



Specifi Public API – Content Integration Examples

Specifi offers a Rest API (Application Programming Interface) which is software that allows Specifi and another party to interact with each other without any user intervention. The use of these APIs provides products or services to communicate with other products and services without having to know how they're implemented.

Product API

- Search for products.
 - Send / export
 - Send product(s), product category, or entire brand
 - Default attributes include Manufacturer, Model, Short and Long Descriptions, Dimensions, and Prices.
 - Additional (Cost) attributes
 - Accessory options
 - Connections data
 - All languages and currencies
 - Send attachments including, jpg, dwg, and rfa.
 - Receive / import
 - Receive new products to add to existing brands
 - Receive updated product information including price updates
 - Receive accessory mapping parameters
 - Receive product attachments

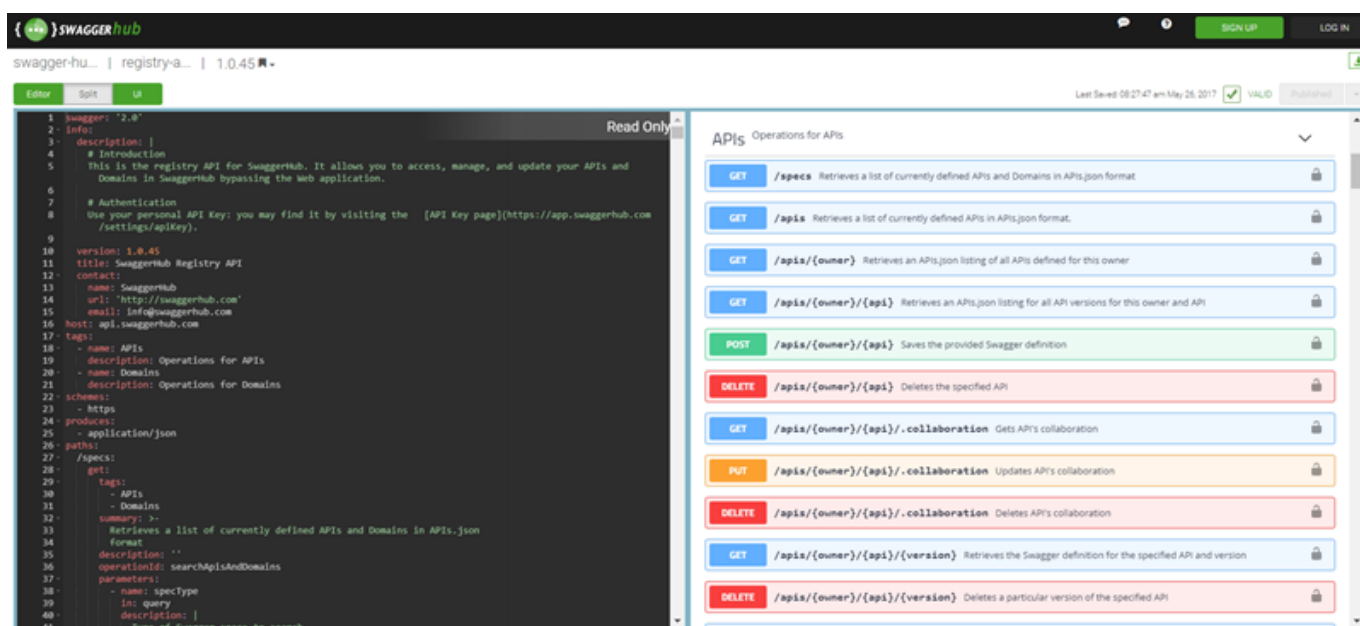
Quote API

- Send / export
 - Send this quote
 - Send this Purchase Order
 - Additional Cost attributes
 - Include spec sheets
- Receive / import
 - Add products to this Quote
 - Add products to current personal library
- Add, delete, or modify companies and/or contacts

Specifi Public API – Technical Overview for Developers

The technical stack for Specifi's Public API consists of:

