



Azure App Configuration

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Azure App Configuration



Servizio **centralizzato** per la gestione di:

- Application Settings
- Feature Flags

Key Value Store

APC-EXAMPLE-APP01 | Configuration explorer

App Configuration

Search

Overview

Activity log

Access control (IAM)

Tags

Quick start

Events

Operations

Configuration explorer

Snapshots

Feature manager

Restore

Compare

Import/export

Settings

Create

Refresh

Manage view

Collapse

Expand

View

Be the first to explore and experiment with upcoming application features on Azure before they're available in Azure App Configuration!

Filter all key-values:

Keys : Select key

Labels : Select label

Date : Select date

Search displayed key-values

Loaded 7 key-values with 6 unique keys.

Key	Value	Label
ApplicationInfo:Title	Azure App Configuration Exa...	(No label)
Sentinel	122	(No label)
> SmtServer:Hostname		(2 labels)
SmtServer>Password	{"uri":"https://kv-example-app..	(No label)
SmtServer:Port	25	(No label)
SmtServer:Username	Test33	(No label)

Possiamo organizzare le chiavi in uno spazio dei nomi gerarchico utilizzando un delimitatore

<input type="checkbox"/>	SmtServer:Port	25
<input type="checkbox"/>	SmtServer:Username	Test33

Key Labels

Permettono di impostare valori differenti per stessa chiave tramite una etichetta. Es. per separare valori in ambienti diversi (Test/Porduzione ecc..)

Key Vault References

Come valore delle chiavi posso utilizzare riferimenti a un secret di uno store Key Vault esterno.

Feature Flags

I flag di funzionalità sono basati sulla logica condizionale che controlla la visibilità delle funzionalità per gli utenti in fase di esecuzione dell'applicazione.

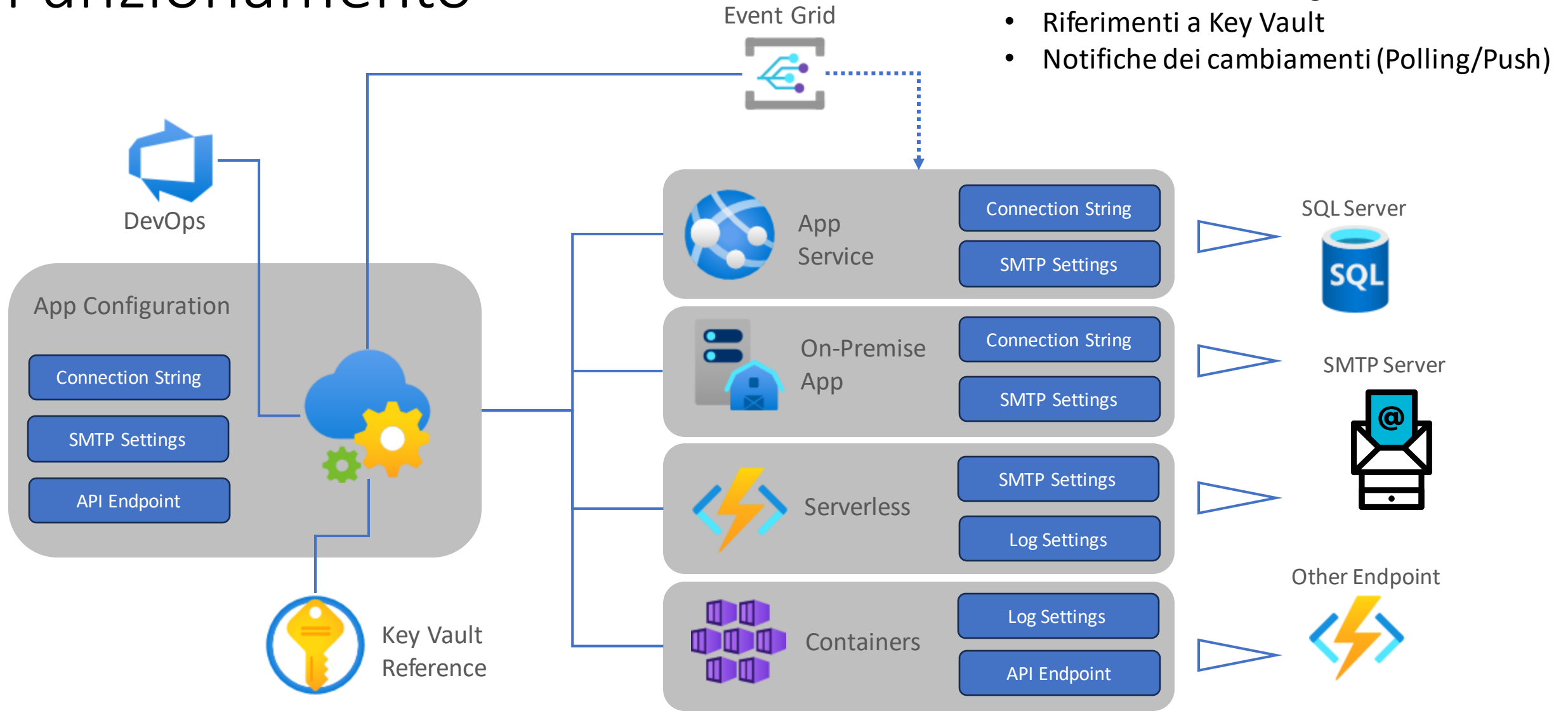
The screenshot shows the 'Feature manager' interface for 'APC-EXAMPLE-APP01'. The left sidebar contains navigation links: Overview, Activity log, Access control (IAM), Tags, Quick start, Events, Operations, Configuration explorer, Snapshots, Feature manager (selected), Restore, and Compare. The main area has a top bar with 'Create', 'Refresh', 'Manage view', 'Delete', and 'Feedback' buttons. Below this is a notification banner. A filter bar shows 'Filter all feature flags' with filters for 'Keys', 'Labels', and 'Date'. A search box for 'Search displayed feature flags' is present. Below the search, it says '3 feature flags loaded'. A table lists the flags:

