

Cookies (Client 客戶端 / Server 伺服器端)

The top screenshot shows the Application tab for <https://www.cookies.com>. The 'Cookies' folder is expanded, showing a table of cookies:

Name	Value	D...	P...	E...	Si...	H...	S...	S...	P...	P...
1P_JAR	2024-04-05-14	.g...	/	2...	19		✓	N...		M...
PHPSESSID	eeb54b240d60b...	w...	/	S...	41	✓	✓			M...
PHPSESSID	b1df866da8927...	co...	/	S...	41					M...
sbjs_current	typ%3Dtypein%	.c...	/	S...	175					M...
sbjs_current_add	fd%3D2024-04-...	.c...	/	S...	116					M...
sbjs_first	typ%3Dtypein%	.c...	/	S...	173					M...
sbjs_first_add	fd%3D2024-04-...	.c...	/	S...	114					M...
sbjs_migrations	1418474375998...	.c...	/	S...	32					M...
sbjs_session	pgs%3D1%7C%	.c...	/	2...	66					M...
sbjs_udata	vst%3D1%7C%	.c...	/	S...	212					M...

The bottom screenshot shows the Application tab for <https://mrszeto.net>. The 'Cookies' folder is expanded, showing a single cookie:

Name	Value	D...	P...	E...	S...	H...	S...	S...	P...	P...
count	8	m...	/	2...	6					M...

https://www.w3schools.com/php/php_sessions.asp

SESSION (伺服器端 server side cookies)

```
<?php
session_start();
if(isset($_SESSION['animal'])) {
    echo "Welcome to my web site<p>\n";
}else {
    echo '<h2>Error</h2>No session data! Please LOGIN first!<p>';
    header ('refresh:2; url=login.php'); exit ();
}
?>
```

list.php

SESSION (logout.php)

```
<?php
session_start();
session_unset(); // 清除 Clear the $_SESSION variable
session_destroy(); // 毀滅 Destory the session
header ('refresh:2; url=login.php');
?>
```

new-login.php

```
setcookie("user", "Tomme", time()+10, "/");
setcookie("visit", date("Y-m-d"), time()+10, "/");
<a href="new.php">new.php</a>
```

client 客戶端

new.php

```
<?php
if(!isset($_COOKIE["user"])) {
    echo "Error - No Access Right.";
    header('refresh:2; url=new-login.php');
    exit();
}
$x = $_COOKIE["user"]; echo "user: $x";
?>
```

cookies-counter.php

```
<?php
if (!isset($_COOKIE['count'])) {
    $n = 1;
    setcookie("count", $n, time()+60, "/");
    echo "This is the 1st time you view this page.";
} else {
    $n = $_COOKIE['count'];
    $n += 1;
    setcookie("count", $n, time()+60, "/");
    echo "You have viewed this page $n times.";
}
?>
```

cookies-delete.php (ctrl-shift-delete)

```
if(isset($_COOKIE["user"]) and isset($_COOKIE["visit"])) {
    echo "Deleting Cookies ...";
    setcookie("user", "", time()-60);
    setcookie("visit", "", time()-60);
} else {
    echo "No Cookies found.";
}
```

3.6 Cookies (一種小型文字檔案)

提供個人化體驗

maintaining user preferences, 用戶喜好

提供更良好的用戶體驗

tracking user behaviour, 追蹤用戶行為

facilitating persistent authentication. 身份認證

`$_COOKIE["user"]`

contain key-value pairs 包含 鍵-數值 配對 ("`user`", "`john`")

associated with a specific domain and expiration date. 有期限 1 day
與特定的網域相關，

allow the site to recall user-specific information.

讓網站回憶起與用戶相關的資訊。

enhances user experience by providing personalised content,

為用戶提供更個人化的內容

remembering login credentials, and retaining items in a shopping cart.

例如記憶登入憑證

購物車

is a text file stored in the client browser.

儲存於客戶機瀏覽器的文字檔案，

the browser creates the Cookie and stores the data locally.

瀏覽器會創建 Cookie 並將數據儲存於本機。

https://www.w3schools.com/php/php_cookies.asp

```
<?php
$cookie_name = "user";
$cookie_value = "John Doe"; // 86400 = 1 day
setcookie($cookie_name, $cookie_value, time() + (86400 * 30), "/");
```

client

```
if(!isset($_COOKIE[$cookie_name])) {
    echo "Cookie named '" . $cookie_name . "' is not set!";
} else {
    echo "Cookie '" . $cookie_name . "' is set!<br>";
    echo "Value is: " . $_COOKIE[$cookie_name];
}
?>
```

```
<?php
session_start();
// Set session variables
$_SESSION["favcolor"] = "green";
$_SESSION["favanimal"] = "cat";
echo "Session variables are set.";
?>
```

`$_session`

server

login authentication
身份認證



<https://iwa-network.org/use-of-cookies/>

language 語言, gps location 地理位置, shopping cart 購物, youtube

B 在網絡應用程式中使用 Cookie 的好處

Benefits of using Cookies in web application

Cookies can be used to enhance the user experience.

examples

- Saving language preference for the website
- Saving last search record for faster access next time
- Saving criteria used for filtering on an online shop (i.e. Ladies' products, dairy and meat, etc.)

改善用戶體驗。例子：

- 儲存網站的語言偏好
- 儲存上次搜尋記錄，方便重用
- 保存網上商店的篩選條件 (例如日常用品，乳製品和肉類等)

Cookies can also store analytics data used for market research, 還可以儲存用戶數據

examples

- How often a user visited a site.
- How long a user spent on a page

作分析和市場研究用途，例如：

- 用戶瀏覽網站的頻率
- 用戶在頁面上逗留的時間

C Potential risks involved with using Cookies

Since Cookies are stored on the client's browser, unpredictable behaviours may occur when a server-side script attempts to access a Cookie:

- The value stored in a Cookie was altered, either intentionally by the user, or by a browser extension.
- The Cookie has been deleted. Some browsers clear out Cookies after a certain period to protect user privacy. Users could also delete Cookies associated with a website manually in browser settings.
- The user has disabled Cookies entirely on the browser. The browser would ignore any set-cookie header in HTTP responses.
- Since Cookies are sent to the server in every HTTP request, its size is usually extremely small (the typical size limit is 4KB, which is only enough for a few thousand characters at most).

This limits what type of data are suitable to be stored in a Cookie.

C 使用Cookie涉及的潛在風險

由於 Cookie 會儲存於客戶機瀏覽器中，當伺服器端程式嘗試讀取 Cookie 時，可能會出現以下無法預料的行為：

- 儲存在 Cookie 中的數值被擅自修改；可能是用戶刻意為之，也可能是由瀏覽器擴展程式所修改的。
- Cookie 已被刪除。部分瀏覽器會在一定時間後清除 Cookie，以保護用戶的私隱。用戶也可以在瀏覽器設定中手動刪除由網站所創建的 Cookie。
- 用戶完全停用了瀏覽器的 Cookie；瀏覽器將忽略 HTTP 回應中的 set-cookie 標頭。
- 由於所有 HTTP 請求都會將 Cookie 傳送至伺服器，Cookie 的大小是非常小的 (通常大小上限都是 4KB，只足夠儲存數千個字符)。這將限制了 Cookie 中能夠儲存的數據類型。