利用AWS S3 + Lambda运行ffmpeg获取视频首关键帧

方案说明

提取视频首关键帧，保存成图片。

利用AWS S3 + Lambda处理方式。上传视频到S3指定的存储桶时，将触发S3事件，触发事件将传递事件给Lambda，由Lambda完成视频处理。

视频处理可以利用ffmpeg开源软件，ffmpeg目前在AWS SAM上已经提供对应的Lambda layer（类似依赖包）。使用时只要把对应的layer引入到Lambda函数中。

前提条件

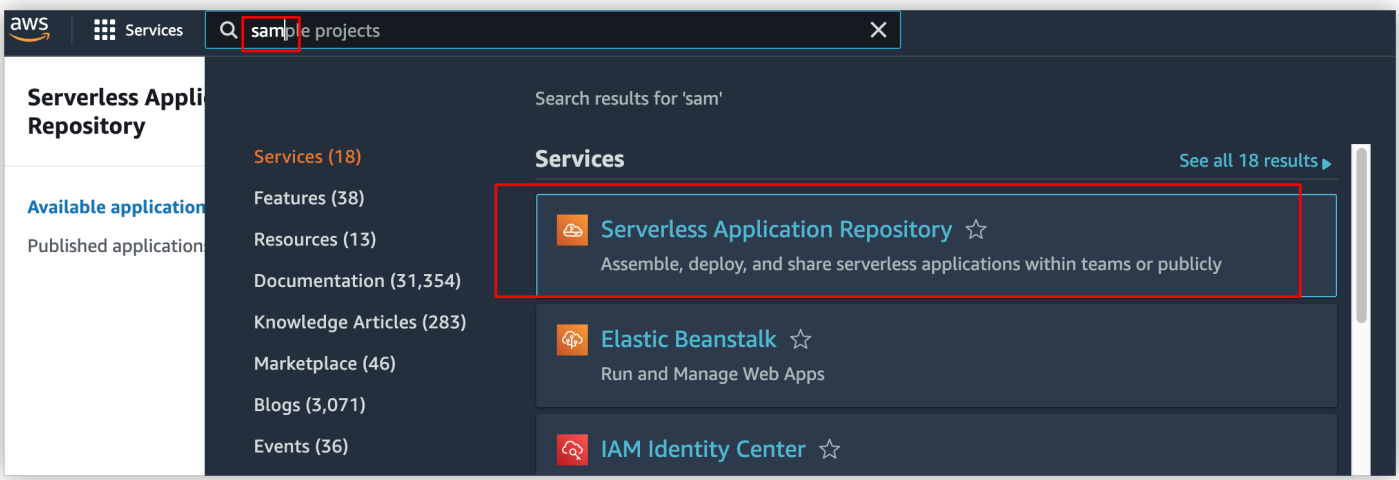
提供两个同区域的存储桶，分别是目标和来源。

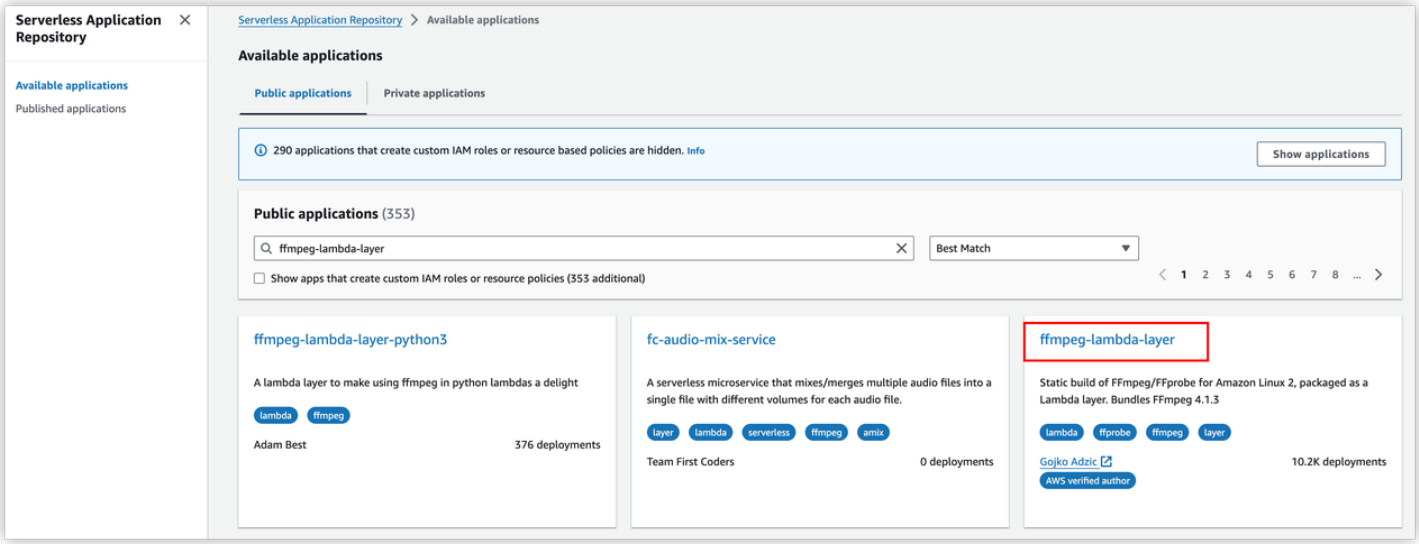
来源桶要求：vod-source-ap-southeast-1-xxx。来源桶下建议创建子目录，用于上传来源视频文件：

