IBM WebSphere Application Server Network Deployment V8.5.5 and Liberty Profile System Administration

Exam A

QUESTION 1
A system administrator has created a Python script called globalScript. py.
What should the administrator do to ensure globalScript. py is loaded when the wsadmin shell is used?

A. Compile globalScript.py to a Java class in the bin directory.
B. Invoke wsadmin with the argument-profileName globalScript.py.
C. Modify the configureCustomProperty script to import globalScript. py.
D. Set the script profiles in the wsadmin.properties file to load globalScript .py.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 2
A system administrator has created a Python script that will run in WebSphere Network cell where administrative security is enabled. This script is named
doUpdate.py and will be run by using the following:
wsadmin -connType RMI -f doUpdate.py
How can the administrator suppress a user/password prompt from appearing when this script is run?
Set the user and password in the:

A. sas.client.props file.
B. ssl.client.props file.
C. soap.client.props file.
D. wsadmin.properties file.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 3
A system administrator runs a Python script that creates and configures several servers and realizes that the script fails before completing. Although many tasks succeeded, they are rolled back when the script fails.
Before running the script again, what can the administrator add to the script after each task so the completed tasks are committed even if other tasks fail?

A. AdminApp.update ()
B. AdminConfig.save()
C. AdminControl.invoke(server, 'sync')
D. AdminTask.backupJobManager('server')

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 4
An application deployed to a multi-node cluster is reported to have slowness and hung threads. A system administrator is asked to review the logs on each node and identify if the hung threads are a false alarm.
How can the administrator determine that the hung threads are a false alarm?
Analyze the:

A. ffdc logs
B. SystemErr.log
C. SystemOut.log
D. native_stderr.log

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Problem(Abstract)

The SystemOut.log contains a WSVR0605W message, also called a hung thread message. A javacore, or thread dump on Solaris and HP-UX, is needed in order to determine how to resolve the potentially hung threads.

Cause
WebSphere Application Server attempts to report potentially hung threads using the hung thread detector. Depending on how the hung thread detector policy is configured, a thread running for a certain interval (default 10 minutes) might be reported as hung and a WSVR0605W message is printed in the SystemOut.log file: WSVR0605W: Thread <threadname> has been active for <time> and may be hung. There are <totalthreads> in total in the server that may be hung.
References: https://www-01.ibm.com/support/docview.wss?uid=swg21448581

QUESTION 5
A system administrator suspects that the slow performance of an application might be caused by lock contention.
To debug this further, what can the administrator do using IBM Support Assistant?

A. Analyze the running server using **IBM Monitoring and Diagnostic Tools for Java – Health Center**.
B. Collect a javacore and analyze it using **IBM Monitoring and Diagnostic Tools for Java – Health Center**.
C. Collect three thread dumps at equal time intervals and analyze them using **IBM Monitoring and Diagnostic Tools for Java – Dump Analyzer**.
D. Collect three system dumps at equal time intervals and analyze them using **IBM Monitoring and Diagnostic Tools for Java – Memory Analyzer**.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The IBM Monitoring and Diagnostic Tools for Java - Health Center is a lightweight tool that monitors active IBM Virtual Machines for Java with minimal performance overhead. The Health Center suggests live tuning recommendations for Garbage Collection, profiles methods including call stacks, and highlights contended locks.
This information can help you optimize performance, improve stability and optimize system resource usage.

The tool is provided in two parts:
▪ An agent, which collects data from a running application. Java applications are monitored by the Health Center agent
▪ The Health Center client, an Eclipse-based GUI which connects to the agent. The client interprets the data that is obtained by the agent and provides recommendations to improve the performance of the monitored application. The client is available as an Eclipse plug-in and as part of IBM Support Assistant (ISA).

References: https://www.ibm.com/support/knowledgecenter/SS3KLZ/com.ibm.java.diagnostics.healthcenter.doc/homepage/plugin-homepage-hc.html

QUESTION 6

A system administrator was asked by the development team to inform them of any warning message which contains a string "Connection" on a WebSphere Application Server with High Performance Extensible Logging (HPEL) enabled.

What should the administrator do to continuously monitor logs for the required message?
A. Configure log detail levels to include filter on "Connection" string.
B. Use the Log Viewer in the administrative console with filter on "Connection" string.
C. Use the logviewer.sh or logviewer.bat command with appropriate options.
D. Use the Log Viewer in the administrative console with filter on "Connection" string and enable the "Refresh automatically" feature.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The High Performance Extensible Logging (HPEL) facility writes to the log and trace repositories in a binary format. You can view, query and filter the repository using the LogViewer command.

logviewer.sh -monitor -includeLoggers Connection

-monitor [integer]
Specifies that you want the logViewer to continuously monitor the repository and output new log record entries as they are created. You can provide an optional integer argument after this parameter to specify how often you want the LogViewer tool to query the repository for new records. By default the logViewer queries the repository for new records every 5 seconds. When used with other filtering options, only those new records that match the filter criteria are displayed.

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/rtrb_logviewer.html

QUESTION 7
A system administrator is required to monitor the application server logs for heap memory issues and determine if the heap memory usage is reaching close to 70% of the maximum heap. The application server is configured with an initial heap of 256 MB and a max heap of 1 GB.
How should the administrator determine if the application server is utilizing 70% of the max allocated heap memory?

