# Introduction

API (Application Programming Interface) keys and endpoints are an integral part of any application that utilizes web services. They are used to authenticate the identity of the user or application and provide access to a specific set of resources or functionality. In this report, we will explore what subscription keys and endpoints are, their uses and the importance of their use.

# What are Subscription Keys and Endpoints?

API keys, also known as subscription keys, are unique strings of characters that identify the calling application or user. They are used to authenticate the identity of the caller and ensure that the caller has the necessary permissions to access the requested resources or functionality. API keys are typically generated by the service provider and provided to the developer of the application that will be accessing the service.

Endpoints are the URLs or IP addresses of the web services that an application will be accessing. They provide the location of the resources or functionality that the application is requesting. Endpoints are typically specific to a particular service and are provided by the service provider.

# Azure Cognitive Services and Subscription Keys/Endpoints

Azure Cognitive Services is a collection of pre-built APIs for natural language processing, computer vision, and speech recognition. These services are designed to allow developers to easily add intelligent features to their applications. To use Azure Cognitive Services, developers must first create an Azure Cognitive Services account and obtain a subscription key and endpoint.

The subscription key is used to authenticate the identity of the caller and ensure that the caller has the necessary permissions to access the requested resources or functionality. The endpoint is the URL of the web service that the application is requesting. It provides the location of the resources or functionality that the application is requesting.

# Why we need Subscription Keys and Endpoints

API keys and endpoints are necessary for several reasons. Firstly, they provide a way to authenticate the identity of the caller, ensuring that only authorized users or applications have access to the requested resources or functionality. This helps to secure the web services and protect against unauthorized access.

Secondly, API keys and endpoints provide a way to track usage and billing. Service providers can use the information provided by the API keys and endpoints to track the usage of their services and bill the appropriate parties.

Thirdly, API keys and endpoints allow for the management of access to resources and functionality. Service providers can use the information provided by the API keys and endpoints to control which users or applications have access to specific resources or functionality. This allows for a more fine-grained control over access to web services.

# Conclusion

In conclusion, subscription keys and endpoints are an important part of any application that utilizes web services, including Azure Cognitive Services. They provide a way to authenticate the identity of the caller, track usage and billing, and manage access to resources and functionality. It is important for developers to understand the use and importance of these elements in order to properly utilize and secure web services.

# References:

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