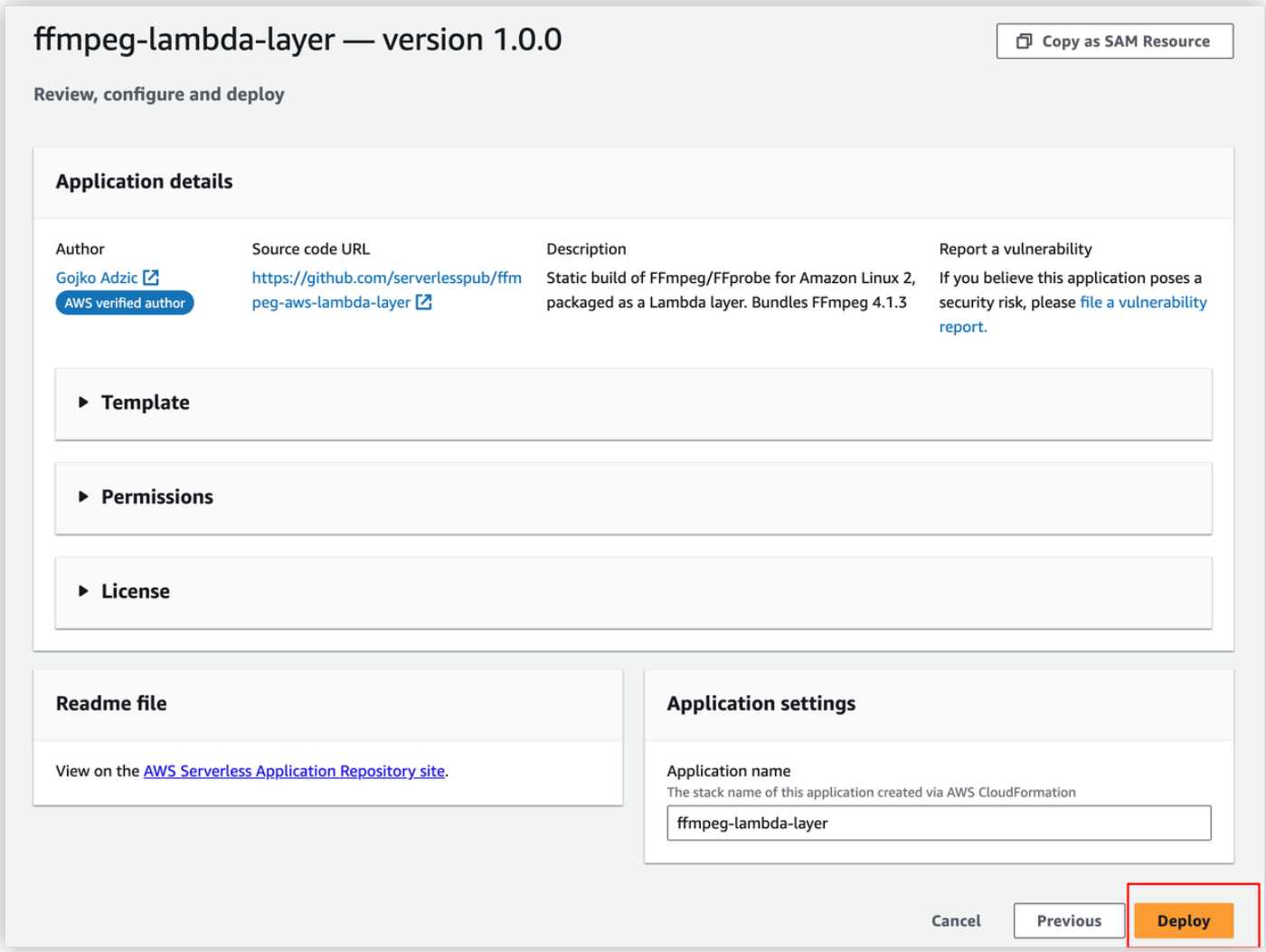
目标桶要求：vod-destination-ap-southeast-1-xxx。目标桶创建子目录，用于保存图片。