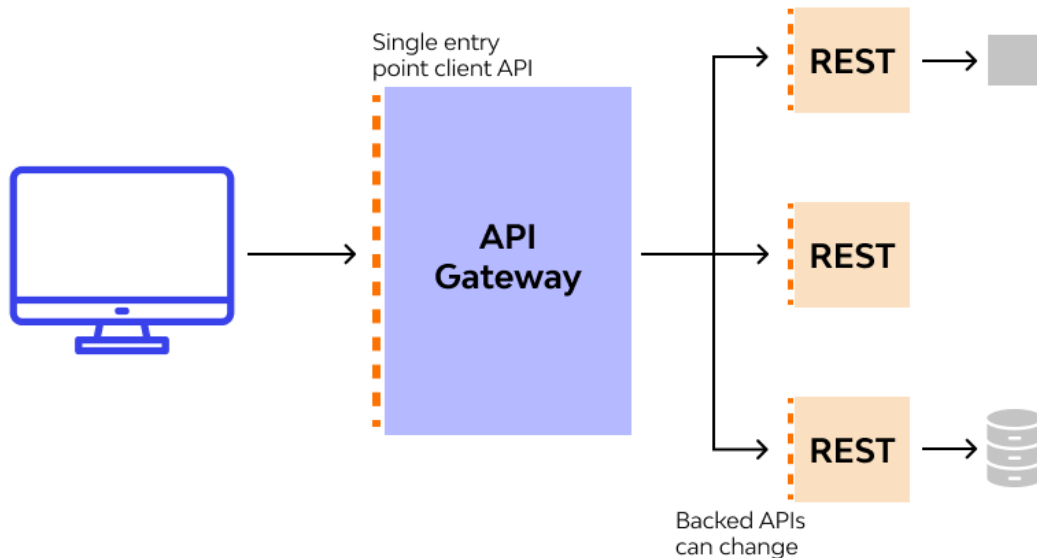
- **API Portal** - is a password protected documentation resource, where developers can access Specifi API definitions. These definitions could be easily imported by popular REST clients such as Postman or Insomnia.
This portal is dynamically created from Specifi's backend code and therefore it's always up to date.



- **API authentication** and authorization layer – Specifi Cloud API is not publicly accessible (whoever wants to consume it needs to authenticate first) using a special endpoint of Authentication microservice, exposed via API Gateway (see below).
Upon a successful authentication a JSON Web Token (JWT) is issued, which later could be used to interact with other Specifi API endpoints.
 - JWT is an open standard (RFC 7519) that defines a compact and self-contained way for securely transmitting information between parties as a JSON object. This information can be verified and trusted because it is digitally signed, so there is no chance our APIs could be consumed using a fake token.
 - Along with JWT a refresh token is issued, which could be used to get a new JWT token after existing one has expired, without having to send login information again and again.

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- **API Gateway** - a single point of entry for 3rd party developers, it sits in between REST client and Specifi's backend microservices. Providing routing and aggregation.



Besides that it offers the following features:

- it allows Specifi keeping alive 1 or 2 previous API versions of the same service (e.g. in the future for reverse compatibility) allowing 3rd party developers to gracefully migrate their API integrations to newer versions without breaking anything on their side
- allows collecting detailed analytics for both internal and external usage of APIs
- it offers throttling capabilities (slow down applications issuing too many calls per second)
- could provide an additional caching layer for repetitive calls (from 3rd party consumers), to avoid heavily loading “real” API services behind the gateway and therefore avoid denial of service situations
- it allows conditional access (e.g. in case of a paywall)

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Tools, libraries etc

- [Swagger of Catalog API](#) (username **specifi** password **D36rbp3E**)
- [Online JWT testing tool](#)

Testing code snippets

We recommend testing integration with our Catalog by creating an brand new .NET 6-8 console applicaiton.

After creating the project, just install add some NuGet libraries

```
<PackageReference Include="Microsoft.Extensions.Http" Version="7.0.*" />
```

Use sample below to generate a JWT and get your first search results:

```
using System.Net.Http.Json;
```

```
using System.Text.Json.Serialization;
```

```
var specifiApiUrl = new Uri("https://api.specifiglobal.com");
```

```
var httpClient = new HttpClient { BaseAddress = specifiApiUrl };
```

```
var userResponse = await httpClient.PostAsJsonAsync("users/login",
```

```
    new
```

```
{
```

```
    Email = "adams@mcf.com",
```

```
    Password = "40FBU9FQ",
```

```
});
```

```
var userLogin = await userResponse.Content.ReadFromJsonAsync<UserLogin>();
```

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```
var httpClientAuth = new HttpClient { BaseAddress = specifiApiUrl };
httpClientAuth.DefaultRequestHeaders.Add("Authorization", $"Bearer {userLogin.AccessToken}");
var catalogResponse = await httpClientAuth.PostAsJsonAsync("catalog/search/products",
    new
    {
        Culture = "en",
        Size = 10,
        From = 0,
        SearchByQueryString = false,
        Query = "",
        UseSearchAfter = true,
        Filters = new object[0],
        Sort = new
        {
            Field = "ModifiedTime",
            Direction = 1,
        },
        Token = userLogin.AuthorizationToken,
    });

var productsJson = await catalogResponse.Content.ReadAsStreamAsync();
Console.WriteLine(productsJson);
Console.ReadLine();

class UserLogin
{
    [JsonPropertyName("access_token")]
    public string AccessToken { get; set; }

    [JsonPropertyName("refresh_token")]
    public string RefreshToken { get; set; }
}
```

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```
[JsonPropertyName("authz_token")]
```

```
public string AuthorizationToken { get; set; }
```

```
}
```