A. Check the System logs for OutOfMemoryErrors.
   Trigger a heap dump from the Integrated Solutions Console (ISC).
   Analyze the heap dump.
B. Configure WebSphere Application Server to enable verbose garbage collection. Analyze the garbage collection cycles in the native logs.
C. Configure Initial heap to be equal to the max heap.
   Trigger a heap dump from the Integrated Solutions Console (ISC).
   Analyze the heap dump.

D. Configure WebSphere Application Server to increase max heap.
   Trigger a heap dump from the Integrated Solutions Console (ISC).
   Analyze the heap dump.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Enabling verboseGC (Garbage Collection) output is often required when diagnosing issues with WebSphere Application Server. Because verboseGC data is

critical to troubleshooting memory and performance problems and the overhead is generally very low, you may want to consider proactively enabling it in your

environment. References: http://www-01.ibm.com/support/docview.wss?uid=swg21114927

QUESTION 8
A system administrator needs to trigger a javacore only when a java,net.SocketTimeoutException is encountered in real time.

What does the administrator have to configure to trigger the javacore dump?

A. Configure the JAVA_DUMP_OPTS environment variable to capture javacore for ANYSIGNAL and all exceptions.
B. Configure an –Xdump:java Generic JVM argument on WebSphere Application Server with the filter for java.net.SocketTimeoutException.
C. Code wsadmin script to capture javacore and then execute it after the java.net.SocketTimeoutException has been encountered.
D. Use the log filter in HPEL to monitor for java.net.SocketTimeoutException and then gather a javacore dump from the Integrated Solutions Console (ISC).

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Dump agents are set up during JVM initialization. They enable you to use events occurring within the JVM, such as Garbage Collection, thread start, or JVM termination, to initiate one of four types of dump or to launch an external tool. Default dump agents are set up at JVM initialization They are sufficient for most cases, but the use of the -Xdump option on the command line allows more detailed configuration of dump agents. The total set of options and sub-options available under -Xdump is very flexible and there are many examples presented in this chapter to show this flexibility.

Example: To generate system cores:

-Xdump:system:events=user

QUESTION 9
An EJB application posts a request message into a JMS destination and waits for a response message on a different JMS destination. To correlate the response message to the request message, the application uses the JMS correlationId of the message. The application waits up to five seconds for a response before timing out the request.

A Message Driven Bean (MDB) running on a different cluster is responsible for consuming the request message, process it and post a response message.

The destinations are defined in a Service Integration Bus (SIB) within the cell.

Intermittent timeout exceptions have occurred for the requester application. How can a system administrator correlate and analyze the debug information from both requester and consumer applications?

A. Enable High Performance Extensible Logging (HPEL).
   Use HPEL logViewer command to see debug information.
B. Enable a diagnostic trace in both requester and consumer servers.
   Use the Integrated Solutions Console (ISC) to set the admin=all trace.
   Analyze the trace.
C. Enable High Performance Extensible Logging (HPEL).
   Enable Cross Component Trace (XCT) to include request IDs in log and trace records.
   Use HPEL logViewer command with appropriate filters to see debug information.
D. Using the Integrated Solutions Console (ISC), browse the request message that has timed out and look for any key application data.
   Search for exceptions using the key application data in both requester and consumer in `native_stderr.log` and `native_stdout.log`.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Cross Component Trace (XCT) annotates the logs so that log entries that are related to a request that is serviced by more than one thread, process, or even server are identified as belonging to the same unit of work. XCT helps identify the root cause of problems across components.

References: WebSphere Application Server V8.5 Administration and Configuration Guide for the Full Profile (July 2013), page 1091

QUESTION 10
A WebSphere system administrator needs to install the Installation Manager (IM) on an unmanaged node on a host named `<machine2>`. The deployment manager is running on a host named `<machine1>`.

What step must the administrator take before submitting a job from the Integrated Solutions Console (ISC) to install the IM on `<machine2>`?

A. Install a node agent on `<machine2>`.

B. Install the job manager on `<machine1>`.

C. Start the job manager on `<machine1>`.

D. Register `<machine2>` as a target for job manager.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Submitting jobs to install Installation Manager on remote hosts
In a flexible management environment, you can submit the Install IBM Installation Manager job to install the Installation Manager on registered hosts of the job manager.

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.installation.zseries.doc/ae/tagt_jobmgr_install_im.html

QUESTION 11
A system administrator has created a wsadmin script with several steps to install and configure an application and some resources in a WebSphere Application Server process. The script executed but the application was not installed successfully. The administrator suspects that the script has problems.

How can the administrator test and debug the script?

A. In WebSphere Application Server Developer Tools for Eclipse, right click on the script file and select `Validate` from context menu.

B. Execute the script using the wsadmin with the option `-conntype NONE` and monitor the `commandAssistanceJythonCommands.log` file.

C. Use WebSphere Application Server Developer Tools for Eclipse in the debug perspective connected to the server and execute the script step by step.

D. Run the script using wsadmin with these parameters: `-lang jython -javaoption "-Xdebug"` and then execute the logViewer command with the option `listInstances`

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
QUESTION 12
A system administrator has been asked to uninstall an application from a cluster running in a WebSphere Application Server Network Deployment cell. This application was installed from the Integrated Solutions Console (ISC). The monitored directory for the cluster is `<cluster1_dir>`.

What step(s) can the administrator perform to uninstall the application?

A. Delete the application file from `<cluster1_dir>`.

B. Stop the running cluster.
   Delete the application file from `<cluster1_dir>`.

C. Stop the running cluster.
   Copy the application file to `<cluster1_dir>`.
   Delete the application file from `<cluster1_dir>`.