方案部署

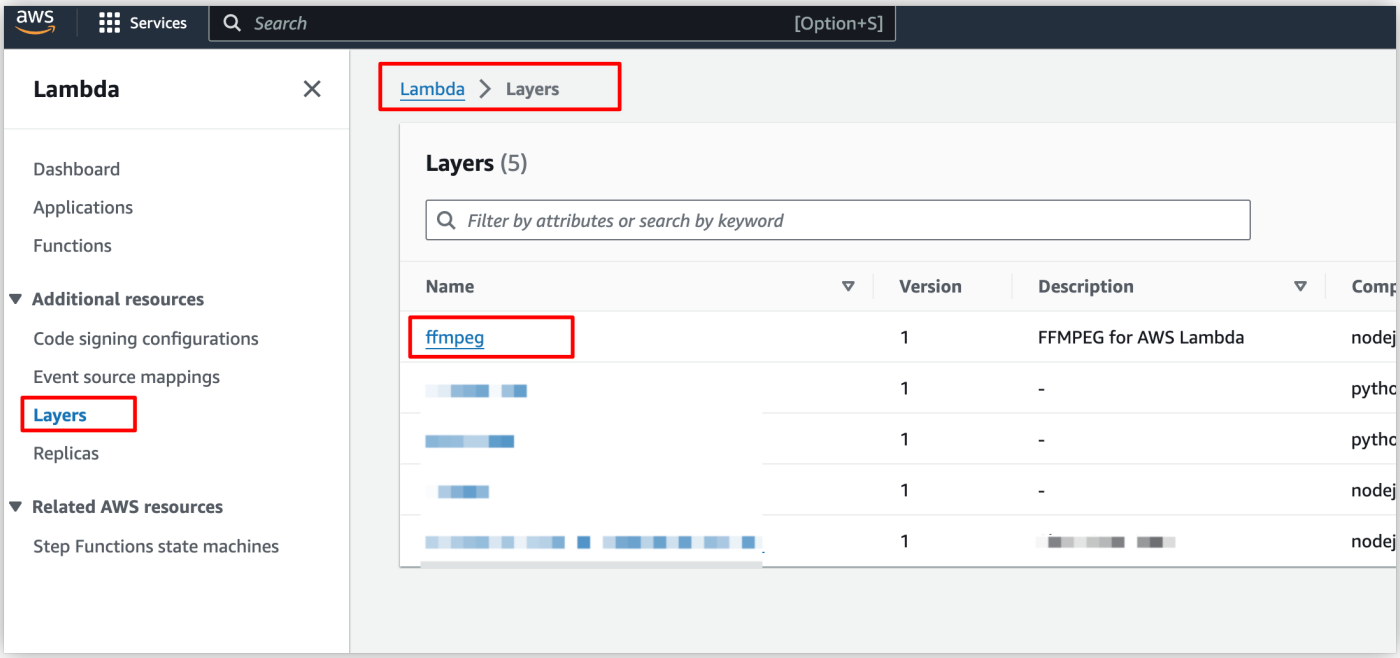
1.从SAM部署ffmpeg到 lambda layer

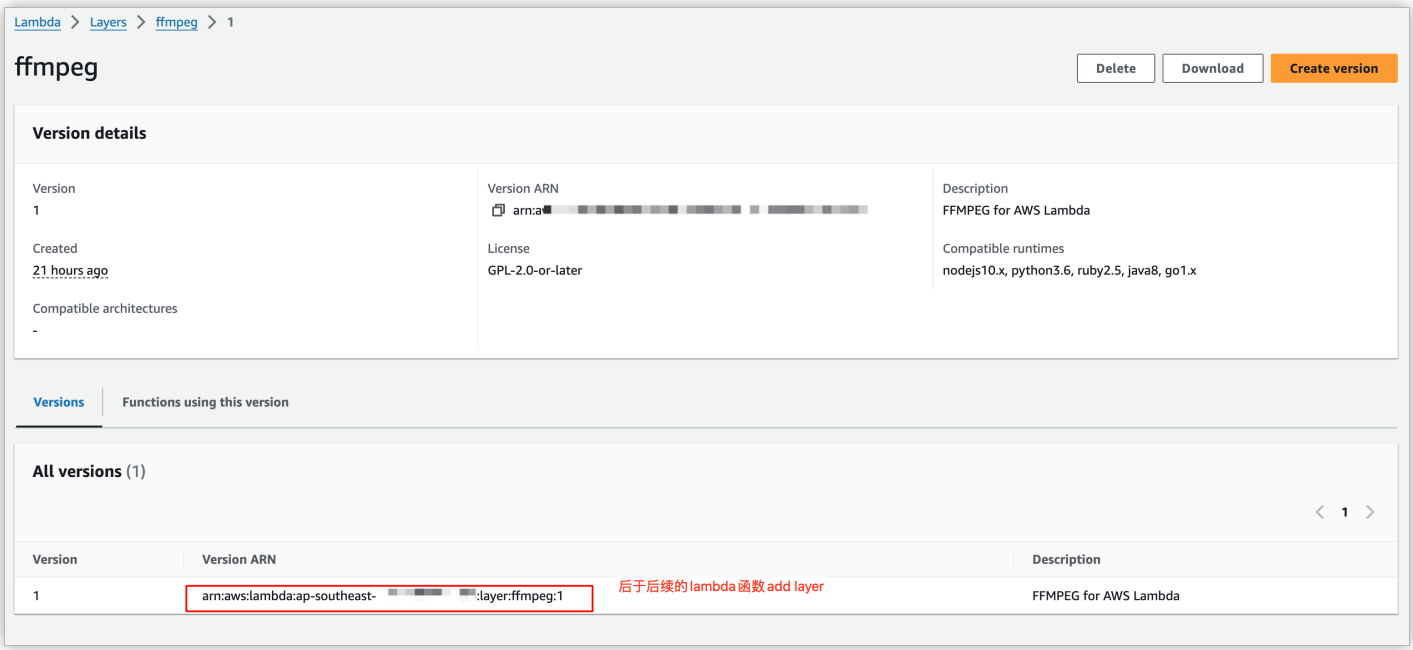




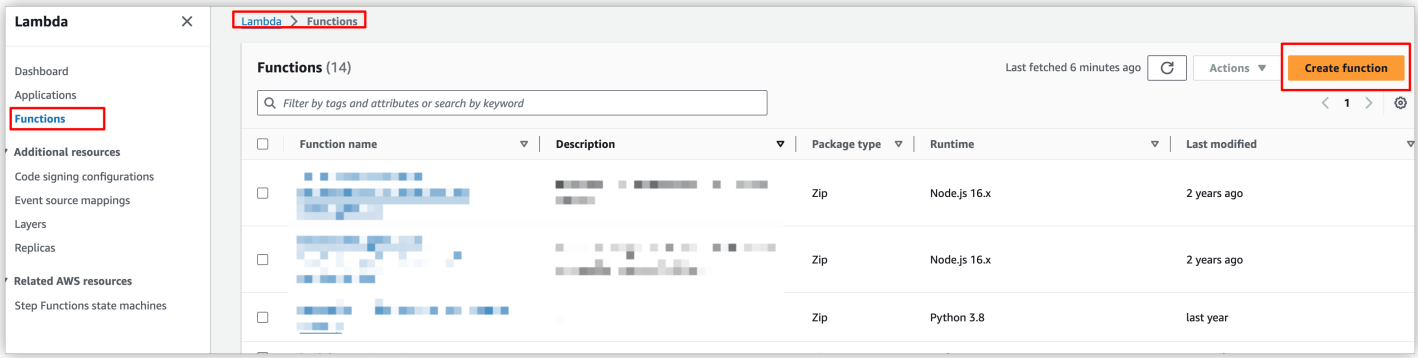


2.查看已部署的layer

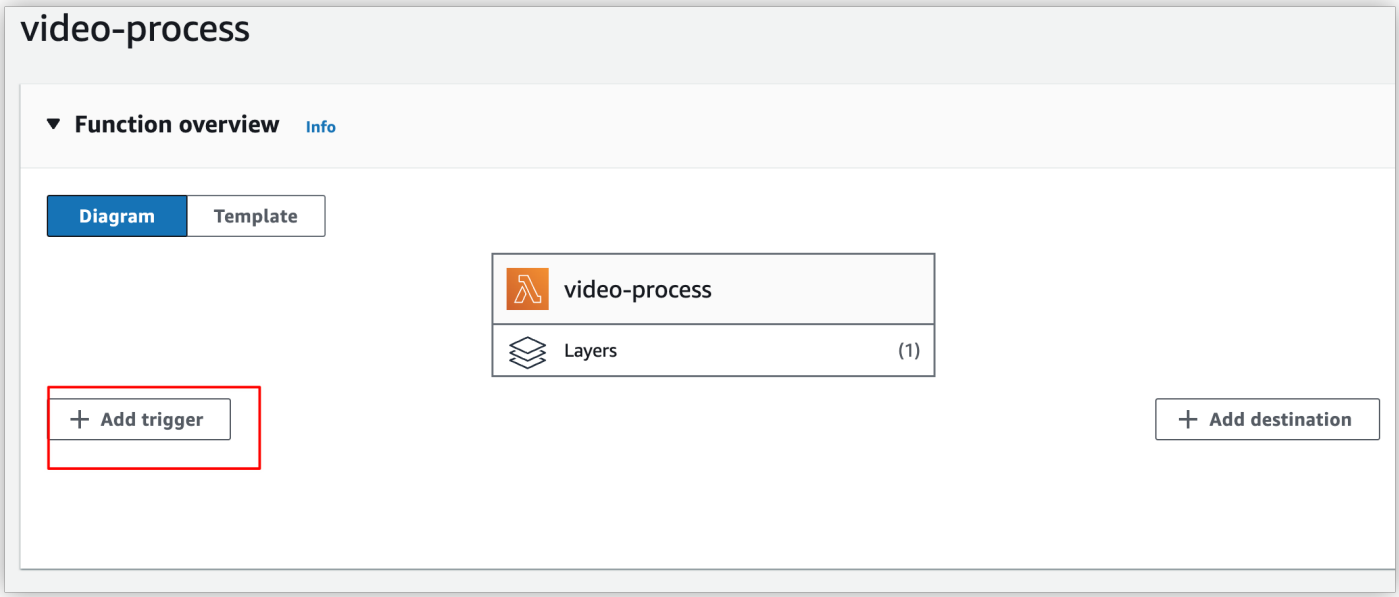




3.创建lambda函数



4.为lambda添加一个触发器，例如：S3是事件源



Add trigger

Trigger configuration Info

S3
aws asynchronous storage

Bucket

Choose or enter the ARN of an S3 bucket that serves as the event source. The bucket must be in the same region as the function.

s3/vod-destination-ap-southea

Bucket region: ap-southeast-1

Event types

Select the events that you want to have trigger the Lambda function. You can optionally set up a prefix or suffix for an event. However, for each bucket, individual events cannot have multiple configurations with overlapping prefixes or suffixes that could match the same object key.

All object create events

Prefix - *optional*

Enter a single optional prefix to limit the notifications to objects with keys that start with matching characters.

video-input

Suffix - *optional*

Enter a single optional suffix to limit the notifications to objects with keys that end with matching characters.

