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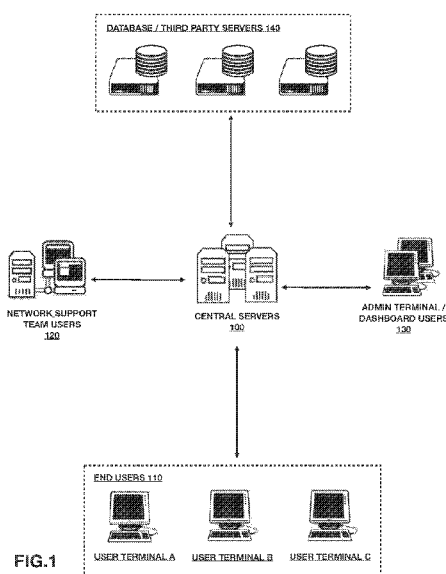


FIG. 1

(57) Abstract: A system and method for managing services via a centralized network platform based on a ticket family framework. The method can include based on a first user input to create a ticket family, creating the ticket family via the centralized network platform; based on a second user input to configure a first view, creating the first view comprising one or more first user input fields for capturing ticket information; and based on a third user input to configure a first workflow for the ticket family, creating the first workflow, the first workflow including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

CENTRALIZED SERVICE MANAGEMENT PLATFORM BASED ON A TICKET HIERARCHY FRAMEWORK

BACKGROUND

Technical Field

[0001] The present disclosure described herein relates to a centralized service management network platform.

Background

[0002] A trouble ticket service platform is generally an incident management system for tracking the detection, reporting, and resolution of some kind of problem within an organization or a telecommunications network. Further, it is generally necessary to obtain detailed information with respect to problems encountered by a customer using a service provider's network (or an organization's services) in order to promptly and correctly diagnose the problem. Further, customer support agents or technicians must generate the trouble ticket that accurately reflects problems conveyed to the customer support agent or technicians by the customer. Various tools have been available in the market to provide such incident management, problem management, or service requests and related processes in the form of fixed templates where users or support agents can modify existing workflows and views. However, existing platforms do not provide the users or support agents the ability to modify existing templates or create new custom templates and service workflows. In particular, conventional systems do not allow the creation of unique processes or workflows and customizing specific data within a process or workflow. Further, such conventional systems are generally limited to information technology (IT) operations or departments. Hence, conventional service management systems are highly rigid in structure, inefficient in implementation and operation, and require significant human and computing

resources.

[0003] Hence, what is needed is a centralized service or incident management platform that requires minimum energy consumption, is resource efficient, is less taxing on computing resources and network elements, and can provide high customer satisfaction.

SUMMARY

[0004] According to example embodiments, a centralized service or incident management platform is disclosed having a trouble ticket family or ticket hierarchy framework which can form the basis for which users can operate within the service management platform. For example, multiple ticket workflows and views can be created for individual processes, wherein each ticket workflow includes its own specific values for at least one of a domain, subdomain, category, subcategory, etc. Each ticket family can allow businesses to create multiple processes with their own individual identities. Accordingly, the service management platform of the disclosure described herein is not limited to IT or network operations and departments, but can also be used by other areas and aspects of a service provider's business, such as human resources (HR) and marketing operations and departments.

[0005] According to other embodiments, a ticket family can be a central component within the service management platform of the disclosure described herein in which workflows, views, and master data such as domains, subdomains, categories, and subcategories are latched to or associated therewith. Further, a user can create multiple ticket flows (e.g., master ticket and sub-ticket) with respect to various processes, wherein each ticket family (including linked families) can have multiple workflows which may be mapped to certain domains and categories. According to an exemplary embodiment, to create a ticket (or a trouble ticket), a user can select a ticket family which may be associated with or related to certain processes, such as incident management,

problem management, or service requests, among others. Within a ticket family there can be multiple workflows depending on the domain and category, including the workflows, domains, or categories that can capture different information. Each ticket family can have its own view latched or associated with user tasks in the workflow. Further, it is contemplated within the scope of the present disclosure described herein that the service management platform of the disclosure described herein can be used in various industries not limited to telecommunications and can further operate as a single central platform for all ticket management related to various departments or operations across an organization.

[0006] Some technical improvements of the service management platform system and method of the disclosure described herein over conventional systems can include, among others, providing a ticketing solution under one centralized network platform for all departments of an organization, thereby minimizing computing resources and improving operational efficiency. Further, the system and method of the disclosure described herein can create a ticket family master module within an administrator section of a dashboard which can include all the master modules from where data can be configured for each of the ticket families, thereby further improving operational and ticket management efficiency. In addition, the service management platform of the disclosure described herein can allow organizations to introduce and adopt new processes for ticket management, thereby improving customer satisfaction, and minimizing the turnaround time needed to modify existing processes. In addition, other improvements can include faster onboarding, each process being denoted or labeled with its individual ticket family name for easy of searching for tickets, and quick and easy identification of tickets, problems, and solutions by end users and management of the organization, among other advantages.

[0007] According to one or more exemplary embodiments, a method of managing services via

a centralized network platform includes: based on a first user input to create a ticket family, creating the ticket family via the centralized network platform; based on a second user input to configure a first view, creating the first view comprising one or more first user input fields for capturing ticket information; and based on a third user input to configure a first workflow for the ticket family, creating the first workflow, the first workflow including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

[0008] According to one or more exemplary embodiments, a system for managing services via a centralized network platform includes: at least one memory storing instructions; and at least one processor configured to execute the instructions to: based on a first user input to create a ticket family, create the ticket family via the centralized network platform; based on a second user input to configure a first view, create the first view comprising one or more first user input fields for capturing ticket information; and based on a third user input to configure a first workflow for the ticket family, create the first workflow, the first workflow including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

[0009] According to one or more exemplary embodiments, a non-transitory computer-readable medium has recorded thereon instructions executable by at least one processor to perform a method of managing services via a centralized network platform, the method including: based on a first user input to create a ticket family, creating the ticket family via the centralized network platform; based on a second user input to configure a first view, creating the first view comprising one or more first user input fields for capturing ticket information; and based on a third user input to configure a first workflow for the ticket family, creating the first workflow, the first workflow

including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Features, advantages, and significance of exemplary embodiments of the disclosure will be described below with reference to the accompanying drawings, in which like signs denote like elements, and wherein:

[0011] FIG. 1 illustrates a diagram of a general system architecture of the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0012] FIG. 2 illustrates a block diagram for various sub-modules within a ticket family module for the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0013] FIG. 3 illustrates a process flow diagram illustrating a method of creating a ticket family via an administrator for the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0014] FIG. 4 illustrates a process flow diagram illustrating a method creating a ticket family via an end-user for the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0015] FIG. 5 illustrates a graphical user interface (GUI) portal of a dashboard for the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0016] FIG. 6 illustrates a GUI portal illustrating various configurations and ticket families within the dashboard of the service management platform method and system of the disclosure

described herein according to one or more embodiments;

[0017] FIG. 7A illustrates a GUI portal illustrating an input screen for creating a new workflow within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0018] FIG. 7B illustrates a GUI portal of an exemplary workflow diagram within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0019] FIG. 8 illustrates a GUI portal illustrating detailed ticket family information within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0020] FIG. 9A illustrates a GUI portal illustrating an input screen for creating a new ticket family within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0021] FIG. 9B illustrates a GUI portal illustrating an input screen for creating a new domain within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments;

[0022] FIG. 10A illustrates a GUI portal illustrating an input screen for creating a new subdomain within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments; and

[0023] FIG. 10B illustrates a GUI portal illustrating an input screen for creating a new category within the dashboard of the service management platform method and system of the disclosure described herein according to one or more embodiments.

DETAILED DESCRIPTION

[0024] The following detailed description of example embodiments refers to the accompanying drawings. The same reference numbers in different drawings may identify the same or similar elements.