D. Create a properties file to describe the deletion of the application file.
   Copy the properties file to `<cluster1_dir>`.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
You can use application properties files to install enterprise application files on a server or cluster, update deployed applications or modules, or uninstall deployed applications or modules. Drag or copy a properties file to a monitored directory and the product performs the deployment action described in the properties file. The enterprise application files that you can install, update, or uninstall using properties files include enterprise archive (EAR), web archive (WAR), Java archive (JAR), and Session Initiation Protocol (SIP) archive (SAR) files.

References: https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.multiplatform.doc/ae/trun_app_install_dragdrop_prop.html

QUESTION 13

A system administrator runs a Jython script that creates and configures several servers and realizes that the script fails before completing. Although many tasks succeeded, they are rolled back when the script fails.

Before running the script again, what can the administrator add to the script after each task so the completed tasks are committed even if other tasks fail?

A. `AdminApp.update()`

B. `AdminConfig.save()`

C. `AdminControl.invoke(server, 'sync')`

D. `AdminTask.backupJobManager('server')`

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
AdminConfig.save()to save changes after script execution.

QUESTION 14
A system administrator has created a Jython script called `globalScript.py`.

What should the administrator do to ensure `globalScript.py` is loaded when the `wsadmin` shell is used?

A. Compile `globalScript.py` to a Java class in the bin directory.

B. Invoke `wsadmin` with the argument `-profileName globalScript.py`.

C. Modify the `configureCustomProperty` script to import `globalScript.py`.

D. Set the script profiles in the `wsadmin.properties` file to load `globalScript.py`.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation: wsadmin.properties has this entry com.ibm.ws.scripting.profiles where we can add the scripting files
to be loaded.

References: https://www-01.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/rxml_propscript.html

QUESTION 15
A system administrator discovers an issue that requires a change to a federated server. In this cell, WebSphere administrative security is enabled, but application security is not enabled.

How should the administrator make this change?

The administrator should use:

A. a web browser to connect to the node agent https port.
B. a web browser to connect to the deployment manager `admin_host` port.
C. the job manager to submit a job to update the unmanaged server.
D. an ssh connection to the node and modify the `client_types.xml` file.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The admin_host virtual host is used for access to the WebSphere administrative console.
At installation time, the host is configured to match requests on the wc_adminhost and wc_adminhost_secure ports for the stand-alone server or deployment manager.

References: WebSphere Application Server V8.5 Administration and Configuration Guide for the Full Profile (July 2013), page 303

QUESTION 16
A system administrator has created a Jython script that will run in WebSphere Network cell where administrative security is enabled. This script is named `doUpdate.py` and will be run by using the following:

`wsadmin –connType RMI –f doUpdate.py`

How can the administrator suppress a user/password prompt from appearing when this script is run?

Set the user and password in the:

A. `sas.client.props` file.

B. `ssl.client.props` file.

C. `soap.client.props` file.

D. `wsadmin.properties` file.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The user Id and password needed for wsadmin to connect to a secured server can be supplied as command line options and in properties files. If used together, command line options take precedence over what is in the properties files. The properties files are located at Profile_root/properties.

If you use a Remote Method Invocation (RMI) connector or a JSR160RMI connector, set the following properties in the sas.client.props file with the appropriate values:
com.ibm.CORBA.loginUserid=
com.ibm.CORBA.loginPassword=

References: https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/txml_security.html

QUESTION 17
A system administrator wants to learn some of the Jython scripting commands for the administration of the environment.
Which product feature should the administrator use?

A. The `wsadmin.properties` file to load a profile.
B. The AdminTask object to generate wsadmin scripts.
C. The guided activities panel from the Integrated Solutions Console (ISC).
D. The "Log command assistance commands" option in the Integrated Solutions Console (ISC).

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18
A system administrator is tasked with monitoring the overall health of the WebSphere environment to be able to tune the environment properly. Specifically, the administrator was asked to:
▪ Monitor how much time is spent in the various parts of the environment.

▪ Determine the concurrent usage of the site. ▪
Identify potential memory leaks.

Which PMI modules can the administrator examine to obtain this data?

A. Number of requests, Java virtual memory, Average response time
B. Number of requests, Average response time, Web server thread pools
C. Average response time, Java virtual memory, Number of Live HTTP Sessions
D. Average response time, Web server thread pools, Number of Live HTTP Sessions

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Monitoring overall system health. To monitor overall system health, monitor the following statistics at a minimum: ▪
Average response time
Include statistics, for example, servlet or enterprise beans response time. Response time statistics indicate how much time is spent in various parts of
WebSphere Application Server and might quickly indicate where the problem is (for example, the servlet or the enterprise beans). ▪ Java virtual memory
Use JVM metrics to understand the JVM heap dynamics, including the frequency of garbage collection. This data can assist in setting the optimal heap size.
In addition, use the metric to identify potential memory leaks. ▪ Number of Live HTTP Sessions
The number of live HTTP sessions reflects the concurrent usage of your site. The more concurrent live sessions, the more memory is required. As the number of
live sessions increase, you might adjust the session time-out values or the Java virtual machine (JVM) heap available.