.mp4

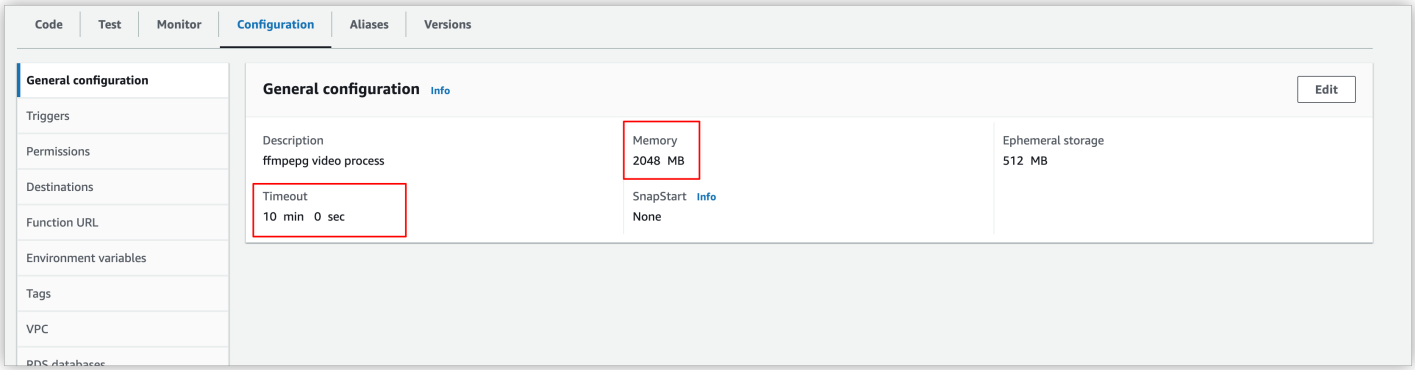
Recursive invocation

If your function writes objects to an S3 bucket, ensure that you are using different S3 buckets for input and output. Writing to the same bucket increases the risk of creating a recursive invocation, which can result in increased Lambda usage and increased costs. Learn more

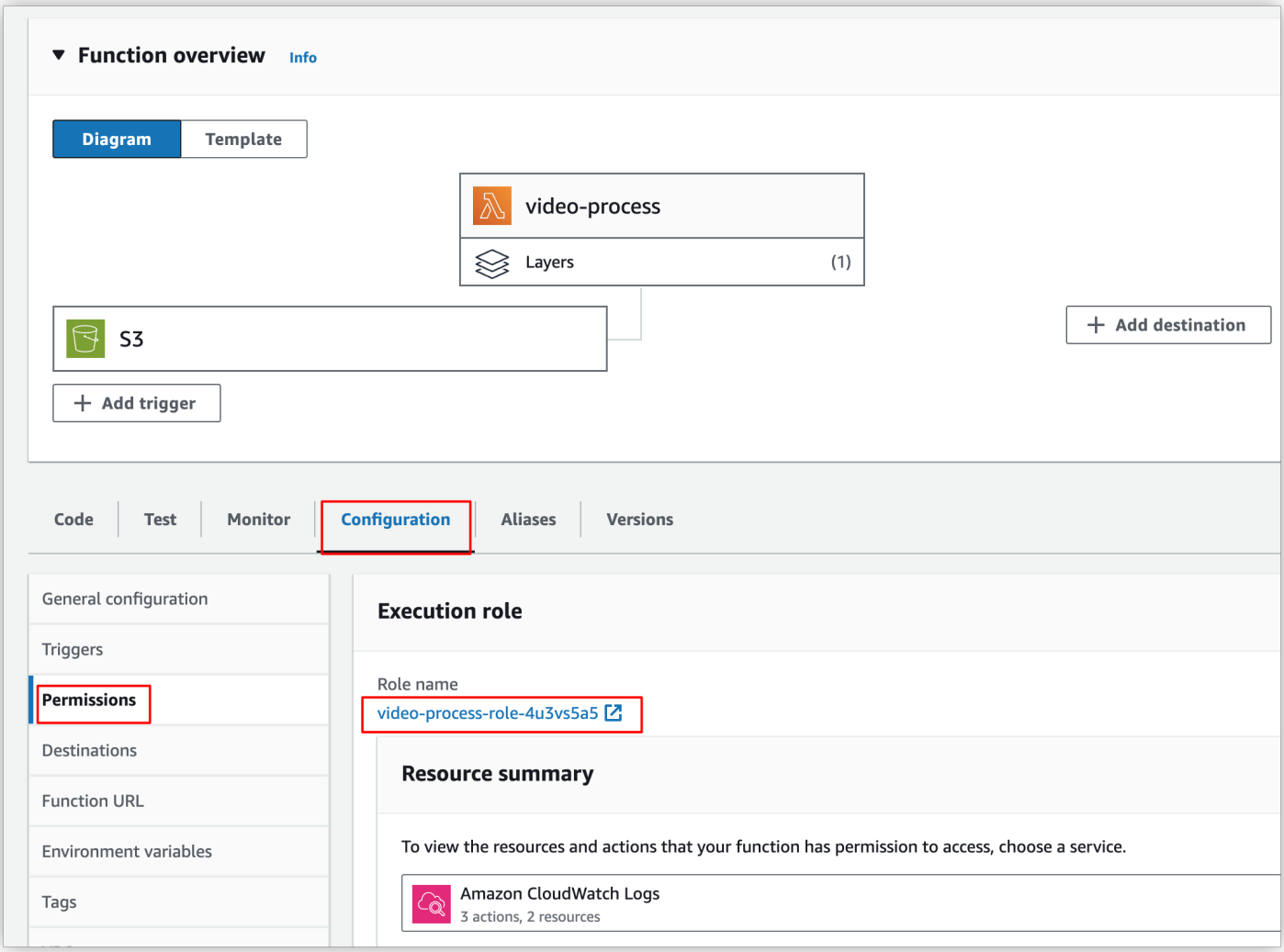
I acknowledge that using the same S3 bucket for both input and output is not recommended and that this configuration can cause recursive invocations, increased Lambda usage, and increased costs.

