

NetSRM – Successful Go-Live 1/27/14

Congratulations to the entire team

with a special shout out to the development team: Cynthia Skinner, Robert Dolak, Neal Blackburn, George Heller, Michael Warner and Bob Weisend.

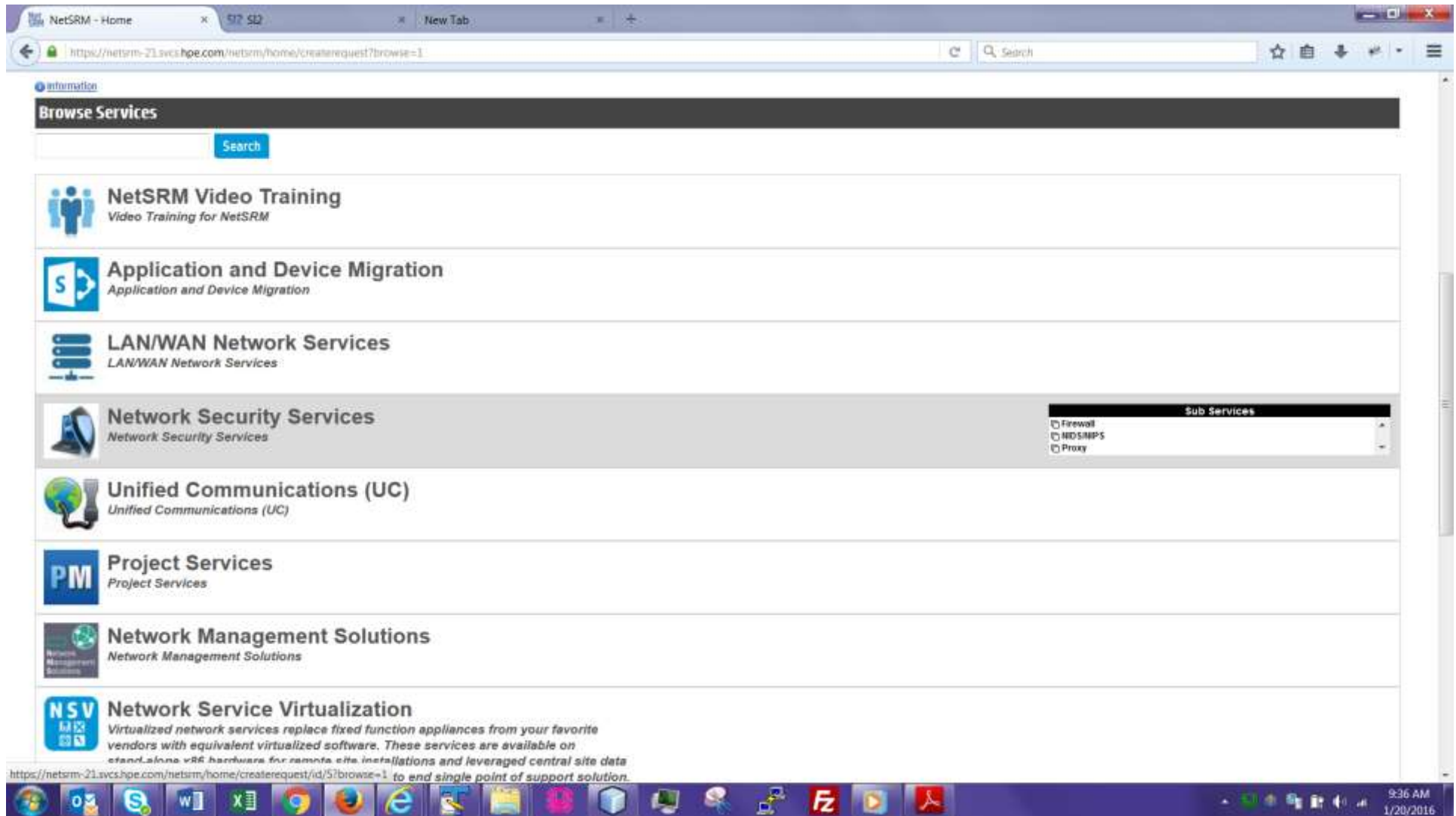
“The tool is simply GREAT!!! It's so friendly and easy to use from a user perspective that I have the urge to shout it out ... This is when we can say: HP has the tools and process that help me do my job.”



© Copyright 2014 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice.



NetSRM (Network Service Request Management) is a custom web-based software application using the LAMP stack (Linux, Apache, MySQL, PHP). The application was coded using the Zend Framework, which utilizes the MVC design pattern.



NetSRM provides a catalog of available network services. They are grouped into categories to allow for easy browsing, or the user can search by keyword.

The screenshot shows a web browser window with the URL `http://netsrm-21.svc.hp.com/netsrm/home/serviceform/ld/5/subid/177/browse+1`. The page displays a catalog of services, with 'Firewall Modify Project' selected. A modal form is open, allowing the user to fill out service request details.

Service Information:

- Service #: 6191
- Requester Name: Bob Weisend
- Requester Email: bob.weisend@hp.com
- Requester Phone #: 408-621-4232
- Technical Contact: Bob Weisend
- Technical Email: bob.weisend@hp.com
- Technical Phone #: 408-621-4232
- New/Add-On Request or Reorder: ☐ Yes ☒ No

Account:

AFFINIA GROUP INC.

Other Fields:

- Region: AMER
- Service Location: Service Location 2
- Billing Code: USA7075085 / 0000330296
- NWS/Compass: US1-IT01/01/01
- SCS Location Code: SCS Location Code 2
- Project Name: SIZ AUTH TEST
- Risk: ABSOLUTELY NONE
- Target Date:

Buttons: Next, On Behalf, Cancel

Background Catalog Items:

- Firewall Modify Project:** This catalog is for requesting Firewall changes requiring engineering engagement. Service includes: Firewall rule, routes and add/modify/delete changes. Project will be sized dependent on number of FWs, complexity and provided details.
 - Large Project: 41+ hours
 - Medium Project: 9-40 hours
 - Small Project: 1-8 hours
- Firewall Modify Project - Service Form:** This catalog is for requesting Firewall changes requiring engineering engagement. Service includes: Firewall rule, routes and add/modify/delete changes. Project will be sized dependent on number of FWs, complexity and provided details.
 - Large Project: 41+ Hours
 - Medium Project: 9-40 Hours
- Enterprise Services:** ECS MFS provided service.
- VPN Point-to-Point:** Virtual Private Network bundled service.
- Firewall Add/Modify/Remove:** New Firewall Installation Service. Provides network design and placement of new Firewalls in a production network environment. Tasks include: DPS Firewall information only, pre_ICTD to establish billing proposal, EWOs for rack/stack/monitoring/OOB, Application Build out process to design and implement all necessary traffic, billing initiations with a post_ICTD and finally a move to fully supported production status. This is a mandatory bundled service, PM and network engineer are additional services required.
- Firewall Removal / Decommission:** Expected Delivery: 30 Days

Once a catalog item is selected, the user fills out the service request form. Favorites can be saved so that the form will pre-populate in the future, saving time for users who frequently create tickets. Users can also create a ticket on behalf of another user (e.g. if someone is on a leave of absence).