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/tprf_monitoringhealth.html

QUESTION 19
A system administrator is required to create a star topology for multi-cell performance management for three WebSphere Application Server
cells. How should the administrator configure the Application Placement Controller (APC) in a star topology? Configure the cell custom property
`CenterCell` to:

A. `false` in all three WebSphere Application Server cells.

B. `false` in one WebSphere Application Server cell `true` in the other two WebSphere Application Server cells.
   C. `true` in all three WebSphere Application Server cells.

D. `true` in one WebSphere Application Server cell `false` in
   the other two WebSphere Application Server cells.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: http://www-01.ibm.com/support/knowledgecenter/SSEQTP_8.5.5/com.ibm.websphere.nd.multiplatform.doc/ae/twve_mcpconfig.html

QUESTION 20
A system administrator has deployed web applications to a clustered environment where database session persistence is configured. The administrator needs to improve the response time and the throughput.

How can the system administrator do this?

A. Disable server affinity.

B. Configure dynamic caching.
C. Configure a load balancer to spread work between existing web servers.
D. Tune the database session persistence to optimize for failover.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The dynamic cache service improves performance by caching the output of servlets, commands, and JavaServer Pages (JSP) files. WebSphere Application Server consolidates several caching activities, including servlets, web services, and WebSphere commands, into one service called the dynamic cache. These caching activities work together to improve application performance and share many configuration parameters that are set in an application server's dynamic cache service.

References: WebSphere Application Server V8.5 Administration and Configuration Guide for the Full Profile (July 2013), page 512

QUESTION 21
A system administrator decides to use the advice from the Performance and Diagnostic Advisor to identify the optimum connection pool settings for data sources. In a cell, the data source db2datasource is defined under node scope and used by two servers from that node. The administrator receives two different sets of advice for `db2datasource`.

▪ One set of advice suggests to increase the `maximum connection pool size` for `db2datasource`. ▪
The other suggests reducing the `maximum connection pool size` for `db2datasource`.

How should the administrator configure the data sources before reusing the Performance and Diagnostic Advisor?

A. Create a data source of the same name under cell scope.
B. Create a data source of the same name under server scope for each server.
C. Increase the `minimum connection pool size` for the data source.
D. Decrease the `maximum connection pool size` for the data source.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
References: https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/cprf_rpa.html

QUESTION 22
A performance test team was testing the capacity of concurrent users of a web application deployed on a multi-processor server. While testing 250 concurrent users, the administrator discovers connections to the database are failing.

In response, a system administrator increased the connection pool to the maximum limit which the database allows and increased the prepared statement cache size. The test passed, but the application response time was slower.

How should the system administrator tune the data source properties to improve the application response time?

A. Change connection pools purge policy.
B. Decrease connection pool reap time.
C. Decrease number of free pool partitions.
D. Decrease the prepared statement cache size.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The higher the statement cache, the more system resources are delayed. Therefore, if you set the number too high, you might lack resources because your system cannot open multiple prepared statements.

References: http://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/udat_jdbcdatasorprops.html

QUESTION 23
A system administrator in a bank was asked by business users to determine the most accessed JSP page in a web application at normal work load for marketing purpose.

Which tool should the administrator use to find the most used JSP page?

- A. Performance and Diagnostic Advisor
- B. IBM Support Assistant Data Collector
- C. High Performance Extensible Logging Log Viewer
- D. Tivoli Performance Viewer (TPV) summary reports

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Summary reports are available for each application server.
Tivoli Performance Viewer provides the following summary reports for each application server:
The servlet summary lists all servlets that are running in the current application server. Use the servlet summary view to quickly find the servlet that consumes the most time and the applications that use them, and to determine which servlets are invoked most often.

Etc.

References: https://www.ibm.com/support/knowledgecenter/SSEQTJ_8.5.5/com.ibm.websphere.base.doc/ae/uprf_tpvserverview.html

QUESTION 24
A system administrator is asked by a development team to monitor the performance of a newly deployed EJB application. The administrator noticed that the heap size of the application server is growing.

What should the administrator do to fix the problem using ORB settings?

A. Use J2EE managed object MBeans.
B. Enable the pass by reference option.
C. Disable the application scoped resources in the application deployment descriptor.
D. Ensure that Process embedded configurations is not selected when exporting the EAR.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The Object Request Broker (ORB) pass by reference option determines if pass by reference or pass by value semantics should be used when handling parameter objects involved in an EJB request. This option can be found in the administrative console by navigating to Servers => Application Servers => *server_name* => Object Request Broker (ORB). By default, this option is disabled and a copy of each parameter object is made and passed to the invoked EJB method. This is considerably more expensive than passing a simple reference to the existing parameter object.

References: https://www.ibm.com/developerworks/websphere/techjournal/0909_blythe/0909_blythe.html#sec3e

QUESTION 25
There are many applications deployed in a large WebSphere Application Server cluster. A system administrator is required to give Configurator role access to a developer for a single application deployed in that cluster.

How should the administrator meet this requirement and restrict Configurator role access for a single application?

A. Create a J2C authentication alias for that developer.
B. Create an Administrative user role and provide Configurator access to the developer.
C. Create an Administrative group role and provide Configurator access to the developer.
D. Create an administrative authorization group, scope it only for that application and create an Administrative user or group role to give Configurator access to the developer.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Fine-grained administrative security
In releases prior to WebSphere® Application Server version 6.1, users granted administrative roles could administer all of the resources under the cell.
WebSphere Application Server is now more fine-grained, meaning that access can be granted to each user per resource.
For example, users can be granted configurator access to a specific instance of a resource only (an application, an application server or a node).