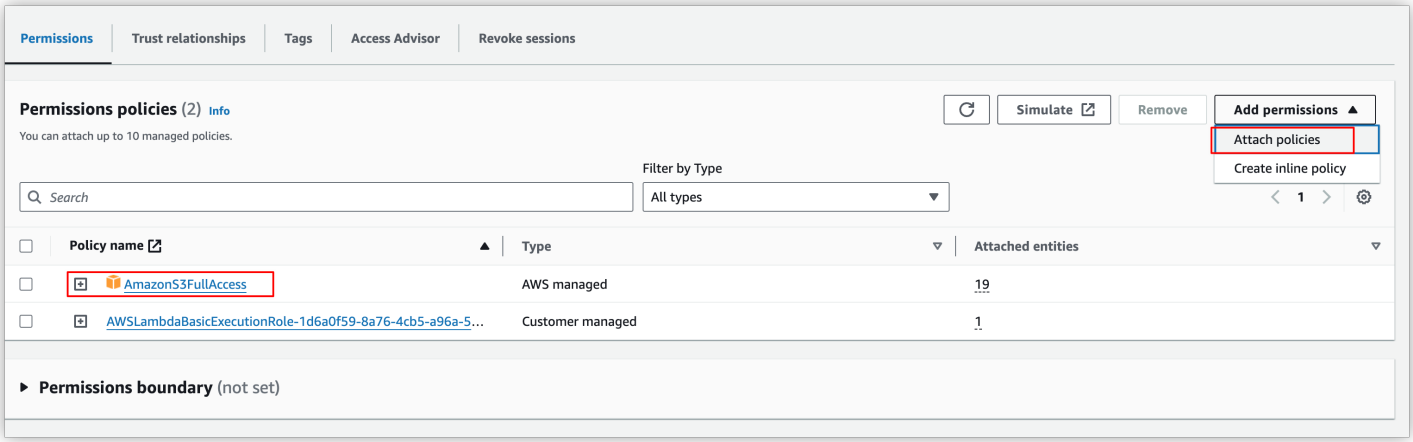
Lambda will add the necessary permissions for AWS S3 to invoke your Lambda function from this trigger. Learn

