Streamlining TicketAssignment For Efficient SupportOperation

Service now NAAN
MUDALVAN PROJECT

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١. INTRODUCTION:

Streaming TicketAssignment for Efficient Support Operations In today's fast- paceddigitalenvironment,supportteamsmusthandleagrowing volume ofcustomerinquirieswhilemaintaininghighlevelsofservice quality andresponsespeed.Traditionalmethodsofticketassignment—often manualorround-robinbased—canleadtoinefficiencies,suchas uneven workloads, delayed responses, and lower customer satisfaction.

Streaming ticket assignment introduces a dynamic, real-time approach to distributing support tickets. Instead of batching or queuing tickets for late assignment, tickets are automatically routed to the most suitable availabl they are created. This method leverages automation, real-time analytics, a contextual understanding to ensure that each ticket is handled by the rig at therighttime.Byoptimizingticketflowandbalancingworkloadsacros teams, streaming assignment significantly enhances operational efficiency reduces response times, and improves the overall support experience—agents and customers.

In thisproject,adedicatedservicecatalogitemwillbecreatedforlapto

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Provide details such as quantity, justification, and department. Submit the request, which will be automatically routed to the appropr
eeds.
approvers.

The systemensuresthateveryrequestfollowsastandardizedworkflow involving approval from department heads and IT administrators befo fulfillment. Additionally, requestors will be kept informed at each stage through automated notifications. Administrators, on the other hand, w have accesstoreportsanddashboardstotracklaptopdemand,usage patterns, and request completion timelines.

ABSTRACT:

Efficient ticketmanagement is critical to delivering timely and Effective customersupport.TraditionalticketassignmentMethods,such as manual distribution or round-robin systems, Often result in delayed responses, uneven workloads, and Decreased customer satisfaction. This paperexplorestheConceptofstreamingticketassignment, a real-time,automatedApproachthatdynamicallyroutesincoming support ticketstothemostappropriateandavailableagentsbased on predefined workload such as skill set, ticket priority, and current Criteria. By continuouslyevaluatingticketflowandagentAvailability,streaming assignment systems ensure faster Response times, balanced agent utilization, and improved Resolution rates. This approach not only enhancesoperationalEfficiencybutalsoprovidesascalablesolution fo support teams dealing with high Volumes of customer inquiries. The paper alsodiscussesImplementationstrategies,potentialchallenges, and theMeasurableimpactof streamingticketassignmentonoverall Support performance.

PROBLEM STATEMENT

In modern customer support environments, handling a high Volume of incoming tickets efficiently is a critical challenge. Traditional ticket assignment methods— such as manual Allocation, round-robin distribution, or first-come-first-serve Queues—often lead to operational inefficiencies. These include Delayed response times, uneven workload distribution among Agents, underutilization of specialized skills, and reduced Customer satisfaction. As support teams scale, these static assignment approaches struggle to adapt in real timetodynamicvariablessuchasagentavailability,ticket priority, complexity, and customer context. This results in increased resolution times, agent burnout, and a disjointed customer experience.Thereisaclear needforamoreintelligent,adaptive solutionThatcanassigntickets dynamicallyandefficientlyasthey Arrive. Streaming ticket assignment addresses this gap by Introducing real-time, criteria-based routing that optimizes.

٣. SOLUTION

StreamingTicketAssignment System—a real-time, automated ticket dis mechanismdesignedtoenhance theresponsiveness and effectiveness sup operatior Thissystemcontinuously monitorsincomingticketsan

Dynamicallyassignsthemtothe mostsuitable andavailablesupporta basedonpredefinedcriteria,such as:

AiTcikteetopsrekteitrylo vrtaiislea pryonsetime
lotripalo nucseto
Cgstkrwiandde oarndamac nderbilre
e nxdpae am tiseit

Language and regional preferences

Byleveragingreal-timedataandintelligent routing algorithms, Thestreamingassignmentmodelensures that each ticket is immediately tothe best-fitagent.Thisapproachnotonly reduces ticket wait times but balancesworkloadsacrossthesupportteam, improves first-contact resol rates, andenhancestheoverallcustomer experience. The solution can be implementedusingrule-basedenginesor enhanced further with ai/ml m predictiveroutingandcontinuousoptimization. Integration with existing atilclokewtsinsgeapmlatlefosrsmads(oep.tgio.,n wZeitnh oudte dsiks,r u streamingticketassignmentoffersascalable, adaptive, and efficient alternativetostaticticketdistributionmethods, aligning support operationswithmoderncustomerservice expectations. Both resource utilization and customer satisfaction.