To achieve this instance-based security or fine-grained security, resources that require the same privileges are placed in a group called the administrative authorization group or authorization group. Users can be granted access to the authorization group by assigning to them the required administrative role.

References: http://www-01.ibm.com/support/knowledgecenter/SSEQTP_8.5.5/com.ibm.websphere.base.doc/ae/csec_fineg_admsec.html?cp=SSEQTP_8.5.5%2F1-8-1-30-3-3

QUESTION 26
How can a system administrator secure a WebSphere Application Server environment to ensure that an application code will not be allowed to access any files in the server's file system?

A. Configure the CSIv2 outbound communications under RMI/IIOP security.
B. Configure the file-based repository and create the `fileRegistry.xml` file.
C. Enable Java 2 security and configure the `app.policy` and `was.policy` files.
D. Use the AdminTask `deleteAuthorizationGroup` to remove application access.

Correct Answer: C
Section: (none)
Explanation
Explanation/Reference:
Explanation:
When Java 2 security is enabled for a WebSphere Application Server, all the applications that run on WebSphere Application Server undergo a security check before accessing system resources. An application might need a was.policy file if it accesses resources that require more permissions than those granted in the default app.policy file

References: http://www.aiotestking.com/ibm/how-can-a-system-administrator-secure-a-websphere-application-server-environment-to-ensure-that-an-applicationcode-will-not-be-allowed-to-access-any-files-in-the-servers-file-system/

QUESTION 27
A web application has a configured session timeout of eight hours and a default LTPA token timeout of two hours. After every two hours, the users have to log in again from their HTTP browser. The system administrator is required to make configuration changed so users only have to log in once, while keeping the above mentioned timeouts the same. The authentication mechanism available is Kerberos.

How should the administrator do this?

A. Configure the SIP digest authentication.
B. Configure the SPNEGO Web or SPNEGO TAI.
C. Enable Session Management Security Integration.
D. Ensure Web Inbound security attribute propagation is enabled.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
In WebSphere Application Server Version 6.1, a trust association interceptor (TAI) that uses the Simple and Protected GSS-API Negotiation Mechanism (SPNEGO) to securely negotiate and authenticate HTTP requests for secured resources was introduced. This function was deprecated In WebSphere Application Server 7.0. SPNEGO web authentication has taken its place to provide dynamic reload of the SPNEGO filters and to enable fallback to the application login method.

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/csec_ssovo.html

QUESTION 28
A newly deployed application has authorization errors when invoking EJB methods from a servlet. An additional review indicates that users are authenticated, but do not have the correct authorization.

How can a system administrator fix the issue ensuring only authorized access?

A. Using the Integrated Solutions Console (ISC), map all security roles to the special subject `Everyone`.
B. Using the Integrated Solutions Console (ISC), map the security roles that are still not mapped to groups in the current user registry.
C. Edit the application using an assembly tool to add a security constraint for the servlet and reinstall the application.
D. Edit the application using an assembly tool to remove the security constraint defined for the servlet and reinstall the application.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29
A system administrator needs to deploy a new enterprise application which requires that application security be enabled, but, the existing applications in the cell cannot be executed with application security enabled. The cell has the global security and Java 2 security disabled.

How can the administrator handle this requirement?

A. Enable Java 2 security for the cell.
   Create a security domain with application security enabled.
   Associate the security domain to the new application.
B. Enable Java 2 security for the cell.
   Create a security domain with application security enabled.
   Associate the security domain to a new cluster to be used to deploy the new application.
C. Enable administrative security for the cell.
   Create a security domain with application security enabled.
   Associate the security domain at the application level for the new application.
D. Enable administrative security for the cell.
   Create a security domain with application security enabled.
   Associate the security domain to the new cluster where the new application is deployed.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
When Java 2 security is enabled for a WebSphere Application Server, all the applications that run on WebSphere Application Server undergo a security check before accessing system resources. An application might need a was.policy file if it accesses resources that require more permissions than those granted in the default app.policy file
References: https://www-01.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/tsec_waspolicy.html

QUESTION 30
A system administrator needs to view the list of certificates for unmanaged web server located on a remote system.

How should the administrator do this?

A. View the plugin-cfg.xml
B. Look at the SSL configuration in the httpd.conf
C. Use iKeyman to view the keyring.
D. Use the administrative console to check the content of the cell default keystore.

Correct Answer: C

Section: (none)
Explanation

Explanation/Reference:
Explanation:
You do not have a secure network connection until you have created a key for secure network communications and received a certificate from a certificate authority (CA) who is designated as a trusted CA on your server. Use IKEYMAN to create the key database file, public-private key pair, and certificate request. After you receive the CA-signed certificate, use IKEYMAN to receive the certificate into the key database where you created the original certificate request.

References: http://www-01.ibm.com/software/webservers/httpservers/doc/v10/ibm/9atikeyu.htm

QUESTION 31
An organization updated their LDAP directories and modified user roles. The roles that were configured to have access to a highly secured enterprise application were deleted and new roles with new names were created. The application then had security related exceptions.

How can a system administrator resolve the exceptions and restore security for the application?

A. Modify the mapping of security roles of the application to the new LDAP roles.
B. Modify the application and remove all security constraints and redeploy the application.
C. Modify the application to have a runAs role for each new LDAP role and redeploy the application.
D. Create an administrative authorization group with administrator privileges scoped for the application with an administrative group role for the new LDAP roles.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Incorrect Answers:
C: runAS roles are not used for Authorization or Access Control.