[0025] The foregoing disclosure provides illustrations and descriptions, but is not intended to be exhaustive or to limit the implementations to the precise form disclosed. Modifications and variations are possible in light of the above disclosure or may be acquired from practice of the implementations. Further, one or more features or components of one embodiment may be incorporated into or combined with another embodiment (or one or more features of another embodiment). Additionally, in the flowcharts and descriptions of operations provided below, it is understood that one or more operations may be omitted, one or more operations may be added, one or more operations may be performed simultaneously (at least in part), and the order of one or more operations may be switched.

[0026] It will be apparent that systems and/or methods, described herein, may be implemented in different forms of hardware, firmware, or a combination of hardware and software. The actual specialized control hardware or software code used to implement these systems and/or methods is not limiting of the implementations. Thus, the operation and behavior of the systems and/or methods were described herein without reference to specific software code—it being understood that software and hardware may be designed to implement the systems and/or methods based on the description herein.

[0027] Even though particular combinations of features are recited in the claims and/or disclosed in the specification, these combinations are not intended to limit the disclosure of possible implementations. In fact, many of these features may be combined in ways not specifically recited in the claims and/or disclosed in the specification. Although each dependent

claim listed below may directly depend on only one claim, the disclosure of possible implementations includes each dependent claim in combination with every other claim in the claim set.

[0028] No element, act, or instruction used herein should be construed as critical or essential unless explicitly described as such. Also, as used herein, the articles “a” and “an” are intended to include one or more items, and may be used interchangeably with “one or more.” Where only one item is intended, the term “one” or similar language is used. Also, as used herein, the terms “has,” “have,” “having,” “include,” “including,” or the like are intended to be open-ended terms. Further, the phrase “based on” is intended to mean “based, at least in part, on” unless explicitly stated otherwise. Furthermore, expressions such as “at least one of [A] and [B]” or “at least one of [A] or [B]” are to be understood as including only A, only B, or both A and B.

[0029] Reference throughout this specification to “one embodiment,” “an embodiment,” “non-limiting exemplary embodiment,” or similar language means that a particular feature, structure, or characteristic described in connection with the indicated embodiment is included in at least one embodiment of the present solution. Thus, the phrases “in one embodiment,” “in an embodiment,” “in one non-limiting exemplary embodiment,” and similar language throughout this specification may, but do not necessarily, all refer to the same embodiment.

[0030] Furthermore, the described features, advantages, and characteristics of the present disclosure may be combined in any suitable manner in one or more embodiments. One skilled in the relevant art will recognize, in light of the description herein, that the present disclosure can be practiced without one or more of the specific features or advantages of a particular embodiment. In other instances, additional features and advantages may be recognized in certain embodiments that may not be present in all embodiments of the present disclosure.

[0031] In one implementation of the disclosure described herein, a display page may include information residing in the computing device's memory, which may be transmitted from the computing device over a network to a database center and vice versa. The information may be stored in memory at each of the computing device, a data storage resided at the edge of the network, or on the servers at the database centers. A computing device or mobile device may receive non-transitory computer readable media, which may contain instructions, logic, data, or code that may be stored in persistent or temporary memory of the mobile device, or may somehow affect or initiate action by a mobile device. Similarly, one or more servers may communicate with one or more mobile devices across a network, and may transmit computer files residing in memory. The network, for example, can include the Internet, wireless communication network, or any other network for connecting one or more mobile devices to one or more servers.

[0032] Any discussion of a computing or mobile device may also apply to any type of networked device, including but not limited to mobile devices and phones such as cellular phones (e.g., any "smart phone"), a personal computer, server computer, or laptop computer; personal digital assistants (PDAs); a roaming device, such as a network-connected roaming device; a wireless device such as a wireless email device or other device capable of communicating wireless with a computer network; or any other type of network device that may communicate over a network and handle electronic transactions. Any discussion of any mobile device mentioned may also apply to other devices, such as devices including short-range ultra-high frequency (UHF) device, near-field communication (NFC), infrared (IR), and Wi-Fi functionality, among others.

[0033] Phrases and terms similar to "software", "application", "app", and "firmware" may include any non-transitory computer readable medium storing thereon a program, which when executed by a computer, causes the computer to perform a method, function, or control operation.

[0034] Phrases and terms similar to "network" may include one or more data links that enable the transport of electronic data between computer systems and/or modules. When information is transferred or provided over a network or another communications connection (either hardwired, wireless, or a combination of hardwired or wireless) to a computer, the computer uses that connection as a computer-readable medium. Thus, by way of example, and not limitation, computer-readable media can also include a network or data links which can be used to carry or store desired program code means in the form of computer-executable instructions or data structures and which can be accessed by a general purpose or special purpose computer.

[0035] Phrases and terms similar to "portal" or "terminal" may include an intranet page, internet page, locally residing software or application, mobile device graphical user interface, or digital presentation for a user. The portal may also be any graphical user interface for accessing various modules, components, features, options, and/or attributes of the disclosure described herein. For example, the portal can be a web page accessed with a web browser, mobile device application, or any application or software residing on a computing device.

[0036] FIG. 1 illustrates a diagram of a general network architecture according to one or more embodiments. Referring to FIG. 1, end users 110, network support team users 120, and admin terminal / dashboard users 130 (collectively referred to herein as users 110, 120, and 130) can be in bi-directional communication over a secure network with central servers or application servers 100 according to one or more embodiments. In addition, users 110, 120, 130 may also be in direct bi-directional communication with each other via the network system of the disclosure described herein according to one or more embodiments. Here, users 110 can be any type of customer, network service provider agent, or vendor, among others, of a network or telecommunication service provider, such as users operating computing devices and user terminals A, B, and C. Each

of users 110 can communicate with servers 100 via their respective terminals or portals, wherein servers 110 can provide or automatically operate the network impact prediction engine system and method of the disclosure described herein. Users 120 can include application development members or support agents of the network service provider for developing, integrating, and monitoring service platform management method and system of the disclosure described herein, including assisting, scheduling/modifying network events, and providing support services to end users 110. Admin terminal / dashboard users 130 may be any type of user with access privileges for accessing a dashboard or management portal of the disclosure described herein, wherein the dashboard portal can provide various user tools, GUI information, maps, graphs, and customer support options. It is contemplated within the scope of the present disclosure described herein that any of users 110 and 120 may also access the admin terminal / dashboard 130 of the disclosure described herein.

[0037] Still referring to FIG. 1, central servers 100 of the disclosure described herein according to one or more embodiments can be in further bi-directional communication with database / third party servers 140, which may also include users. Here, servers 140 can include vendors and databases where various captured, collected, or aggregated data, such as current, real-time, and past network related historical and KPI data, may be stored thereon and retrieved therefrom for network analysis, predictions, and simulations by servers 100. However, it is contemplated within the scope of the present disclosure described herein that the service management platform method and system of the disclosure described herein can include any type of general network architecture.

[0038] Still referring to FIG. 1, one or more of servers or terminals of elements 100-140 may include a personal computer (PC), a printed circuit board comprising a computing device, a mini-computer, a mainframe computer, a microcomputer, a telephonic computing device, a

wired/wireless computing device (e.g., a smartphone, a personal digital assistant (PDA)), a laptop, a tablet, a smart device, a wearable device, or any other similar functioning device.

[0039] In some embodiments, as shown in FIG. 1, one or more servers, terminals, and users 100-140 may include a set of components, such as a processor, a memory, a storage component, an input component, an output component, a communication interface, and a JSON UI rendering component. The set of components of the device may be communicatively coupled via a bus.

