**TECHNOLOGY TOPIC: MICROSERVICES ASSESSMENT**

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# REVIEWERS: PLEASE READ

* Use Suggestion mode or the comments feature to provide feedback/recommend changes
* All questions/answers need to:
  + Map to one of the learning objectives
  + Appear in one of the resources in the learning path (we cannot test on what we don’t share)
* Answers should be similar in length, if possible.
  + The correct answer choice should not be obviously shorter or longer than the detractors (incorrect answer choices)
* DO NOT USE
  + True/False questions
  + None of the above or All of the above as answer choices
* Keep in mind the following for multiple select questions (multiple choice questions with more than one correct answer):
  + The question must include the number of correct responses (e.g., Which TWO of the following are features of Red Hat Enterprise Linux?)
  + There should be at least two detractors (incorrect answer choices)

# FOR YOUR INFORMATION:

These questions could be used in any of the following:

* Technology Topic: Microservices

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# ASSESSMENT QUESTIONS

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| #1 | **LEARNING OBJECTIVE:** Define microservices. |
| **QUESTION:** Which TWO of the following BEST describes microservices? | |
| **ANSWERS:**   * Programming for nanocomputing * \* An architecture and an approach to writing software * \* A service that implements a single discrete function * Services tailored to small businesses | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #2 | **LEARNING OBJECTIVE:** Identify the difference between a microservices-based approach and a traditional, monolithic approach to building applications. |
| **QUESTION:** What is the difference between microservices versus traditional, monolithic approaches to applications? | |
| **ANSWERS:**   * Microservices are exclusively designed for lightweight applications * \* Microservices applications consist of many microservices wired together rather than built as one single program * With Microservices, due to their distributed deployment, testing can become streamlined and easier * With a traditional, monolithic approach, applications are broken down into their smallest components | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #3 | **LEARNING OBJECTIVE:** Identify the benefits and challenges customers could have with a microservices-based infrastructure. |
| **QUESTION:** Which TWO of the following are customer benefits of a microservices-based architecture? | |
| **ANSWERS:**   * \* Makes applications easier to build, test, deploy, and update * Simple to refactor legacy applications into microservices * \* Higher resilience since each function or service can be built and deployed independently * The adoption of microservices always reduces complexity | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #4 | **LEARNING OBJECTIVE:** Identify the benefits and challenges customers could have with a microservices-based infrastructure. |
| **QUESTION:** What TWO of the following are potential challenges of using microservices? | |
| **ANSWERS:**   * \* Organizational and cultural changes * \* Potential for increased complexity * Microservices are not conducive to an open source architecture * A microservices architecture is not scalable | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #5 | **LEARNING OBJECTIVE:** Identify how organizations are using microservices. |
| **QUESTION:** If an organization’s architecture is distributed, but their integration still relies on a centralized team managing a centralized technology like an enterprise service bus (ESB), the business goals of microservices can be: | |
| **ANSWERS:**   * Improved * \* Negated * This is a trick question--there is no right answer | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #6 | **LEARNING OBJECTIVE:** Identify why Red Hat is the best choice for customers who want a microservices-based infrastructure. |
| **QUESTION:** Which of the following can Red Hat help organizations do? Select all that apply. | |
| **ANSWERS:**   * \* Break monolithic apps into microservices * \* Manage microservices * \* Orchestrate microservices * \* Handle the data that microservices create | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #7 | **LEARNING OBJECTIVE:** Identify which Red Hat solutions are typically associated with using microservices. |
| **QUESTION:** What Red Hat offerings are most typically associated with using microservices? | |
| **ANSWERS:**   * Red Hat OpenShift Container Platform, Red Hat OpenStack Platform, Red Hat Ansible Automation, and Red Hat Open Innovation Labs * Red Hat OpenShift Container Platform, Red Hat Fuse, Red Hat Middleware Core Services Collection, and Red Hat Ansible Automation * Red Hat OpenShift Container Platform, Red Hat OpenStack Platform, Red Hat Fuse, and Red Hat Middleware Core Services Collection * \* Red Hat OpenShift Container Platform, Red Hat Fuse, Red Hat Middleware Core Services Collection, and Red Hat Open Innovation Labs | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #8 | **LEARNING OBJECTIVE:** Identify how microservices relate to agile integration, as well as Linux containers. |
| **QUESTION:** What does Red Hat call an approach to connecting resources that combines integration technologies, agile delivery techniques, and cloud-native platforms to improve the speed and security of software delivery? | |
| **ANSWERS:**   * Microservices * \* Agile integration * Digital transformation * API management | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #9 | **LEARNING OBJECTIVE:** Identify how microservices relate to agile integration, as well as Linux containers. |
| **QUESTION:** What is the ideal application deployment unit and self-contained execution environment for a microservice? | |
| **ANSWERS:**   * \* Linux containers * APIs * Service mesh * Virtual machines | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |

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| #10 | **LEARNING OBJECTIVE:** Identify how Red Hat Fuse augments microservices architectures. |
| **QUESTION:** What Red Hat offering integrates microservice-based apps, data, services, and devices with a robust, flexible, and easy-to-use platform? | |
| **ANSWERS:**   * Red Hat 3Scale API Management * Red Hat OpenShift Container Platform * Red Hat Enterprise Linux * \* Red Hat Fuse | |
| **CORRECT FEEDBACK:** Your answer is correct. | |
| **INCORRECT FEEDBACK:** Your answer is incorrect. Review the *Technology Topic: Microservices* course. | |