5.配置lambda基础配置，执行超时时间10分钟，可用内存2028M（视频可能较大）

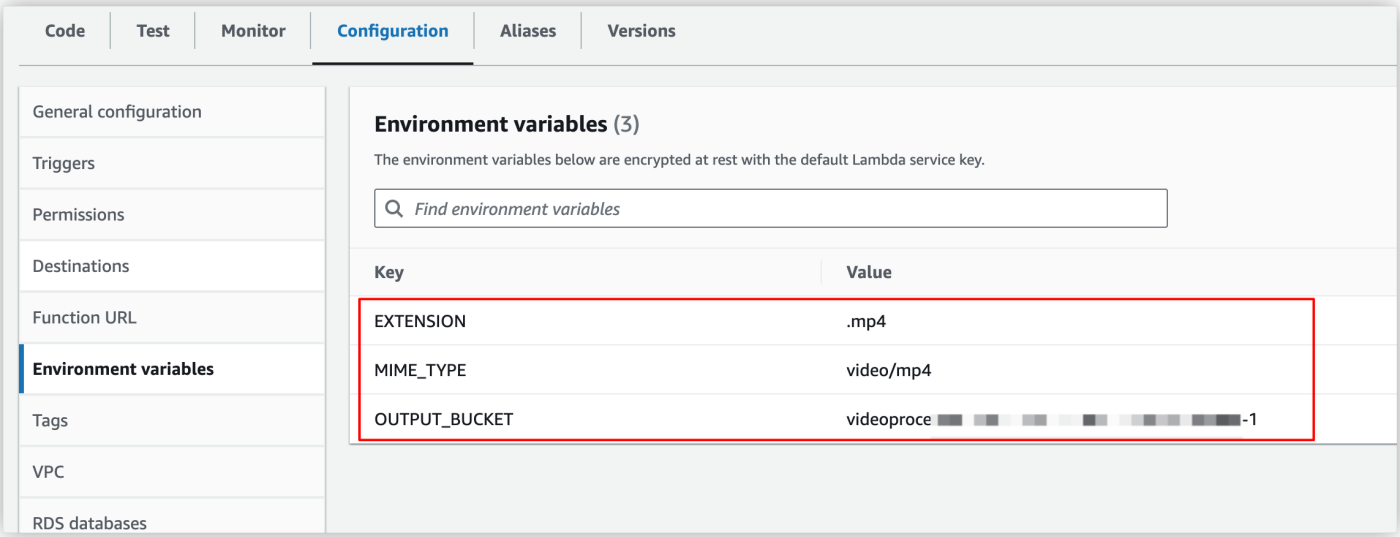


6.配置权限，新建lambda函数会自动生成一个角色，权限设置是对这个角色，这里配置是增加S3存储桶。（按照最小权限原则，在iam里可以设置到具体的桶和目录）

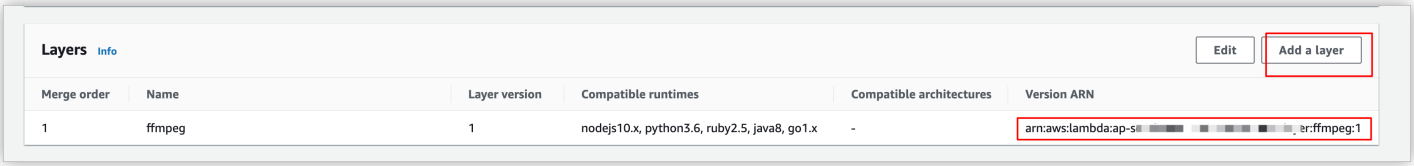




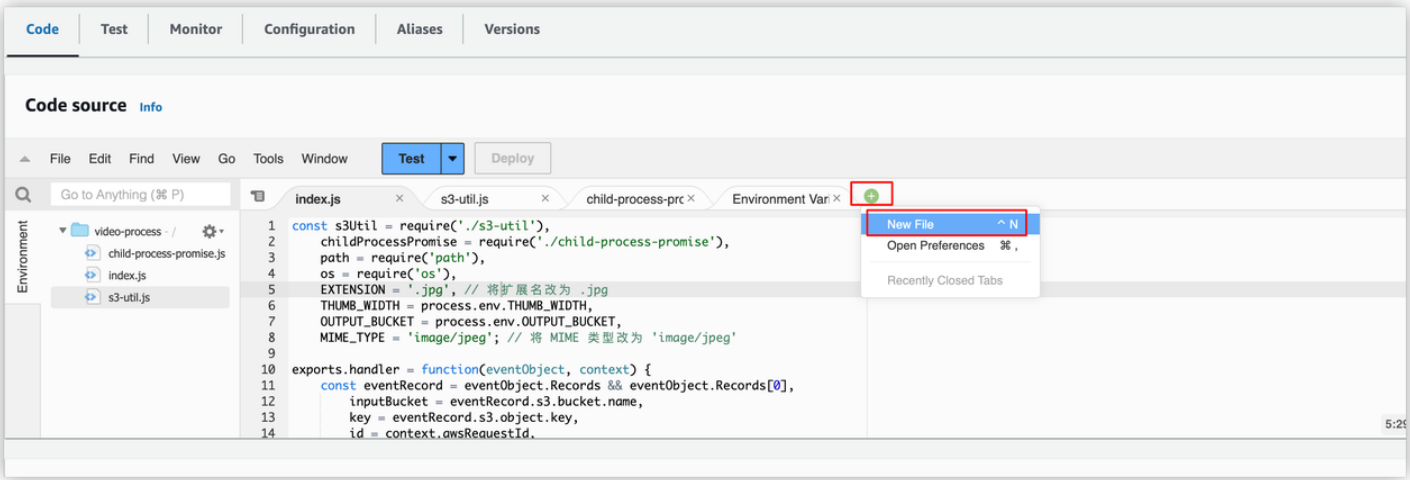
7.设置lambda变量环境，这里设置了三个参数：文件扩展名、S3的元数据、输出的目标存储桶。