The screenshot shows the NetSRM Home page in a web browser. The browser's address bar displays the URL `https://netsr.../netsrm/home`. The page header includes the "Home" title and a "Logout" button. The main content area features the "Hewlett Packard Enterprise NetSRM" logo and version "2.2.5". A sidebar on the left contains links for "Information", "My Requests", "Documentation", and "Support". A central banner displays the "Hewlett Packard Enterprise" logo. A "CHANGE STATUS" button is visible on the right. A blue notification bar at the top of the main content area states: "You have: 17 notifications, 1 message, 132 service requests, and 0 escalations 0 Forms Pending Approval". A dropdown menu for "Notifications" is open, listing various service requests and messages with their IDs, sender information, and timestamps. The main content area also features a "HP ES Network Services Our Services" section with buttons for "Create New Request" and "Search". The Windows taskbar at the bottom shows the system clock as 9:03 AM on 1/20/2016.

Home

Logout

9:04:19 AM Jan 20, 2016 PST
Signed In As: Bob Weisend
NetSRM Role: Requestor

Information

My Requests

Documentation

Support

Hewlett Packard Enterprise

CHANGE STATUS

You have: 17 notifications, 1 message, 132 service requests, and 0 escalations 0 Forms Pending Approval

Notifications:

- 3668.6217 (AVIVA INVESTORS): "reopen" (08/04/2014 12:51 PM PDT)
- 3668.6217 (AVIVA INVESTORS): "testing closed date -askinner" (08/04/2014 11:33 AM PDT)
- 3668.6217 (AVIVA INVESTORS): "Testing Assigned Date -askinner" (08/04/2014 11:32 AM PDT)
- 3425.5850 (AVIVA USA INC): "" (06/26/2014 6:15 AM PDT)
- 3224.5331 (GRANDVISION): "vv" (06/26/2014 5:14 AM PDT)
- 3224.5331 (GRANDVISION): "" (06/26/2014 5:14 AM PDT)
- 3425.5850 (AVIVA USA INC): "test" (06/25/2014 10:24 AM PDT)
- 3425.5850 (AVIVA USA INC): "" (06/19/2014 7:38 AM PDT)
- 2995.4981 (BANK OF AMERICA): "Reminder" (05/09/2014 10:34 AM PDT)
- 2995.4981 (BANK OF AMERICA): "Hi William, This is testing for a Demo" (05/09/2014 10:32 AM PDT)
- 2995.4981 (BANK OF AMERICA): "test" (05/09/2014 9:34 AM PDT)
- 3064.5082 (CIGNA HEALTHCARE): "test" (04/25/2014 7:10 AM PDT)
- 3068.5087 (CIGNA HEALTHCARE): "I did this because I have issues" (04/25/2014 6:57 AM PDT)
- 415.850 (KOOPERATIVA FORBUNDET GROUP): "" (02/06/2014 5:56 AM PST)
- 415.850 (KOOPERATIVA FORBUNDET GROUP): "" (02/06/2014 5:55 AM PST)
- (and 2 more)

