

UrbanCode Deploy is used to manage containers or not??1/0? --1

Workflow engine comes under which tier of architecture in UrbanCode Deploy??service tier

Which of the following is used for authorization of agents?token -->agents,agent-relays, users and external systems or applications is provided through tokens.

How many components are there in UCD architecture? 4 UrbanCode Deploy has four main components:

Enabling Process branching based on value of property can be defined as? join

Which can be defined as Logical Deployment Target? resource

Which of the following can be defined as collection of resources along with Agent Prototype?resource

Conditional flag consists of how many modes? 3 Success - Process is completed,Failure - Process is not completed,Both - Both success and failure

which is a specific version of components and processes?snap

Which of the following concept comes under Security System??all (4 --> authn, auth, team, role)

Does UrbanCode Deploy run in a container or not? T

How many security models are present in UCD security? 2-> Team & role

component is deployed in an environment or not?? inv (Agent type and agent pool type)

Which of the following can be defined as user-defined parameter? resource properties

Process steps are provided through ?? plug-ins

In how many ways an environment can be created?3

Which is used to delete resources from UCD Server? delete action

Which allows you to refine how a resource can be used? resource role

How many types of processes are defined in UrbanCode Deploy?4 There are 4 types of processes:

Which of the following can be defined as list of steps that are created and connected with each other?process

Which command is used to access the property of a process? properties.get()

Which of the following contains the information about property names and references of a process?process temp

which of the following storage system is used in data storage? Flat files, including deployable artifacts and logs, are stored in a storage system known as CodeStation

IBM UrbanCode is available in how many flavours? 3 --There are three types Amazon Elastic Load Balancers ❶ Classic --> wrong

How many Types of component processes are present?3

which format is used to export an application?json

Which of the following is defined as a condition to be met to deploy component versions to an environment?env gate correct

which of the following is a feature of UrbanCode Deploy? all

Which of the following comes under product areas???agent,component,application --all agents, agent pools, application, cloud connection, component, environment, process, resource

Which is used to repeat the same deployment process that is requested earlier including version?repeat request

Which can be used to track the state of an environment?Inventory

The collection of components can be defined as?? Components --> wrong

How many types of component versions are available in UCD?2

Which of the following template is used to provision an environment?? Resource template //??HOT template

UrbanCode Deploy allows you to create models of deployment process with??graphical process//component design//easy process design --?all

Which of the following are defined as deployable items?? artifact

Which of the following is the default database in UrbanCode deploy server? apache

deby

In how many scenarios you can update an environment? 2

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Till now how many plug-ins are made available to the users? 140

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IBM UrbanCode

UrbanCode Deploy

UrbanCode Release

UrbanCode Build

UrbanCode Velocity

processes

Component process -run tasks on a single component, such as deploying it, uninstalling it, or running configuration tasks on it.

Application Process -run within the context of application

Generic processes -run outside the context of components or applications

There are mainly four components of this architecture.

1. Service Tier

2. Data Tier

3. Agents

4. Agent Relays

Deploy to

public, private and Hybrid clouds

Creating Groups

Top-level

existing resource and display Action menu and then use

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UrbanCode Deploy - IBM UrbanCode Deploy is an automation solution or a tool for deploying applications or databases and configuring them into development, test and production environments.

UrbanCode Release - It manages the release of complex applications, infrastructure changes and deployment of multiple applications which helps to reduce errors. Enables you to plan, track and execute the release of the delivery lifecycle.

UrbanCode Build - It is a continuous integration and build management server.

UrbanCode Velocity - It provides tools to understand your DevOps practices, implement changes, review change impact, and automate release processes.

Multi-Tier application models - UrbanCode can track components that make an application and those can be deployed.

Easy Process Designer - In UrbanCode Deploy Processes are defined using simple drag and drop process designer.

processes are of two types such as Component process and Application Process which will be discussed later

Deploy to public, private and Hybrid clouds - you can deploy your applications

irrespective of cloud type.

Multi-Tier Application Models ❶ Track which component make up an application, so they can be deployed and tracked together.

Easy Process Designer ❷ Processes are defined in browser using a simple, drag and drop process designer.

Track What is Where: Inventory

Scalable Distributed Automation - Master server clustering support provides high availability and horizontal scalability of the deployment automation tool

Quality Gates and Approvals - help you ensure that only the right stuff goes out at the right time. Because these rules are set per application and per environment, early test environments are likely to be setup to not require approvals

Integrations Replace Custom Scripting - Tested integrations are provided with dozens of tools to make the deployment process easier to design and less risky

UCD Features...

