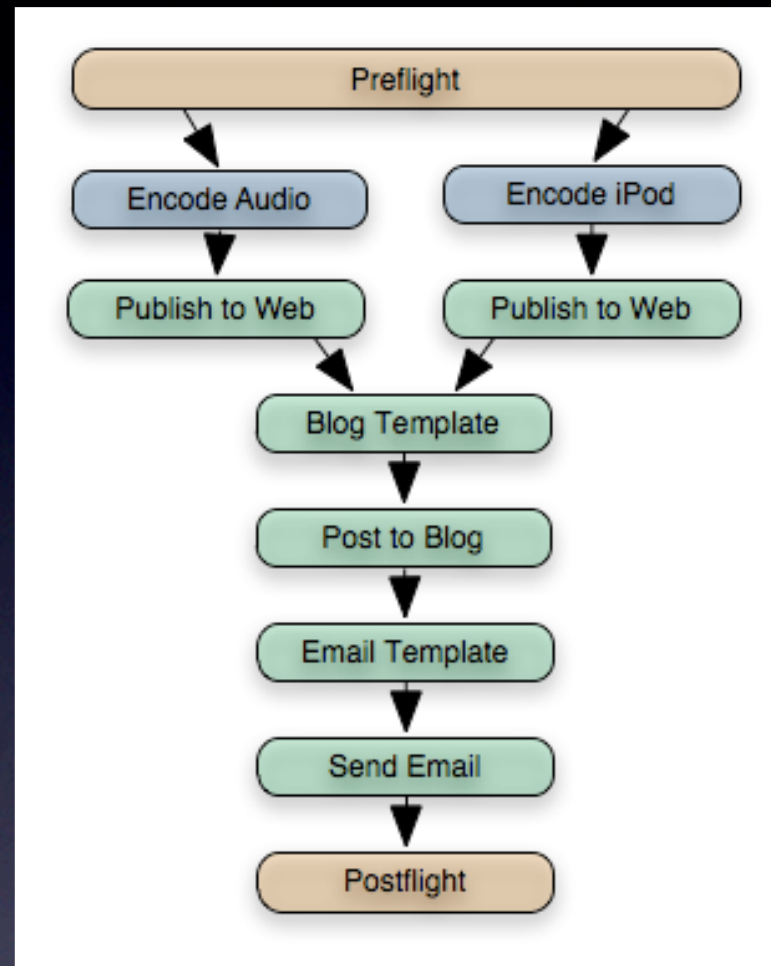
- Copy to `/Library/PodcastProducer/Workflows/` on your server
- Validate Workflow (on the server) by executing

```
sudo /usr/bin/pcastconfig  
--validate_workflow_at_path  
/Library/PodcastProducer/ParallelTemplate.pcf
```

- Test

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Group Blog



Workflow at a Glance

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Group Blog Update

- Duplicate current workflow and archive
- Update Info.plist
- Update InfoPlist.strings

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iPod Poster Image

- Update `publish_ipod()`
"`--create_poster_image`"
- Don't forget formatting, add a comma after the `--outfile` tag.

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Group Blog Template

```
template_groupblog = {  
  dependsOnTasks = (publish_ipod, publish_audio);  
  command = "/usr/bin/pcastaction";  
  arguments = (  
    template,  
    "--basedir=$$Base Directory$$",  
    "--template=$$Workflow Resource Path$$/Templates/groupblog.html.erb",  
    "--output=groupblog.html");  
};
```

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Group Blog

```
groupblog = {
  dependsOnTasks = (template_groupblog);
  command = "/usr/bin/pcastaction";
  arguments = (
    groupblog,
    "--basedir=$$Base Directory$$",
    "--server_url=$$Groups Web Server URL$$",
    "--group=$$Group Short Name$$",
    "--username=$$Groups Administrator Username$$",
    "--pcast_server=$$Podcast Producer URL$$",
    "--otp=###Groups Administrator Username:Groups Administrator Password###",
    "--authorize=$$User Short Name$$",
    "--title=$$Title$$",
    "--content_file=groupblog.html",
    "--enclosure_description_file=ipod_publish_description_file.yaml",
    "--enclosure_description_file=audio_publish_description_file.yaml",
    "--outfile");
};
```

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Domino Effect

- Add `groupblog.html.erb`
- Update `template_mail()`
`dependsOnTasks = (groupblog);`

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Now what?

