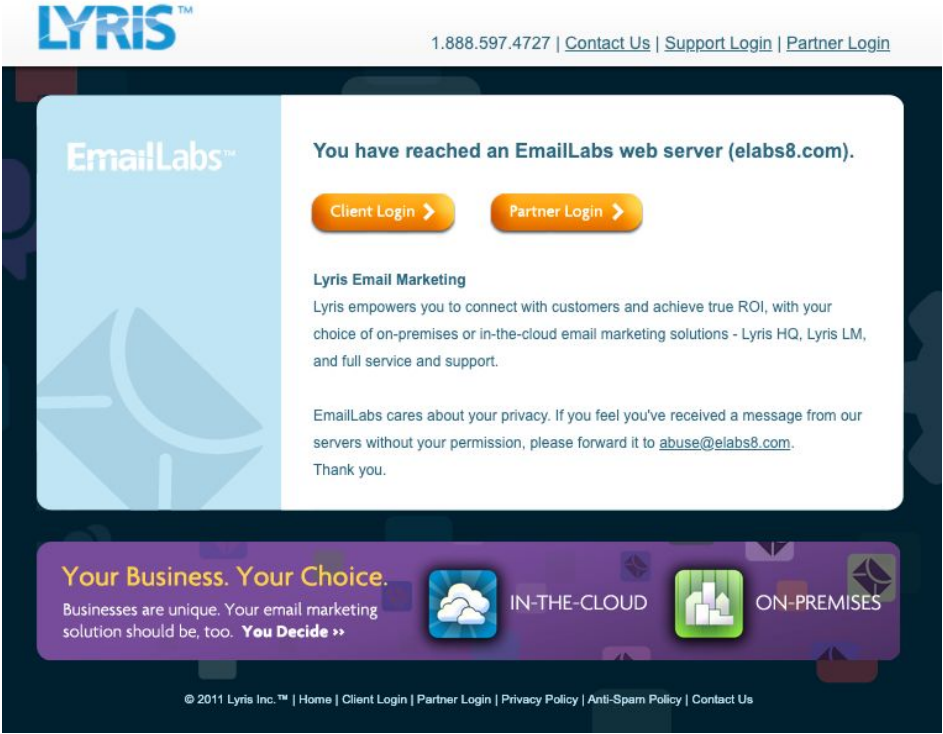


# CA RWA2 #3

<b>Problem Statement</b> (Internal/technical)	<p><b>Problem statement:</b></p> <ul style="list-style-type: none"><li>● <b>What:</b> <i>Support team reported the EmailLabs UI was not working when opened from LHQ / CAM and even from standalone EmailLabs Login screen</i></li><li>● <b>When:</b><ul style="list-style-type: none"><li>○ <b>Outage Started:</b> 25/Jul/20 2:26 PM</li><li>○ <b>Outage Detected:</b> 25/Jul/20 2:26 PM</li><li>○ <b>Outage Ended:</b> 25/Jul/20 4:33 PM</li></ul></li></ul> <p><b>Top 3 Symptoms:</b></p> <p>List the top symptoms that uniquely identify this outage (minimum one symptom)</p> <ul style="list-style-type: none"><li>● <b>symptom1:</b> users cannot login to EmailLabs using HQ link "Launch EmailLabs"</li><li>● <b>symptom2:</b> users cannot login to EmailLabs using CAMlink "Launch EmailLabs"</li><li>● <b>symptom3:</b> Support cannot login to EmailLabs using the Elabs ADMIN Portal</li></ul>
<b>Root cause analysis</b> (internal)	<p>Apply the why-why methodology. Start with the topmost visible failure and keep going deeper. A minimum of 3 why-why levels must be done.</p> <p><b>Why 1:</b></p> <ul style="list-style-type: none"><li>● <b>Question:</b> <i>Why did the Support team report the EmailLabs UI was not working when opened from LHQ / CAM?</i></li><li>● <b>Reason:</b> <i>because when the user clicks on the "Launch EmailLabs" the system was redirecting the user to EmailLabs standalone login page.</i></li><li>● <b>Evidence:</b></li></ul> <div><p>The screenshot shows the EmailLabs website. At the top, there is a Lyris logo and a phone number 1.888.597.4727 with links for Contact Us, Support Login, and Partner Login. The main content area has a blue header with 'EmailLabs™' and a message: 'You have reached an EmailLabs web server (elabs8.com)'. Below this are two orange buttons: 'Client Login &gt;' and 'Partner Login &gt;'. The text 'Lyris Email Marketing' is followed by a description of their services. A privacy notice is also present. At the bottom, there is a purple banner with the text 'Your Business. Your Choice.' and icons for 'IN-THE-CLOUD' and 'ON-PREMISES'. The footer contains copyright information and various links.</p></div> <p><b>Why 2:</b></p> <ul style="list-style-type: none"><li>● <b>Question:</b> <i>Why did the user click on the "Launch EmailLabs" and is getting redirected to EmailLabs standalone login page?</i></li></ul>

