

Solbox Purge System

Version 0.10 | Updated 2022/10 | Written by Solbox

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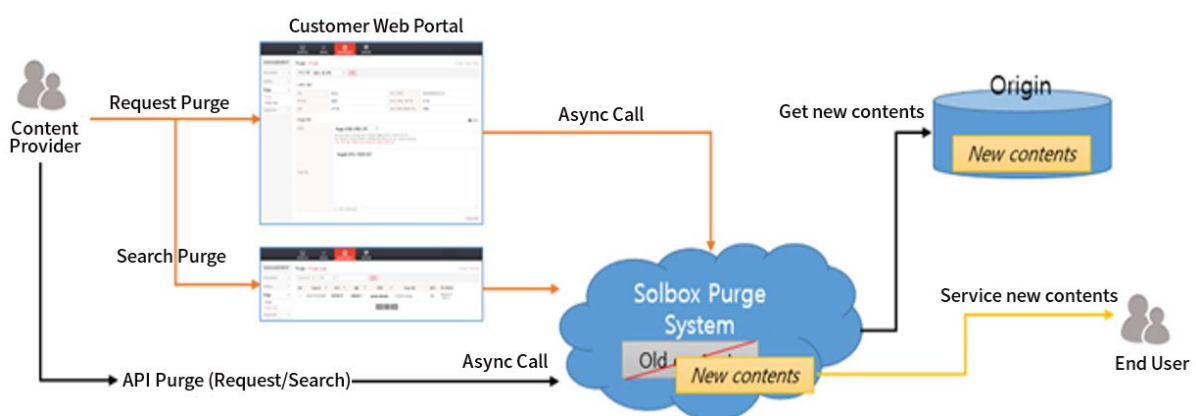
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1. Content

1.1. Solbox Purge System

Caching is the key technology of the CDN service to seamlessly deliver various content to online users. In general, CDN services receive files from the origin server by user request through caching, cache them on the edge cache server, and deliver them to the end user. It delivers the cached content from the edge cache server, not the origin server, to the online user who requested the content. The cache server at the edge checks the origin server for content changes at regular intervals to provide valid content. If there are any changes to the original content, it will provide the content viewer with the updated cached content.

Using purge function, which is the required key feature of CDN service allows, a service provider to deliver content at the scheduled timeslot. The purge function is as important as caching function to handle tons of static content, such as online games that frequently patch large quantities, shopping malls that newly change images and information, and online education that communicates with online users and generates content in real time. The purge method can both invalidate (soft purge) or delete (hard purge) cached content on the edge cache server to serve with content that is different from the original one.



Picture-Solbox Purge System Configuration

The Solbox Purge method consists of a high-performance, safe and easy-to-use system to run a big scale of purge requests and real-time purges for a large service provider. In addition, through continuous feature enhancement, Solbox purge system can handle purge tasks of an average of 2 million purge requests per day at an average speed of 10ms.

For the service convenience, it supports the RESTful API as well as the customer-specific web UI and provides a pattern purging that allows a purge request to a file with the same path or name.

Solbox CDN service allows a service provider to use our purge system to quickly update the content for various purposes and operate the service efficiently and reliably.

However, just keep in mind that the purge operation may place an excessive load on the edge cache server and the origin server.