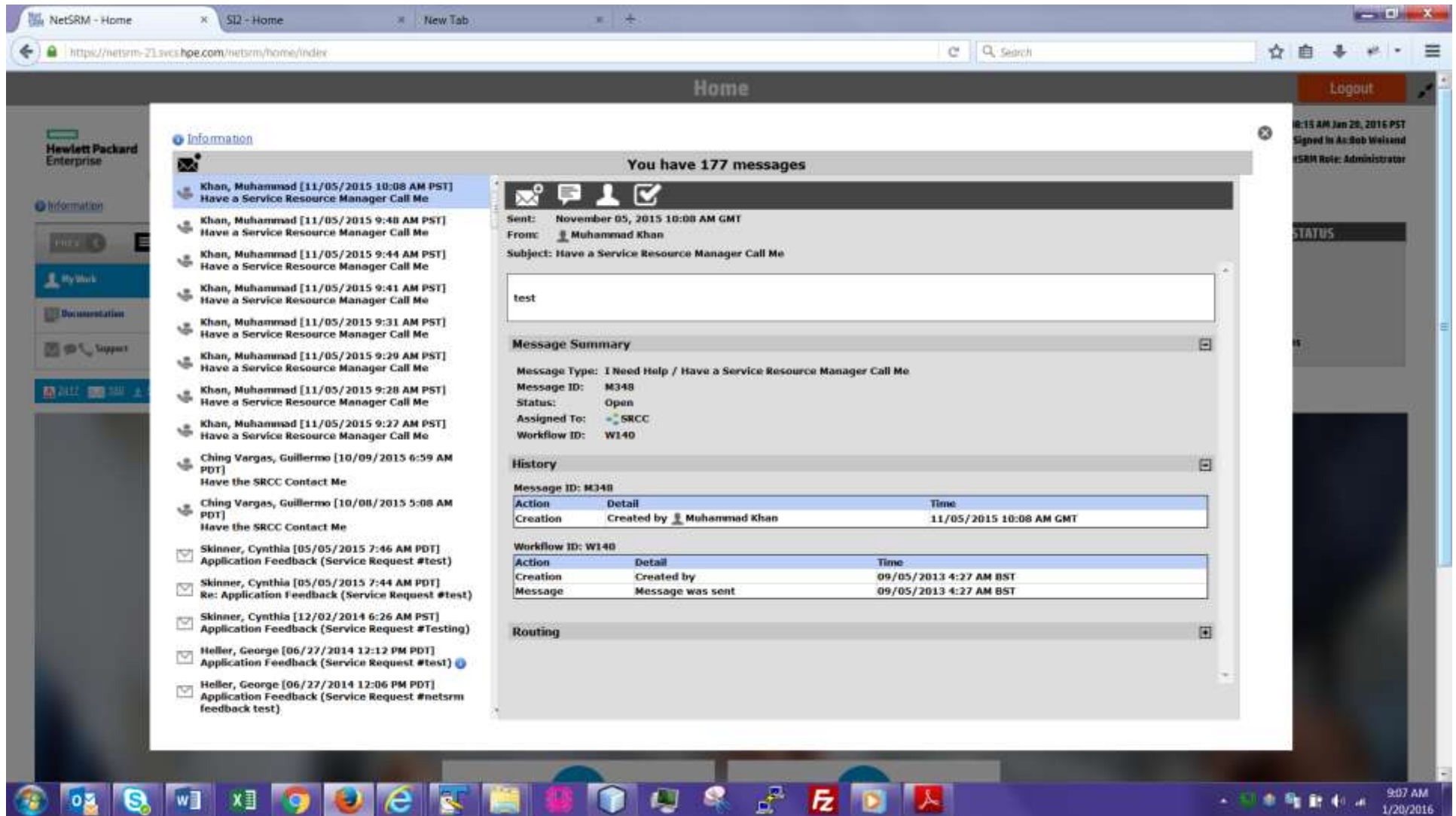
HP ES Network Services
Our Services

Create New Request
Submit a Service Request Order

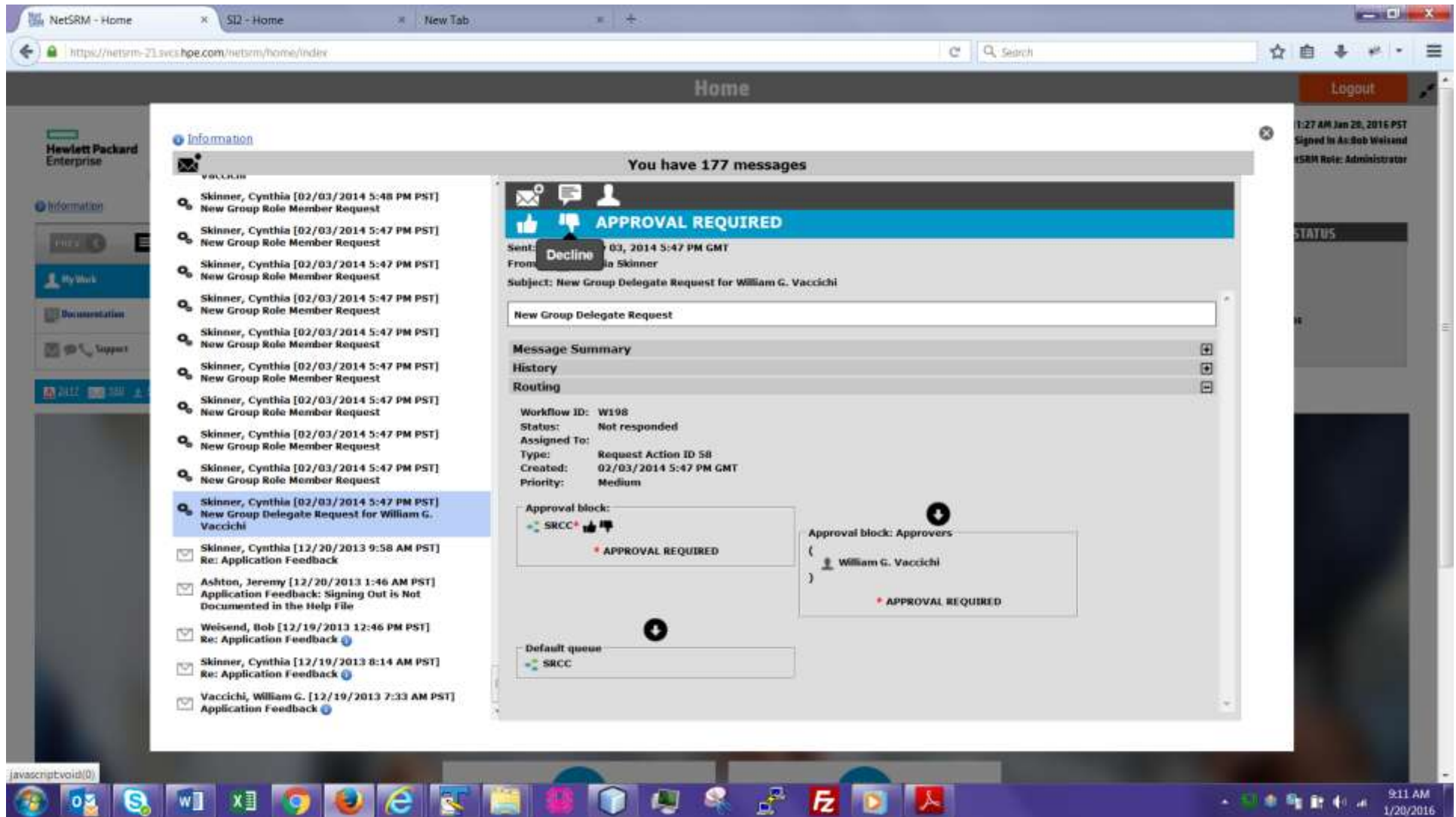
Search
Search All Service Request Orders & Tasks:
Search All Requests Search All Tasks

9:03 AM
1/20/2016

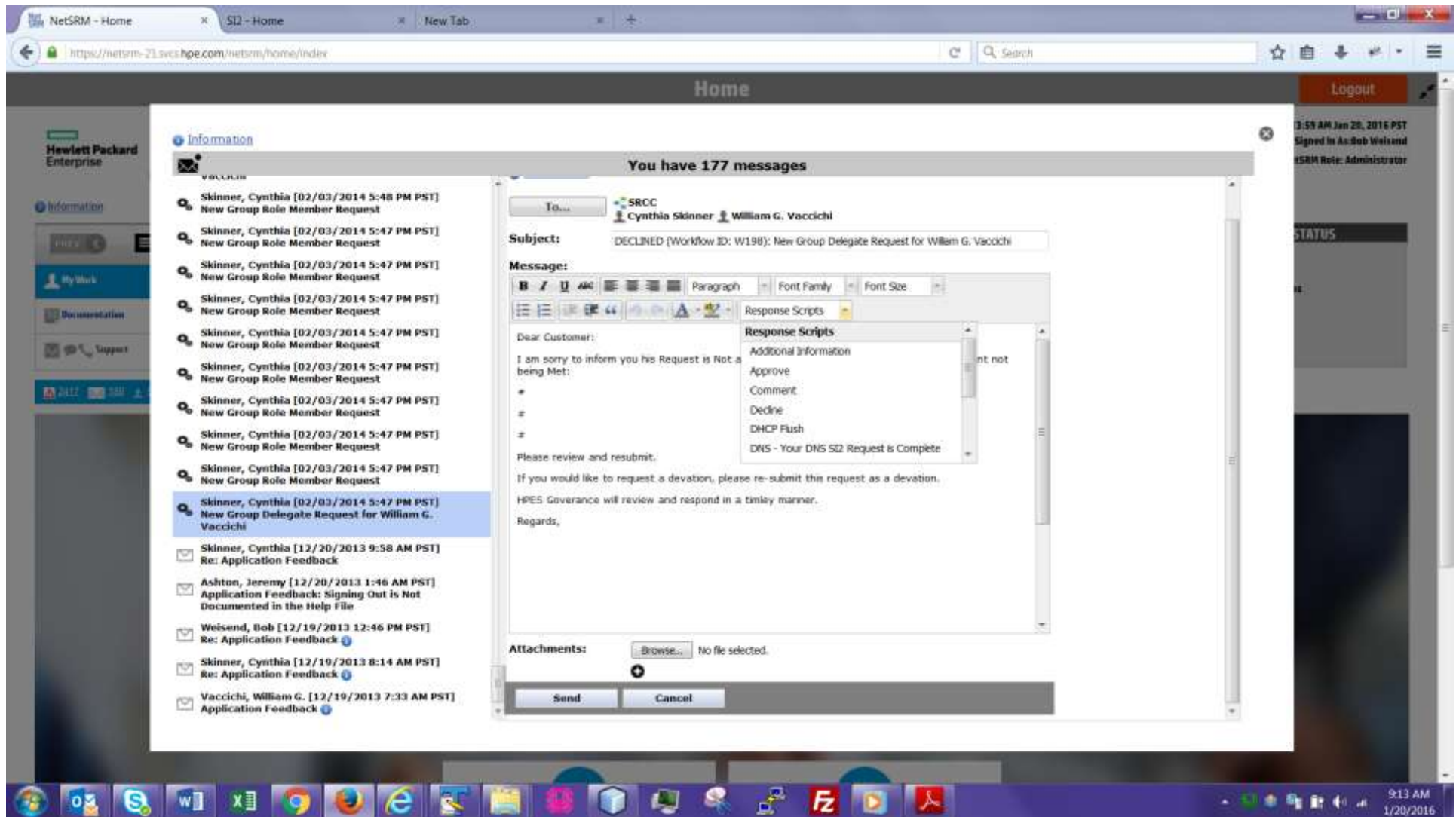
The notification bar appears on every page, providing a quick jump point to a particular service request, message or task. It also provides notifications when certain important events or updates occur.