[0040] The bus may comprise one or more components that permit communication among the set of components of one or more of servers or terminals of elements 100-140. For example, the bus may be a communication bus, a cross-over bar, a network, or the like. The bus may be implemented using single or multiple (two or more) connections between the set of components of one or more of servers or terminals of elements 100-140. The disclosure is not limited in this regard.

[0041] One or more of servers or terminals of elements 100-140 may comprise one or more processors. The one or more processors may be implemented in hardware, firmware, and/or a combination of hardware and software. For example, the one or more processors may comprise a central processing unit (CPU), a graphics processing unit (GPU), an accelerated processing unit (APU), a microprocessor, a microcontroller, a digital signal processor (DSP), a field-programmable gate array (FPGA), an application-specific integrated circuit (ASIC), a general purpose single-chip or multi-chip processor, or other programmable logic device, discrete gate or transistor logic, discrete hardware components, or any combination thereof designed to perform the functions described herein. A general purpose processor may be a microprocessor, or any conventional processor, controller, microcontroller, or state machine. The one or more processors also may be implemented as a combination of computing devices, such as a combination of a DSP

and a microprocessor, a plurality of microprocessors, one or more microprocessors in conjunction with a DSP core, or any other such configuration. In some embodiments, particular processes and methods may be performed by circuitry that is specific to a given function.

[0042] The one or more processors may control overall operation of one or more of servers or terminals of elements 100-140 and/or of the set of components of one or more of servers or terminals of elements 100-140 (e.g., memory, storage component, input component, output component, communication interface, rendering component).

[0043] One or more of servers or terminals of elements 100-140 may further comprise memory. In some embodiments, the memory may comprise a random access memory (RAM), a read only memory (ROM), an electrically erasable programmable ROM (EEPROM), a flash memory, a magnetic memory, an optical memory, and/or another type of dynamic or static storage device. The memory may store information and/or instructions for use (e.g., execution) by the processor.

[0044] A storage component of one or more of servers or terminals of elements 100-140 may store information and/or computer-readable instructions and/or code related to the operation and use of one or more of servers or terminals of elements 100-140. For example, the storage component may include a hard disk (e.g., a magnetic disk, an optical disk, a magneto-optic disk, and/or a solid state disk), a compact disc (CD), a digital versatile disc (DVD), a universal serial bus (USB) flash drive, a Personal Computer Memory Card International Association (PCMCIA) card, a floppy disk, a cartridge, a magnetic tape, and/or another type of non-transitory computer-readable medium, along with a corresponding drive.

[0045] One or more of servers or terminals of elements 100-140 may further comprise an input component. The input component may include one or more components that permit one or more of servers and terminals 100-140 to receive information, such as via user input (e.g., a touch screen,

a keyboard, a keypad, a mouse, a stylus, a button, a switch, a microphone, a camera, and the like). Alternatively or additionally, the input component may include a sensor for sensing information (e.g., a global positioning system (GPS) component, an accelerometer, a gyroscope, an actuator, and the like).

[0046] An output component any one or more of servers or terminals of elements 100-140 may include one or more components that may provide output information from the device 100 (e.g., a display, a liquid crystal display (LCD), light-emitting diodes (LEDs), organic light emitting diodes (OLEDs), a haptic feedback device, a speaker, and the like).

[0047] One or more of servers or terminals of elements 100-140 may further comprise a communication interface. The communication interface may include a receiver component, a transmitter component, and/or a transceiver component. The communication interface may enable one or more of servers or terminals of elements 100-140 to establish connections and/or transfer communications with other devices (e.g., a server, another device). The communications may be enabled via a wired connection, a wireless connection, or a combination of wired and wireless connections. The communication interface may permit one or more of servers or terminals of elements 100-140 to receive information from another device and/or provide information to another device. In some embodiments, the communication interface may provide for communications with another device via a network, such as a local area network (LAN), a wide area network (WAN), a metropolitan area network (MAN), a private network, an ad hoc network, an intranet, the Internet, a fiber optic-based network, a cellular network (e.g., a fifth generation (5G) network, sixth generation (6G) network, a long-term evolution (LTE) network, a third generation (3G) network, a code division multiple access (CDMA) network, and the like), a public land mobile network (PLMN), a telephone network (e.g., the Public Switched Telephone Network

(PSTN)), or the like, and/or a combination of these or other types of networks. Alternatively or additionally, the communication interface may provide for communications with another device via a device-to-device (D2D) communication link, such as FlashLinQ, WiMedia, Bluetooth, ZigBee, Wi-Fi, LTE, 5G, and the like. In other embodiments, the communication interface may include an Ethernet interface, an optical interface, a coaxial interface, an infrared interface, a radio frequency (RF) interface, or the like.

[0048] FIG. 2 illustrates one exemplary embodiment of a ticket family module and various sub-modules for the centralized service management platform method and system of the disclosure described herein. Here, the ticket family module 200 can include an incident management module 202 for creating (or opening), editing, assigning, and managing various incident or problem tickets and ticket families within the platform, such as errors related to end-to-end network communications. Module 200 can also include a problem management module 204 for creating, editing, assigning, and managing various problem tickets associated with an organization's network, services, or products, such as network element causing errors. Module 200 can also include a service request module 206 for creating, editing, assigning, and managing tickets related to a particular customer service request, such as network component installation or repair. Module 200 can also include a human resource process module 208 for creating, editing, assigning, and managing tickets related to human resource requests within an organization, such as for the hiring of employees. In addition, module 200 may also include a marketing management module 210 for creating, editing, assigning, and managing tickets related to marketing for the organization, such as for various marketing or advertising campaigns or requests associated with products or services. Here, each module 202-210 can pertain to a particular business process, operation or department within an organization, or processes within the organization, that can be accessed and managed

via the centralized service management platform. Further, each ticket family for each of the foregoing modules 202-210 can include a custom domain, subdomain, category, subcategory, priority, impact, urgency, workflow, views, and a naming rule associated with its respective ticket family, among other advantages.

[0049] According to an example embodiment, each ticket family may represent a particular business process (e.g., incident management, problem management, service request, release management, human resources processes, marketing, etc.) within an organization. Further, a ticket family may have multiple workflows each with their own respective views (e.g., ticket pages or forms) and respectively corresponding to (or associated with) different domains, subdomains, and/or categories. That is, within a configured ticket family corresponding to a particular process (e.g., incident management), there may be multiple workflows depending on the domain and/or category, which might capture different information relevant to that domain or category (via differently configured and latched views).

[0050] FIG. 3 illustrates one exemplary embodiment of a method of operation for an administrator to create a ticket family. At step 300, a user having administrator privileges can log in to an admin dashboard of the service management platform system and method of the disclosure described herein, such as shown in FIG. 5 illustrating a grid for various general configuration modules, applications, options, or components. As shown in FIG. 5, the user can select a module (e.g., service or application) for creating and/or configuring a ticket family, exemplified herein as the Ticket Family Master configuration module. Via this module, for example, the user can view or edit previously created ticket families and create a new ticket family.

[0051] Next, at step 302, the service management platform system and method can receive a request from the user to create a new ticket family from a view or page of the ticket creation module

(e.g., Ticket Family Master), such as shown in FIG. 6, wherein said view may list active, pending, or closed tickets of various previously-created ticket families. Based on the user selection to create a new ticket family, a graphical user interface (GUI) for creating the new ticket family by configuring various parameters of the new ticket family (e.g., name, description, integration type, source application from which the ticket may be opened, etc.) is displayed, as shown in FIG. 9A. Through this GUI, the user can input a name for the new ticket family as well as a description. Further, the user may select an integration type (internal or external), to thereby configure whether the ticket family is to be integrated with an application within the platform of the user's enterprise or organization, or with an external platform. Further, the user may select a source application or module within the application platform that the ticket family will be accessible, viewable, etc., through (e.g., through which tickets of that ticket family may be created, worked on, handled, etc.). The user may also configure a ticket family closure setting, through which a user can select another ticket family as a suggested course of action if resolution of a ticket opened in the new ticket family is not attainable, for example (e.g., if a ticket of the new ticket family cannot be resolved, then a problem ticket selected via the ticket family closure setting may be suggested to the ticket handler). Additionally, the user may specify one or more workspaces (or users, user groups, etc.) that can create or open a ticket of the new ticket family.

