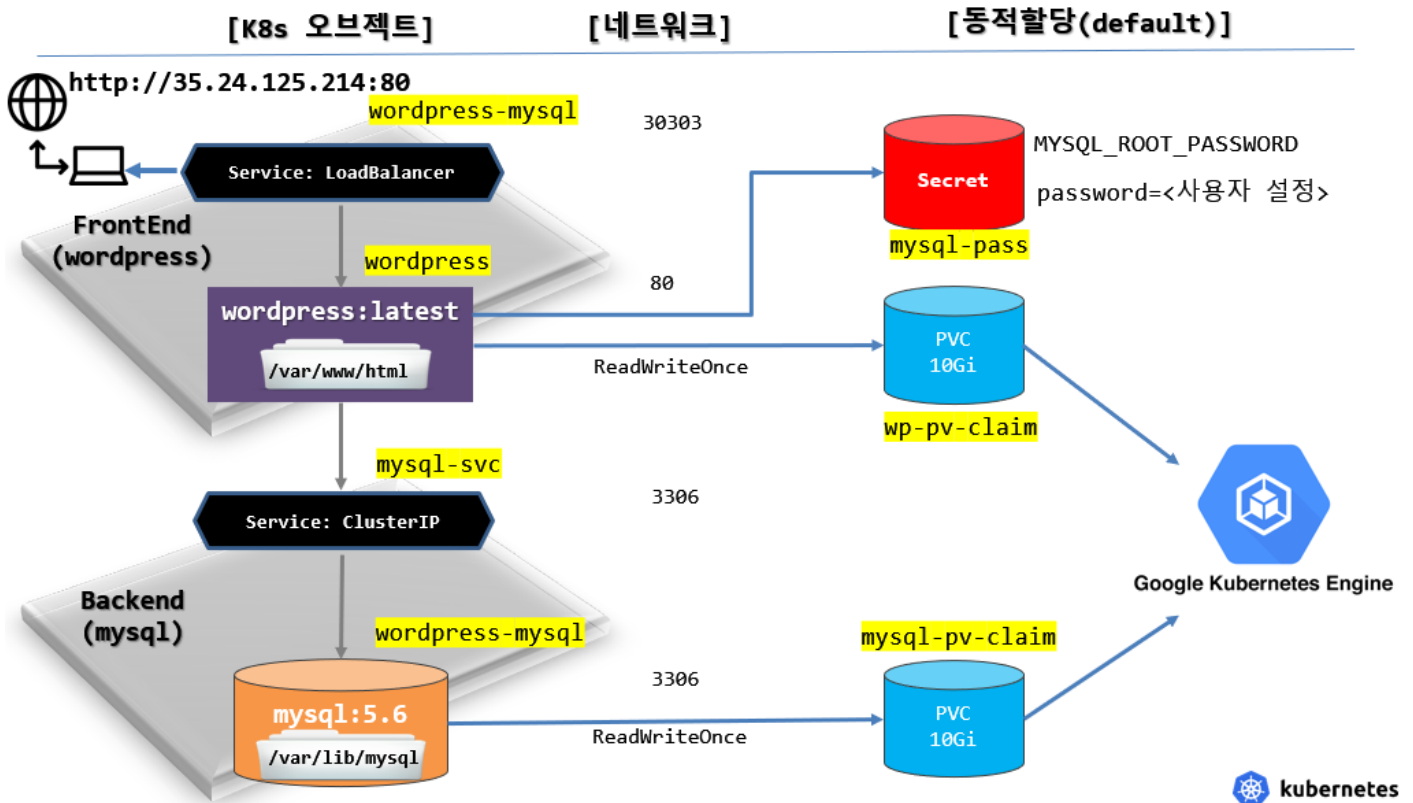


[GKE: Web(wordpress) + DB(mysql) + Volume(PVC)]



mysql을 위한 서비스 구성: mysql-svc.yaml

```
apiVersion: v1
kind: Service
metadata:
  name: wordpress-mysql
  labels:
    app: wordpress
spec:
  ports:
    - port: 3306
  selector:
    app: wordpress
    tier: mysql
  clusterIP: None
```

mysql을 위한 서비스 구성: mysql-pvc.yaml

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: mysql-pv-claim
  labels:
    app: wordpress
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 20Gi
```

mysql Pod를 위한 Deployment 구성: mysql-deploy.yaml

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: wordpress-mysql
  labels:
    app: wordpress
spec:
  selector:
    matchLabels:
      app: wordpress
      tier: mysql
  strategy:
    type: Recreate
  template:
    metadata:
      labels:
        app: wordpress
        tier: mysql
    spec:
      containers:
        - image: mysql:5.6
          name: mysql
          env:
            - name: MYSQL_ROOT_PASSWORD
              valueFrom:
                secretKeyRef:
                  name: mysql-pass
                  key: password
          ports:
            - containerPort: 3306
              name: mysql
          volumeMounts:
            - name: mysql-persistent-storage
              mountPath: /var/lib/mysql
      volumes:
        - name: mysql-persistent-storage
          persistentVolumeClaim:
            claimName: mysql-pv-claim
```