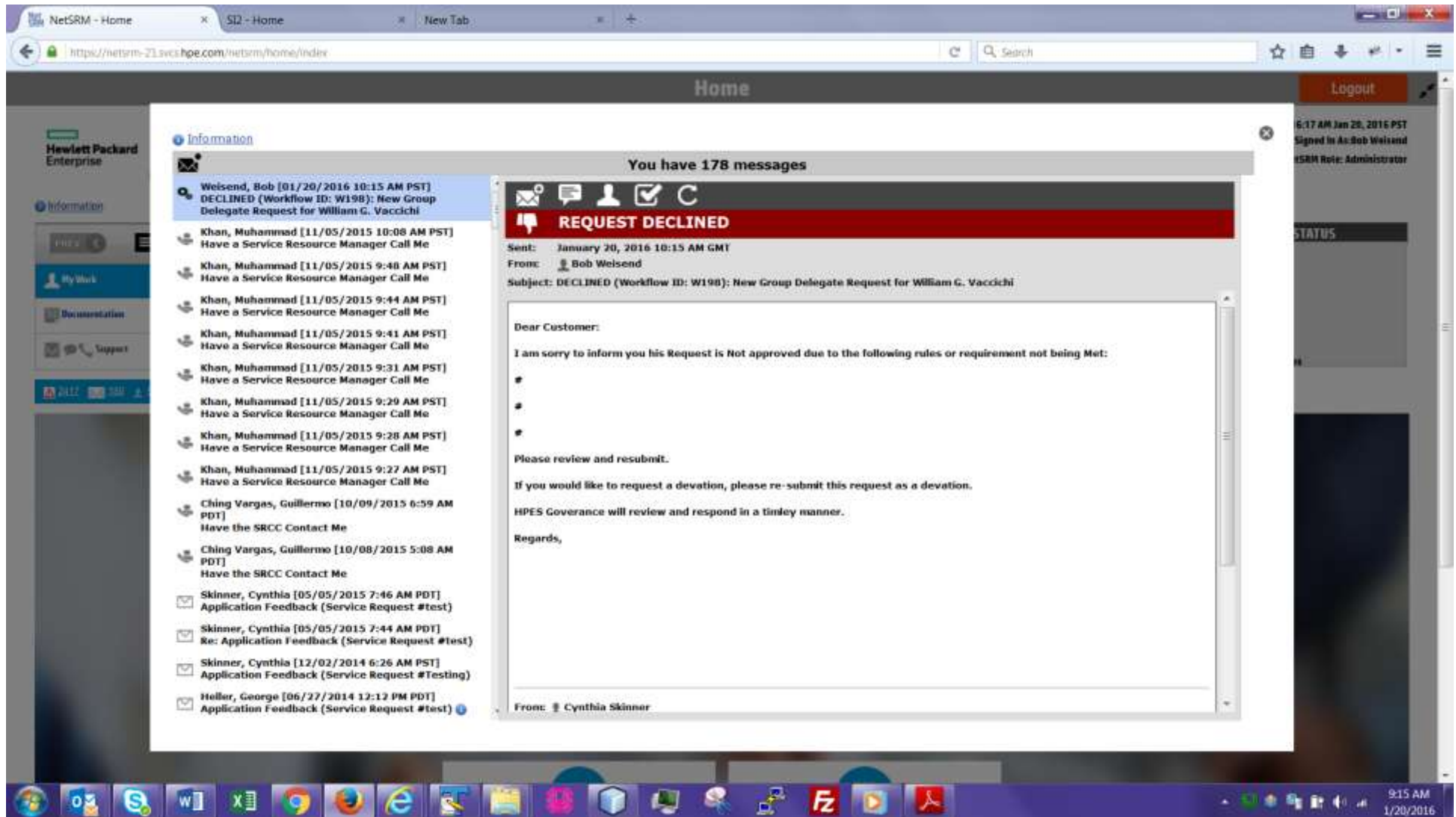
The messaging window works similar to an email client, but with added features such as workflow approvals and task management.



Some messages come with a workflow approval request. If the recipient is designated as an approver, he/she can approve or decline the request and add comments.



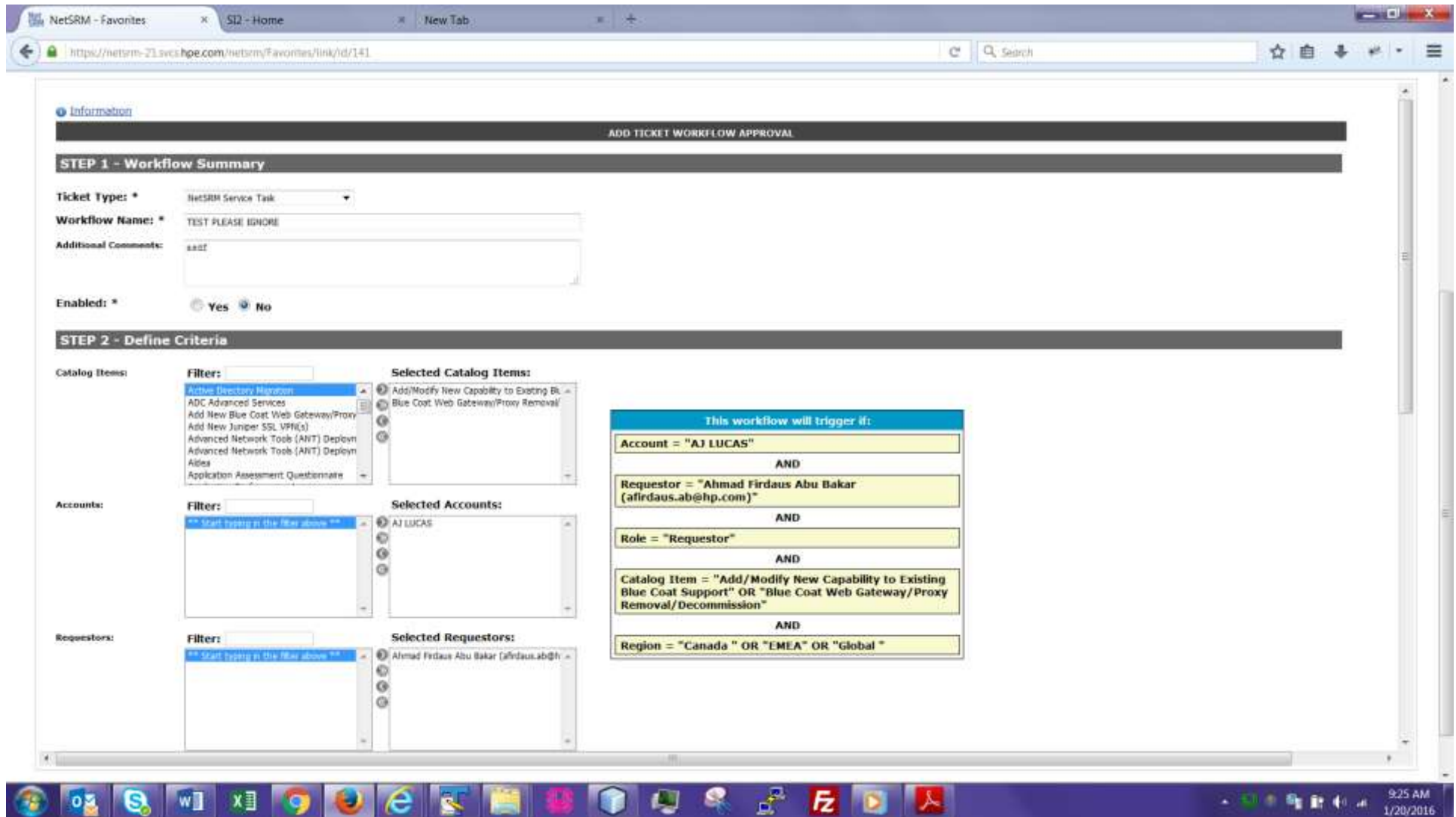
When responding to a message, the user can choose a “Response Script” from the list so he/she doesn’t have to type a custom response every time.