<input type="checkbox"/>	Name ↑↓	Label ↑↓	Enabled ↑↓	Feature filter(s) ↑↓
<input type="checkbox"/>	EnableFTemp	(No label)	<input checked="" type="checkbox"/>	None
<input type="checkbox"/>	EnableUmidity	(No label)	<input checked="" type="checkbox"/>	1
<input type="checkbox"/>	HeaderColorGray	(No label)	<input checked="" type="checkbox"/>	1

Alcuni casi d'uso:

- Limitare la funzionalità Premium a specifici gruppi di clienti
- Stabilizzare un sistema disattivando rapidamente una funzionalità problematica
- Disabilitare una funzionalità facoltativa con un utilizzo elevato delle risorse durante i periodi di utilizzo di picco.
- Condurre "experimental feature releases" a segmenti di utenti di piccole dimensioni

Funzionamento



Scenari tipici

- Applicazioni Serverless
- Applicazioni Multiservizi
- Distributed Application
- Hybrid Application (Cloud/On premise)
- Continuous Deployment pipeline



Utilizzo di App Configuration

Il modo più semplice di integrare App Configuration nelle nostre applicazioni è quello di utilizzare le librerie client fornite da Microsoft

Programming language and framework	How to connect	Quickstart
.NET	App Configuration provider for .NET	.NET quickstart
ASP.NET Core	App Configuration provider for .NET	ASP.NET Core quickstart
.NET Framework and ASP.NET	App Configuration builder for .NET	.NET Framework quickstart
Java Spring	App Configuration provider for Spring Cloud	Java Spring quickstart
JavaScript/Node.js	App Configuration provider for JavaScript	Javascript/Node.js quickstart
Python	App Configuration provider for Python	Python quickstart
Other	App Configuration REST API	None