٤. PracticalUse ofStreamingTicketAssignmentfor Efficient Support Operations

١. Real-TimeTicket Routing:

As customerrequestscomein,ticketsareimmediatelyanalyzed and assigned tothemostappropriateagent,ensuring fasterresponse tim

٢. Sk
ill-
based
routing:
Tickets arematchedtoagentswiththerightexpertise(e.g., technical is go to technicalspecialists),improvingthequality of support and first-co resolution rates.

٣. Workload Balancing:
The systemdynamicallymonitorsagentavailability and workload, distributingticketsevenlytopreventburnoutand idle time,which increases team productivity and morale.

٤. Priority Handling:
High-priorityorVIPcustomerticketsareautomaticallyflagged and to seniororspecializedagents,ensuringcritical issuesgetimmediate a

٥. Multi-Channel Support:
Ticketsoriginatingfromdifferentchannels(email, chat,phone, social media)areunifiedandassignedseamlessly,enablingconsistent and efficient multi-channel support.

٦. Scalability during PeakTimes:
Duringperiodsofhighticketvolume(e.g.,productlaunches, outage

streamingassignmentadaptsin real-timetohandlespikesefficiently overloading any single agent.

٧. PerformanceAnalyticsandContinuous Improvement:
Datacollectedfromtheassignmentprocesshelpsidentify bottlene

optimize routing rules, continuously improving support operations ove

٥. Knowledge Gained from Streaming Ticket Assignment for Efficient Support Operations

١. Improved Understanding of Real-Time Resource Management:
Streaming ticket assignment highlights the importance of dynamically managing agent availability and workloads to optimize operational efficiency and prevent bottlenecks.

٢. The Value of Skill-Based Routing:
Matching tickets to agents based on their expertise significantly enhances resolution quality and customer satisfaction, reducing repeat contacts and escalation rates.

٣. Impact of Automation on Response Times:
Automatingticketdistributioninrealtimedrasticallyreduces wait times,demonstratinghow intelligentsystemscanaccelerate support workflows and improve customer experience.

٤. Scalability BenefitsDuring PeakDemand:
Streamingassignmentsystemscanflexiblyhandlesuddensurges in ticket volumes,ensuringcontinuousservicelevelsevenunder pressure.

٥. Data-DrivenContinuous Improvement:

Collectingandanalyzing assignment data enablesongoing refinementofrouting algorithms, supportingaculture of continuous o

im
ip6
nrtoevgermatei Challenges and Solutions:
ohnt.

Practical experience revealsbest practicesforintegrating streaming ticket assignment withexisting supportplatformsand workflows, minimizing disruption during adoption.

٧. EnhancedTeam CollaborationandMorale:

Balancedworkload distributionhelpsreduce agent burno fosters a moreengagedandproductivesupportteam.

MILESTONE 1: SETTING UP THE SERVICENOW
INSTANCE Activity 1–RequestingaDeveloperInstance

١. Visit the official ServiceNow Developer portal: https://developer.servicenow.com
Createadeveloperaccountorloginifyoualreadyhaveone.
٢.
٣. Fromthedashboard,gotothePersonalDeveloperInstance section.
٤. ClickonRequestInstancetogenerateanewServiceNowenvironment.
٥. ChoosethelatestavailableversionofServiceNowandconfirm therequest.
٦. WaitforaconfirmationemailthatincludesyourinstanceURL andlogin crede

Activity 2 – Configuring the Instance

١. Use the provided credentials to log in to your ServiceNow instance.
ExploretheApplicationNavigatortobecomefamiliarwiththe interface.
٢.
٣. Set up user roles if needed (admin, developer, requester). Configurethe
environmentforprojectdevelopmentbyenabling accessto
٤.
Service Catalog and Workflow modules.
٥. Verifythatyourinstanceisactive andready forfurthercustomization.