8.添加层到这个函数（ARN来自第2步）



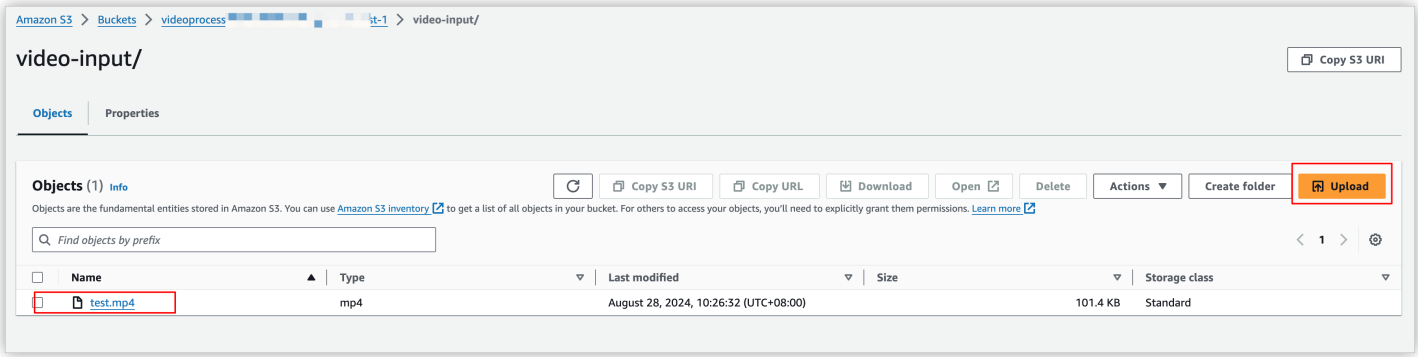
9.添加代码



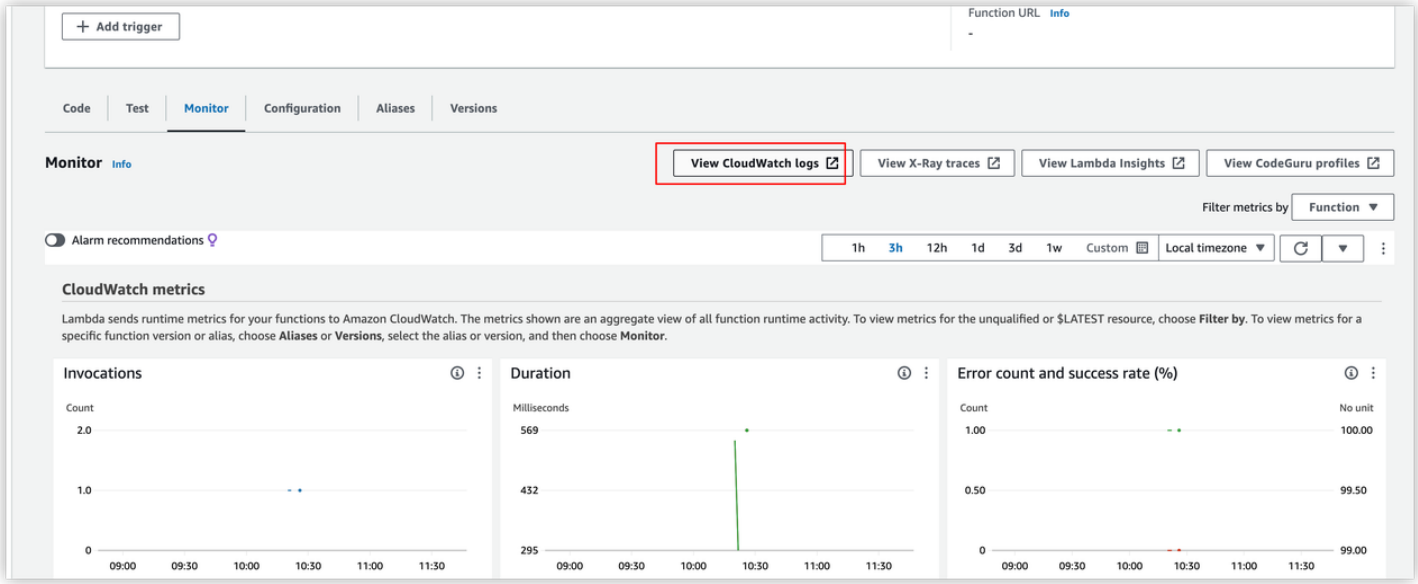
把代码贴到具体的脚本里。

验证

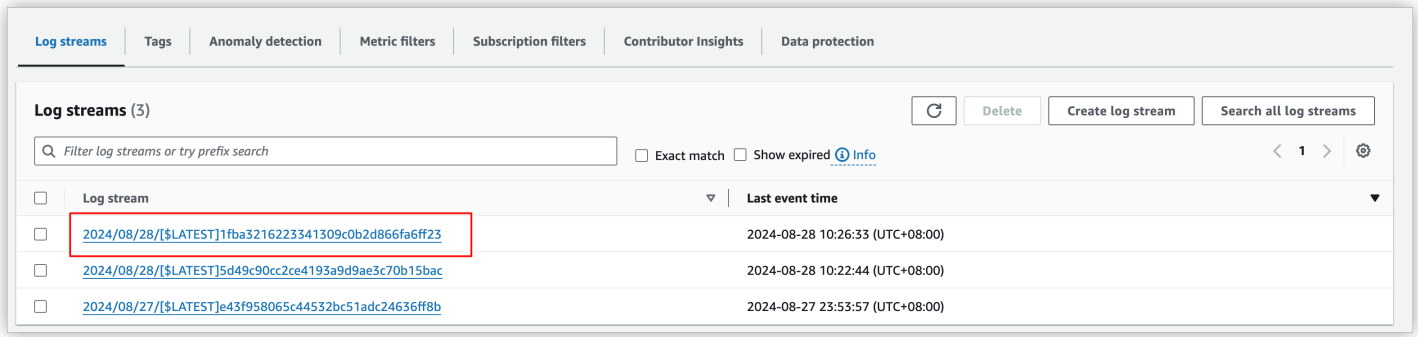
1.上传视频



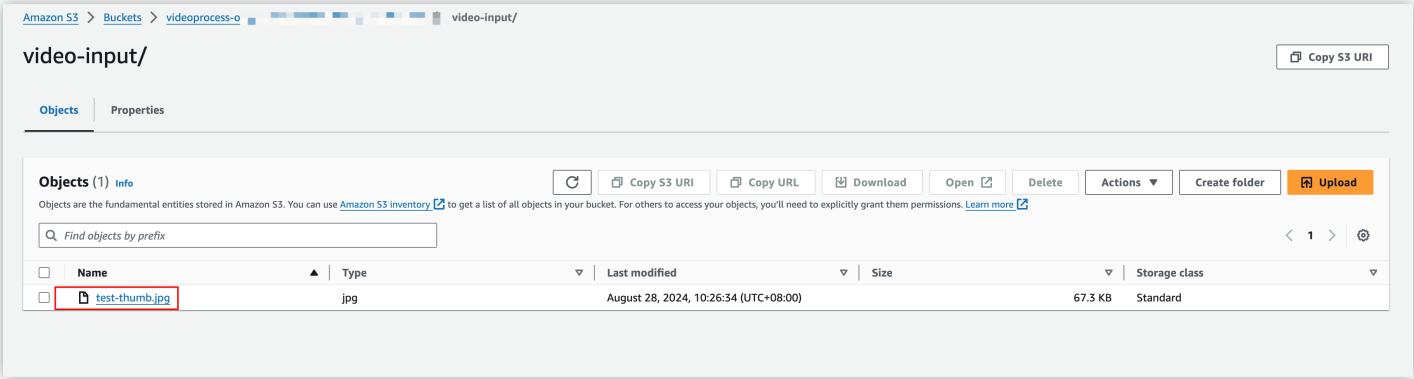
2.查看监控



3.查看日志



4.查看输出



结论

符合预期，提取了视频的首要关键帧。

交付的内容是文档、三个脚本

参考

https://blog.csdn.net/ht_csdn_net/article/details/125839802