Vantaggi

- Servizio completamente gestito facile da implementare e integrare
- Rappresentazioni e mappature flessibili delle chiavi
- Etichettatura con etichette
- Restore dei settings a un determinato punto nel tempo
- Interfaccia dedicata per la gestione delle feature flag
- Confronto tra due insiemi di configurazioni
- Integrazione con managed identities
- Crittografia (at rest and in transit)
- Integrazione con Azure Key-Vault (references)
- Import/Export
- Integrazione nativa con molti frameworks conosciuti



ASP.NET

```
dotnet add package Microsoft.Azure.AppConfiguration.AspNetCore
```

```
var builder = WebApplication.CreateBuilder(args);

// Retrieve the connection string
string connectionString = builder.Configuration.GetConnectionString("AppConfig");

// Load configuration from Azure App Configuration
builder.Configuration.AddAzureAppConfiguration(connectionString);

// The rest of existing code in program.cs
// ... ..
```

.NET

```
dotnet add package Microsoft.Extensions.Configuration.AzureAppConfiguration
```

```
var builder = new ConfigurationBuilder();
builder.AddAzureAppConfiguration(Environment.GetEnvironmentVariable("ConnectionString"));

var config = builder.Build();
Console.WriteLine(config["TestApp:Settings:Message"] ?? "Hello world!");
```

Azure Function (isolated process)

```
dotnet add package Microsoft.Azure.AppConfiguration.Functions.Worker
```

```
public static void Main()
{
    var host = new HostBuilder()
        .ConfigureAppConfiguration(builder =>
        {
            string cs = Environment.GetEnvironmentVariable("ConnectionString");
            builder.AddAzureAppConfiguration(cs);
        })
        .ConfigureFunctionsWorkerDefaults()
        .Build();

    host.Run();
}
```

App Configuration Reference

Può essere utilizzato nei servizi App Service o Azure Functions senza modifiche al codice, tramite riferimenti diretti alle chiavi nelle variabili d'ambiente.

Note

Automatic refresh/re-fetch of these values when the key-values have been updated in App Configuration, is not currently supported.

Home > FAPP-EXAMPLE-APP01

{x} FAPP-EXAMPLE-APP01 | Environment variables ☆ ...
Function App

Search

App settings Connection strings

Search Refresh Show values Advanced edit Fetch latest values


Name	Value	Deployment slot
MySettings	@Microsoft.AppConfiguration(Endpoint=https://...	<input type="checkbox"/>
FUNCTIONS_EXTENSION_VERSION	..	<input type="checkbox"/>
FUNCTIONS_WORKER_RUNTIME	<input type="checkbox"/>
WEBSITE_CONTENTAZUREFILECONNECTIONSTRI...	<input type="checkbox"/>

```
@Microsoft.AppConfiguration(Endpoint=https://myAppConfigStore.azconfig.io;  
Key=myAppConfigKey; Label=myKeysLabel)
```

<https://learn.microsoft.com/en-us/azure/app-service/app-service-configuration-references>

Container App

ome > Container Apps > my-container-app

 **my-container-app** | Service Connector (preview) ...
Container App

Search

- Overview
- Access control (IAM)
- Tags
- Diagnose and solve problems

Settings

- Authentication
- Secrets
- Ingress
- Continuous deployment
- Custom domains
- Dapr
- Identity
- Service Connector (preview)**
- Locks

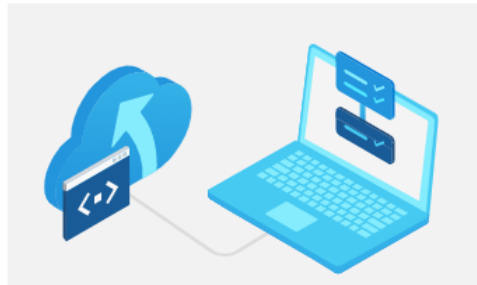
Application

Using Service Connector will register resource provider 'Microsoft.Service'

+ Create Refresh Feedback

Safely and Quickly Connect

Don't like spending time figuring out what authentication method to use or where to store your secrets safely. Don't worry about determining the right firewall settings. Service Connector makes



Connect your Services

Don't get lost trying to figure out what authentication method to use or where to store your secrets safely. Don't worry about determining the right firewall settings. Service Connector makes

Access from i

No need to store application configuration in your code. They are available in the cloud, ready to be used

Create connection

Basics Authentication Networking Review

Select the service instance and client type.