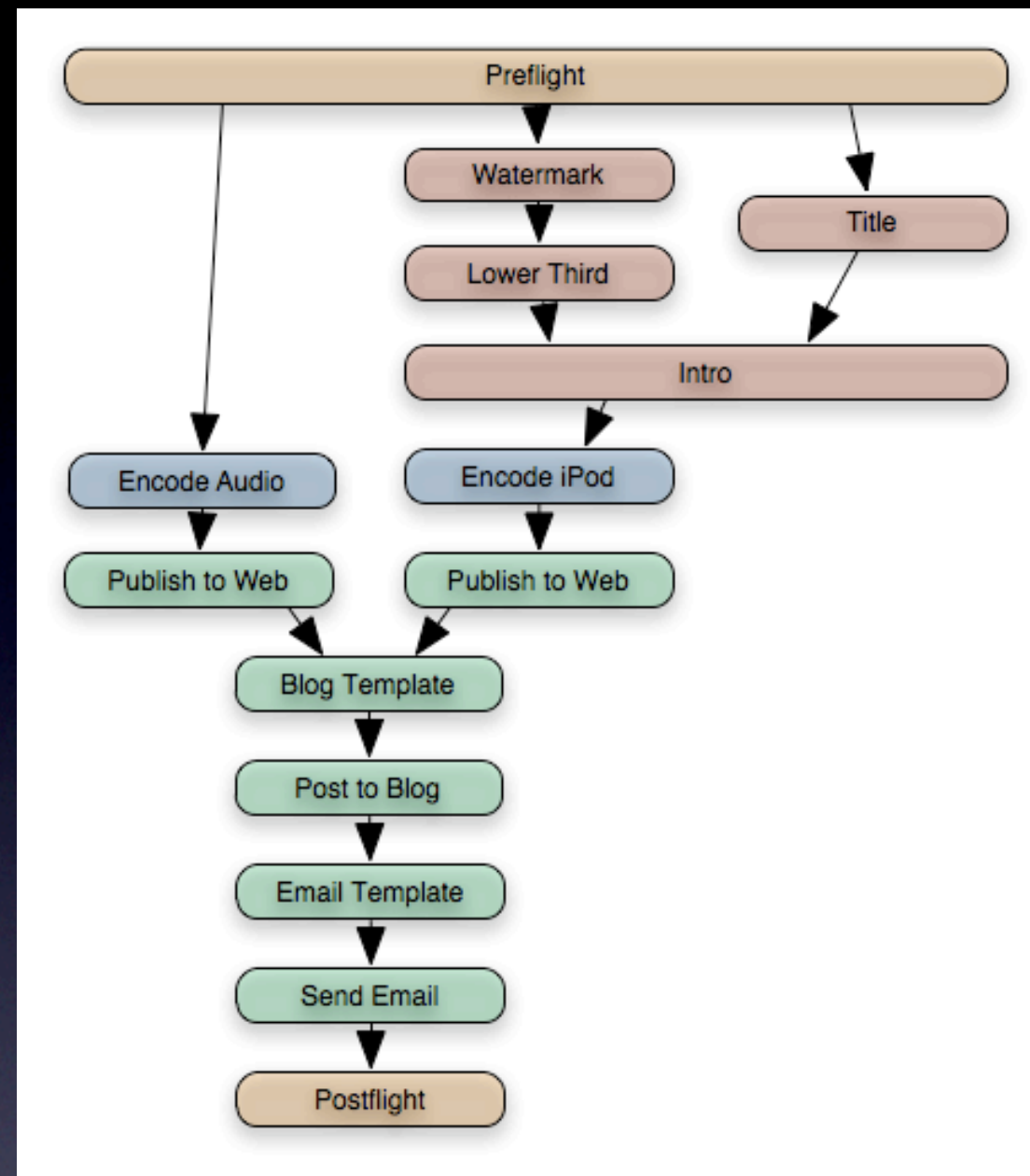
- Copy to `/Library/PodcastProducer/Workflows/` on your server
- Validate Workflow (on the server) by executing

```
sudo /usr/bin/pcastconfig  
--validate_workflow_at_path  
/Library/PodcastProducer/GroupBlog.pcf
```

- Test

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Watermarks, Titles, Quartz Composer, Intros



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Watermarks Update

- Duplicate current workflow and archive
- Update Info.plist
- Update InfoPlist.strings

