📄 LoadRunner & Performance Testing Interview Q&A (Detailed Explanation)

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1. What is the relationship between Throughput and Response Time?

Throughput is the amount of data transferred between client and server per unit of time (usually KB/sec).

Response Time is the time taken from the moment a request is sent until the response is received.

Relationship:

At low load: Both throughput and response time are optimal.

As users increase: Throughput increases and response time starts to rise slightly.

Beyond saturation point: Throughput plateaus or drops, while response time increases drastically. This indicates a performance bottleneck.

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2. What is 90th Percentile in Performance Testing?

The 90th percentile indicates the time within which 90% of the transactions are completed.

It helps to measure the worst-case scenario performance without being skewed by extreme outliers.

Example: Out of 100 requests, if 90 took less than 3 sec and 10 took more, then 90th percentile = 3 sec.

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3. Why do we report 90th Percentile?

Average can be misleading due to a few very slow or very fast transactions.

90th percentile is a better indicator of real-world user experience.

It’s often used in Service Level Agreements (SLAs).

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4. Advanced Items in LoadRunner

Virtual Table Server (VTS): Centralized data sharing among Vusers.

Correlation Studio: Helps identify and correlate dynamic values.

DevWeb Protocol: Lightweight protocol ideal for HTTP/JSON services.

CI/CD Integration: Jenkins, Azure DevOps.

Integration with APM tools like Dynatrace or New Relic for root cause analysis.

Rendezvous points, pacing, transactions, and think time management.

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5. What is VTS in LoadRunner?

VTS (Virtual Table Server) allows dynamic data sharing among virtual users.

Example Scenario: Ensure every Vuser uses a unique login credential that isn’t reused by others.

Useful in scenarios requiring data uniqueness or queue-like behavior.

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6. web\_get\_int\_property Function

Retrieves internal properties related to HTTP communication.

Common usage: Find out download size using:

int size = web\_get\_int\_property(HTTP\_INFO\_DOWNLOAD\_SIZE);

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7. How to Get Size of Downloaded File

Use web\_get\_int\_property(HTTP\_INFO\_DOWNLOAD\_SIZE) to get the size in bytes of last server response.

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8. File Upload Works for .txt but Fails for Others – What to Check

Check content-type headers (e.g., text/plain, application/pdf).

Ensure multipart form-data boundary is correct.

Validate file encoding (binary vs ASCII).

Confirm server allows that file type and size.

Use web\_custom\_request for custom upload formats.

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9. No Static Boundaries – How to Correlate in LoadRunner?

Use dynamic boundaries or regular expressions.

Use JSON or XML parsers if response is structured.

Enable Snapshot on Error to view dynamic data.

Use tools like Correlation Studio or manual web\_reg\_save\_param.

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10. Generate Random String in LoadRunner

char randStr[20];

sprintf(randStr, "User\_%d", rand());

lr\_save\_string(randStr, "randomUser");

This helps simulate dynamic user or session data.

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11. What is UUID?

Stands for Universally Unique Identifier.

128-bit unique value used for identifying resources, requests, etc.

Example: 123e4567-e89b-12d3-a456-426614174000

Often used in APIs to track session, transaction, or request.

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12. Current Date and Time Parameterization

From VuGen:

Use Date/Time parameter type.

Or dynamically:

lr\_save\_datetime("%Y-%m-%d %H:%M:%S", DATE\_NOW, "currentDateTime");

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13. web\_concurrent\_start/web\_concurrent\_end

Used to simulate concurrent requests like images, scripts, etc.

web\_concurrent\_start(NULL);

web\_url("img1", ...);

web\_url("img2", ...);

web\_concurrent\_end(NULL);

Helps emulate browser-like parallel behavior.

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14. web\_reg\_find vs web\_find

web\_reg\_find: Registers before the request. Used in HTTP/HTML protocols.

web\_find: Only used in GUI-based Vuser scripts (rarely used now).

web\_reg\_find is used to validate that a certain text appears in the response.

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15. Count Text Occurrences in Response

web\_reg\_save\_param("matchText", "LB=", "RB=YourText", "ORD=ALL", LAST);

int count = atoi(lr\_eval\_string("{matchText\_count}"));

Use ORD=ALL to capture all matches.

{param\_count} gives how many times it was found.

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16. Extension of Parameter File in LoadRunner

.dat (default) and .csv files are used.

These files are used for feeding data to Vuser scripts.

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17. Common Reasons for Record Failures

Invalid correlation or missing dynamic values.

Incorrect parameterization.

Expired or reused session tokens.

Server rejecting duplicate or incorrect data.

Authorization or CSRF token mismatch.

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18. Convert URL to HTML Recording or Vice Versa

During recording, choose recording mode: URL or HTML.

To switch:

Delete old script and re-record with new mode.

Some parts may be manually converted but it's not reliable.

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19. What is ORD in LoadRunner?

Specifies which occurrence to capture when multiple matches found.

ORD=1: First match

ORD=ALL: All matches (used in correlation)

Helps in selecting specific data from multiple similar patterns.

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20. Redirection Not Working – How to Enable

By default, LoadRunner follows redirects.

If not:

web\_set\_option("MaxRedirectionDepth", "5", LAST);

Or capture Location header and manually hit redirected URL.

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21. Client Report in Analysis – What’s Included

Average, Min, Max, 90th percentile response times

Transactions per second (TPS)

Throughput (KB/sec)

Error summary and error details

System resource graphs (CPU, memory, etc.)

Graphs for Load vs. Response Time

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22. Basics and Advanced Topics in LoadRunner

Basics:

Recording & Replay

Correlation & Parameterization

Transactions & Think Time

Error Handling

Advanced:

VTS, Custom Correlation Rules

CI/CD Integration

DevWeb Protocol

JavaScript Protocol

APM Tool Integration

Network Virtualization

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23. About Yourself – Sample Answer

"I’m a Performance Test Engineer with X years of experience, primarily working with LoadRunner, JMeter, and integrating tests with APM tools like Dynatrace. I’ve executed various types of performance tests such as Load, Stress, and Endurance. My strengths lie in scripting, correlation, analyzing bottlenecks, and preparing performance reports. I enjoy optimizing systems for better reliability and user experience."

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24. What is Baseline Testing?

Initial test to establish reference performance metrics.

Performed before tuning or code changes.

Helps to compare improvements or regressions in later cycles.

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25. File Upload Fails for Some Types – What to Check?

Content-Type: multipart/form-data, application/pdf, etc.

Encoding: Binary vs text.

File format validation on server.

Content-length header.

Use web\_custom\_request to simulate file uploads.

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Let me know if you'd like a clean PDF, export to Excel/Q&A format, or want to include visuals for each topic.