Container * ⓘ

simple-hello-world-container

Service type * ⓘ

App Configuration

Connection name * ⓘ

appconfig_6a35a

Subscription * ⓘ

MySubscription

App Configuration * ⓘ

MyAppConfiguration

Create new

Client type * ⓘ

.NET

Next : Authentication

Cancel

Viene create una variabile d'ambiente che verrà aggiunta al contenitore con il valore della connection string al servizio App Configuratio.

<https://learn.microsoft.com/en-us/azure/azure-app-configuration/quickstart-container-apps>

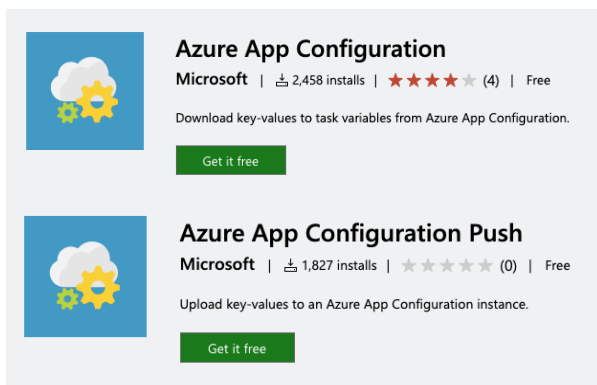


DEMO

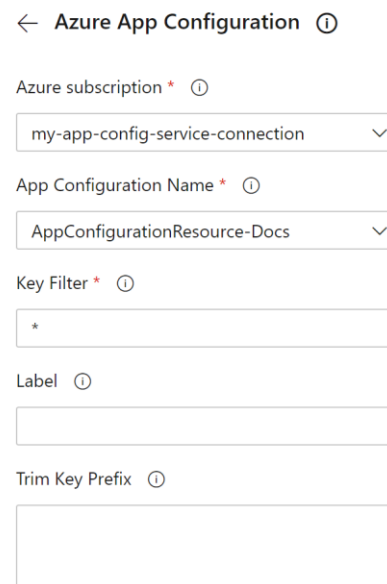
Devops / Automazione

Azure DevOps Marketplace

Pipeline task già pronti per caricare/scaricare la configurazione da azure



The screenshot shows the Azure DevOps Marketplace interface. It features two task cards. The first card is for 'Azure App Configuration' by Microsoft, with 2,458 installs and a 4-star rating. It includes a description: 'Download key-values to task variables from Azure App Configuration.' and a 'Get it free' button. The second card is for 'Azure App Configuration Push' by Microsoft, with 1,827 installs and a 0-star rating. It includes a description: 'Upload key-values to an Azure App Configuration instance.' and a 'Get it free' button.