외부 서비스를 위한 LoadBalancer 구성

```
apiVersion: v1
kind: Service
metadata:
  name: wordpress
  labels:
    app: wordpress
spec:
  ports:
    - port: 80
  selector:
    app: wordpress
    tier: frontend
  type: LoadBalancer
```

mysql 관리자 암호 저장을 위한 secret 생성

```
C:\Users\g7>kubectl create secret generic mysql-pass --from-literal=password=Passw0rD
secret/mysql-pass created
```

```
C:\Users\g7>kubectl describe secret mysql-pass
```

```
Name:          mysql-pass
Namespace:     default
Labels:        <none>
Annotations:   <none>
```

```
Type: Opaque
```

```
Data
```

```
====
```

```
password: 8 bytes
```

wordpress를 위한 PVC 구성

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: wp-pv-claim
  labels:
    app: wordpress
spec:
  accessModes:
    - ReadWriteOnce
  resources:
    requests:
      storage: 20Gi
```

WordPress Pod를 위한 Deployment 구성

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: wordpress
  labels:
    app: wordpress
spec:
  selector:
    matchLabels:
      app: wordpress
      tier: frontend
  strategy:
    type: Recreate
  template:
    metadata:
      labels:
        app: wordpress
        tier: frontend
    spec:
      containers:
        - image: wordpress:4.8-apache
          name: wordpress
          env:
            - name: WORDPRESS_DB_HOST
              value: wordpress-mysql
            - name: WORDPRESS_DB_PASSWORD
              valueFrom:
                secretKeyRef:
                  name: mysql-pass
                  key: password
          ports:
            - containerPort: 80
              name: wordpress
          volumeMounts:
            - name: wordpress-persistent-storage
              mountPath: /var/www/html
      volumes:
        - name: wordpress-persistent-storage
          persistentVolumeClaim:
            claimName: wp-pv-claim
```

정보 조회

C:\Users\g7>kubectl get deploy,pod,svc -o wide

pod/wordpress-mysql-5b697dbbfc-hbclv	1/1	Running	0	13m	10.0.1.10
gke-k8s-cluster-k8s-pool-181d1c70-swzp	<none>	<none>			

NAME	TYPE	CLUSTER-IP	EXTERNAL-IP	PORT(S)	AGE
SELECTOR					
service/kubernetes	ClusterIP	10.4.0.1	<none>	443/TCP	2d16h
<none>					
service/wordpress	LoadBalancer	10.4.1.115	35.221.226.224	80:32419/TCP	12m
app=wordpress,tier=frontend					
service/wordpress-mysql	ClusterIP	None	<none>	3306/TCP	13m
app=wordpress,tier=mysql					

■ Wordpress WEB 접속: http://35.221.226.224:80

환영합니다

유명한 5분 워드프레스 설치 과정에 오신 것을 환영합니다! 아래에서 정보를 입력만 하면 세계에서 가장 확장성 높고 강력한 개인 출판 플랫폼을 사용하는 길로 들어서게 됩니다.

필요한 정보

다음 정보들을 제공해주세요. 나중에 다시 변경할 수 있으니 걱정하지 않아도 됩니다.

사이트 제목	<input type="text" value="datastory hub"/>
사용자명	<input type="text" value="kevin.lee"/> <small>사용자명은 알파벳, 숫자, 스페이스, 밑줄, 하이픈, 마침표, @ 심볼만 가능합니다.</small>
비밀번호	<input type="password" value="....."/> <input type="button" value="보기"/> <div>강함</div> <small>중요: 로그인하려면 이 비밀번호가 필요할 것입니다. 안전한 곳에 보관하십시오.</small>
이메일 주소:	<input type="text" value="abc@abc.com"/> <small>계속하기 전에 이메일 주소를 한 번 더 확인하세요.</small>
검색 엔진 접근 여부	<input type="checkbox"/> 검색 엔진이 이 사이트 검색 차단하기 <small>이 요청이 받아들여지는 것은 전적으로 검색 엔진에 좌우됩니다.</small>
<input type="button" value="워드프레스 설치하기"/>	

mysql 접속

```
C:\Users\g7>kubect1 exec -it wordpress-mysql-5b697dbbfc-hbclv -- bash
root@wordpress-mysql-5b697dbbfc-hbclv:/# env | grep MYSQL
MYSQL_ROOT_PASSWORD=Passw0rD
MYSQL_MAJOR=5.6
MYSQL_VERSION=5.6.50-1debian9
```

```
root@wordpress-mysql-5b697dbbfc-hbclv:/# mysql -uroot -p
Enter password:
```

