

TCP Load Balancer Sizing

F5 Distributed Cloud TCP Load Balancer provides Layer 4 load balancing for non-HTTP protocols including databases, gaming servers, mail servers, and custom TCP/UDP applications.

TCP Load Balancer Requirements

Application Inventory

What TCP/UDP applications need load balancing?

APPLICATION	PROTOCOL	PORT(S)	USE CASE
<div>Enter value</div>	<div><input type="checkbox"/> TCP</div> <div><input type="checkbox"/> UDP</div>	<div>Enter value</div>	<div><input type="checkbox"/> Database <input type="checkbox"/> Gaming</div> <div><input type="checkbox"/> Mail <input type="checkbox"/> SSH</div> <div><input type="checkbox"/> Custom</div>
<div>Enter value</div>	<div><input type="checkbox"/> TCP</div> <div><input type="checkbox"/> UDP</div>	<div>Enter value</div>	<div><input type="checkbox"/> Database <input type="checkbox"/> Gaming</div> <div><input type="checkbox"/> Mail <input type="checkbox"/> SSH</div> <div><input type="checkbox"/> Custom</div>
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Port Configuration

- ☒ Single port per load balancer
- ☒ Multiple specific ports: ____
- ☒ Port range: ____ to ____

Traffic Volume

Connection Metrics

Metric	Average	Peak
Connections per second	<div>Enter value</div>	<div>Enter value</div>
Concurrent connections	<div>Enter value</div>	<div>Enter value</div>
Bandwidth (Mbps)	<div>Enter value</div>	<div>Enter value</div>
Average connection duration	<div>Enter value</div> <div>seconds</div>	<div>Enter value</div>

Connection Patterns

What are your connection patterns?

- ☒ Short-lived connections (request/response)
- ☒ Long-lived connections (persistent)
- ☒ Mixed

Origin Configuration

Origin Servers

APPLICATION	ORIGIN TYPE	COUNT	PORTS
<input type="text" value="Enter value"/>	<input type="checkbox"/> IP <input type="checkbox"/> FQDN	<input type="text" value="Enter value"/>	<input type="text" value="Enter value"/>
<input type="text" value="Enter value"/>	<input type="checkbox"/> IP <input type="checkbox"/> FQDN	<input type="text" value="Enter value"/>	<input type="text" value="Enter value"/>
<input type="text" value="Enter value"/>	<input type="checkbox"/> IP <input type="checkbox"/> FQDN	<input type="text" value="Enter value"/>	<input type="text" value="Enter value"/>

Origin Connectivity

How will F5 XC reach TCP origins?

- ☒ Public Internet
- ☒ Customer Edge site
- ☒ Cloud Site (AWS/Azure/GCP)
- ☒ Private connectivity

Load Balancing Configuration

Load Balancing Algorithm

- ☒ Round Robin
- ☒ Least Connections
- ☒ Source IP Hash (session persistence)
- ☒ Random

Health Checks

Health check configuration:

PARAMETER	VALUE
Health check type	<input type="checkbox"/> TCP Connect <input type="checkbox"/> Custom
Check interval	<input type="text" value="Enter value"/> seconds
Healthy threshold	<input type="text" value="Enter value"/> checks
Unhealthy threshold	<input type="text" value="Enter value"/> checks
Timeout	<input type="text" value="Enter value"/> seconds

Session Persistence

- ☒ Yes - Source IP based
- ☒ No - Connections can go to any origin

TLS Configuration

TLS Requirements

- ☒ **TLS Termination** - F5 terminates TLS
- ☒ **TLS Pass-Through** - Pass encrypted traffic to origin
- ☒ **No TLS** - Unencrypted TCP

Certificate Configuration

If TLS termination:

PARAMETER	VALUE
Certificate source	<input type="checkbox"/> Automatic <input type="checkbox"/> Custom
Minimum TLS version	<input type="checkbox"/> TLS 1.2 <input type="checkbox"/> TLS 1.3
mTLS required	<input type="checkbox"/> Yes <input type="checkbox"/> No

Timeouts and Limits

Connection Timeouts

PARAMETER	VALUE
Connection timeout	<input type="text" value="Enter value"/> seconds
Idle timeout	<input type="text" value="Enter value"/> seconds

Connection Limits

PARAMETER	VALUE
Max connections per client IP	<input type="text" value="Enter value"/>
Max total connections	<input type="text" value="Enter value"/>

Use Case Specific

Database Load Balancing

If load balancing databases:

PARAMETER	VALUE
Database type	<input type="checkbox"/> MySQL <input type="checkbox"/> PostgreSQL <input type="checkbox"/> MongoDB <input type="checkbox"/> Redis <input type="checkbox"/> Other: <input type="text" value="Enter value"/>
Read/Write splitting needed	<input type="checkbox"/> Yes <input type="checkbox"/> No
Connection pooling	<input type="checkbox"/> Yes <input type="checkbox"/> No

Gaming/Real-Time

If gaming or real-time applications:

PARAMETER	VALUE
UDP support needed	<input type="checkbox"/> Yes <input type="checkbox"/> No
Latency sensitivity	<input type="checkbox"/> Critical <input type="checkbox"/> Important <input type="checkbox"/> Normal
Geographic proximity required	<input type="checkbox"/> Yes <input type="checkbox"/> No

Summary: TCP Load Balancer Requirements

REQUIREMENT	VALUE
Number of TCP Load Balancers	<div>Enter value</div>
Protocols	<div><input type="checkbox"/> TCP <input type="checkbox"/> UDP <input type="checkbox"/> Both</div>
Port(s)	<div>Enter value</div>
Peak Connections per Second	<div>Enter value</div>
TLS Required	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>
Session Persistence	<div><input type="checkbox"/> Yes <input type="checkbox"/> No</div>

Additional notes: