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**Cognizant Digital Nurture 3.0** – Week-2 Understanding Document

**ServiceNow Admin Full Course | Learn ServiceNow Administration**

1. Overview of the ServiceNow Platform:
   * ServiceNow is a cloud-based platform offering Platform-as-a-Service (PaaS) used by organizations for automating business processes.
   * It can be applied across multiple business areas like IT, HR, finance, and security to automate manual, repetitive tasks and standardize service delivery.
   * Historically known as a ticketing tool, it has evolved into a comprehensive automation platform that helps manage workflows, services, and tasks across an organization.
2. ServiceNow Platform Architecture:
   * ServiceNow uses a multi-instance architecture, meaning each organization gets its own unique instance, offering isolated data and applications, ensuring higher levels of customization and security compared to multi-tenant architecture (where data is co-mingled).
   * It uses a single data model built on a flexible table schema, ensuring consistency and reusability of components across the enterprise.
   * The platform also offers high availability with frequent backups and redundancy, including four weekly full backups and six daily differential backups, allowing for easy recovery in case of failure.
3. Different Ways to Interact with ServiceNow:
   * Native UI: This is the default desktop interface that administrators and users use to interact with the platform, offering features like real-time form updates and enhanced activity streams.
   * Mobile Apps: ServiceNow provides three mobile apps—ServiceNow Agent (for agents handling tasks), Now Mobile (for employees requesting services), and ServiceNow Onboarding (for new employees).
   * Service Portal: A user-friendly, customizable interface designed for self-service, where users can search knowledge articles, request services, or raise incidents. It acts as an advanced UI that simplifies user interaction with the platform.
4. Authentication and Security:
   * ServiceNow supports multiple authentication mechanisms:
   * Local database: Users log in using a username and password stored within the ServiceNow instance.
   * Single Sign-On (SSO): Users authenticate via identity providers like Okta or Azure, allowing them to log in with a single set of credentials.
   * LDAP and OAuth 2.0: Users can authenticate using Lightweight Directory Access Protocol (LDAP) or OAuth 2.0, which offers secure access via token-based authentication.
   * Multi-factor Authentication (MFA): Adds an extra layer of security by requiring users to authenticate via a one-time password (OTP) provided by apps like Google Authenticator.
   * Digest Token: Encrypted tokens are used for secure authentication.
   * Role-Based Access Control (RBAC) is a key security feature where permissions are assigned to users based on their roles and groups, ensuring they can only access data and tasks relevant to their responsibilities.
5. Mobile Apps and Service Portal:
   * ServiceNow provides three mobile applications to improve productivity and streamline access:
   * ServiceNow Agent: Built for agents to manage and fulfill requests quickly from their mobile devices.
   * Now Mobile: Designed for employees and end-users to submit service requests or access information on the go.
   * ServiceNow Onboarding: Helps manage tasks for new hires, ensuring they complete required tasks before starting.
   * The Service Portal offers a user-friendly experience for end-users, providing features like knowledge base search, service requests, and incident tracking. It is designed with customizable widgets for a tailored user experience.
6. Role-Based Access Control (RBAC):
   * Roles, Groups, and Permissions: In ServiceNow, users are assigned roles that dictate what they can access and modify on the platform. These roles can be assigned to groups for easier management.
   * Examples of roles include:
   * Admin role: Full access to all features and data.
   * Approver role: Grants users the ability to approve tasks.
   * ITIL role: Gives read/write access to IT Service Management (ITSM) applications like incident, problem, and change management.
   * Assigning roles to groups simplifies permission management. For instance, assigning a role to a group gives all members of that group the same permissions, which is easier to maintain compared to assigning individual roles to each user.
7. User Interface (UI) Features:
   * Supported Browsers: ServiceNow supports major browsers like Chrome, Safari, Edge, and Firefox. The course recommends Chrome and Safari for the best experience.
   * The ServiceNow UI provides features like application navigator, real-time form updates, and enhanced activity streams, allowing users to navigate the platform efficiently.
   * Developer Instances: ServiceNow offers free developer instances for hands-on practice, enabling learners to explore and work on the platform with a personal sandbox environment.