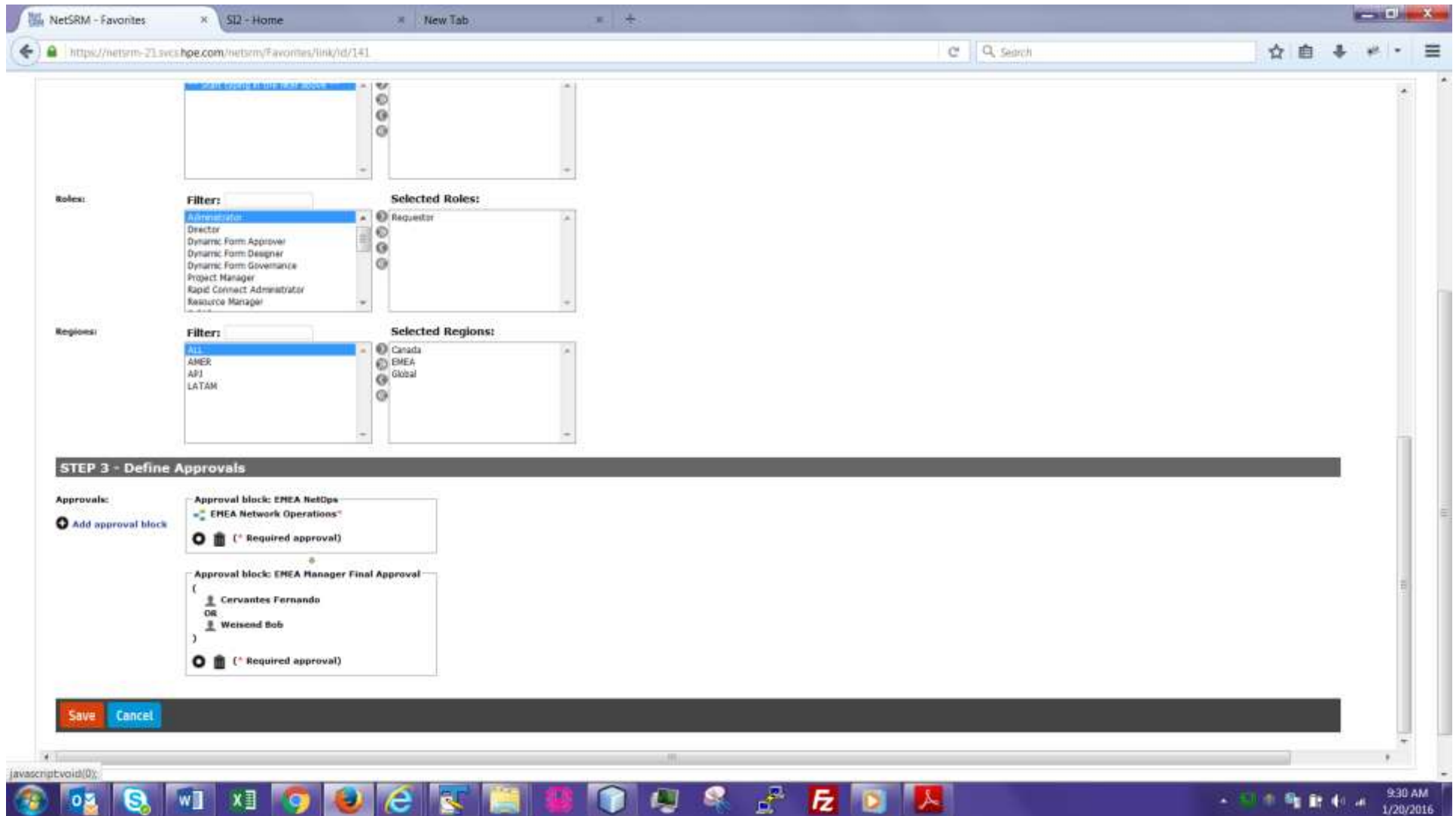
The original requestor receives a message indicating that his/her request has been declined, with the edited Response Script as the message body.

The screenshot displays the NetSRM web application interface. The top navigation bar includes 'Home' and 'Logout' links. The left sidebar shows the 'Hewlett Packard Enterprise' logo and various navigation options like 'Information', 'My Work', 'Documentation', and 'Support'. The main content area is titled 'You have 178 messages' and features a prominent green banner that reads 'REQUEST APPROVED'. Below this banner, the message details are shown: Sent: February 07, 2014 7:07 AM GMT, From: Shantharam Yetur, Subject: New Group Role Member Request. The message body states: 'I work as the Project Manager for the Network projects in GNE'. The 'Message Summary' section includes a 'History' table with columns for Action, Detail, and Time. The 'Workflow ID: W229' section shows a table with columns for Action, Detail, and Time, detailing the creation, message sending, and approval process. The 'Routing' section shows the workflow ID, status (Approved), assigned to (Request Action ID 124), created date, and priority (ASAP). The 'Approval block' section shows the 'Administration' queue and a status of 'APPROVAL REQUIRED'. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 9:20 AM on 1/20/2016.

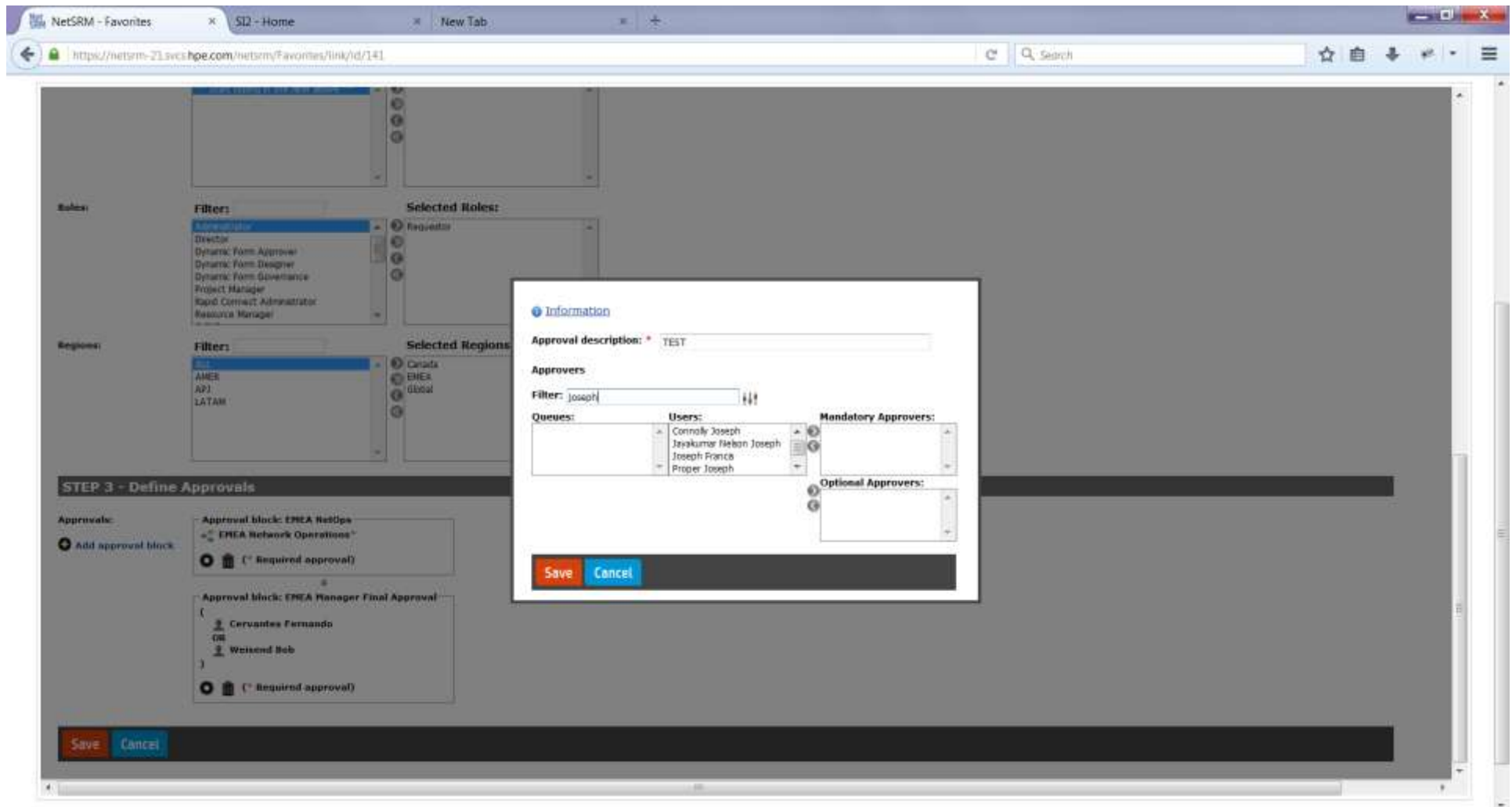
If a workflow request is approved, the associated action (i.e. adding a new role to an existing user) is automatically executed. Automation within NetSRM was a major factor in reducing both resolution times and manual errors.