[0052] Next, at step 304, the system and method can receive a request from the user to create and configure one or more custom views (View 1) (e.g., a page or form with various user input fields such as text fields, drop down menus, rich text editor fields requiring input from an end user, etc.) from a View Builder configuration module. The view may be a page or form for an opened ticket corresponding to the ticket family (e.g., a workflow of the ticket family), through which data or information may be input by a user and captured. A particular ticket may include one or more

views that are displayed to a ticket handler and through which information is input and captured, in accordance with a workflow of the ticket family.

[0053] Next, at step 306, the system and method can receive a request from the user to create a new workflow (Workflow 1) for the ticket family. The workflow may be created via a distinct service or application, exemplified here as a Workflow Builder configuration module. The workflow is mapped or latched to the created ticket family by selecting the created ticket family in a configuration page or GUI for creating the workflow, as shown by way of example in FIG. 7A. Further, in generating or configuring the workflow through the configuration module, the user can add the view(s) created in step 304 to the workflow (e.g., to one or more stages of the workflow). An example of a created workflow is shown in FIG. 7B. Moreover, the workflow may be mapped, linked, latched, or associated with a domain (Domain 1), a subdomain, a category and/or a subcategory, each of which may be mapped or latched to the ticket family. The domains and subdomains may be any of various breakdowns (e.g., departments, functional units, etc.) within an organization, and can be generic for information technology service management (ITSM) across industries. That is, the domains and subdomains may vary and be customized per a particular organization's needs. The domains, subdomains, categories, and sub-categories may be created and configured via respective modules, and may be associated with a ticket family via an input selection to a GUI for configuring the same, as shown by way of example in FIGs. 9B, 10A, and 10B.

[0054] As set forth above, in accordance with an example embodiment, a plurality of different workflows and associated views may be configured for the same ticket family. The corresponding workflows and views for an opened ticket in that ticket family may be selected by an end user based on the domain, subdomain, category, and/or subcategory selected by the user when creating

or opening the ticket.

[0055] To this end, referring back to FIG. 3, at step 308, the system and method can receive a request from the user to create one or more other custom views (View 2) from the View Builder configuration module. Step 308 is similar to step 304, and redundant descriptions thereof may not be repeated below.

[0056] Next, at step 310, the process can receive a request from the user to create another workflow (Workflow 2) from the Workflow Builder configuration module for the created ticket family (from step 302), which can be configured similar to the description above with reference to step 306. In this regard, the view(s) created in step 308 may be added to the other workflow, and the other workflow can be mapped, linked, latched, or associated to another domain (Domain 2), subdomain, a category and/or a subcategory, each of which may be mapped or latched to the ticket family as described above.

[0057] Next, at step 312, the system and method can receive a request from the user to create master data (e.g., in a resource or database, or as a master data component or file) within the dashboard which can be further attached, latched, mapped, or associated with the created ticket family. The master data are values created or configured for various parameters, such as Domain, Subdomain, Category, Subcategory, Impact, Priority, Urgency, Cause, Resolution, etc. These values may be set by a user via user input fields, such as drop down menus, etc., through which the user can select the relevant values (i.e., the master data) to be assigned to the ticket family. As an example, the user can assign impact value (e.g., high network impact), urgency value (e.g., critical urgency), or priority value (e.g., high priority) to a created ticket family. In addition, it is contemplated within the scope of the present disclosure described herein that the user may also create a sub-ticket family associated with the first created ticket family, wherein the sub-ticket is

at a lower hierarchy within the first created ticket family. To this end, an end user may open a sub-ticket while handling a created ticket (e.g., main ticket) in accordance with a workflow for the ticket family.

[0058] FIG. 4 illustrates one exemplary embodiment of a method of operation for an end-user of the to create or open a ticket of the ticket family, wherein the end-user may have different privileges relative to the administrator. In particular, for the service management platform of the disclosure described herein, each user may have different privileges for creating, editing, or managing tickets. For example, a first user (from one department within an organization, such as a support agent) may be able to create a new ticket, whereas another second user (from another department of the organization, such as a technician) may not be able to create new tickets but only modify the status of a particular ticket, such as to “completed” or “closed”. Here, each ticket family can include various rules and restrictions associated with it that depend on the user accessing the ticket family.

[0059] Referring to FIG. 4, at step 400, an end-user having certain privileges or restrictions associated with it can log in to the service management platform system and method of the disclosure described herein. At step 402, the service management platform may then receive a request from the end-user to create a new ticket, select a ticket family for which the ticket is created or opened, define a ticket title, select a domain, select an impact value, and further select an urgency value associated with the ticket. Next, at step 404, based on the selected domain (such as Domain 2), the system and method of the disclosure described herein can automatically switch to a workflow (such as Workflow 2) an output associated views (such as View 2) assigned or latched to that domain. It is understood that the domain is one example, and different workflows and associated views may be selectively triggered based on a selection of a subdomain, category, or

subcategory.

[0060] FIG. 8 illustrates one exemplary embodiment of a GUI dashboard for a created ticket. From there, the user can view various details and parameters associated with the ticket. For example, the user can view how long the ticket has been open, due dates/overdue status, service level agreement (SLA) indicator, urgency level, impact level, priority level, and current status, wherein the status can only be changed by the user who has certain privileges (such as from open, to closed, etc.). In addition, from the dashboard of FIG. 8, the user may also be able to create one or more sub-tickets (or a second hierarchy), wherein the sub-tickets are positioned below the first hierarchy of the created ticket and part of the same ticket family. Here, any number of sub-tickets (or child tickets) can be created and their hierarchy's defined relative to each other within the ticket families. In addition, the user may be able to link/map/associate any number of ticket families to other ticket families (or sub-ticket families). Further, the user can also re-assign a ticket to various people, operations, or departments within the organization. In addition, the user may also add any meeting information or meeting links to a ticket. Further, the user may also be able to view specific details associated with the ticket or ticket family, such as the associated domain, subdomain, category, sub-category, and technology area. In addition, the user can view various insights or historical information related to the ticket family, in addition to related incidents, change requests, and work orders, among others.

[0061] It is understood that the specific order or hierarchy of blocks in the processes/ flowcharts disclosed herein is an illustration of example approaches. Based upon design preferences, it is understood that the specific order or hierarchy of blocks in the processes/ flowcharts may be rearranged. Further, some blocks may be combined or omitted. The accompanying method claims

present elements of the various blocks in a sample order, and are not meant to be limited to the specific order or hierarchy presented.

[0062] Some embodiments may relate to a system, a method, and/or a computer readable medium at any possible technical detail level of integration. Further, one or more of the above components described above may be implemented as instructions stored on a computer readable medium and executable by at least one processor (and/or may include at least one processor). The computer readable medium may include a computer-readable non-transitory storage medium (or media) having computer readable program instructions thereon for causing a processor to carry out operations.

[0063] The computer readable storage medium can be a tangible device that can retain and store instructions for use by an instruction execution device. The computer readable storage medium may be, for example, but is not limited to, an electronic storage device, a magnetic storage device, an optical storage device, an electromagnetic storage device, a semiconductor storage device, or any suitable combination of the foregoing. A non-exhaustive list of more specific examples of the computer readable storage medium includes the following: a portable computer diskette, a hard disk, a random access memory (RAM), a read-only memory (ROM), an erasable programmable read-only memory (EPROM or Flash memory), a static random access memory (SRAM), a portable compact disc read-only memory (CD-ROM), a digital versatile disk (DVD), a memory stick, a floppy disk, a mechanically encoded device such as punch-cards or raised structures in a groove having instructions recorded thereon, and any suitable combination of the foregoing. A computer readable storage medium, as used herein, is not to be construed as being transitory signals per se, such as radio waves or other freely propagating electromagnetic waves,

electromagnetic waves propagating through a waveguide or other transmission media (e.g., light pulses passing through a fiber-optic cable), or electrical signals transmitted through a wire.