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| #mysql50#lost+found |
| mysql |
| performance_schema |
| wordpress |
+-----+
5 rows in set (0.00 sec)
```

```
mysql> use wordpress;
Database changed
mysql> show tables;
Empty set (0.00 sec)
```

wordpress 사이트 install 이후 테이블 생성됨.

```
mysql> show tables;
```

```
+-----+
| Tables_in_wordpress |
+-----+
| wp_commentmeta      |
| wp_comments         |
| wp_links            |
| wp_options          |
| wp_postmeta         |
| wp_posts            |
| wp_term_relationships |
| wp_term_taxonomy    |
| wp_termmeta         |
| wp_terms            |
| wp_usermeta         |
| wp_users            |
+-----+
12 rows in set (0.00 sec)
```

```
mysql> select * from wp_users;
```

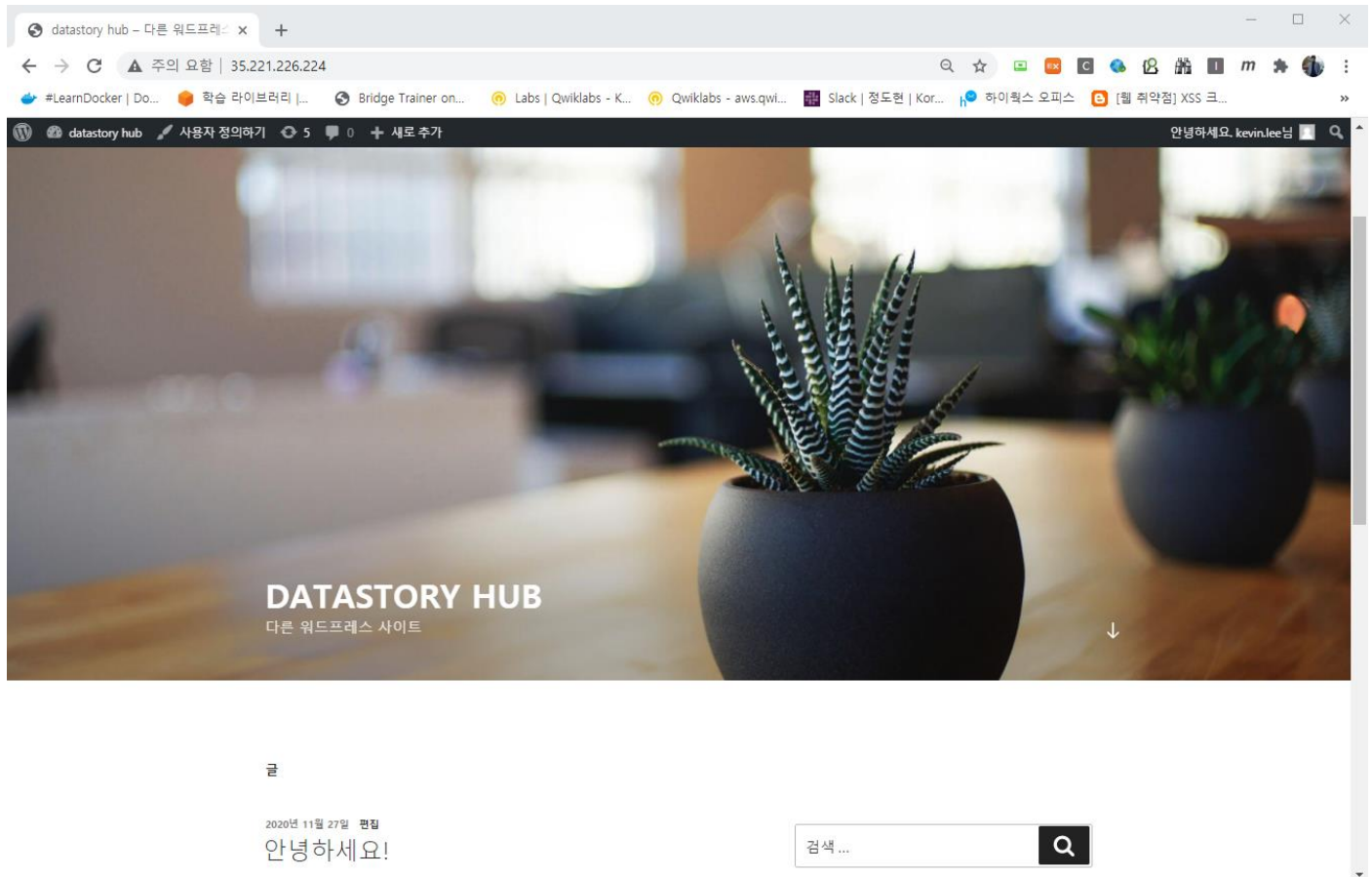
```
+-----+-----+-----+-----+-----+-----+-----+
| ID | user_login | user_pass | user_nicename | user_email | user_url | user_registered |
| user_activation_key | user_status | display_name |
+-----+-----+-----+-----+-----+-----+-----+
| 1 | kevin.lee | $P$BSr1AWquFtlQgQaVZuJ6/1Z14MHJZ4/ | kevin-lee | abc@abc.com | | 2020-11-26 |
23:40:07 | | 0 | kevin.lee |
+-----+-----+-----+-----+-----+-----+-----+
1 row in set (0.00 sec)
```