Ticket workflow definitions can be used to add manager approvals if certain criteria are met. For example, if the request is for a specific Account (“AJ LUCAS”) and the request originates from the “EMEA” region, trigger the workflow. The helpful sidebar on the right updates in real time as the user defines the workflow.



Multiple approval blocks can be defined. In the example above, a member of the “EMEA Network Operations” team must approve first, followed by either Fernando Cervantes or Bob Weisend.



Additional approver blocks can be defined using the modal dialog above. The Filter field can be used to narrow the list of results. Any number of queues (groups) or users can be chosen for a block, and can either be required or optional.

The screenshot displays the NetSRM 'My Service Requests' page. The interface includes a navigation bar with 'Information' and 'Selected View' (Request View). A list of requests is shown on the left, with request 3424 selected. The detailed view for request 3424 (Service Task 1) is shown on the right, including fields for Requestor Data, Data Center(s), and Comments. The 'Add HSP Connections' section is also visible, showing a table of connections with columns for Interface, Billing Code, and a description.

Interface	Billing Code	Description
Te1/0/49	hp	
Te1/0/50	HP: IT40004064 SAP: 0000104565	
Te1/0/51	SCS: TR0002962600VC00 Customer: D.O. DEFENSE-MHP	
Te1/0/52	HP: IT40004267 SAP: 0000104811	
Te2/0/49	SCS: TR0003342600VC00 Customer: D.O. DEFENSE-MHP	
Te2/0/50		
Te2/0/51		
Te2/0/52		

This JQuery plugin (<https://flexbox.codeplex.com/>) allows the user to type a partial value, then is presented with a list of matching records. When the user stops typing for 1 second, an AJAX call is made which sends the partial text as a parameter, queries the billing code database, and returns the results. The user can simply click on the desired result to automatically populate the text field.

The screenshot shows the NetSRM service form interface. The form is divided into several sections:

- Requestor Information:** Includes fields for Requestor Name, Requestor Email, WBS/Compass, Billing Code / Cost Center, and a Summary text area.
- Region and Domain:** Includes dropdown menus for Region, Domain, Device Group, and Device / Firewall Host Name.
- Impact of Rule Change:** Includes a dropdown menu for Impact of Rule Change.
- Notes:** A text area for additional notes.
- Target Date Implementation:** Includes fields for Target Date Implementation, Start Time Implementation, and End Time Implementation.
- Timezone:** A dropdown menu for Timezone.
- Design Required:** A dropdown menu for Design Required.
- Change Control:** Includes dropdown menus for Change Control and Change Control Freeze.
- Business Unit:** A text field for Business Unit.
- Business Owner:** A text field for Business Owner.
- External Ticket ID:** A text field for External Ticket ID.
- Additional Email Notification:** A text field for Additional Email Notification.
- Justification:** A text area for Justification.
- Policy Planner Email Notifications:** A dropdown menu for Policy Planner Email Notifications.

Below the form is a table with the following columns: #, Manage, Source, Destination, Protocol, Port, Action, Expiration Date, and Review Date. The table contains one row with the following data:

#	Manage	Source	Destination	Protocol	Port	Action	Expiration Date	Review Date
1		<input type="text"/>	<input type="text"/>	Please select...	dhcp	Please select...	<input type="text"/>	<input type="text"/>

Below the table is a button labeled "Add Another Requirement".

At the bottom of the form is a "NetSRM Watch/Notify is On" button.

A tooltip is visible over the "Port" field, showing the following information:

- Port: 67
- Protocol: UDP
- Service Name: bootps
- Aliases: dhcps
- Comment: Bootstrap Protocol Server
- Port: 68
- Protocol: UDP
- Service Name: bootpc
- Aliases: dhcpc
- Comment: Bootstrap Protocol Client

Another implementation of the flexbox. Typing a partial value will make an AJAX call to the port database table. This prevents users from having to memorize or look up the port number for a particular network service.

NetSRM - Home x 512 512 x New Tab

http://netsrm-21.svc.hpe.com/netsrm/home/index

Search

Logout

10:29:14 AM Jan 20, 2016 PST
Signed In As: Bob Weisend
NetSRM Role: Requestor

CHANGE STATUS

Associated Configuration Items

CI Name 1:

CI Name 2:

CI Name 3:

Coordinator Workgroup:

Supervisor Workgroup:

Change Title:

Change Type:

Customer:

Reason For Change:

Initiated On:

Service:

Urgency:

Detailed Change Info:

Will Affected CIs Require Downtime:

Risk Assessment:

Impact Assessment / Risk Analysis:

Initiated By

Name:

Email:

Phone:

Contact Details For Post-Implementation Testing

January 2016

Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

The date picker (jQuery plugin) allows a user to easily choose a date.

End Time Implementation:

Timezone:

Design Required:

Change Control:

Change Control Freeze:

Business Unit:

10:30 AM

Choose End Time

Time 10:30 AM

Hour

Minute

The time picker, similar to date picker.

Mozilla Firefox

https://netsrm-21.svcs.hpe.com/netsrm/livehelp/live_netsrm.php?showvisitors=0&csIdOPERATOR=4f8a4cff133259e37e879aeccafe82e7

SRCC Chat Monitoring

Hewlett Packard Enterprise NetSRM

Monitoring chats as: Bob Weisend

Information
18:22 January 20, 2016

Chat Requests
No Chat Requests...

