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C9510-401

**D 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?



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- 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

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.

- 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:**

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

**QUESTION 5**

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:**

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 6**

After collecting diagnostic trace from a server running under a cell, a system administrator noticed that the trace files contained sensitive information.

To avoid this issue in the future, what can the administrator do?

- A. Configure entries in the `ras.rawtracelist.properties`.
- B. Configure `suppressSensitiveTrace` in the `bootstrap.properties` file.
- C. Clear the “Disable logging and tracing of potentially sensitive data” checkbox.
- D. Add the entry `com.ibm.websphere.logging.RawTraceList=off` to the end of the trace string.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

You can either enable or disable the sensitive log and trace guard to help control whether loggers write sensitive information in your log and trace files.

Use the administrative console to enable or disable the sensitive log and trace guard.

Procedure

1. Log on to the administrative console.
2. If you are using an administrative agent topology, then select a node that you want to manage, and navigate to it.
3. From the navigation section in the console, choose Troubleshooting > Logs and trace.
4. Select the server that you want to enable or disable with sensitive log and trace guard.
5. Click Change log detail levels.
6. Select the Disable logging and tracing of potentially sensitive data check box to enable sensitive log and trace guard. To disable sensitive log and trace guard, clear the Disable logging and tracing of potentially sensitive data check box.
7. Click OK
8. Save the changes.

References: [https://www.ibm.com/support/knowledgecenter/en/SSAW57\\_8.5.5/com.ibm.websphere.nd.doc/ae/ttrb\\_enableSensitiveLogTrace.html](https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/ttrb_enableSensitiveLogTrace.html)

## QUESTION 7

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 `ANY SIGNAL` and all exceptions.
- B. Configure an `-Xdump:java` Generic JVM argument on WebSphere Application Server with the filter for `java.net.SocketTimeoutException`.



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- 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:**

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

References: <http://www-01.ibm.com/support/docview.wss?uid=swg21242497>

**QUESTION 8**

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:**

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 9

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:**

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

#### QUESTION 10

A system administrator runs a Jython script that creates and configures several servers and realize 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:**

`AdminConfig.save()` to save changes after script execution.

#### QUESTION 11

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:** 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](https://www-01.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/rxml_propscript.html)

### QUESTION 12

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:**

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 13

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:**

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/](https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/)

[com.ibm.websphere.nd.doc/ae/txml\\_security.html](com.ibm.websphere.nd.doc/ae/txml_security.html)



#### QUESTION 14

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 15**

Within a WebSphere Application Server Network Deployment cell, a system administrator needs to write a script to determine if a particular server is stopped. It is important that the `wsadmin` script explicitly return a status of `stopped` as opposed to just failing. What `wsadmin` object should the administrator use to write this script?

- A. `AdminApp`
- B. `AdminTask`
- C. `AdminConfig`
- D. `AdminControl`



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**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Use the `AdminControl` object to invoke operational commands that manage objects for the application server.

Many of the `AdminControl` commands have multiple signatures so that they can either invoke in a raw mode using parameters that are specified by Java Management Extensions (JMX), or by using strings for parameters. In addition to operational commands, the `AdminControl` object supports some utility commands for tracing, reconnecting with a server, and converting data types.

References: [https://www.ibm.com/support/knowledgecenter/en/SSAW57\\_8.5.5/com.ibm.websphere.nd.doc/ae/rxml\\_admincontrol.html](https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/rxml_admincontrol.html)

**QUESTION 16**

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:**

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

### QUESTION 17

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

#### **QUESTION 18**

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:**

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 19**

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](https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/cprf_rpa.html)

#### QUESTION 20

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:**

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

#### QUESTION 21

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:**

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

## QUESTION 22

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:**

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](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 23**

A system administrator is configuring the security of a new environment. The administrator has been asked to configure one LDAP server that has different subtrees for business users and administration users.

What should the administrator do to implement the required security configuration?

- A. Install and configure a TAI (Trust Association Interceptor)
- B. Configure a security domain for the stand-alone LDAP server.
- C. Use Federated repositories and configure the supported entity types.
- D. Use Stand-alone custom registry and configure the flat file implementation.

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

select the type of user registry that you need for your environment:

- Federated repositories: Manage identities that are stored in multiple repositories in a single, virtual realm.
- Standalone LDAP Server: Uses the Lightweight Directory Access Protocol (LDAP) user registry settings. Select this option in case your users and groups reside in an external LDAP registry
- Local operating system: Uses the local operating system user registry of the application server.
- Standalone custom registry: Specifies a custom registry that implements the UserRegistry interface in the com.ibm.websphere.security package.