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Watermarks and Title

Watermark and Intro

- Needs to be stored into the Workflow to allow Xgrid Agents to process.
- Copy to WaterQuartzIntro.pwf/Contents/Resources/Compositions/
 - Watermark goes in “Images” folder
 - Intro goes in “Movies” folder

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Customize Watermarks

```
watermark = {  
    dependsOnTasks = (preflight);  
    command = "/usr/bin/pcastaction";  
    arguments = (  
        watermark,  
        "--basedir=$$Base Directory$$",  
        "--watermark=$$Workflow Resource Path$$/Images/Watermark.png",  
        "--input=$$Content File Basename$$$$Content File Extension$$",  
        "--output=$$Content File Basename$$-watermarked.mov" );  
};
```

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Customize Titles

```
title = {
  dependsOnTasks = (preflight);
  command = "/usr/bin/pcastaction";
  arguments = (
    title,
    "--basedir=$$Base Directory$$",
    "--output=Introduction.mov",
    "--title=$$Title$$",
    "--input=$$Workflow Resource Path$$/Movies/Introduction.mov",
    "--composition=$$Titling Composition$$",
    "--author=$$User Full Name$$",
    //"--date=Today",
    "--offset=8.25",
    "--duration=20",
    "--organization=$$Organization$$");
};
```