8. Base System Roles and Best Practices:
   * ServiceNow comes with out-of-the-box roles that provide specific permissions for different functions. Examples include:
   * Admin role: Complete access to the platform.
   * ITIL role: Focuses on ITSM operations like incident, change, and problem management.
   * Catalog admin: Manages the service catalog.
   * Best practice suggests assigning roles to groups rather than individual users, as this simplifies maintenance. Removing or adding users to a group automatically adjusts their permissions without needing to change each user’s roles manually.
9. Impersonation and Access Levels:
   * Impersonation: Administrators can impersonate other users to see how the platform looks from their perspective, helping verify role-based access.
   * Different User Access Levels:
   * Self-service users: Users with minimal access, mainly to request services or raise incidents.
   * ITIL users: Have more extensive access, allowing them to manage ITSM functions.
   * Admin users: Have full access to all features and settings within the platform.
10. Tables and Database Structure:
    * Table Management: ServiceNow's architecture revolves around a relational database, and tables store data in records (rows) and fields (columns). Admins learn to manage tables, including creating new tables and customizing existing ones.
    * Types of Tables: There are two main table types in ServiceNow:
    * Core Tables: Built-in tables like `Incident`, `Change`, and `Problem` tables, which serve specific ITSM functions.
    * Custom Tables: Tables that admins create based on unique organizational needs.
    * Table Inheritance: ServiceNow tables follow an inheritance model, where new tables can inherit fields and functionality from parent tables. This promotes data reusability.
11. Forms and Form Layout:
    * Form Customization: Forms are the user interface for accessing table data. The course teaches admins how to customize form layouts, including adding, removing, or rearranging fields to suit business needs.
    * UI Policies and UI Actions: Admins can use UI Policies to dynamically modify form behaviors, such as making fields read-only or mandatory based on specific conditions. UI Actions enable adding custom buttons and actions to forms, enhancing user interaction.
    * Client Scripts: These are JavaScript code blocks that run on the client side (browser) to enhance form functionality, enabling real-time data validation and interactivity without needing a server round trip.
12. Business Rules and Automation:
    * Business Rules: These are server-side scripts that run automatically when certain conditions are met. Admins can use business rules to automate tasks like field updates, email notifications, or data validation when records are created, updated, or deleted.
    * Scheduled Jobs: Admins learn how to schedule jobs to automate repetitive tasks such as sending reports, generating data exports, or performing system clean-up.
    * Event Management: ServiceNow generates events based on platform activities. Admins can configure how these events trigger notifications, alerts, or other actions to respond to system activity in real time.
13. Service Catalog and Request Management:
    * Service Catalog: ServiceNow’s Service Catalog allows admins to create a collection of available services, enabling users to request hardware, software, access, or other organizational resources.
    * Catalog Items and Categories: Admins organize services into categories and define catalog items (e.g., "Laptop Request", "Access Request"). They configure workflows to fulfill these requests efficiently.
    * Approvals and Workflows: Admins set up multi-stage approval processes and automated workflows for service requests. This ensures that requests are routed to the right teams for approval and fulfillment, improving service delivery.
14. Incident, Problem, and Change Management:
    * Incident Management: The course covers how to configure and manage the Incident Management application, which tracks and resolves issues reported by end-users. Admins learn to define incident priorities, categories, and assignment rules.
    * Problem Management: Focuses on identifying and fixing the root cause of incidents. Admins configure workflows to escalate recurring incidents into problems and ensure permanent fixes are implemented.
    * Change Management: ServiceNow’s Change Management module tracks changes to the IT infrastructure. Admins configure the change process, including approvals, impact analysis, and post-change reviews to minimize risks during IT changes.
15. Notifications and Reporting:
    * Email Notifications: Admins configure email notifications to keep users informed about system updates, incidents, and approvals. They can also create custom notifications and use templates to ensure consistency.
    * Performance Analytics: This module provides in-depth reporting and performance tracking for key business metrics. Admins learn how to build dashboards, use out-of-the-box reports, and create custom reports tailored to specific business needs.
    * Scheduled Reports: Admins can automate report generation and distribution to stakeholders by scheduling recurring reports, ensuring consistent visibility into system performance and business operations.