

IMPORTANT: This isn't a solution (because simply I don't know, and the time wasn't enough for searching; since I have a current commitments to my position), this is the result of quick searching on the web and prompting LLMs like Grok3 and Claude 3.7 sonnet.

## Troubleshooting Internal Web Dashboard Connectivity

### 1 Verifying DNS Resolution

When encountering “host not found” errors, the issue often lies in the system's inability to translate the hostname (`internal.example.com`) into an IP address via DNS.

#### 1.1 Compare DNS Resolution

```
1 # Check what DNS servers the system is currently using
2 cat /etc/resolv.conf
3
4 # Try to resolve using the system's default DNS
5 nslookup internal.example.com
6
7 # Compare with Google's public DNS (8.8.8.8)
8 nslookup internal.example.com 8.8.8.8
```

**Explanation:** The first command displays the DNS servers configured in the system. The second command attempts resolution using the default DNS, while the third uses Google's public DNS. If system DNS fails but 8.8.8.8 succeeds → system DNS issue. If both fail → maybe the domain is only internal (not public) → focus on internal DNS servers.

### 2 Diagnosing Service Reachability

This section checks whether the web service is operational and reachable on the resolved IP address.

```
1 # If we know the IP address (let's say it's 192.168.1.10):
2 ping 192.168.1.10
3
4 # Check if web ports are reachable
5 telnet 192.168.1.10 80
6 telnet 192.168.1.10 443
```

```

7
8 # Try accessing with curl
9 curl -v http://192.168.1.10
10 curl -v https://192.168.1.10
11
12 # Check local listening services
13 sudo netstat -tulpn | grep -E ':(80|443)'
14 # or
15 sudo ss -tulpn | grep -E ':(80|443)'

```

#### Explanation:

- ping tests basic network connectivity.
- telnet checks if specific ports (80 for HTTP, 443 for HTTPS) are open.
- curl attempts an actual web request.
- netstat/ss verifies if web services are running on your machine.

## 3 Possible Causes for the Issue

The following lists potential reasons why `internal.example.com` might be unreachable.

1. Internal DNS server is down or unreachable.
2. Firewall blocking access to the web server or DNS traffic.
3. Web service is down on the server.

## 4 Proposed Fixes for Each Issue

This section details how to confirm and resolve each potential issue.

### 4.1 Internal DNS Server is Down or Unreachable

Confirm it's the issue:

```

1 # Get your DNS server IP from resolv.conf
2 DNS_SERVER=$(grep nameserver /etc/resolv.conf | head -1 | awk
   '{print $2}')
3
4 # Test if DNS server is responding
5 ping $DNS_SERVER
6
7 # Check if it's accepting DNS queries
8 dig @$DNS_SERVER google.com

```

Fix:

```

1 # Temporarily use Google's DNS
2 sudo sh -c 'echo "nameserver 8.8.8.8" > /etc/resolv.conf'

```

## 4.2 Firewall Blocking Access

Confirm it's the issue:

```
1 # Check if local firewall is blocking
2 sudo iptables -L
3
4 # Test connection with telnet
5 telnet 192.168.1.10 80
```

Fix:

```
1 # Allow HTTP/HTTPS traffic
2 sudo iptables -A INPUT -p tcp --dport 80 -j ACCEPT
3 sudo iptables -A INPUT -p tcp --dport 443 -j ACCEPT
4
5 # Make it persistent
6 sudo apt install iptables-persistent
7 sudo netfilter-persistent save
```

## 4.3 Web Service is Down on the Server

Confirm it's the issue:

```
1 # SSH to the server (if possible)
2 ssh admin@192.168.1.10
3
4 # Check service status
5 sudo systemctl status apache2      # or any other webserver.
```

Fix:

```
1 # Start the web service
2 sudo systemctl start apache2      # or any other webserver.
3
4 # Enable it to start at boot
5 sudo systemctl enable apache2
```