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Quartz Composer

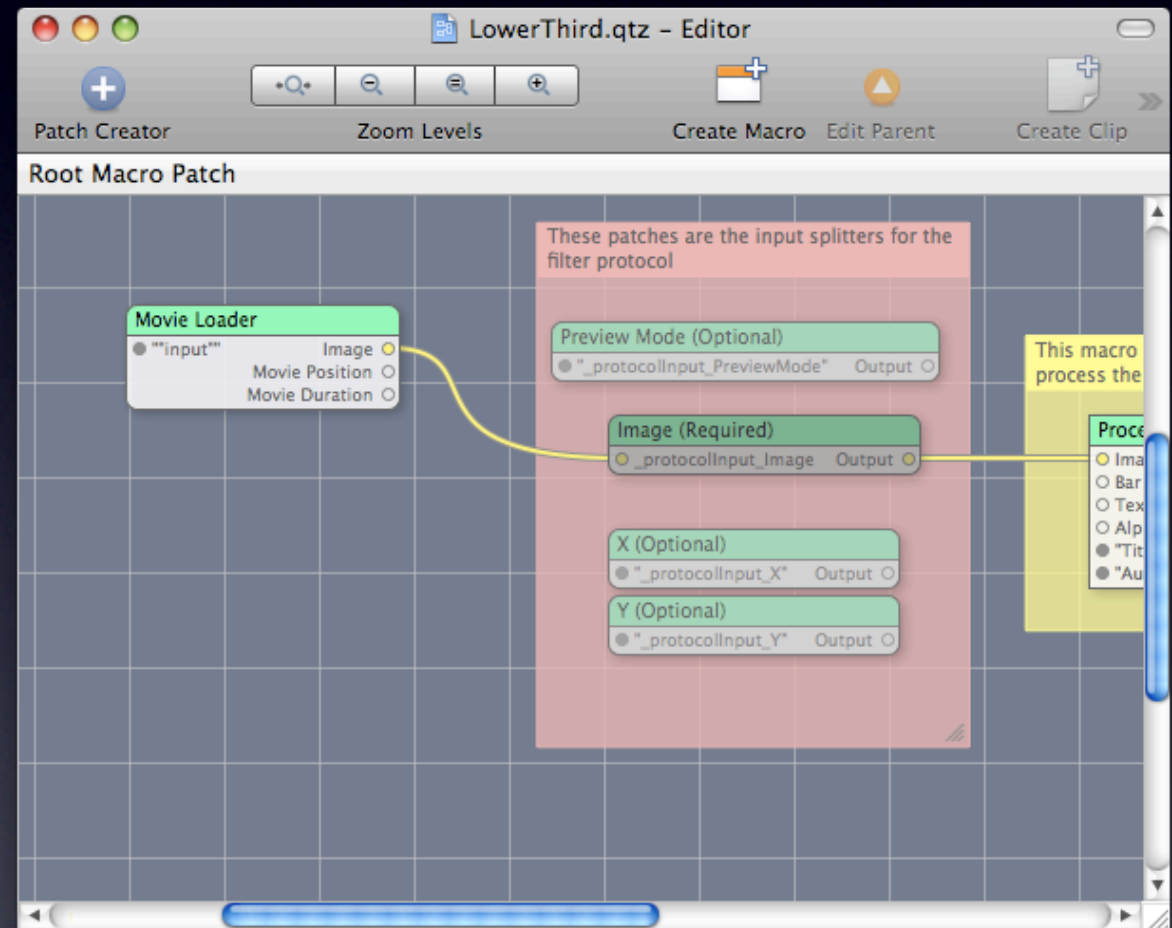
Lower Third.qtz

- Needs to be stored into the Workflow to allow Xgrid Agents to process.
- Copy to WaterQuartzIntro.pwf/Contents/Resources/Compositions/

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Modify Lower Third

- Rename LowerThird.qtz
- Open
- Patch Creator to add Movie Loader
- Control-click, select Published Inputs > Movie Location
- Change the text to be “input”
- Connect the Movie Loader output called ‘image’ to the input of “Image (Required)”



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Customize Quartz Composer

```
lower_third = {
  dependsOnTasks = (watermark);
  command = "/usr/bin/pcastaction";
  arguments = (
    qceffect,
    "--basedir=$$Base Directory$$",
    "--composition=$$Workflow Resource Path$$/Compositions/LowerThird.qtz",
    "--input=$$Content File Basename$$-watermarked.mov",
    "--output=$$Content File Basename$$-lower_third.mov",
    "--",
    "--Title",
    "$$Title$$",
    "--Author",
    "$$User Full Name$$");
};
```

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Intro Video

Customize Intro Video

```
intro = {  
  dependsOnTasks = (lower_third, title);  
  command = "/usr/bin/pcastaction";  
  arguments = (  
    merge,  
    "--basedir=$$Base Directory$$",  
    "--input1=Introduction.mov",  
    "--input2=$$Content File Basename$$-lower_third.mov",  
    "--transition=$$Quartz Composer Intro Transition$$",  
    "--duration=$$Intro Transition Duration$$",  
    "--output=$$Content File Basename$$-watermarked-titled-intro.mov");  
};
```

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Domino Effect

- Update `encode_ipod()`
- `dependsOnTasks = (intro);`
- `"--input=$$Content File Basename$$-watermarked-titled-intro.mov"`

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Now what?

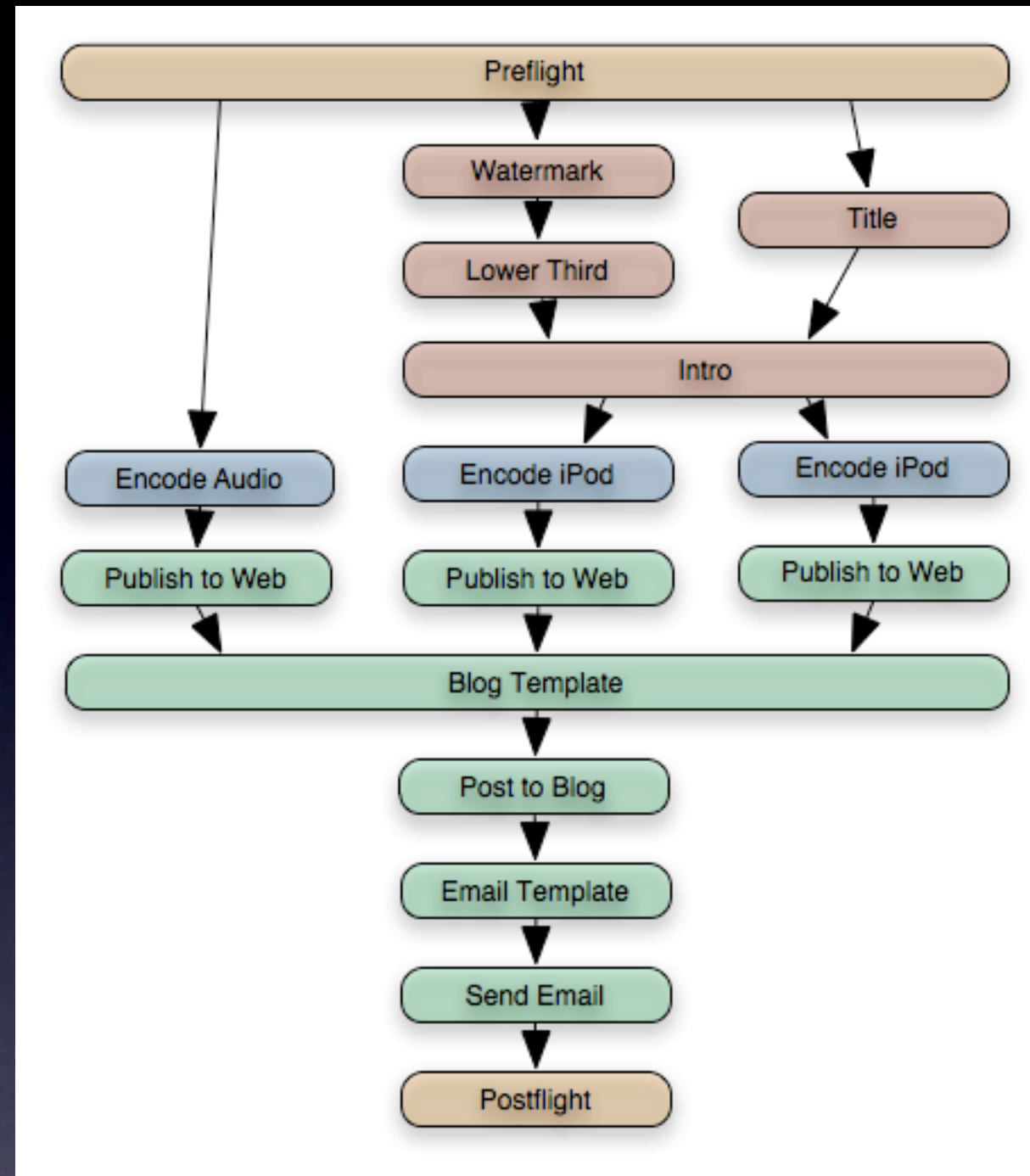
- Copy to `/Library/PodcastProducer/Workflows/` on your server
- Validate Workflow (on the server) by executing

```
sudo /usr/bin/pcastconfig  
--validate_workflow_at_path  
/Library/PodcastProducer/WaterQuartzIntro.pcf
```