```
mysql> exit
Bye
```

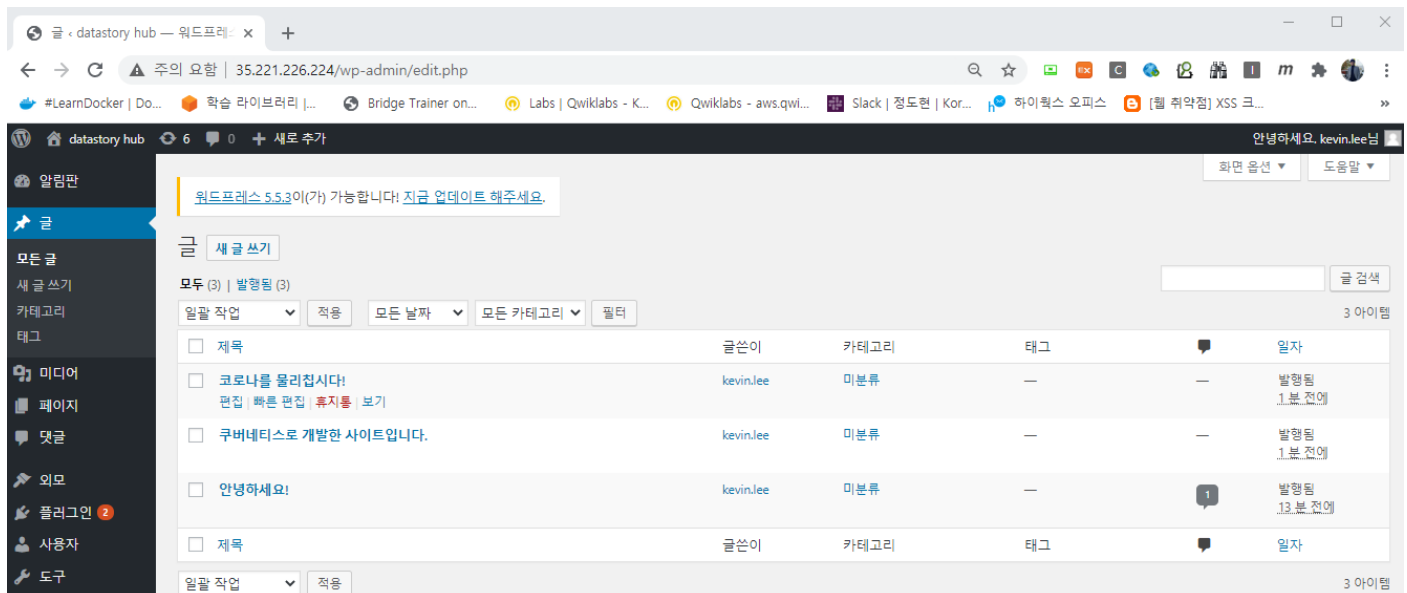
PVC 할당 공간 확인

```
root@wordpress-mysql-5b697dbbfc-hbclv:/# df -h
Filesystem      Size  Used Avail Use% Mounted on
overlay          95G   3.4G   91G   4% /
tmpfs            64M    0    64M   0% /dev
tmpfs           999M    0   999M   0% /sys/fs/cgroup
/dev/sda1        95G   3.4G   91G   4% /etc/hosts
shm             64M    0    64M   0% /dev/shm
/dev/sdb         20G   226M   20G   2% /var/lib/mysql ★★★★★