[0064] Computer readable program instructions described herein can be downloaded to respective computing/processing devices from a computer readable storage medium or to an external computer or external storage device via a network, for example, the Internet, a local area network, a wide area network and/or a wireless network. The network may comprise copper transmission cables, optical transmission fibers, wireless transmission, routers, firewalls, switches, gateway computers and/or edge servers. A network adapter card or network interface in each computing/processing device receives computer readable program instructions from the network and forwards the computer readable program instructions for storage in a computer readable storage medium within the respective computing/processing device.

[0065] Computer readable program code/instructions for carrying out operations may be assembler instructions, instruction-set-architecture (ISA) instructions, machine instructions, machine dependent instructions, microcode, firmware instructions, state-setting data, configuration data for integrated circuitry, or either source code or object code written in any combination of one or more programming languages, including an object oriented programming language such as Smalltalk, C++, or the like, and procedural programming languages, such as the “C” programming language or similar programming languages. The computer readable program instructions may execute entirely on the user's computer, partly on the user's computer, as a stand-alone software package, partly on the user's computer and partly on a remote computer or entirely on the remote computer or server. In the latter scenario, the remote computer may be connected to the user's computer through any type of network, including a local area network (LAN) or a wide area network (WAN), or the connection may be made to an external computer (for example,

through the Internet using an Internet Service Provider). In some embodiments, electronic circuitry including, for example, programmable logic circuitry, field-programmable gate arrays (FPGA), or programmable logic arrays (PLA) may execute the computer readable program instructions by utilizing state information of the computer readable program instructions to personalize the electronic circuitry, in order to perform aspects or operations.

[0066] These computer readable program instructions may be provided to a processor of a general-purpose computer, special purpose computer, or other programmable data processing apparatus to produce a machine, such that the instructions, which execute via the processor of the computer or other programmable data processing apparatus, create means for implementing the functions/acts specified in the flowchart and/or block diagram block or blocks. These computer readable program instructions may also be stored in a computer readable storage medium that can direct a computer, a programmable data processing apparatus, and/or other devices to function in a particular manner, such that the computer readable storage medium having instructions stored therein comprises an article of manufacture including instructions which implement aspects of the function/act specified in the flowchart and/or block diagram block or blocks.

[0067] The computer readable program instructions may also be loaded onto a computer, other programmable data processing apparatus, or other device to cause a series of operational steps to be performed on the computer, other programmable apparatus or other device to produce a computer implemented process, such that the instructions which execute on the computer, other programmable apparatus, or other device implement the functions/acts specified in the flowchart and/or block diagram block or blocks.

[0068] The flowchart and block diagrams in the Figures illustrate the architecture, functionality, and operation of possible implementations of systems, methods, and computer readable media

according to various embodiments. In this regard, each block in the flowchart or block diagrams may represent a module, segment, or portion of instructions, which comprises one or more executable instructions for implementing the specified logical function(s). The method, computer system, and computer readable medium may include additional blocks, fewer blocks, different blocks, or differently arranged blocks than those depicted in the Figures. In some alternative implementations, the functions noted in the blocks may occur out of the order noted in the Figures. For example, two blocks shown in succession may, in fact, be executed concurrently or substantially concurrently, or the blocks may sometimes be executed in the reverse order, depending upon the functionality involved. It will also be noted that each block of the block diagrams and/or flowchart illustration, and combinations of blocks in the block diagrams and/or flowchart illustration, can be implemented by special purpose hardware-based systems that perform the specified functions or acts or carry out combinations of special purpose hardware and computer instructions.

[0069] It will be apparent that systems and/or methods, described herein, may be implemented in different forms of hardware, firmware, or a combination of hardware and software. The actual specialized control hardware or software code used to implement these systems and/or methods is not limiting of the implementations. Thus, the operation and behavior of the systems and/or methods were described herein without reference to specific software code—it being understood that software and hardware may be designed to implement the systems and/or methods based on the description herein.

What is claimed is:

1. A method of managing services via a centralized network platform, the method comprising:

based on a first user input to create a ticket family, creating the ticket family via the centralized network platform;

based on a second user input to configure a first view, creating the first view comprising one or more first user input fields for capturing ticket information; and

based on a third user input to configure a first workflow for the ticket family, creating the first workflow, the first workflow including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

2. The method of claim 1, further comprising:

based on a fourth user input to configure a second view, creating the second view comprising one or more second user input fields for capturing ticket information; and

based on a fifth user input to configure a second workflow for the ticket family, creating the second workflow, the second workflow including the second view and the second workflow mapped to at least one of a second domain and a second category configured via the centralized network platform.

3. The method of claim 2, further comprising:

based on receiving a sixth user input to select the ticket family for creating a new ticket of the ticket family, outputting a user interface screen;

receiving a seventh user input, to the user interface screen, for selecting at least one of a domain and a category for the new ticket;

outputting the first view according to the first workflow, based on the seventh user input selecting the first domain or the first category; and

outputting the second view according to the second workflow, based on the seventh user input selecting the second domain or the second category.

4. The method of claim 1, wherein the first user input comprises at least one of a ticket family name and a ticket family description.

5. The method of claim 1, wherein the third user input comprises a user selection of the ticket family from among a plurality of previously created ticket families.

6. The method of claim 1, further comprising creating the first domain based on a seventh user input to create the first domain and select the ticket family, from among a plurality of previously created ticket families, to which to associate the first domain.

7. The method of claim 1, further comprising creating the first category based on an eighth user input to create the first category and select the ticket family, from among a plurality of previously created ticket families, to which to associate the first category.

8. A system for managing services via a centralized network platform, the system comprising:

at least one memory storing instructions; and

at least one processor configured to execute the instructions to:

based on a first user input to create a ticket family, create the ticket family via the centralized network platform;

based on a second user input to configure a first view, create the first view comprising one or more first user input fields for capturing ticket information; and

based on a third user input to configure a first workflow for the ticket family, create the first workflow, the first workflow including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

9. The system of claim 8, wherein the at least one processor is configured to execute the instructions to:

based on a fourth user input to configure a second view, create the second view comprising one or more second user input fields for capturing ticket information; and

based on a fifth user input to configure a second workflow for the ticket family, create the second workflow, the second workflow including the second view and the second workflow mapped to at least one of a second domain and a second category configured via the centralized network platform.

10. The system of claim 9, wherein the at least one processor is configured to execute the instructions to:

based on receiving a sixth user input to select the ticket family for creating a new ticket of the ticket family, output a user interface screen;

receive a seventh user input, to the user interface screen, for selecting at least one of a domain and a category for the new ticket;

output the first view according to the first workflow, based on the seventh user input selecting the first domain or the first category; and

output the second view according to the second workflow, based on the seventh user input selecting the second domain or the second category.

11. The system of claim 8, wherein the first user input comprises at least one of a ticket family name and a ticket family description.

12. The system of claim 8, wherein the third user input comprises a user selection of the ticket family from among a plurality of previously created ticket families.

13. The system of claim 8, wherein the at least one processor is configured to execute the instructions to create the first domain based on a seventh user input to create the first domain and select the ticket family, from among a plurality of previously created ticket families, to which to associate the first domain.

14. The system of claim 8, wherein the at least one processor is configured to execute the instructions to create the first category based on an eighth user input to create the first category and select the ticket family, from among a plurality of previously created ticket families, to which to associate the first category.