- Test

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YouTube



Workflow at a Glance

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YouTube Update

- Duplicate current workflow and archive
- Update Info.plist
- Update InfoPlist.strings

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Customize YouTube

```
encode_youtube = {  
    dependsOnTasks = (intro);  
    command = "/usr/bin/pcastaction";  
    arguments = (  
        encode,  
        "--basedir=$$Base Directory$$",  
        "--input=$$Content File Basename$$-watermarked-titled-intro.mov",  
        "--output=$$Content File Basename$$-youtube.m4v",  
        "--encoder=h264");  
};
```

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Customize YouTube

```
publish_youtube = {  
  dependsOnTasks = (encode_ipod);  
  command = "/usr/bin/pcastaction";  
  arguments = (  
    shell,  
    "--basedir=$$Base Directory$$",  
    "--",  
    "$$Workflow Resource Path$$/Tools/Uploader.class",  
    "$$Title$$",  
    "$$Content File Basename$$-youtube.m4v",  
    "$$YouTube Login$$",  
    "$$YouTube Password$$");  
};
```

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Uploader.java

- <http://developer.apple.com/mac/articles/server/podcastproduceryoutube.html>
- Download Uploader Project.dmg

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<http://macpres09.shownets.net>

Google API

- Acquire a Google Developer API key and Client ID

<http://code.google.com/apis/youtube/dashboard/>

- Download the Java Google API's, move all of the .jar files into /Library/Java/Extensions

- Download the additional mail.jar and activation.jar into /Library/Java/Extensions