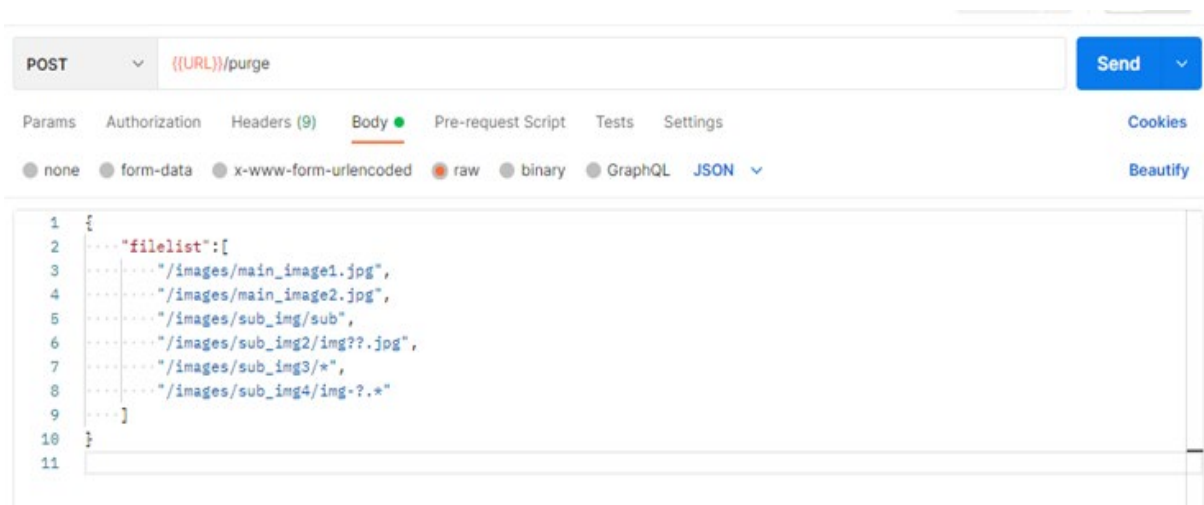


Figure-Purge API Call using Postman

The screenshot displays the Solbox Purge System web interface. At the top, there are navigation tabs for STATISTICS, SERVICE, MANAGEMENT (highlighted), and SUPPORT. The left sidebar contains a 'MANAGEMENT' menu with options for Information, Mailing, Purge (selected), Purge Logs, and Diagnostics. The main content area is titled 'Purge - Purge' and includes a service selection dropdown set to '서비스명 선택' and a '조회' button. Below this, there is a '서비스 정보' table with columns for '타입', '부가타입', and '상태'. The table contains three rows of service information. Underneath is the 'Purge 정보' section, which includes a '도메인' dropdown set to 'Purge 요청할 도메인 선택' and a '도움말' icon. A text box provides instructions on how to specify file paths and patterns. Below the text box is a list of 'Purge 대상' (Purge targets) with corresponding purge methods:

타입	Delivery	서비스 도메인	
부가타입	대용량	서비스 도메인 사용 여부	미사용
상태	서비스중,-	서비스 도메인 활성화 여부	비활성

 The 'Purge 대상' list includes:

- /images/main_image1.jpg → 일반 Purge
- /images/main_image2.jpg → 일반 Purge
- /games/beta/nature* → * 패턴 Purge
- /movie/hero_202207???.mp4 → ? 패턴 Purge
- /docs/* → Directory Purge
- /a~atb@bc\$cd^d&ee(f{f_g+g{h}hxi~}j.k.k?llmm.jpg → 특수 문자 Purge

 At the bottom right of the main content area, there is a 'Purge 요청' button.

Picture-Solbox Purge Web UI Call

2. Benefit

- Provides purge method through customized web UI and RESTful API to improve service operation convenience.
- Increases the efficiency of service operations with an average of 10ms(millisecond) fast purge and pattern purge
- Supports flexible purge options (e.g. hard purge and soft purge) to minimize load on edge cache servers, improving operational reliability

- Provides preload functionality to improve service reliability and efficiency by loading purged files into the cache server in advance before a service provider delivers the content at the scheduled time
- Supports real-time purge with a high-performance for quick follow-up action in case of misloaded content

3. Key Features

- **Web UI for easier purge operation**
- **Provides RESTful API provision to work with 3rd party systems**
- **Supports single/multiple file purge**

Call up to 1,000 files and 10,000 characters of path length at once

- **Real-time Purge Support**

Our high-performance purge system processes purge requests in real time. It means that a service provider can quickly update the cache content through a purge request after updating the origin server in case of misloading service content

- **Pattern Purge Support**

Use '*' wild pattern characters at the end of the file name for pattern purge

Also, the directory purge and file pattern purge are possible with a single pattern character '?' at any location in the file name.

- **Hard Purge & Soft Purge**

Provides an option to delete the file directly on the edge cache server by hard purge method or set TTL (Time To Live) value as zero by soft purge method. This allows the edge cache server to fetch a new file from the origin server when requesting content.

- **Preload**
Use the preload function to load the content from the origin server to the edge cache server in advance to provide faster services to online users after purge request is made
- **Special Characters**
Support special characters for purge tasks - excluding special character reserved for file names such as (), %, #
- **Automatic Fault Detection and Reporting**
Real-time monitoring error codes on the purge system for immediate detection related to service anomalies and faster follow-up action
- **Purge History**
Checks the purge history on the customized web UI