	Column label	Type	Reference	Max length	Default value	Display
	Created by	String	(empty)	40		false
	Created	Date/Time	(empty)	40		false
	Sys ID	Sys ID (GUID)	(empty)	32		false
	Updates	Integer	(empty)	40		false
	Updated by	String	(empty)	40		false
	Updated	Date/Time	(empty)	40		false
✕	Assigned to group	Reference	Group	40		false
✕	Assigned to user	Reference	User	32		false
✕	Comment	String	(empty)	40		false
✕	Issue	String	(empty)	40		false
✕	Name	String	(empty)	40		false
✕	Priority	String	(empty)	40		false
✕	Service request No	String	(empty)	40	javascript:getNextObjNumberPadded();	false
✕	Ticket raised Date	Date/Time	(empty)	40		false
+	Insert a new row...					

MILESTONE 2: CREATION OF CATALOG ITEM

Activity–CreatingaLaptopRequestCatalogItem

١. IntheServiceNowinstance,navigatetoService Catalo→g Catalog Definitions →

MaintainItems.

٢. ClickonNewtocreateanewcatalogitem.

Enter the details as follows:

o Name: Laptop Request

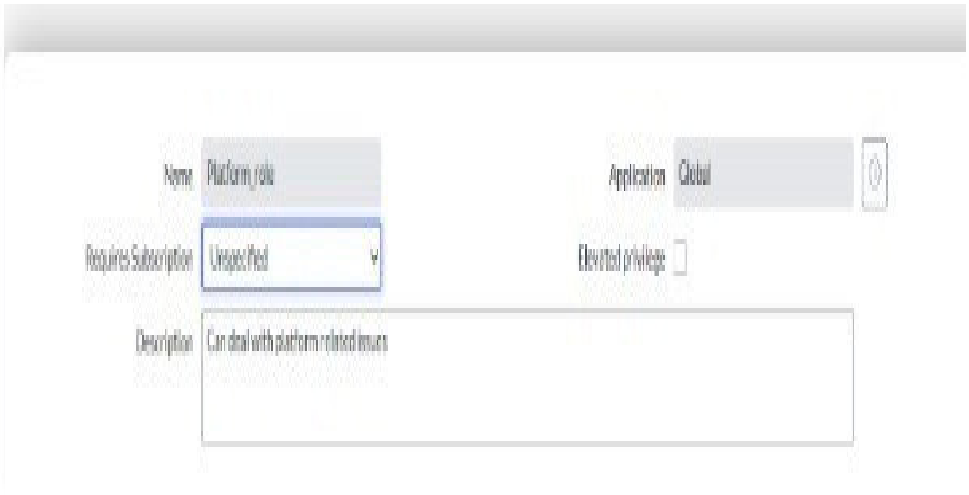
oCategory:ITServices→HardwareRequests

oShortDescription:Requestforanew laptop.

oDescription:Catalogitemtoallowusersto requestlaptops withspecific configurations.

٣. Save the catalog item. Verifythattheitemappearsunderthecorrectcategoryinthe ServiceCatalog.

٤.



MILESTONE3:DESIGNINGLAPTOPREQUEST

FORM Activity – Adding Fields to the Form

١. Open the Laptop Request catalog item.
Underthe Variables tab, add fields to capture request details:

٢.
- oLaptopModel(Choicefield:e.g.,Dell, HP,Lenovo)
- oConfiguration(String/Choice:i5,i7, RAM,SSDoptions)
- o Quantity (Integer)
- o Justification (Multi-line Text, Mandatory)
- oDepartment(ReferencefieldtoDepartmenttable)

٣. Apply field properties:

- oMakeJustificationandDepartmentfieldsmandatory.
- o Set Quantity field default to “1.”