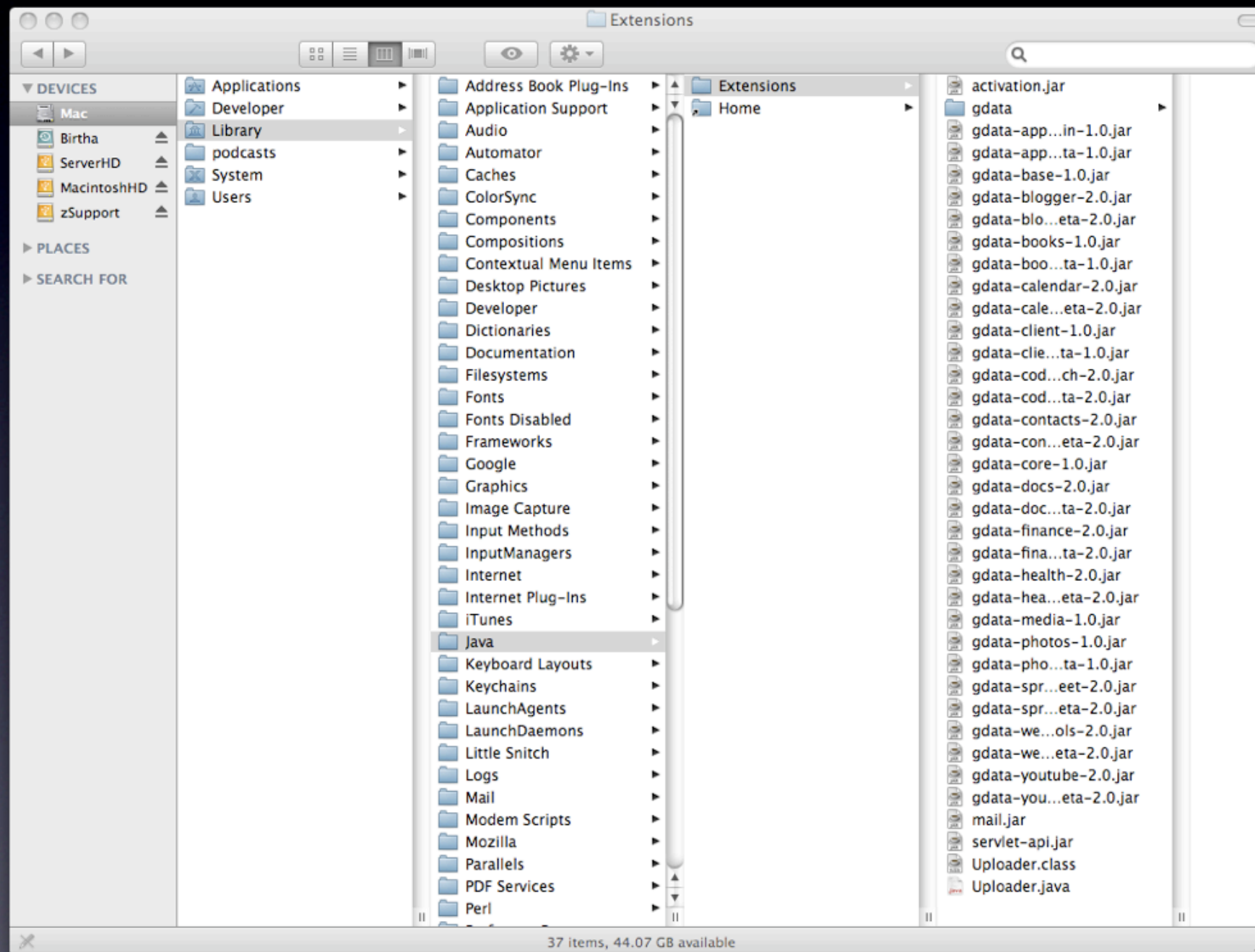
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Google API

- Populate the sample Uploader.java file with the Google Developer and Client Keys
- Compile the modified Uploader.java file (javac Uploader.java) - a proper compile will yield no errors on the command line.

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Google API



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PCP Preferences

- \$\$YouTube Login\$\$
- \$\$YouTube Password\$\$

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Now what?

- Copy to `/Library/PodcastProducer/Workflows/` on your server
- Validate Workflow (on the server) by executing

```
sudo /usr/bin/pcastconfig  
--validate_workflow_at_path  
/Library/PodcastProducer/YouTube.pcf
```

- Test

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Q&A

<http://bit.ly/Macworld-IT844>

Resources

- http://manuals.info.apple.com/en_US/Podcast_Producer_Admin_v10.5.pdf
- http://images.apple.com/server/macosx/docs/Command_Line_Admin_v10.5.pdf
- <http://podcastproducer.org/>
- TextMate - <http://macromates.com/>
- OmniGraffle - <http://www.omnigroup.com/applications/OmniGraffle/>

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Resources

- <http://developer.apple.com/mac/articles/server/podcastproduceryoutube.html>
- <http://code.google.com/support/bin/answer.py?answer=78455>
- <http://developer.apple.com/mac/articles/server/podcastproducercommandline.html>

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Thank You

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