Chatting Users and Operators
2 Online 0 Hidden

Bob Weisend
Robert Dolak STOP

with selected: GO

Transcript History
Search: Only My Chats:

Matthew Kammo	13:45 02/03/2015	View/Send
Chitta Behera	13:45 02/03/2015	View/Send
Cynthia Skinner	16:17 05/15/2014	View/Send
Cynthia Skinner	21:19 04/04/2014	View/Send
Tanya Banks	20:08 02/18/2014	View/Send
Hatim Nasher	19:07 02/18/2014	View/Send
Maigorzata Kolat	18:01 02/18/2014	View/Send
Jun Sabado	16:30 02/18/2014	View/Send
Jun Sabado	16:23 02/18/2014	View/Send
Pablo Josue Rivel	16:07 02/18/2014	View/Send

Previous 1 2 3 4 5 ... 96 Next

Bob Weisend: I am with the SRCC. How may I help you?
 Bob Weisend: hello Rob?
 Robert Dolak: hello Bob
 Bob Weisend: cool! it still works :)
 Robert Dolak: hello Bob
 Robert Dolak: I see you
 Robert Dolak: yes it seems to be working

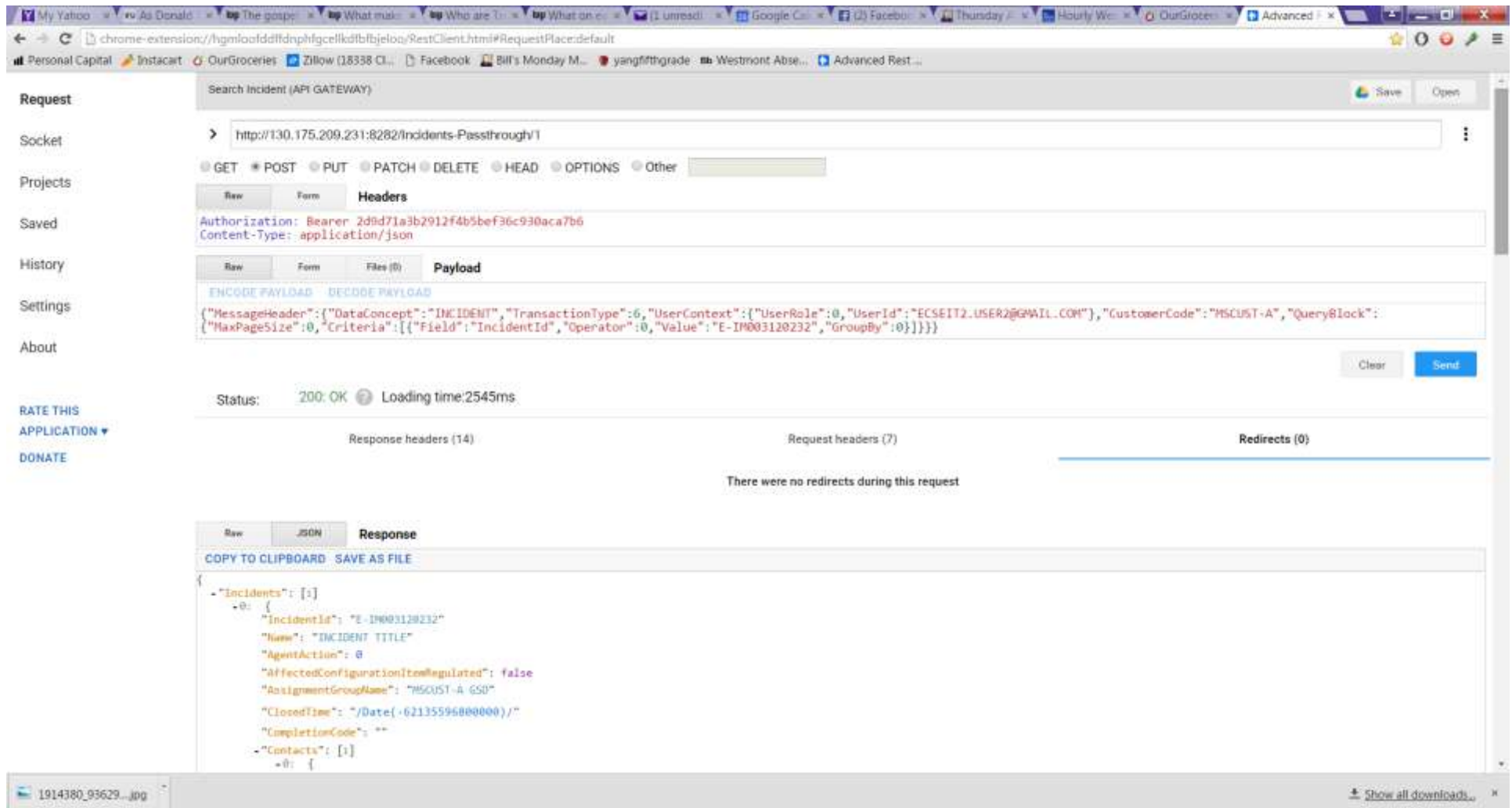
Robert Dolak

Clear Chat Refresh

Additional Options and Actions:
 Response Scripts: Choose Something

Send

The help desk can monitor chat requests through this interface. It captures the transcript of each session, and the transcript can be emailed to the user.



NetSRM interfaces with HP Service Manager (separate ticketing system) using RESTful APIs. The example above shows how NetSRM would pull the details of an INCIDENT ticket using a JSON-encoded message body. NetSRM also has the ability to create new tickets or update existing tickets.

The screenshot displays the HP E-FRCR NetSRM web interface. The browser's address bar shows the URL 138.35.217.240. The page header includes the HP E-FRCR logo and navigation links: Create Ticket, Dashboard, Search, and Administration. The main content area is titled "Ticket: CM0001117" and features buttons for Assign, Claim, Operations, and Tools. The "General Information" section provides details about the ticket, including the workflow step, summary, firewall host name, priority, impact of rule change, billing code, cost center, due date, time zone, start and end times, and design requirements. The bottom section lists the requestor's name and email, business unit, business owner, customer, and external ticket ID. The footer contains the copyright notice: Copyright © 2014 Firemon® LLC. All Rights Reserved.

Workflow & Step: Misc Authorized Submitter/Approver
Summary: NetSRM (5882.9760): TEST SUMMARY
Firewall Host Name: CUHFW3
Priority: Normal
Impact of Rule Change: Non-Impacting
Billing Code/Cost Center: USA7075085 / 0000330296, Compass WBS: US1-ITD11.01.01
Due Date: 10/31/2015
Timezone: (GMT-8) Pacific Time (US and Canada)
Start Time: 8:00 AM
End Time: 2:00 PM
Design Required? No
Designer Assigned? No
Designer Name:
Change Control No Required?
Change Control Freeze No Required?
Additional Work Required? No
Requestor Name: Bob Weisend
Requestor Email: bob.weisend@hp.com
Carbon Copy:
Justification: JUSTIFICATION
Business Unit: Business Unit
Business Owner: Business Owner
Customer: AFFINIA GROUP INC.
External Ticket ID: 5882
Copyright © 2014 Firemon® LLC. All Rights Reserved.

NetSRM interfaces with another ticketing system that Firewall Administrators use ("Firemon"). When a firewall ticket is created in NetSRM, the data is sent to Firemon via RESTful APIs. The example above shows a ticket that was created from an API call originating from NetSRM. A separate API call could send/retrieve a binary attachment (e.g. Word, PDF).

The screenshot displays the WSO2 API Store interface. The top navigation bar includes links for APIs, Prototyped APIs, My Applications, My Subscriptions (active), Forum, Statistics, Tools, Themes, and a user profile for 'nascent'. A search bar is located below the navigation bar.