Inventory - The Inventory system is used to track the state of each environment and checks whether they are deployed to the target resource

Scalable Distributed Automation - UrbanCode Deploy uses a light-weight deployments agents to provide immediate presence near the target

Quality Gates and Approvals - Deployments may not be allowed until some conditions are met and they should pass gates.

Deployment approvals are created in a process that specifies the job that needs approval and the role of the approver.

Integrations Replace Custom Scripting - Tested integrations are provided with dozens of tools to make the deployment process easier to design and less risky.

UrbanCode Architecture

The main aim of this architecture is to meet requirements like

High Availability

Horizontal Scalability

Quick Response

High Security

There are mainly four components of this architecture.

1. Service Tier

2. Data Tier

3. Agents

4. Agent Relays

Architecture Continuation

Service Tier - It provides User Interface, Workflow Engine, Security Service and so on.

Users can log into them through web browsers or command line to configure tool, run deployments, and view reports.

Data Tier - UrbanCode Deploy Configuration is stored in the back-end database.

Flat files, deployable artifacts, and logs are stored in a storage system called codestation.

Agents - It is a light-weight process running on target-host and communicates with the UrbanCode Deploy server.

The function of the agent is deploying components.

Agent relay - Agent relay co-ordinate communication between agent and server.

Resources

The resource can be defined as logical deployment target

An agent, agent pool, component or an organizational entity which are used to group other resources.

A group-type resource can represent any logical collection of resources.

The following concepts are explained in Resources

- Creating groups.

- Creating agent-type and agent-pool type resources

- Creating component-type resources.

- Importing resources from Websphere application server.

- Importing resources from Websphere Portal.

- Managing resource properties.

- Moving and copying resources.

Creating Groups\

You can create a resource group in two ways

- Top-level Group by clicking create Top-level group

- create under an existing resource and display Action menu

Managing resource properties

Properties can be defined as user-defined parameter and used in processes.

Deleting resources

Delete Action can be used to delete a resource.

Resource Roles

Resource Role can be defined as how the resource can be used.

Resource Template

A resource template is a hierarchy of resources, groups and agent prototypes

Agent prototypes can be defined as which represents agents that are not installed or connected to the environment.

Component

A smallest functional unit of an application is known as Component.

Artifacts are stored in Codestation repositor

Every time when a component is imported it is versioned.

Component Concepts

Component involves different types of concepts like

- Creation of Component

- Component Versions

- Each and every concept are explained in upcoming cards.

Creation of Components

- Define the types.

- Assemble Processes.

- Components page > Create New Component

- Components page > Source Config Type

Component Versions

- Full - It contains all the component artifacts.

- Incremental - It contains only the new component artifacts that are different from the previous version.

Snapshots

A snapshot is a collection of specific versions of components and processes.

when an application component moves from one environment to another environment UrbanCode deploy ensures that specific versions and processes that you selected are used in the environment by the use of snapshots

tasks

Creating Snapshots - You can create a snapshot by specifying the version of the component and processes.

Deploying Snapshot - You can deploy a snapshot into an environment.

Comparing Snapshots - You can compare two snapshots.

Previewing Snapshot - You can preview a snapshot before it is deployed to an environment.

Inventory and Compliance

Inventory for an environment shows all the deployed component version.

Inventory and Compliance..

Component Inventory - lists all the resources on which a component is deployed.

Environment Inventory - lists all the component versions that are deployed to an environment.

Resource Inventory - lists all the components that are deployed to an environment.

Component Template

Creating component templates - You can create a component template by specifying information about the template, plug-ins and so on.

Importing component template - You can import an existing template or a new one.

Exporting component template - Exporting a template creates a JSON file which contains templates information, configuration, processes, and properties.

Component template properties - It ensures that every component that created from a template have the same properties.

Using component template - Any component that is developed from a template will inherit the templates process and properties.

Deleting the component

permanently removed from codestation and database.

The artifacts are not affected but only codestation copies are deleted.

Application Template

An Application template can be used to save and reuse the resources, environments, and processes and tagged templates to create a standard application.

Application properties, Environment properties, and environment gates are specified application template.

Users should provide values for these properties and create an application from the application template

You can create an Application template by following the below path in UrbanCode Deploy server

Applications > Templates > Create Application Template

NOTE: You can create applications from application template, environment template, and export and import application templates in JSON format.

