.NET Web API

WCF Rest

- To use WCF as WCF Rest service you have to enable webHttpBindings.
- It support HTTP GET and POST verbs by [WebGet] and [WebInvoke] attributes respectively.
- Passing data through parameters using a WebGet needs configuration. The UriTemplate must be specified
- It support XML, JSON and ATOM data format.

Web API

- This is the new framework for building HTTP services with easy and simple way.
- Web API is open source an ideal platform for building REST-ful services over the .NET Framework.
- Unlike WCF Rest service, it use the full featues of HTTP (like URIs, request/response headers, caching, versioning, various content formats)

Web API

- It also supports the MVC features such as routing, controllers, action results, filter, model binders, IOC container or dependency injection, unit testing that makes it more simple and robust.
- It can be hosted with in the application or on IIS.
- It is light weight architecture and good for devices which have limited bandwidth like smart phones.
- Responses are formatted by Web API's MediaTypeFormatter into JSON, XML or whatever format you want to add as a MediaTypeFormatter.

WCF or WEB API

- Choose WCF when you want to create a service that should support special scenarios such as one way messaging, message queues, duplex communication etc.
- Choose WCF when you want to create a service that can use fast transport channels when available, such as TCP, Named Pipes, or maybe even UDP (in WCF 4.5), and you also want to support HTTP when all other transport channels are unavailable.
- Choose Web API when you want to create a resource-oriented services over HTTP that can use the full features of HTTP (like URIs, request/response headers, caching, versioning, various content formats).
- Choose Web API when you want to expose your service to a broad range of clients including browsers, mobiles, iphone and tablets.

Asp.Net Web API vs Asp.Net MVC

- Asp.Net MVC is used to create web applications that returns both views and data but Asp.Net Web API is used to create full blown HTTP services with easy and simple way that returns only data not view.
- Web API helps to build REST-ful services over the .NET Framework and it also support content-negotiation(it's about deciding the best response format data that could be acceptable by the client. it could be JSON,XML,ATOM or other formatted data), self hosting which are not in MVC.

Asp.Net Web API vs Asp.Net MVC

- Web API also takes care of returning data in particular format like JSON,XML or any other based upon the Accept header in the request and you don't worry about that. MVC only return data in JSON format using JsonResult.
- In Web API the request are mapped to the actions based on HTTP verbs but in MVC it is mapped to actions name.