

Citrix CNS-220 1Y0-240 Exam Hints

This is not a brain dump! Questions and Answers are not given here. Rather it is a guide for further study. It assumes you have attended the CNS-220 official Citrix instructor led course.

Most of the questions come from the CNS-220 course. There may be some not covered in the course but covered in the Exam Prep references.

The headings below are based on the course modules in approximately the same order as covered in the course.

Quite often the exam exhibit involves a section of CLI. Maybe it would be beneficial to set up a lab using the evaluation version of the VPX and redo some of the labs using the CLI option. You don't have to write any CLI, rather you will inspect some output, and the meaning of the output is usually guessable if you have used the GUI to configure the feature.

Getting started

Know that after licensing the Netscaler, a reboot is required.

Know the various licenses, including the use case for Burst Packs.

Hardware Platforms

Know that using the SDX, the Netscaler instances can be independently upgraded.

Networking

Know that 2 arm mode is also known as inline mode.

Know that you can enable or disable management access on a SNIP. In the course we used a separate SNIP for management access to the HA pair.

Know the two ways of enabling a back end server to have visibility of the client IP address. Both were discussed in the course.

Know that if clients are connecting over unreliable 3G connections, the TCP buffering feature can help improve performance. This topic is unfortunately not covered in the CNS-220! For more see <http://support.ctx.org.cn/ctx124712.citrix>

When would RNAT be useful. Remember my use case about having an internal server with a private IP address needing to access the internet to download patches or applications.

Know or recognise the CLI to enable a LAG using LACP.

Be able to recognise some CLI syntax for an expression looking for a particular client IP eg

`CLIENT.IP.SRC.IN_SUBNET(10.10.10.0/24).`

Know what DSR is ie Direct Server Return. The course doesn't cover any use case for it but a google search reveals a small number of customer use cases.

Know how a Wireshark trace can help troubleshoot issues where the log files may not give enough information.

Know the difference between simple ACLs and Extended ACLs. What can be checked in a simple ACL? What actions can be taken? If you use both, which are evaluated first? These are covered in the courseware.

Know that an ACL entry needs to be Enabled and Applied in order to take effect.

HA

Know the implication of different build versions and the effect on sync. We see it in the lab during the upgrade process.

The course covers some ports used by HA heartbeats and sync, unfortunately it's best to learn them.

Know what a FIS is. Failover Interface Set. I don't tend to highlight this feature as although the use case is supposed to be for when redundancy is required, and there are better ways eg LACP. See <https://support.citrix.com/article/CTX114657>

Know the pre-reqs for HA eg unique NSIPs.

Know the best practice for HA monitoring on the interfaces. We discussed some gotchas in class eg using an interface temporarily for testing at the time of setting up HA causes that interface to be monitored by default.

Know the recommended practice for managing a NetScaler high availability (HA) pair to ensure that management changes are always made on the Primary NetScaler? As used in class to manage our lab HA pair using a SNIP with management access enabled.

Know the process for an upstream device connects to the Primary Netscaler after an HA failover. (GARP)

Load Balancing.

Know that you can use the No Monitor option to remove health checks from a specific service. Maybe you need to save the bandwidth. We also saw a use case when using responder as one way to do http to https redirection. We needed a dummy service just to keep the vserver in the UP state, with the No Monitor option. The server had to be UP for responder to work.

Know the purpose of Weights when using a load balancing method.

Know the default LB method ie Least Connections

Know about the protection feature ie when a vserver is down we can forward the client to a backup vserver or redirect to a url. If there is a query present, it can be preserved.

Know some of the advanced load balancing methods which involve hashing.

Know that if we configure a load balancing method other than round robin, it may use round robin while starting up.

SSL

Know the input format supported by the Certificate Import wizard. PKCS#12 and the two certificate formats supported ie PEM, DER.

Know a key benefit of Session Reuse. It uses a partial SSL handshake over an existing SSL connection to reduce overhead.

Know the purpose of SNI. ie multiple certificates bound to a single vserver.

Know that an SSL vserver will be DOWN if no certificate is bound

Know the process and order of steps for creating a certificate ie generate keys, create a CSR, obtain a certificate, install which is creating a certificate-key pair, and bind the certificate-key pair to an SSL vserver.

Security

Know the `cat /tmp/aaad.debug` command and purpose

Know the built-in command policies.

Know that Netscaler Gateway supports various authentication standards for dual factor authentication including LDAP, RADIUS and TACACS

Know how to create a custom LDAP monitor and what parameters are required as we did in a lab when creating a monitor for our 2 LDAP services.

Know the purpose of Admin Partitions

Monitoring and Management

Know what MAS can do for example monitor client side and server side latency, and what information Web, HDX and Gateway Insight can display. There were no hands on for this as we don't have MAS in these labs but the information is in the ecourseware.

Know when the `ns.log` file is archived and a new one started.

Know about the Generate Support File option which collects logs and configuration information for Citrix technical support

Scenario: NetScaler features are NOT licensed. A NetScaler Engineer has checked that the proper

Policy

There will be some examples of policies using CLI with questions about what the policy does. Its worth reviewing the CLI sections of the labs on policies.

Know about pattern sets and data sets.

Know about binding of policies, the bind points and priorities.

Content switching

Know when a CS vserver would be marked as DOWN and the Enable State Update option to change the behaviour.

Optimization

Which includes the following...

Compression

Know that compression can be bypassed when CPU reaches a certain threshold.

Know that after enabling the feature globally, you have to enable compression on existing services, but if the compression feature is already enabled, then when creating a service compression will be enabled by default.

Know which client header indicates support for the type of compression the NetScaler may use? ie Accept-encoding.

Caching

There was no lab on it but if you want to try it the lab guide for the advanced course may be on this web site. So review the content from the courseware to be prepared for some basic questions on Caching.

Front end optimization

Again there is a lab in the Netscaler Advanced course if you want to try and adapt it to your own lab. Be familiar with the various optimisations that can be done.

Policies

Know where policies can be bound and the use of priorities.

Be able to recognise what an expression would match eg

```
REQ.IP.SOURCEIP == 10.10.10.1 || REQ.IP.SOURCEIP != 10.10.10.0 -netmask 255.255.255.0
```

Secure Web Gateway

Know the basics of the feature, in particular the Transparent v Explicit Proxy modes.

GSLB

Know that when you are using dynamic proximity, know how the RTT is measured ie is it between the client and each Netscaler or is it between the Clients LDNS and each Netscaler?

Know the MIR feature