Plug-in

IBM UrbanCode Deploy plug-ins provide tools for the creation of Component Processes and integrations.

There are two types of plug-ins

- Source-type plug-ins
- Automation type plug-ins

Process

list of steps that are created and connected with each other through a process editor.

Steps can be of any type like run programs, download files, system commands, manipulate files and so on.

Most of the plug-ins contribute in these steps.

There are four different types of processes.

- Generic Processes
- Component Processes
- Application Processes
- Conditional Processes

Branching and Joining steps
processes such as

- Branching Processes
- Merging Processes
- Joining Processes

Branching Processes - You can make multiple steps to run at the same time by branching a process.

Switch Step

Process Tasks

- Generic Processes
- Conditional Processes
- Editing Processes
- Running Processes
- Adding Process Properties
- Copying Process steps
- Branching and joining steps
- Switch steps
- Process Step Properties
- Process Step Preconditions
- Post-processing Scripts

Generic Processes

Generic Processes are created to run outside of component or application processing.

Every connection between two steps consists of two things

- Delete tool

- Conditional flag

Conditional flag sets a condition to the connection. The conditional flag can be of three modes

- Success - Process is completed

- Failure - Process is not completed

- Both - Both success and failure

Running Processes

Component Process - You cannot run component process directly. Instead, you can add one or more components to the application process and run the application process.

Application Process - For the application process, you must have an application environment

Applications>Request Process>specify application process.

Generic Process - To run generic process

Processes>generic process>specify resource list>click submitProcess

Process Step Properties

type of properties like exitcode, status, lines of Interest and so on.

You can access a property through a command called properties.get()

Component Process

Process Editor is used in creating Component Processes.

Process Editor is a visual drag-and-drop editor.

Process Steps can be selected from the menu of standard steps.

Process Steps can also be provided through Plug-ins.

UrbanCode Deploy provides a plug-in for common processes such as downloading and uploading artifacts and retrieving environment information.

Types of Component Processes

application process>Install component step>select deployment component process

Application process>Add Apply configuration step>select configuration deployment process

uninstall - This will remove the component version from the target resource

Operational(With Version)

Operational(No Version) -

Configuring Component Process

Configuring basic information

Using Process Editor

Application Process

Running the process again

The Repeat Request function is used to repeat the same deployment process that was requested earlier including the selected version.

Creating an Environment

create an environment in three ways

You install or provision servers manually and install agents

create a blueprint in IBM UrbanCode Deploy and create the environment using that blueprint

create a blueprint in IBM UrbanCode Deploy with Patterns and create the environment with that blueprint

Provisioning Environment

Provisioning Environments - You can provision an environment from UrbanCode Deploy with the pattern.

Provisioning an environment doesn't create an application environment.

Creating Environment Gates

An environment gate is a requirement that must be met before component versions can be deployed to an environment.

You must be met some specify conditions to deploy component versions to an environment.

component versions cannot be deployed to the environments unless they have the specified statuses.

Mapping resources and components to environments

Specify the components to where they are deployed by adding a resource or resource group to the environment and then map the components to those resources.

UCD Security

two types of security models

Team-based

Role-based

Security system consists of Authentication realms, Authorisation realms, roles, and teams.

Authentication realms - It verifies the user or system that are trying to log into IBM UrbanCode Deploy.

Authorisation realms - It manages user groups.

Roles - It manages permissions.

Teams - It assigns users with roles and secure product areas.

Security Types

product areas are nothing but agents, agent pools, application, cloud connection, component, environment, process, resource and so on

Authorization Realms

They are used to create authorization realms and user groups. Available Authorization realms are

Internal Storage - It uses Internal role management.

LDAP or Active Directory - It uses external LDAP role management.

SSO - single sign-on authorization.

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Approval Process

The job of Approval Process is to check for any approvals and the role of the approver.

You will create Approval process only when Requires Approval is selected for an environment.

If a deployment reaches its start time and the approval is not given then the process will not run.

The following is the path to create an approval process

Home > Applications > Application_Name > Environments > Environment:
Environment_Name > Approval Process.

NOTE: You can check whether your approval process is created or not in work Items tab

Application tasks

The following tasks can be performed for an application

Creation of Applications
Building and deploying mobile applications
Application blueprints
Creation of Manual application tasks
Approval process
Application template