٤. Save the form and preview it under the catalog.

MILESTONE

4:WORKFLOWFORAPPROVALS Activity –

Building the Approval Workflow

١. Navigatto Workflow Editor→ New Workflow.

٢. Nametheworkflow LaptopRequestApproval Workflow.

٣. Drag and drop activities:

oApproval–User:ManagerApproval (first level).

oApproval–User:ITApproval(second level).

oTaskAssignment:Assignrequestto IT team after approvals.

٤. Configureworkflow condi rt ei oqnus e: stisclosed with rejection note.

oIfmanagerrejects→

oIfmanagerapproves→routedtoIT for final approval.

oOnceITapproves→laptopprovisioning task is generated.

٥. Save and publish the workflow.

MILESTONE5:CATALOGCATEGORIES ANDUSER ACCESS Activity–Creating Categories

١. Navigateto ServiceCatalog→CatalogDefinitions → Maintain Categories.

٢. Addcategories suchas:

- Standard Laptops
- oHigh-PerformanceLaptops
- oLightweight/PortableLaptops

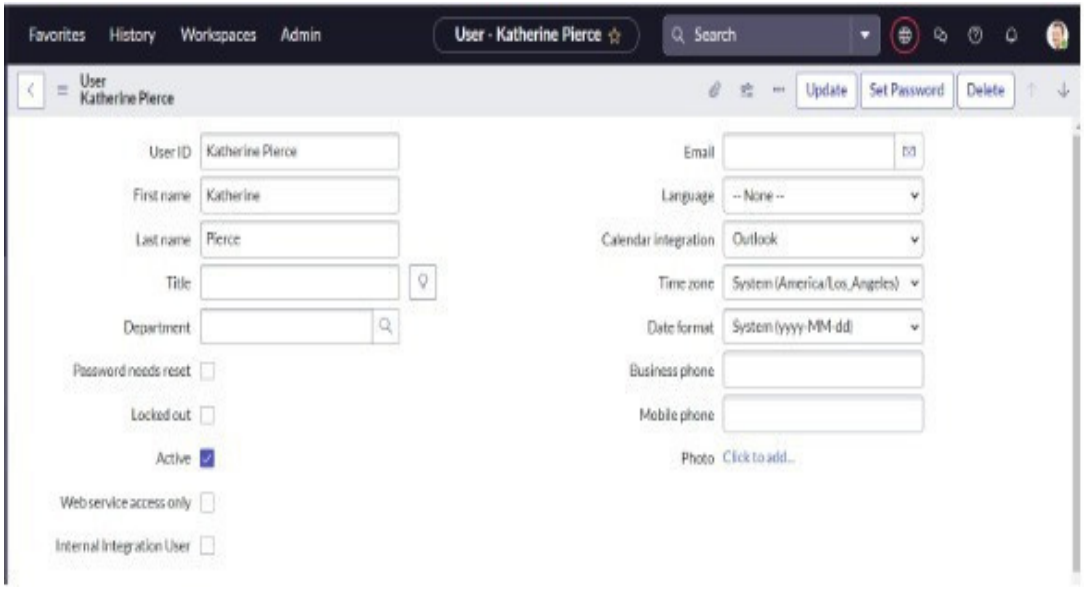
٣. Assign catalogitems tothesecategories for easier selection.

Activity–ApplyingRole-BasedAccess

١. Define userroles:Requestor,Approver, ITStaff.

٢. Configureaccessso:

- oStudents/Employees(Requestors) canonly submit requests.
- oManagers(Approvers) can review andapprove.
- oIT Staffcanprocessfulfillment tasks.