```

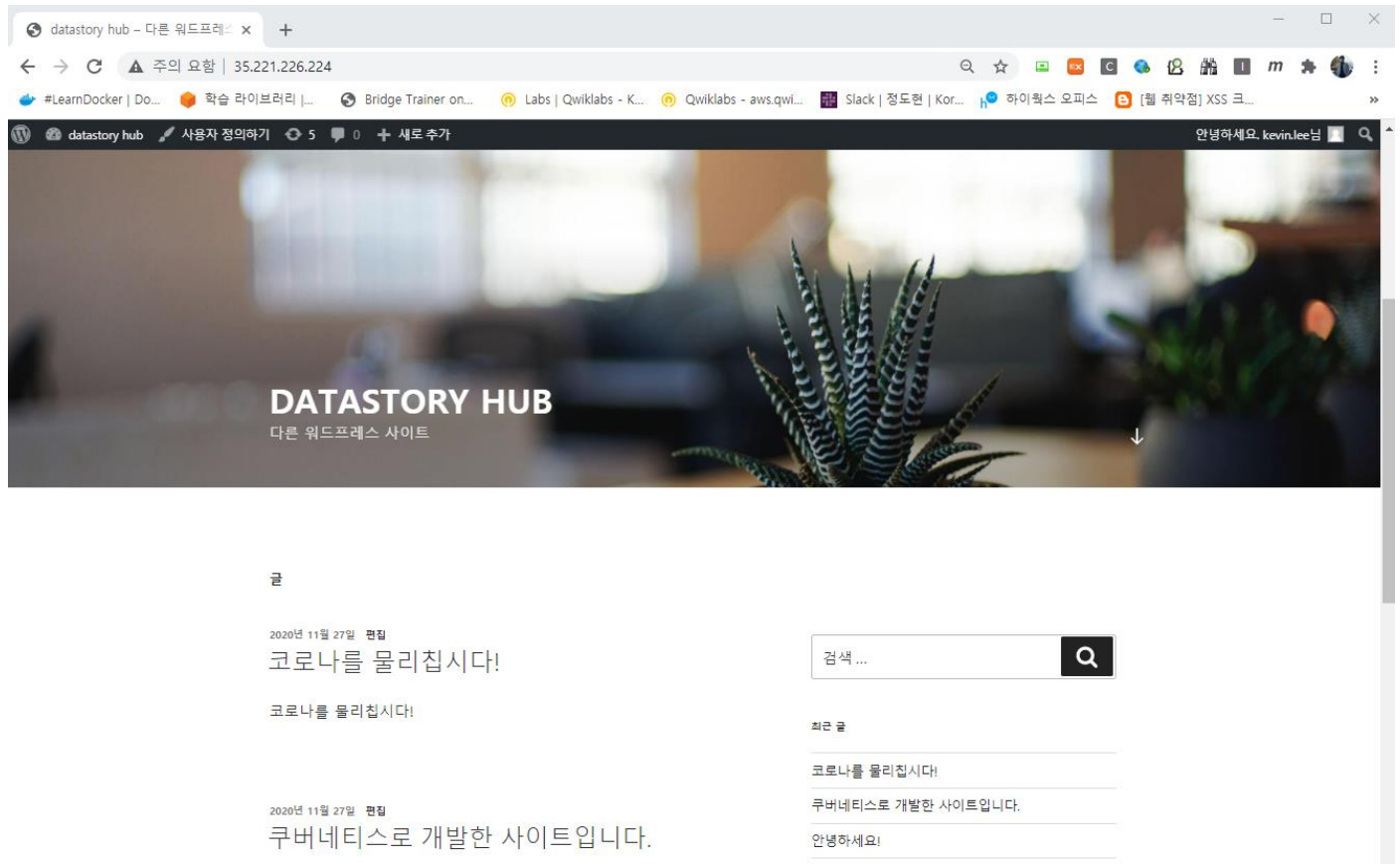
wordpress를 이용한 사이트 접속 확인



사이트에서 글 입력



메인 페이지



```
root@wordpress-mysql-5b697dbbfc-hbclv:/# mysql -uroot -p
Enter password:
```

```
mysql> show databases;
+-----+
| Database |
+-----+
| information_schema |
| #mysql50#lost+found |
| mysql |
| performance_schema |
| wordpress |
+-----+
5 rows in set (0.00 sec)

mysql> use wordpress;

mysql> select * from wp_posts;
```