Lab Report – Application Deployment & Testing

# 1. Overview

This lab involved deploying a simple RESTful API using Python’s built-in http.server module. The API was hosted on a VM running on ESXi Host 1 and accessed from another VM on ESXi Host 2.

# 2. Deployment Details

• Programming Language: Python

• Hosting VM: Kali on ESXi Host 1

• API Base URL: http://192.168.255.2:8081/api

• Port Used: 8081

# 3. Network Connectivity Test

Command Used: ping 192.168.255.2

Result:  
Reply from 192.168.255.2: bytes=32 time<1ms TTL=128  
✅ Inter-host network connectivity successful.

# 4. Test Scenarios & Results

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Test Case | Description | Method | Endpoint | Request Body | Expected Result | Actual Result |
| TC01 | GET message | GET | /api | None | 200 OK + Message | ✅ Success |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| TC04 | GET invalid path | GET | /wrong | None | 404 Not Found | ✅ Error shown |

# 5. Sample API Responses

TC01 – GET /api

{  
 "message": "Hello, this is your GET API!"  
}

# 6. Tools Used

• curl – for command-line testing

• ping – to validate connectivity between VMs

# 7. Conclusion

The RESTful API was deployed successfully and worked as expected. All tested endpoints behaved correctly. Communication between VMs on different ESXi hosts was successful.