MILESTONE 6: TESTING AND

VALIDATION Activity–

TestingtheCatalogItem

١. Submitasamplelaptoprequest as a student/employee.

٢. Verifythattherequestroutes correctly to the manager for approval.

٣. AuplpflotvheetrheeIqaT rsu esaetqasmutfefa,sa tnhfeirsmysittem

٤. ır sntnadgcehrectkhethnacto

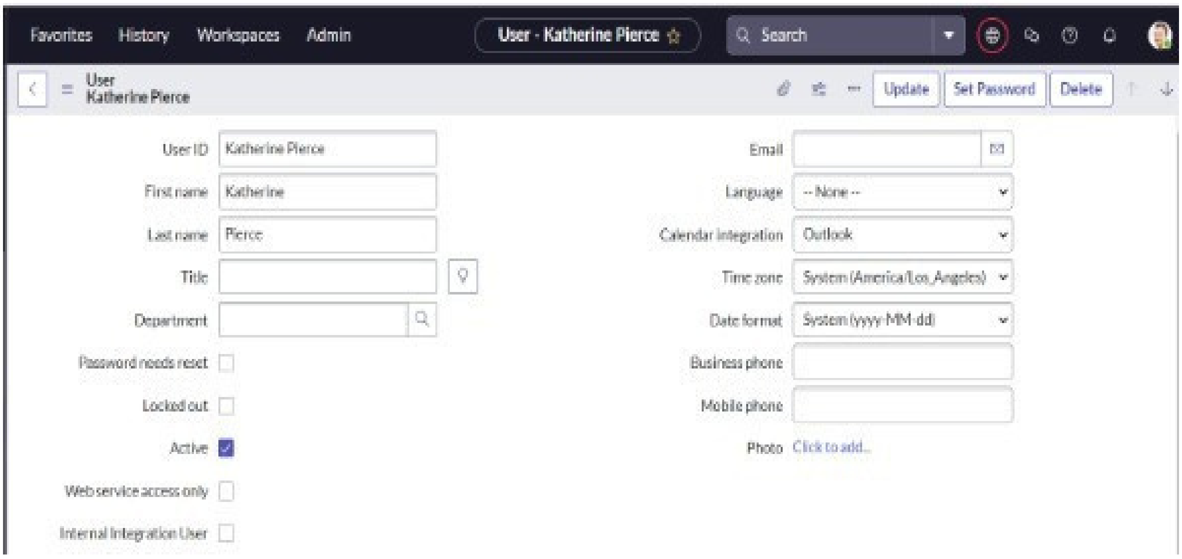
Activity – Validation

١. Ensuremandatoryfields preventincomplete submissions.

٢. Confirmnotifications are sentateachstage.

٣. VerifySLA timersare triggeredand monitored.

٤. Testreports anddashboardstoensureaccuratedata display.



CORE AND MOTIVE OF THE PROJECT:

The coreofstreamingticketassignmentlies inthereal-time, Intelligent distribution of incoming support tickets to the most Suitableagents.Thissystem dynamicallyconsidersfactorssuchAs agent skills, availability, workload, and ticket priority to Ensure that eachcustomerissueisaddressedpromptly andEffectively.It replaces static, manual, or batch- based Assignment methods with a continuous,automatedprocess thatOptimizessupportefficiencyand service quality.

The primarymotivebehindimplementingstreamingticketassignment

is to enhance support the overall efficiency and responsiveness of operations.Byautomatingand optimizingticketrouting,organizations aim to reduceresponseand resolutiontimes,balanceworkloads among agents,improvecustomersatisfaction,andenablescalable support thatcanadaptseamlesslytofluctuatingticketvolumes. Ultimately, the goal is to provide a smoother, faster, and more personalized support experience for customers while maintaining a motivated and productive support team.

CONCLUSION :

Implementing a streaming ticket assignment approach within ServiceNowsignificantly enhancestheefficiency andresponsiveness of supportoperations. By continuouslyroutingincomingtickets based on real-timeagentavailability,skill sets,andworkload,themodel reduces resolutiontime,minimizesbacklog,andimprovesservice quality. This dynamic,automated processensuresequitableworkloaddistribution and empowerssupport teams tofocuson issueresolution rather tha manualticketmanagement.As organizations continuetoscale, streamingticketassignmentoffersasustainable,intelligent solution for maintainingoperational excellenceanddeliveringconsistent customer satisfaction.