15. A non-transitory computer-readable recording medium having recorded thereon instructions executable by at least one processor to perform a method of managing services via a centralized network platform, the method comprising:

based on a first user input to create a ticket family, creating the ticket family via the centralized network platform;

based on a second user input to configure a first view, creating the first view comprising one or more first user input fields for capturing ticket information; and

based on a third user input to configure a first workflow for the ticket family, creating the first workflow, the first workflow including the first view and the first workflow mapped to at least one of a first domain and a first category configured via the centralized network platform.

16. The non-transitory computer-readable recording medium of claim 15, wherein the method further comprises:

based on a fourth user input to configure a second view, creating the second view comprising one or more second user input fields for capturing ticket information; and

based on a fifth user input to configure a second workflow for the ticket family, creating the second workflow, the second workflow including the second view and the second workflow

mapped to at least one of a second domain and a second category configured via the centralized network platform.

17. The non-transitory computer-readable recording medium of claim 16, wherein the method further comprises:

based on receiving a sixth user input to select the ticket family for creating a new ticket of the ticket family, outputting a user interface screen;

receiving a seventh user input, to the user interface screen, for selecting at least one of a domain and a category for the new ticket;

outputting the first view according to the first workflow, based on the seventh user input selecting the first domain or the first category; and

outputting the second view according to the second workflow, based on the seventh user input selecting the second domain or the second category.

18. The non-transitory computer-readable recording medium of claim 15, wherein the first user input comprises at least one of a ticket family name and a ticket family description.

19. The non-transitory computer-readable recording medium of claim 15, wherein the third user input comprises a user selection of the ticket family from among a plurality of previously created ticket families.

20. The non-transitory computer-readable recording medium of claim 15, wherein the method further comprises at least one of:

creating the first domain based on a seventh user input to create the first domain and select the ticket family, from among a plurality of previously created ticket families, to which to associate the first domain; and

creating the first category based on an eighth user input to create the first category and select the ticket family, from among a plurality of previously created ticket families, to which to associate the first category.

