

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
<input type="text" value="Enter value"/>	<input type="checkbox"/> TCP <input type="checkbox"/> UDP	<input type="text" value="Enter value"/>	<input type="checkbox"/> Database <input type="checkbox"/> Gaming <input type="checkbox"/> Mail <input type="checkbox"/> SSH <input type="checkbox"/> Custom
<input type="text" value="Enter value"/>	<input type="checkbox"/> TCP <input type="checkbox"/> UDP	<input type="text" value="Enter value"/>	<input type="checkbox"/> Database <input type="checkbox"/> Gaming <input type="checkbox"/> Mail <input type="checkbox"/> SSH <input type="checkbox"/> Custom
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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	Enter value	Enter value
Concurrent connections	Enter value	Enter value
Bandwidth (Mbps)	Enter value	Enter value
Average connection duration	Enter value seconds	Enter value

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
Enter value	<input type="checkbox"/> IP <input type="checkbox"/> FQDN	Enter value	Enter value
Enter value	<input type="checkbox"/> IP <input type="checkbox"/> FQDN	Enter value	Enter value
Enter value	<input type="checkbox"/> IP <input type="checkbox"/> FQDN	Enter value	Enter value

Origin Connectivity

How will F5 XC reach TCP origins?

- Public Internet
 - Customer Edge site
 - Cloud Site (AWS/Azure/GCP)
 - Private connectivity
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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
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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	Enter value seconds
Idle timeout	Enter value seconds

Connection Limits

PARAMETER	VALUE
Max connections per client IP	Enter value
Max total connections	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	<input type="text" value="Enter value"/>
Protocols	<input type="checkbox"/> TCP <input type="checkbox"/> UDP <input type="checkbox"/> Both
Port(s)	<input type="text" value="Enter value"/>
Peak Connections per Second	<input type="text" value="Enter value"/>
TLS Required	<input type="checkbox"/> Yes <input type="checkbox"/> No
Session Persistence	<input type="checkbox"/> Yes <input type="checkbox"/> No

Additional notes:

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