- **Reason:** because the login controller was unable to write the authentication details into `$_SESSION` object. It was getting an unhandled error and was being redirected to the login page.
- **Evidence:** First request to store data at `$_SESSION` where the unhandled error was being thrown

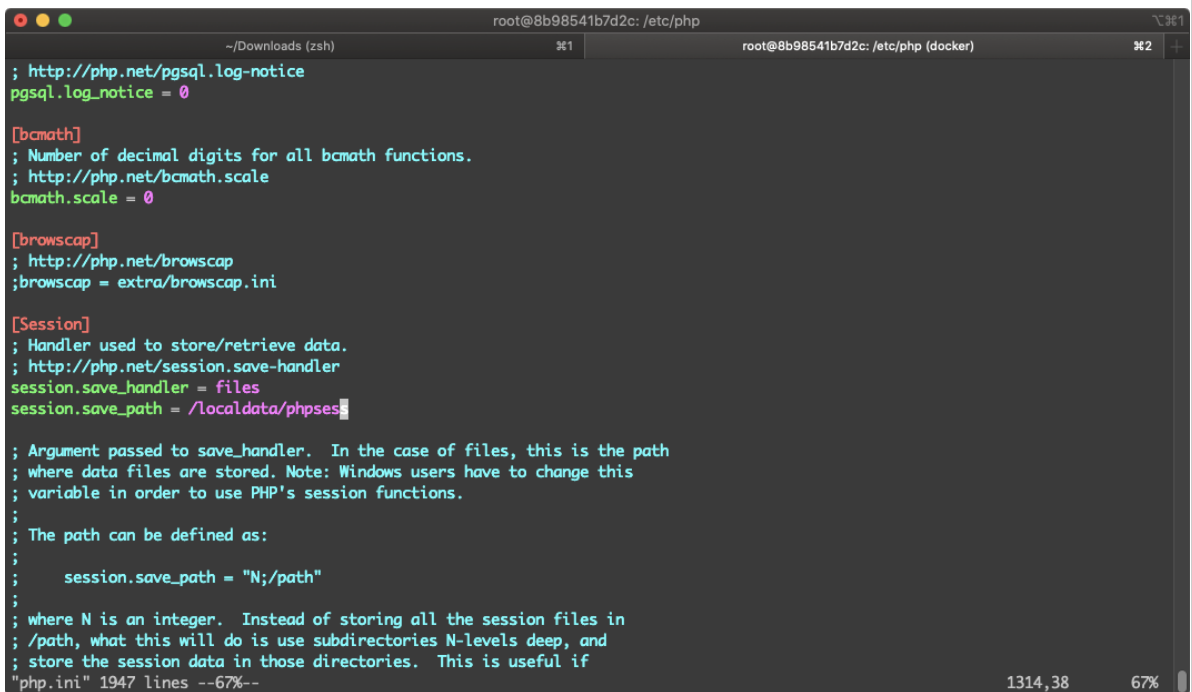
```

57
58     if ($email != "" && ok == true)
59     {
60         $_SESSION['sso_object'] = $sso_object;
61         //Set LHQ cookie...
62         setcookie("LHQ","yes",time()+60*60*24*365); //1 year...
63         $activity = "login";
64         $lhq_ok = true;
65
66         if (MCC_SS0::is_new_lhq())

```

### Why 3:

- **Question:** Why was the login controller getting an unhandled error?
- **Reason:** because the `$_SESSION` variable cannot be created at the `session.save_path`.
- **Evidence:**



```

root@8b98541b7d2c: /etc/php
~/Downloads (zsh) 131
root@8b98541b7d2c: /etc/php (docker) 132
; http://php.net/pqsql.log-notice
pqsql.log_notice = 0

[bcmath]
; Number of decimal digits for all bcmath functions.
; http://php.net/bcmath.scale
bcmath.scale = 0

[browscap]
; http://php.net/browscap
browscap = extra/browscap.ini

[Session]
; Handler used to store/retrieve data.
; http://php.net/session.save-handler
session.save_handler = files
session.save_path = /localdata/phpses

; Argument passed to save_handler. In the case of files, this is the path
; where data files are stored. Note: Windows users have to change this
; variable in order to use PHP's session functions.
;
; The path can be defined as:
;
;     session.save_path = "N;/path"
;
; where N is an integer. Instead of storing all the session files in
; /path, what this will do is use subdirectories N-levels deep, and
; store the session data in those directories. This is useful if
"php.ini" 1947 lines --67%--
1314,38 67%

```

### Why 4:

- **Question:** Why did the `$_SESSION` variable cannot be created at the `session.save_path`?
- **Reason:** Because the `session.save_path` directory was not allowed to create files inside it by the Apache user.
- **Evidence:**

```
root@8b98541b7d2c:/etc/php# ls -l /localdata
total 16
drwxr-xr-x 2 root root 4096 Aug 2 12:38 contents
drwxr-xr-x 2 root root 4096 Aug 2 12:38 data
drwxr-xr-x 2 root root 4096 Aug 2 12:38 phpsess
drwxr-xr-x 2 root root 4096 Aug 2 12:38 uploads
root@8b98541b7d2c:/etc/php#
```

Permissions are not allowing  
Apache user to write inside /localdata/phpsess

#### Why 5:

- **Question:** Why did the session.save\_path directory was not allowed to create files inside it by the Apache user?
- **Reason:** The DL-3 storage server had a hard failure, and the file system got corrupted. Ever since the file system was recovered, the system has been preventing them from creating files.
- **Evidence:** After the volumes were mounted, the support personnel noticed the following in the system volumes

```
root@8b98541b7d2c:/etc/php# su - nobody
su: warning: cannot change directory to /nonexistent: No such file or directory
nobody@8b98541b7d2c:/etc/php$ cd /localdata/phpsess/
nobody@8b98541b7d2c:/localdata/phpsess$ pwd
/localdata/phpsess
nobody@8b98541b7d2c:/localdata/phpsess$ touch test
touch: cannot touch 'test': Permission denied
nobody@8b98541b7d2c:/localdata/phpsess$ ls -l
total 0
nobody@8b98541b7d2c:/localdata/phpsess$
```

login as 'nobody'  
entering 'session.save\_path'  
entering '/localdata/phpsess'  
trying to create a file as 'nobody'  
permission denied  
no files!

#### Why 6:

- **Question:** Why has the system been preventing file creation since the recovery ?

- Reason / Root-cause: [Insert root cause here]
- Evidence: The DL-3 drive was restored by mounting the following volumes using create\_web.yml

```
ansible > roles > elabs > tasks > ! create_web.yml
15  docker_container:
16      name: "{{ container_name }}"
17      hostname: "{{ container_name }}"
18      image: "{{ container_image }}"
19      # docker_host: "tcp://{{ docker_tls_host }}:{{ docker_tls_port | default(2375) }}"
20      # tls: "{{ docker_tls_verify | default('no') }}"
21      # tls_verify: yes
22      # ssl_version: "TLSv1_2"
23      state: started
24      # recreate: yes
25      memory: 24g
26      cpu_period: 50000
27      cpu_quota: 300000
28      env:
29          S3_BUCKET: "{{ s3_bucket }}"
30          ROLE: "{{ container_role }}"
31          FARM: "{{ cluster_config.elabs_farm_name }}"
32          APP_ENV: "{{ mode }}"
33          EMAIL_ID_IS_BIGINT: "{{ container_config.elabs_email_id_is_bigint }}"
34      links:
35          - "{{ mode }}_aem_elabs-redis:redis"
36      ports:
37          - "{{ ansible_host }}:{{ container_config.http_ports[container_index - 1] }}:80"
38          - "{{ ansible_host }}:{{ container_config.https_ports[container_index - 1] }}:443"
39      restart_policy: always
40      volumes:
41          - "{{ containers_log_prefix }}/{{ cluster_config.elabs_farm_name }}/{{ container_role }}:/var/log"
42          - "{{ containers_log_prefix }}/{{ cluster_config.elabs_farm_name }}/monitoring:/var/log/mailman-monitoring"
43          - "{{ containers_data_prefix }}/{{ cluster_config.elabs_farm_name }}/localdata/data/uploads:/localdata/data/uploads"
44          - "{{ containers_data_prefix }}/{{ cluster_config.elabs_farm_name }}/localdata/data/content:/localdata/data/content"
45          - "{{ containers_data_prefix }}/{{ cluster_config.elabs_farm_name }}/localdata/data/sd:/localdata/data/sd"
46          - "{{ containers_data_prefix }}/{{ cluster_config.elabs_farm_name }}/localdata/phpsess:/localdata/phpsess"
47          - "{{ containers_data_prefix }}/{{ cluster_config.elabs_farm_name }}/localdata/pixelpop:/pixelpop"
48      labels:
```

Fix plan

Fix: [Insert fix here]