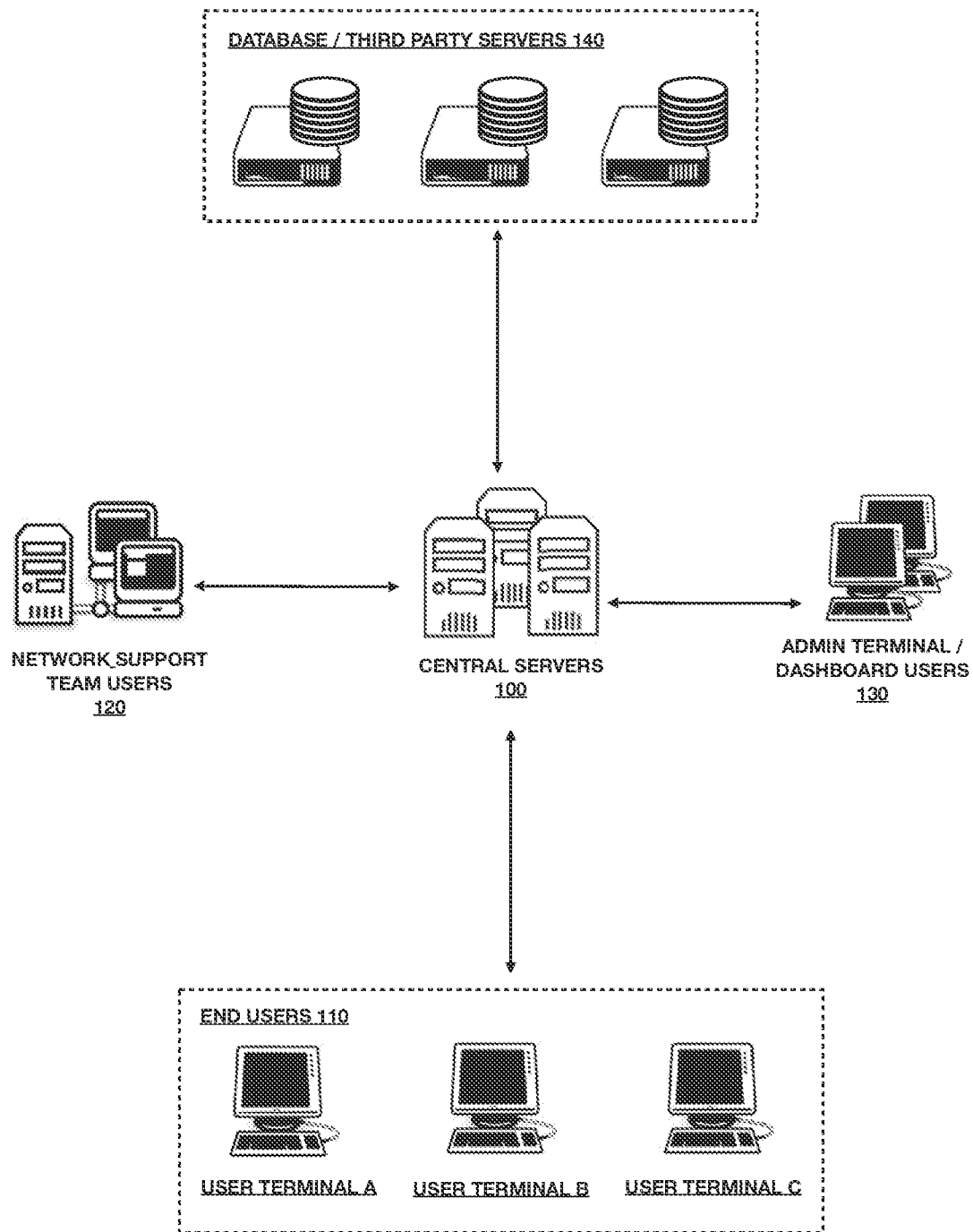


FIG.1

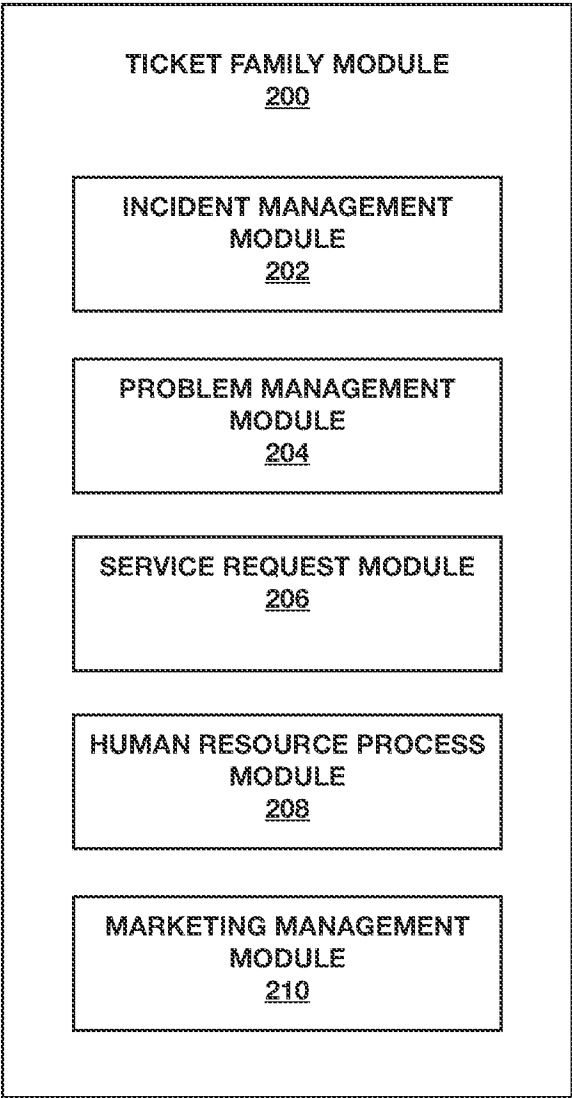


FIG. 2

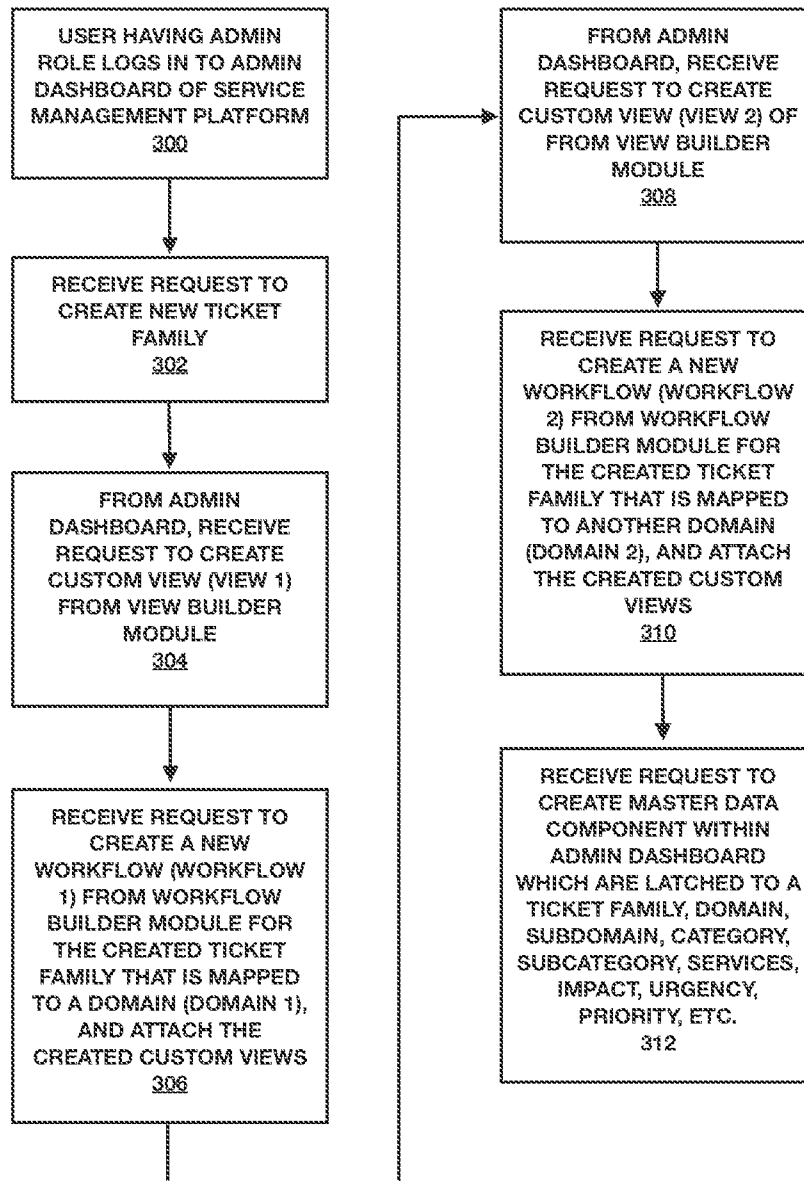
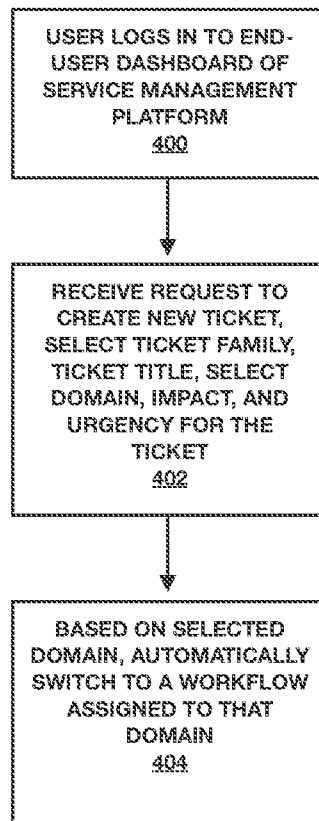
ADMINISTRATOR PROCESS

FIG. 3

END-USER PROCESS**FIG. 4**

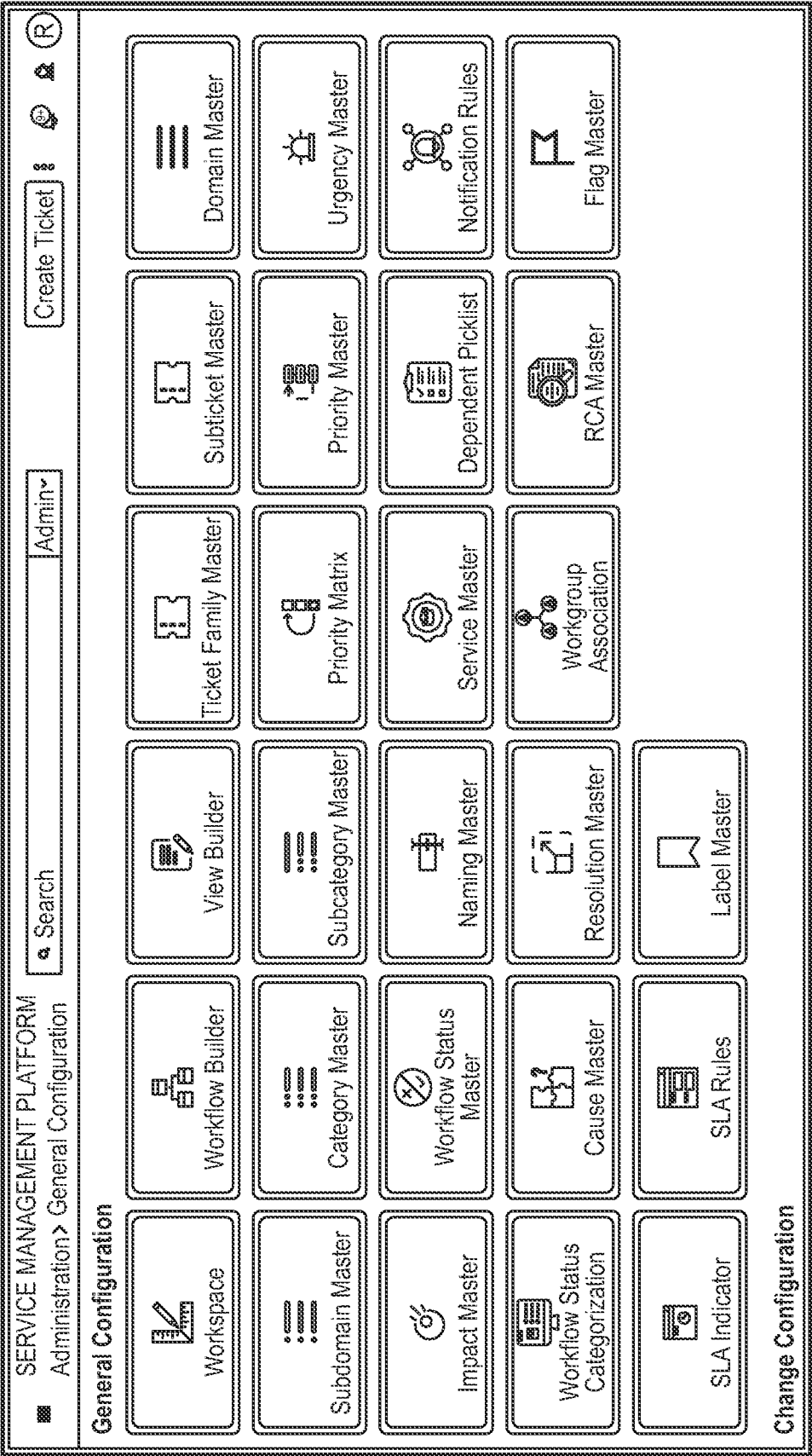


FIG. 5

■

SERVICE MANAGEMENT PLATFORM

Administration > Ticket Family Master

🔍 Search

Ticket Family Master

Create Ticket

🔔

+

Y

🔒

Ⓡ

General Configuration <

🏠 Workspace

🏢 Workflow Builder

👁 View Builder

📁 Ticket Family Master

📁 Subticket Master

📁 Domain Master

📁 Subdomain Master

📁 Category Master

📁 Subcategory Master

📁 Priority Matrix

📁 Priority Master

📁 Urgency Master

📁 Impact Master

📁 Workflow Status Master

📁 Naming Master

📁 Service Master

Displaying 19 of 19

FIG. 6

SERVICE MANAGEMENT PLATFORM

Administration > Workflow Builder > New Workflow

Search Apps Apps

New Workflow

Name*
demo

Description* 4 / 100
demo

Mandatory Information 4 / 500

Type of Ticket* Ticket Family*
Ticket RTT-Trouble Ticket

SLA Rule Level*
Select SLA Rule Level

Set As Action Button ☐

Import Workflow Template

Additional Information

Blank Diagram

Cancel Create

FIG. 7A

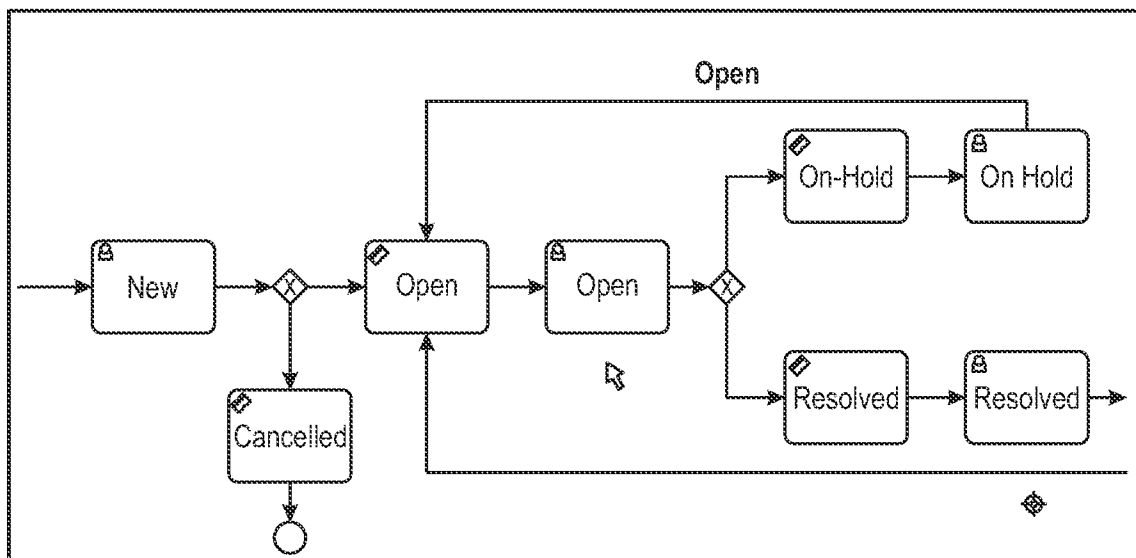


FIG. 7B

SERVICE MANAGEMENT PLATFORM Ticket Center > Search Ticket Center Create Ticket Help Logout Profile	
Auto RIT - Trouble Ticket Standard Assignee Link Share Print	03 Minute(s) 31 Second(s)
Due/Overdue 2 Days 23 Hours 56 Minutes to go User Affected ① + Create Subticket ↕ Create Change Request 🔗 Link Ticket ⚙ Reassign + Add Meeting Link	SLA Indicator On Track Urgency ① Medium Impact ① Minor Priority P4 - Minor Status Open
< Details Insights (Beta) Attachments Incidents Change Request WorkOrder Subticket Affected CIs Control Room Automation S...	
Interaction Ticket Description ① Domain ① DOMAIN 1 Technology ① LTE Labels ① Sub Domain ① DOMAIN 1A Vendor ① - Category ① NLS Sub Category ① Performance	
Assignment	

New Ticket Family

×

Ticket Family Name*

SERVICE PLATFORM TROUBLE TICKET

Description*

27 / 100

SERVICE PLATFORM TROUBLE TICKET

27 / 500

Integration Type*

Internal

Source

Service Desk Console

×

Ticket Family Closure

RPT - Problem Ticket

×

Workspace

Select Workspaces

Cancel

Create

FIG. 9A

New Domain

Domain Name*

Domain Name

0 / 100

Domain Key*

Domain Key

0 / 7

Description*

Description

Ticket Family*

Domain

0 / 500

Select Ticket Family

Add Icon*

Drag and Drop here

or

Cancel

Create

FIG. 9B

New Subdomain

Subdomain Name*

Subdomain Name

0 / 100

Subdomain Key*

Subdomain Key

0 / 7

Description*

Description

Ticket Family*

Select Ticket Family

Domain

Select Domain

0 / 500

Add Icon

Drag and Drop here

or

Cancel

Create

FIG. 10A

New Category

Category Name*

Category Name

0 / 100

Category Key*

Category Key

0 / 7

Description*

Description

Ticket Family*

Select Ticket Family

Domain

Select Domain

0 / 500

Add Icon

Drag and Drop here

or

Browse File

Cancel

Create

FIG. 10B

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US22/45312

A. CLASSIFICATION OF SUBJECT MATTER

IPC - INV. G06F 3/0481; G06F 9/451; G06F 9/455; G06F 16/955 (2022.01)
ADD. G06F 3/04847; G06F 9/48; G06F 9/50; G06F 21/62; G06F 40/103 (2022.01)
CPC - INV. G06F 3/0481; G06F 9/451; G06F 9/453; G06F 9/455; G06F 16/955
ADD. G06F 3/04847; G06F 9/4843; G06F 9/5072; G06F 21/62; G06F 40/103

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
See Search History document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
See Search History document

Electronic database consulted during the international search (name of database and, where practicable, search terms used)
See Search History document

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 2022/154880 A1 (MICROSOFT TECHNOLOGY LICENSING LLC) 21 July 2022; abstract; paragraphs [0002], [0020]-[0026], [0040]-[0045]; figures 1, 2, 3, 4	1-20
Y	US 2022/0261120 A1 (REALFAR LTD.) 18 August 2022; figures 2, 3A, 3B, 4; paragraphs [0008], [0103], [0104], [0106]-[0108], [0117], [0118], [0149]-[0156]	1-20
A	US 2018/0091624 A1 (SALESFORCE.COM, INC.) 29 March 2018; See entire document	1-20
A	US 2016/0359690 A1 (ORACLE INTERNATIONAL CORPORATION) 08 December 2016; See entire document	1-20
A	US 2020/0159569 A1 (HEWLETT PACKARD ENTERPRISE DEVELOPMENT LP) 21 May 2020; See entire document	1-20
A	WO 2022/186873 A1 (RAKUTEN MOBILE, INC.) 09 September 2022; See entire document	1-20
A	WO 2022/203726 A1 (RAKUTEN MOBILE, INC.) 29 September 2022; See entire document	1-20

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"D" document cited by the applicant in the international application	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"E" earlier application or patent but published on or after the international filing date	"&" document member of the same patent family
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
12 December 2022 (12.12.2022)

Date of mailing of the international search report

JAN 25 2023

Name and mailing address of the ISA/
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