QUESTION 32
In a test environment, a system administrator has configured an external HTTP server in the DMZ that is routing to a cluster of application servers. The administrator wants to achieve higher performance when routing and prioritizing incoming requests to the back-end cluster.

How can the system administrator achieve this task?

A. Configure a cluster of external HTTP servers.
B. Enable the prefer local option on the cluster members.

C. Set up a Caching Proxy server between the external web server and the application server.

D. Place an On Demand Router (ODR) between the external web server and the application servers.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
References: https://www.ibm.com/developerworks/websphere/techjournal/1206_alcott/1206_alcott.html

QUESTION 33

A system administrator has deployed an application. The development team has updated a new version of this application. The administrator needs to immediately deploy this updated application and guarantee that only this new edition is used by clients and that any service requests for the application are queued during the deployment of the new application.

How can the administrator achieve this task without any downtime to the application?

A. Perform a soft rollout.

B. Perform a hard rollout.

C. Perform an atomic rollout.

D. Perform a concurrent activation rollout.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Performing an atomic rollout activates the new edition on half of the cluster first, and then activates the edition on the remaining half of the cluster. While the first half of the cluster is taken offline and updated, application requests are routed to the second half of the cluster. Verify that half the cluster can handle the entire load during the rollout period.

References: http://www.aiotestking.com/ibm/how-can-the-administrator-achieve-this-task-without-any-downtime-to-the-application/

QUESTION 34

The application placement controller has been configured with elasticity mode enabled. Intermittently, all instances of a dynamic cluster are removed. After further review, the system administrator noticed that it occurs during peak load on another dynamic cluster.

The administrator wants to keep at least one instance available. Which configuration is needed in the dynamic clusters?

A. Enable application lazy start with elasticity mode.
B. Set the `proactiveIdleStop` custom property to `true`.
C. Set the Number of instances to a value greater than zero.
D. Disable the option "`If other dynamic clusters need resources, stop all instances of this cluster during periods of inactivity`".

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
It is not recommended to enable elasticity mode when the following option is set in the administrative console for one or more dynamic clusters:
If other dynamic clusters need resources, stop all instances of this cluster during periods of inactivity.
If you have elasticity mode enabled and the option set, the application placement controller can remove all of the custom nodes in the cell.

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/twve_cfgelastic.html

QUESTION 35
A new cell contains a cluster with members defined in two managed nodes running on two different machines. The cell also contains two unmanaged nodes running on HTTP servers with HTTP plug-in. Session persistence has been enabled.

Which additional component(s) can the system administrator configure to make this environment highly available?

A. Enable administrative security.
B. Configure a DMZ secure proxy.
C. Configure High Performance Extensible Logging.
D. Configure primary and backup load balancers for the HTTP servers.
Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 36
A JAX-WS EJB stateless session bean web service needs to be accessed by consumers outside the corporate domain.

Which configuration will help a system administrator meet the requirement?

A. Open firewall ports for both bootstrap and orb listener ports within the cell.
B. Configure plug-in in the DMZ to send request to the cluster members.
C. Configure on demand router (ODR) in the DMZ to send requests to the cluster members.
D. Configure HTTP tunneling to send the client-side Object Request Broker (ORB) request to the server-side ORB.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Incorrect Answers:
C: In the DMZ, ODR is not supported.

References: https://www.ibm.com/developerworks/websphere/techjournal/0310_alcott/alcott.html

QUESTION 37
A system administrator has configured a network deployment cell containing multiple nodes and global security enabled with an LDAP repository. To increase capacity, the administrator needs to add additional nodes to the cell. After adding the nodes by using both scripts and the Integrated Solutions Console (ISC), the administrator examines the System.out log for the deployment manager and notices the following message:

```
0000004d ORBRas E com.ibm.ws.security.orbssl.WSSSLClientSocketFactoryImpl
createSSLSocket ProcessDiscovery : 0 JSSL0080E:
javax.net.ssl.SSLHandshakeException -
The client and server could not negotiate the desired level of security.
Reason?com.ibm.jsse2.util.h: No trusted certificate found
```

How can the administrator resolve this problem?

A. Disable Java 2 security.
B. Restart the deployment manager.
C. Increase the RSA token timeout value.
D. Change the number of active LTPA keys.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
When nodes are added while LDAP security is enabled, the following exception is generated in the deployment manager System.out log under certain circumstances. If this happens, restart the deployment manager to resolve the problem. 0000004d ORBRas E com.ibm.ws.security.orbssl.WSSSLClientSocketFactoryImpl createSSLSocket ProcessDiscovery : 0 JSSL0080E: javax.net.ssl.SSLHandshakeException The client and server could not negotiate the desired level of security. Reason?com.ibm.jsse2.util.h: No trusted certificate found

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.0.0/com.ibm.websphere.nd.doc/info/ae/ae/tagt_svr_conf_nodes.html

QUESTION 38
Which of the following comprises an initial Liberty profile server process?

A. A single JVM, the Liberty kernel, and feature manager.
B. A single JVM, and OSGI framework and an object request broker.
C. an OSGI framework, a web container and an EJB container.
D. AN administrative agent, the Liberty kernel and shared libraries.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The server process comprises a single JVM, the Liberty kernel, and any number of optional features.

References: https://www.ibm.com/support/knowledgecenter/SSEQTP_8.5.5/com.ibm.websphere.wlp.doc/ae/cwlp_about.html

QUESTION 39
A system administrator has to design a new production environment to host a web application. The workload of this web application is expected to increase during special marketing campaigns.