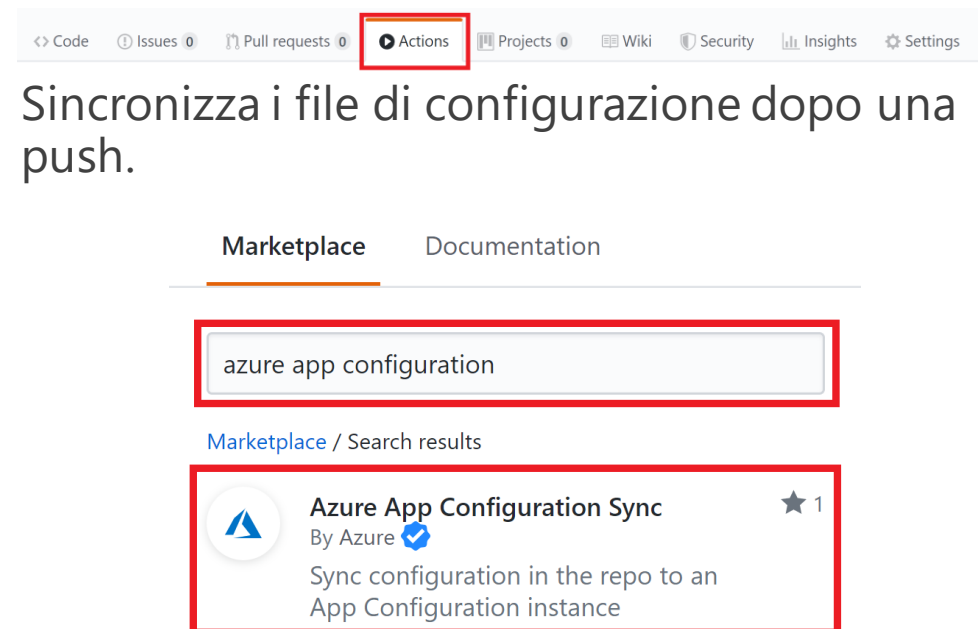
The screenshot shows the configuration page for the 'Azure App Configuration' task. It includes several input fields: 'Azure subscription' (a dropdown menu with 'my-app-config-service-connection' selected), 'App Configuration Name' (a dropdown menu with 'AppConfigurationResource-Docs' selected), 'Key Filter' (a text input field with '*' entered), 'Label' (a text input field), and 'Trim Key Prefix' (a text input field). Each field has a help icon (i) next to it.

MSBuild + Azure CLI

```
<Target Name="Export file" AfterTargets="Build">
  <Message Text="Export the configurations to a temp file. " />
  <Exec WorkingDirectory="$(MSBuildProjectDirectory)" Condition="$(ConnectionString) != ''"
    Command="az appconfig kv export -d file --path $(OutDir)\azureappconfig.json --format json --separator : --connection-string $(ConnectionString)" />
</Target>
```

GitHub Actions

Sincronizza i file di configurazione dopo una push.



The screenshot shows the GitHub Actions marketplace interface. At the top, there's a navigation bar with links for Code, Issues, Pull requests, Actions (highlighted with a red box), Projects, Wiki, Security, Insights, and Settings. Below the navigation bar, there's a search bar with 'azure app configuration' entered (highlighted with a red box). The search results show a list of actions, with 'Azure App Configuration Sync' by Azure (highlighted with a red box). The action has a star rating of 1 and a description: 'Sync configuration in the repo to an App Configuration instance'.

Azure App Configuration - Piani

	Free	Standard
Resources per subscription (A resource consists of a single configuration store)	1 per region	Unlimited
Storage per resource	10 MB	1 GB
Revision history	7 days	30 days
Request quota per resource	1,000 per day (Once the quota is exhausted, HTTP status code 429 will be returned for all requests until the end of the day)	30,000 per hour (Once the quota is exhausted, requests may return HTTP status code 429 indicating Too Many Requests - until the end of the hour). For Geo Replication enabled resources, 30,000 per hour per replica.
SLA	None	99.9% availability
Features	Encryption with Microsoft-managed keys HMAC or AAD authentication RBAC support Managed identity Service tags	All Free tier functionality plus: Encryption with customer-managed keys Private Link support Soft Delete Geo Replication

Azure App Configuration - Costi

	Free	Standard
Cost per store ¹	Free	€1.087 per store per day, plus an overage charge at €0.055 per 10,000 requests. The first 200,000 requests are included in the daily charge. Additional requests will be billed as overage.
Cost per replica	Not applicable	€1.087 per replica per day plus an overage charge at €0.055 per 10,000 requests per replica. The first 200,000 requests for each replica are included in the daily charge. Additional requests will be billed as overage.

- Configuration in .NET documentation

<https://learn.microsoft.com/en-us/dotnet/core/extensions/configuration>

- Azure App Configuration

<https://azure.microsoft.com/en-us/products/app-configuration>

- Azure App Configuration Documentation

<https://learn.microsoft.com/en-us/azure/azure-app-configuration>

- Demo App Source Code

<https://github.com/bortolin/GlobalAzure24-AppConfig>



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