ServiceNow CIS-ITSM Certification Study Notes

Code: servicenow-cis-itsm

Exam Overview

📋 CIS-ITSM Exam Overview

Key information about the ServiceNow IT Service Management certification

- **Exam Code:** CIS-ITSM
- **Duration:** 90 minutes
- **Questions:** 60 multiple choice
- **Passing Score:** 70%
- **Level:** Professional (Implementation Specialist)
- **Prerequisite:** CIS-DF (Data Foundations)
- **Cost:** $150

Exam Domain Weights

Domain	Weight	Questions
Incident Management	25%	15
Problem Management	15%	9
Change Management	25%	15
Service Portfolio Management	5%	3

Domain	Weight	Questions
Service Catalog & Request Management	25%	15
Configuration Management Database (CMDB)	5%	3

Incident

Incident Management

Restore normal service operation as quickly as possible

What is Incident Management?

Incident Management is the process responsible for managing the lifecycle of all incidents. The primary objective is to restore normal service operation as quickly as possible and minimize the adverse impact on business operations.

- Restore normal service operation as quickly as possible
- Minimize adverse impact on business operations
- Ensure quality and availability of IT services
- Maintain user satisfaction through efficient service restoration

Incident Lifecycle

> **Incident States**
>
> **1. New** - Incident has been created but not yet assigned
>
> **2. In Progress** - Incident is being actively worked on
>
> **3. On Hold** - Waiting for user or third-party action
>
> **4. Resolved** - Solution implemented, awaiting confirmation
>
> **5. Closed** - Incident verified resolved and closed

> **6. Cancelled** - Incident was created in error or no longer needed

Priority Calculation

ServiceNow calculates incident priority using a Priority Lookup table based on Impact and Urgency:

Impact \ Urgency	High	Medium	Low
High	1 - Critical	2 - High	3 - Moderate
Medium	2 - High	3 - Moderate	4 - Low
Low	3 - Moderate	4 - Low	5 - Planning

Key Tables

Table	Purpose
incident	Main incident records
task_sla	SLA tracking for incidents
sys_audit	Audit history of incident changes
incident_task	Child tasks for incidents

Major Incident Management

> **Major Incident Process**
>
> - Major incidents require escalated handling procedures
> - Dedicated Major Incident Manager coordinates response
> - Communication plan activates stakeholder notifications
> - Post-incident review (PIR) is mandatory

- May trigger Problem record for root cause analysis

Problem

⚠️ Problem Management

Identify and eliminate root causes of incidents

What is Problem Management?

Problem Management is responsible for managing the lifecycle of all problems. The primary objective is to prevent incidents from happening and minimize the impact of incidents that cannot be prevented.

- Prevent problems and resulting incidents from happening
- Eliminate recurring incidents
- Minimize impact of incidents that cannot be prevented
- Document known errors and workarounds

Problem vs Incident

Aspect	Incident	Problem
Focus	Service restoration	Root cause elimination
Timeline	Short-term	Long-term
Goal	Fix symptoms	Fix underlying cause
Trigger	User-reported or monitoring	Pattern analysis or major incident

Problem Lifecycle

> **Problem States**
>
> 1. **New** - Problem identified but not yet investigated
> 2. **Assess** - Evaluating problem for investigation
> 3. **Root Cause Analysis** - Actively investigating root cause
> 4. **Fix in Progress** - Solution being implemented
> 5. **Resolved** - Root cause eliminated
> 6. **Closed** - Problem verified resolved

Known Error Database (KEDB)

Known Errors are documented problems with a known root cause and a workaround. The KEDB stores these for reference during incident resolution.

- Faster incident resolution through documented workarounds
- Knowledge sharing across support teams
- Tracking of permanent fix progress
- Reduced mean time to restore (MTTR)

Root Cause Analysis Techniques

- **5 Whys:** Ask "why" repeatedly to drill down to root cause
- **Fishbone Diagram:** Categorize potential causes (Ishikawa)
- **Fault Tree Analysis:** Map logical relationships between failures
- **Chronological Analysis:** Timeline-based investigation

Change

🔄 🔄 Change Management

Control the lifecycle of all changes to minimize risk

What is Change Management?

Change Management ensures that standardized methods and procedures are used for efficient and prompt handling of all changes to control IT infrastructure and minimize the number and impact of service incidents.