Which one of the following topologies should the administrator configure to address the requirements for this new environment?

A. A Liberty collective environment with autonomic managers and on demand router (ODR).
B. A flexible management environment supported by one admin agent running in each node of the cell.
C. A dynamic cluster with autonomic managers, application placement controller and intelligent routers.
D. A heterogeneous cell with enough server to support the peak load spread across multiple nodes on the same machine.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
A dynamic cluster is a server cluster that uses weights and workload management to balance the workloads of its cluster members dynamically, based on performance information that is collected from the cluster members. Dynamic clusters enable application server virtualization.
A dynamic cluster is an application deployment target that can expand and contract depending on the workload in your environment. Dynamic clusters work with autonomic managers, including the application placement controller and the dynamic workload manager to maximize the use of your computing resources.
Dynamic clusters are required for many of the Intelligent Management autonomic functions, including high availability and service policies.

References: https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/cwve_odrdynamiccluster.html

QUESTION 40
While coordinating a flexible management topology, the job manager can send commands to which components?

A. Application server and name server.
B. On demand router and load balancer.
C. Deployment manager and admin agent.

D. Node agent and web administration server.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:

To manage multiple cells, register deployment managers with job manager directly

Use administrative agent to register base server profiles with a job manager

References: http://194.196.36.29/support/docview.wss?uid=swg27017353&aid=1, page 10

QUESTION 41
A system administrator has installed WebSphere Application Server Network Deployment V8.5.5 using the silent installation process and needs the verify that the installation completed successfully.

What does the administrator need to do to verify a successful installation?

A. Launch the Installation Manager GUI, verify the installation by going to `File -> View Installed Packages`.
B. Run the command `IBMIM listInstalledPackages` and check that the appropriate WebSphere Application Server package is listed.
C. Check for `INSTCONFSUCCESS` message at the end of the `<WebSphere Application Server install directory><log directory>log.txt` file.
D. Use the `installver` command to compare the checksum of the product file to the correct checksum value in the bill-of-materials file and make sure that the checksums match.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
You can verify successful installation of the product using the capabilities of IBM Installation Manager.

To verify installation of the product, you can use Installation Manager to find the product in the list of installed packages.
Perform one of the following actions:
* Launch the Installation Manager GUI, and verify the installation by going to File -> View Installed Packages.

Or
* Change the directory to the eclipse/tools subdirectory of the Installation Manager binaries location and run this command:
[AIX][HP-UX][Linux][Solaris]: ./imcl listInstalledPackages
[Windows] imcl.exe listInstalledPackages
This will display a list indicating which packages this Installation Manager has installed. For example:
com.ibm.websphere.ND.v85_8.5.0.20110203_0234

Incorrect Answers:
C: log.txt was used in earlier versions of WebSphere, but not in version 8.5.

QUESTION 42
The installation of WebSphere Application Server did not complete successfully, and a system administrator needs to troubleshoot the installation.

What can the administrator do to identify the cause of the installation failure?

A. Run the `installver` command with the appropriate command line options.
B. Check the files under the Agent data location of IBM Installation Manager.
C. Check the files under the `logs` directory of IBM Installation Manager installation directory.
D. Check the `log.txt` under `<WebSphere Application Server install directory><log directory>`.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Installation Manager creates log files that you can use to troubleshoot any installation problems. Consider verifying the log files after any installation to ensure that everything in that process went successfully.

To examine the logs manually, locate the Installation Manager logs directory. The default location for this directory varies according to the operating system:
Windows: C:\ProgramData\IBM\Installation Manager\logs
UNIX: /var/ibm/InstallationManager/logs

Reference: WebSphere Application Server V8.5 Administration and Configuration Guide for the Full Profile (July 2013), page 45
http://www.redbooks.ibm.com/redbooks/pdfs/sg248056.pdf

QUESTION 43
A system administrator needs to install WebSphere Application Server Network Deployment V8.5.5 multiple times and would like to automate the task of installing the product. The administrator wants to create a response file based on an initial installation and use this for future installations.

How can the administrator accomplish this task?
A. Use the IBM Packaging Utility.
B. Use the Installation Manager console mode.
C. Complete a silent installation with the `-log` option.
D. Start the Installation Manager GUI with the `-record` option.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Run the command to record a response file for the package installation. This command uses the -skipInstall <agentDataLocation> argument, which records the installation commands without installing the Tivoli Monitoring packages. Substitute your own file name and location for the response file. Verify that the file paths that you enter exist. Installation Manager does not create directories for the response file:
Windows: IBMIM -record <responseFile> -skipInstall <agentDataLocation>
Unix/Linux: ./IBMIM -record <responseFile> -skipInstall <agentDataLocation>

References: https://www.ibm.com/support/knowledgecenter/SS4EKN_7.2.0/com.ibm.itm.doc_6.3/install/record_resp_file.htm

QUESTION 44
A system administrator ran the `backupConfig` command to backup the configuration using the `–nostop` option. The administrator changed the properties for the service integration environment by modifying the `sib.properties file`. During testing the administrator noticed Service Integration Bus related errors and wanted to restore the service integration environment. The administrator used the `restoreConfig` command, but the tuning properties for the service integration environment were not restored.

How can the administrator prevent this issue?