References: WebSphere Application Server V8.5 Administration and Configuration Guide for the Full Profile (July 2013), page 212



**QUESTION 24**

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:**

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

**QUESTION 25**

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 correct 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 26**

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:**

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](https://www-01.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/tsec_waspolicy.html)

**QUESTION 27**

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:**

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/htpservers/doc/v10/ibm/9atikeyu.htm>

#### QUESTION 28

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:**

Incorrect Answers:

C: runAS roles are not used for Authorization or Access Control.

#### QUESTION 29

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](https://www.ibm.com/developerworks/websphere/techjournal/1206_alcott/1206_alcott.html)

### QUESTION 30

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:**

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 31

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:**

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

### QUESTION 32

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:**

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](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 33**

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:**

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

**QUESTION 34**

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:**

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

### QUESTION 35

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.



<https://www.vceplus.com/>

D. Node agent and web administration server.

**Correct Answer:** C

**Section:** (none)

**Explanation**

**Explanation/Reference:**

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 36

A system administrator needs to create a cell for a test environment. The administrator uses the Profile Management Tool (PMT) to create the deployment manager profile using the advanced profile creation option and creates a custom profile using the typical profile creation option. The administrator examines the log files for the custom profile creation and sees an INSTCONFFAIL message indicating the deployment manager was not running during the custom profile creation.

How should the administrator fix this?

- A. Delete the custom profile.  
Start the deployment manager.  
Create the custom profile again.
- B. Start the deployment manager.  
Use PMT to re-create the custom profile.
- C. Use the `syncNode` command to synchronize the node.
- D. Run the `addNode` command to federate the custom profile.



**Correct Answer:** A

**Section:** (none)

**Explanation**

#### **Explanation/Reference:**

Deleting profiles. You can delete a profile using the `manageprofiles` command. If the command fails, you can delete the profile using operating system commands.

Before you begin: If a node within a profile is federated to a deployment manager, before you delete the profile, stop the node and remove the node from the deployment manager. Otherwise, an orphan node remains in the deployment manager.

References: [https://www.ibm.com/support/knowledgecenter/en/SSAW57\\_8.5.5/com.ibm.websphere.nd.doc/ae/tpro\\_removeprofile.html](https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/tpro_removeprofile.html)

### QUESTION 37

A system administrator, **Admin1**, with Administrator privileges has archived full repository checkpoints. Another administrator, **Configurator1**, with Configurator privileges has copied the checkpoint contents directory from one of the archived check points to its original location. **Configurator1** tries to restore the configuration using the copied archived checkpoint contents and the restore fails.

How can **Configurator1** restore the configuration using the copied archived full repository checkpoint?



- A. Copy the archived checkpoint metadata directory to its original location.
- B. Increase the Automatic checkpoint depth to keep all the delta checkpoint.
- C. Delete the delta checkpoint taken after the full repository checkpoint was taken.
- D. Ask an administrator to update the privileges for **Configurator1** to match **Admin1**.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

You must archive both the checkpoint metadata and content directories to store a checkpoint for later restoration.

References: [http://www-01.ibm.com/support/knowledgecenter/SSD28V\\_8.5.5/com.ibm.websphere.nd.doc/ae/twve\\_archive\\_checkpoint.html](http://www-01.ibm.com/support/knowledgecenter/SSD28V_8.5.5/com.ibm.websphere.nd.doc/ae/twve_archive_checkpoint.html)

### QUESTION 38

A WebSphere Application Server cell was configured with a deployment manager node and a custom node. An operator manually changed some configuration files in the custom node, and the node became out of synch with the master repository.

The system administrator used the Synchronize button in the system administration session of the Integrated Solutions Console (ISC) to try to resynchronize the node, but the node remained out of sync.

What should the administrator do to fix it?

- A. Use the Full Resynchronize button.
- B. Invoke "sync" operation on NodeSync MBean.
- C. Recreate the custom profile with the same name without deleting the node.
- D. Manually copy all the deployment manager configuration files to the custom node.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Select "Full Resynchronize" in the console.

References: <https://www-01.ibm.com/support/docview.wss?uid=swg21233075>

### QUESTION 39

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:**

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

#### QUESTION 40

A system administrator completed a WebSphere Application Server installation by using the Installation Manager. During installation, all defaults were selected for the installation root directories and the shared resources directory. Over time, the administrator has updated the installation with various interim fixes and fix packs. The administrator notices that the shared resources directory is very large in size and grows larger each time the Installation Manager is run.

How can the administrator decrease the size and remove some of the content from the shared resources directory?