- Respond to changing business requirements while maximizing value
- Reduce incidents, disruption, and re-work
- Standardize methods and procedures for change handling
- Balance risk and business need

Change Types

Type	Description	Approval
Standard	Pre-approved, low-risk, routine changes	Pre-approved via catalog
Normal	Requires assessment and approval	CAB or delegated authority
Emergency	Must be implemented urgently	Emergency CAB (eCAB)

Change Lifecycle

> **Change States**
>
> **1. New** - Change request submitted
>
> **2. Assess** - Evaluating change for implementation
>
> **3. Authorize** - Awaiting approval
>
> **4. Scheduled** - Approved and scheduled for implementation
>
> **5. Implement** - Change being executed
>
> **6. Review** - Post-implementation review
>
> **7. Closed** - Change completed and closed

Change Advisory Board (CAB)

The CAB is a group responsible for evaluating, prioritizing, and authorizing changes.

- Review and prioritize change requests
- Assess risk and impact of proposed changes
- Authorize or reject changes
- Schedule changes to minimize conflicts
- Review change implementation results

Risk Assessment

Factor	Considerations
Impact	Number of users/systems affected, business criticality
Complexity	Technical difficulty, dependencies, skills required
Testing	Test coverage, rollback plan validity
Schedule	Implementation timing, maintenance windows
History	Past change success rate, similar change outcomes

Conflict Detection

> **Change Collision**
>
> ServiceNow can detect scheduling conflicts between changes affecting:
>
> - Same Configuration Items (CIs)
> - Related CIs (parent/child relationships)
> - Overlapping maintenance windows
> - Same assignee across multiple changes

Service Catalog

🛒 Service Catalog & Request Management

Provide a self-service portal for IT services

What is Service Catalog?

The Service Catalog is a centralized database of accurate information about all IT services available to end users. It provides a self-service portal for requesting services and products.

- Provide single source for service offerings
- Enable self-service for common requests
- Standardize fulfillment processes
- Improve user satisfaction and productivity

Catalog Components

Component	Description
Catalog	Container for categories and items
Category	Logical grouping of catalog items
Catalog Item	Service or product available for request
Variable Set	Reusable group of variables
Variable	Input field for gathering request information
Catalog Client Script	Client-side form behavior
Catalog UI Policy	Dynamic form field behavior

Variable Types

> **Common Variable Types**
>
> - Single Line Text
> - Multi Line Text
> - Select Box (Dropdown)
> - Check Box
> - Reference
> - Date/Date Time
>
> - Yes/No
> - Lookup Select Box
> - Multiple Choice
> - Container (for grouping)
> - Macro
> - HTML

Fulfillment Flow

> **Request Fulfillment Process**
>
> **1. Request (sc_request)** - The shopping cart/order
>
> **2. Requested Item (sc_req_item)** - Individual line items
>
> **3. Catalog Task (sc_task)** - Fulfillment tasks

Order Guides

Order Guides bundle multiple catalog items into a single guided ordering experience.

- Step-by-step wizard interface
- Variable cascading between items
- Conditional item inclusion/exclusion
- Custom scripts for complex logic

Record Producer

Record Producers create records in tables other than sc_request (e.g., incident, change).

Use Case	Target Table
Report an Issue	incident
Request a Change	change_request
Submit Feedback	custom feedback table

CMDB

🗄️ CMDB Integration with ITSM

How CMDB supports ITSM processes

CMDB in ITSM Context

The CMDB provides the foundation for effective ITSM by maintaining accurate information about Configuration Items (CIs) and their relationships to services.

CMDB Support for ITSM Processes

ITSM Process	CMDB Usage
Incident Management	Affected CI identification, impact analysis, service context
Problem Management	Root cause correlation, related CI analysis

ITSM Process	CMDB Usage
Change Management	Impact assessment, CI relationships, conflict detection
Service Catalog	Service offerings linked to technical CIs
SLA Management	Service-based SLA application via CI relationships

CI Relationships

Key Relationship Types

- **Runs on::** Application runs on server
- **Used by::** CI used by business service
- **Depends on::** Service depends on CI
- **Contains::** Parent CI contains child CIs
- **Connected by::** Network connectivity

Impact Analysis

ServiceNow uses CI relationships to determine the impact of incidents and changes:

- Upstream impact: What services are affected by this CI?
- Downstream impact: What does this CI depend on?
- Business Service context for prioritization
- User impact calculation based on service consumers

Service Mapping

Service Mapping Benefits

- Automatic discovery of CI relationships
- Real-time service dependency maps

- Change impact visualization
- Improved incident correlation