A. Use full repository checkpoint for both the backup and the restore.
B. Use the `restoreConfig` command with `–nostop` for the restore.
C. Use the `manageprofiles` command for both the backup and the restore.
D. Use the `backupConfig` command without `–nostop` for the backup Use the `restoreConfig` command without `–nostop` for the restore.

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
With the repository checkpoint and restore function, you can back up copies of files from the master configuration repository. You can use the backups to restore the configuration to a previous state if future configuration changes cause operational problems. By using this function, you can reduce recovery time for problems that are caused by configuration changes. Studies of unplanned outages have shown that as much as 36 percent of unplanned outages are due to operator errors. A common source of operator error is a bad configuration change. The ability to quickly undo a bad configuration change is critical to minimizing the outage window.

References: https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/cwve_xdsochckpt.html

QUESTION 45
A web application was deployed on a WebSphere Application Server cluster. While users are using the application, one of the cluster servers fails and the users lose their working data.

What can the system administrator configure to ensure users can continue to work if one of the cluster server fails?

A. An increased session timeout.
B. A cluster of external HTTP servers.
C. A load balancer to spread work between existing servers.
D. A WebSphere eXtreme Scale HTTP session management.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
WebSphere eXtreme Scale can dynamically process, partition, replicate, and manage application data and business logic across hundreds of servers. It provides transactional integrity and transparent fail-over to ensure high availability, high reliability, and consistent response times.

References: http://www.ibm.com/developerworks/websphere/techjournal/1301_ying/1301_ying.html

QUESTION 46
A web application is hosted on an application server that receives HTTP requests from a third party application named `myApp`. The `URIGroup` mapping for this application is called `default_host_myApp`.

The development team asks a system administrator to configure the HTTP plug-in to prevent routing requests to any application server except `server1`.

The following exhibit shows the parts of the `plugin-cfg.xml` file that are relevant for `myApp`. The `UriGroups` for other applications are not shown in the exhibit.

```
1  ┌   <VirtualHostGroup Name="default_host">
2           <VirtualHost Name="*:9080"/>
3           <VirtualHost Name="*:9081"/>
4           <VirtualHost Name="*:80"/>
5           <VirtualHost Name="*:9443"/>
6           <VirtualHost Name="*:9444"/>
7           <VirtualHost Name="*:443"/>
8  └   </VirtualHostGroup>
9  ┌   <ServerCluster Name="myCluster">
10 ┌       <Server CloneID="a10000001" LoadBalanceWeight="2"
                   MaxConnections="-1" Name="server1">
11           <Transport Hostname="machine1" Port="9080" Protocol="http"/>
12           <Transport Hostname="machine1" Port="9443" Protocol="https"/>
13           </Transport>
14 └       </Server>
15 ┌       <Server CloneID="b20000002" LoadBalanceWeight="2"
                   MaxConnections="-1" Name="server2">
16           <Transport Hostname="machine2" Port="9081" Protocol="http"/>
17           <Transport Hostname="machine1" Port="9444" Protocol="https"/>
18 └       </Server>
19 └   </ServerCluster>
20 ┌   <UriGroup Name="default_host_myApp">
21           <Uri Name="/myApp/*"/>
22           <Uri Name="/myAppAdmin/*"/>
23 └   </UriGroup>
24     <Route ServerCluster="myCluster" UriGroup="default_host_myApp"
               VirtualHostGroup="default_host"/>
```

What should the administrator do to the `plugin-cfg.xml` file to ensure that requests for `default_host_myApp` URIGroup are routed only to `machine1`?

- A. Delete the `Server` tag for `CloneId="b20000002"`
  Delete all of the tags within the `Server` tag

- B. Delete the `UriGroup` tag for `default_host_myApp`
  Delete all of the tags within the `UriGroup` tag

C. Delete the `VirtualHostGroup` tag for `default_host`

   Delete all of the tags within the `VirtualHostGroup` tag

D. Edit the `LoadBalanceWeight` for `server1` to 20 Edit the `LoadBalanceWeight` for `server2` to 2

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Explanation:
Incorrect Answers:
B: If you delete `UriGroup` tag you would break the route.

QUESTION 47
A system administrator has created a cluster containing two servers in a same node. The administrator did not select the option **Generate unique HTTP ports** during the creation of the cluster members. After the cluster creation, the administrator changed the HTTP port of the second cluster member to 9081.

Testing the servers using the snoop servlet directly to the server's HTTP port, the administrator got the following error message for the second server:

```
    SRVE0255E: A WebGroup/Virtual Host to handle
server2:9081 has not been defined
```

How can the administrator fix this problem?

A. Regenerate and propagate the HTTP plug-in.
B. Add the port 9081 to the `default_host` alias.
C. Create a new virtual host alias at the cell level for the port 9081.
D. Edit the `server.xml` for the second server and add the port 9081.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:

Problem(Abstract)

When setting up IBM Cognos within IBM WebSphere, the URI is not accessible. The error message when trying the http://<server>:<was port>/p2pd/servlet/ dispatch is

SRVE0255E: A WebGroup/Virtual Host to handle /p2pd/servlet/dispatch has not been defined.

Symptom

Unable to start IBM Cognos Business Intelligence

Cause

The virtual host does not contain IBM WebSphere Port that the Application server is listening on. This may be one of several reasons. ▪ The Virtual Host mapping for the Application Server and Enterprise Application do not match.

▪ The Application Server port is listed in 2 different Virtual Hosts

▪ The Enterprise Application deployment failed

References: http://www-01.ibm.com/support/docview.wss?uid=swg21438842