- A. Manually delete content from the directory.
- B. During an update, create a new shared resources directory.
- C. Clear the Delete Saved Files option for the Installation Manager.
- D. Set the `preserveDownloadedArtifacts` preference to false.

**Correct Answer:** D

**Section:** (none)

**Explanation**

**Explanation/Reference:**

Because product payloads are cached in this directory, space requirements can grow very large over the lifetime of the product, as service updates are applied. The WebSphere Application Server product image is large, so if this content is permitted to accumulate, then this directory will grow to be many gigabytes in size over the course of multiple fix pack applications. You should never manually delete the content in this folder. Instead, during any installation or maintenance operation, you can specify the following preference to remove some of the content in this folder: `-preferences com.ibm.cic.common.core.preferences.preserveDownloadedArtifacts=false`

References: [https://www.ibm.com/support/knowledgecenter/en/SSAW57\\_7.0.0/com.ibm.websphere.installation.soafepnd.doc/info/ae/ae/tins\\_installfp\\_dist.html](https://www.ibm.com/support/knowledgecenter/en/SSAW57_7.0.0/com.ibm.websphere.installation.soafepnd.doc/info/ae/ae/tins_installfp_dist.html)

**QUESTION 41**

A system administrator needs to install WebSphere Application Server using response files, so that a silent install can be done. The administrator has ensured that all required prerequisites have already been installed and, has downloaded and expanded the required WebSphere Application Server installation files.

What can the administrator run to install the product?

- A. `install -options responsefile.xml -silent`
- B. `install -acceptLicense -options responsefile.xml -silent`
- C. `imcl -acceptLicense input responsefile.xml -log logfile.txt`
- D. `IBMIM -acceptLicense -input responsefile.xml -log logfile.txt`

**Correct Answer: C**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Example of the use of the response files to install the product. `imcl.exe -acceptLicense input C:\temp\keyring_response_file.xml -log C:\temp\keyring_log.xml`

Reference: [https://www.ibm.com/support/knowledgecenter/en/SSAW57\\_8.5.5/com.ibm.websphere.installation.nd.doc/ae/tins\\_installation\\_dist\\_silent.html](https://www.ibm.com/support/knowledgecenter/en/SSAW57_8.5.5/com.ibm.websphere.installation.nd.doc/ae/tins_installation_dist_silent.html)

**QUESTION 42**

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:**

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](http://www.ibm.com/developerworks/websphere/techjournal/1301_ying/1301_ying.html)

#### QUESTION 43

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:**

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>

#### QUESTION 44

A system administrator has configured a cluster containing 40 servers. The cluster members all belong to one core group. While examining the log files, the administrator notices that the core group coordinator is consuming abnormally high amounts of memory and CPU resources.

How can the system administrator reduce the memory and CPU resource usage of the core group coordinator?

- A. Configure a core group bridge.
- B. Configure a second active coordinator.
- C. Decrease the memory on the machine.
- D. Move the coordinator to another machine.

**Correct Answer: B**

**Section: (none)**

**Explanation**

**Explanation/Reference:**

Remember that coordinator election occurs whenever the view changes. Electing a new coordinator uses a lot of resources because this process causes increased network traffic and CPU consumption. Specifying a preferred coordinator server, whenever practical, helps eliminate the need to make frequent coordinator changes.

References: [https://www.ibm.com/support/knowledgecenter/SSAW57\\_8.5.5/com.ibm.websphere.nd.doc/ae/crun\\_ha\\_coordinator.html](https://www.ibm.com/support/knowledgecenter/SSAW57_8.5.5/com.ibm.websphere.nd.doc/ae/crun_ha_coordinator.html)

#### QUESTION 45

A system administrator needs to configure a JDBC provider and a data source for an application in a clustered environment. The administrator also needs to copy the JDBC drivers from the database server to the application server machines.

How can the administrator meet these requirements?

- A. Create a JDBC provider and the data source in the cluster scope. Copy the driver to all nodes.  
Set the environment variable at the node level to the driver's path.
- B. Create a JDBC provider in the server scope and the data source in the node scope.  
Copy the driver to all application servers.  
Set the environment variable at the node level to the driver's path.
- C. Create a JDBC provider in the node scope and the data source in the cell scope. Copy the driver to the deployment manager.  
Set the environment variable at the server level to point to the deployment manager path.
- D. Create a JDBC provider in the application scope and the data source in the server scope.  
Copy the driver to all application server directories.  
Set the environment variable in each JVM to the driver's path.

**Correct Answer:** A

**Section:** (none)

**Explanation**

**Explanation/Reference:**



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