Recently Added

- cmdb.billing_part.query...
api.admin
★★★★★
- cmdb.infra.create-0.1
api.admin
★★★★★
- cmdb.infra.query-0.1
api.admin
★★★★★
- cmdb.infra.update-0.1
api.admin
★★★★★
- si2ac.apiaction.cis-sm9....
nascent
★★★★★

Subscriptions

Create access tokens to applications. Because an application is a logical collection of APIs, you can use a single access token to invoke multiple APIs and to subscribe to one API multiple times with different SLA levels.

Applications With Subscriptions

WHATEVER ☐ Show Keys

Keys - Production ▼

Consumer Key :
jDQG07HoGtiudDgjWKijOFG7xVga

Consumer Secret :
kSGnquGgPYwBQTerNi7iITxylI0a

Access Token:
2d9d71a3b2912f4b5bef36c930aca7b6

cURL ▾ Validity Time: 0 Seconds **Re-generate**

Allowed Domains
ALL
The domains from which requests are allowed to the APIs. Leave empty or enter "ALL" to allow all domains.
Update Domains ⓘ

Keys - Sandbox ▼

NetSRM API calls were made through a third-party application (WSO2's "API Gateway"), which provides additional services such as authorization, throttling, logging and reporting. The above example is for an API that facilitates exchanges with HP Service Manager.

hp http://eitsmapv200.eitsm.hp.com:8021/em/index.do Personal Computer Stan... NetSRM My Subscriptions hp EIT200 R4.2 BFTst User: SI2-AGENT Logout

EIT200 R4.2 BFTst

To Do Queue: My To Do List Change E-C00153448 - Prompt

Cancel Save & Exit Save Find Filter Apply Template Request Assessment More

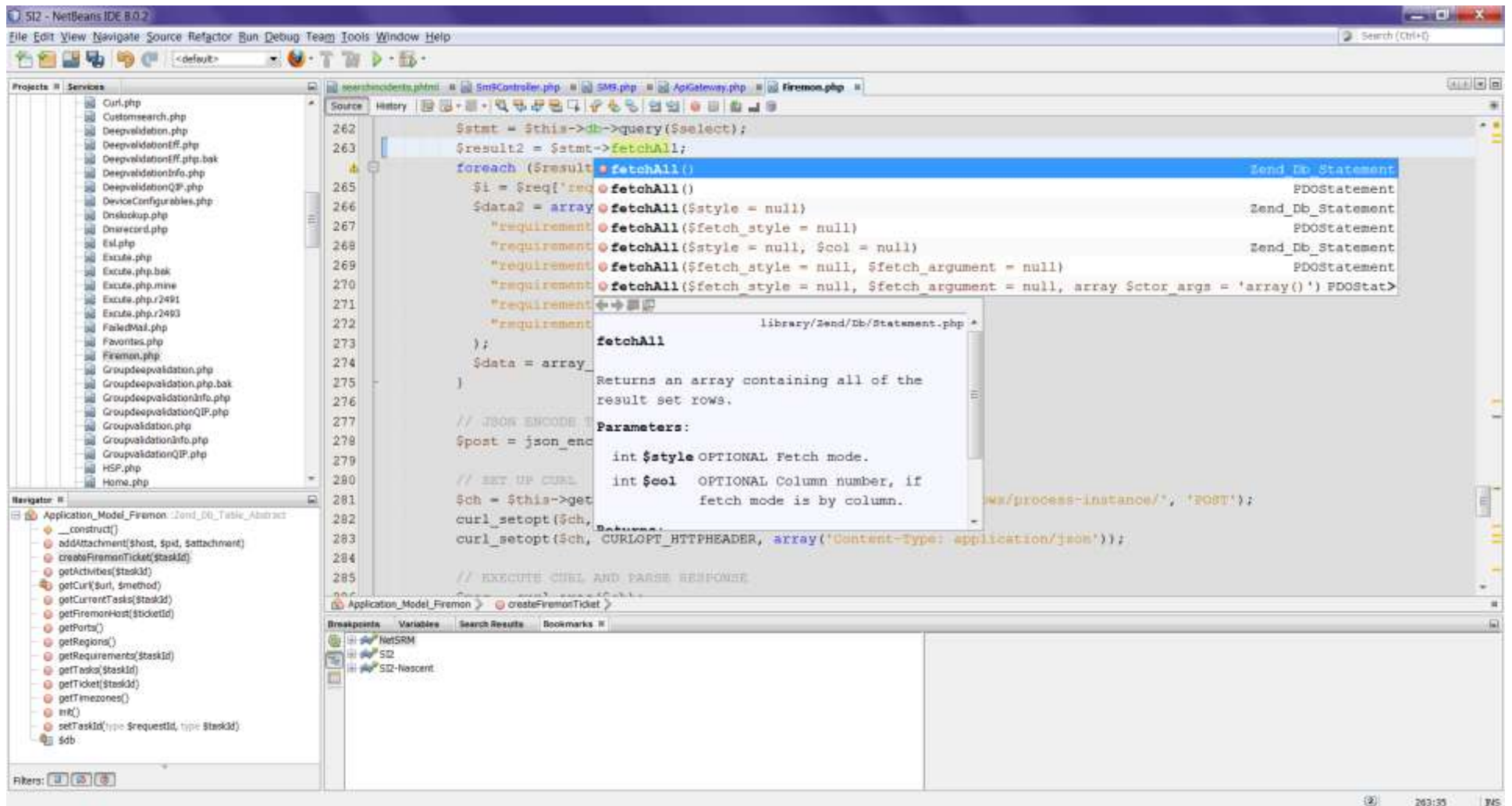
Change - E-C00153448

<p>Title: SM9 Change for Policy Planner</p> <p>Description: SM9 Change for Policy Planner (NetSRM ID = 1234 5082, Policy Planner Process Instance ID = 37802, Policy Planner Business Key = CM0000254)</p> <p>Effect of not implementing: Change is required</p>		<p>Category: normal</p> <p>Change Model: normal</p> <p>Service Line: <input type="text"/></p> <p><input type="checkbox"/> Release Management <input type="checkbox"/> In Release</p>
<p>Change ID: E-C00153448</p> <p>Phase: Register</p> <p>Company: HP ECS EIT 2</p> <p>Department: <input type="text"/></p> <p>Change Requester: ECSEIT2.USER2@GMAIL.COM</p> <p>Requested End Date: 02/10/2015 18:17:58</p> <p>Change Manager Group: GROUP-ECSP <input type="button" value="Lookup"/></p> <p>Change Mgr. Group Supplier: ECSP</p> <p>Change Manager: <input type="text"/></p> <p>Change Supervisor Group: IMS COORDINATOR <input type="button" value="Lookup"/></p> <p>Change Super. Group Supplier: ECSP</p> <p>Change Supervisor: <input type="text"/></p> <p>External Reference: <input type="text"/></p> <p>Template: <input type="text"/></p>	<p>Reason for Change: TEST REASON FOR CHANGE</p> <p>Impact: 4 - Low (e.g. User)</p> <p>Urgency: 4 - Low</p> <p>Priority: 4 - Low</p> <p>Risk Assessment: 1 - Low Risk</p> <p>Service: <input type="text"/></p> <p>Affected CI: temp-0046.1715.1259 ecs.hp.com</p> <p>Location: <input type="text"/></p> <p><input type="checkbox"/> Requested <input type="checkbox"/> SCCX Control</p> <p><input type="checkbox"/> Billable</p>	

Updates Impact/Risk Assessment Associated CIs Companies Affected Services Additional Notes Communication Tasks Related Records SLA Additional Attachments - 0 file(s) attached Approved Attachments History Workflow

New Update Type ☐ Visible to Customer

The above screenshot shows a sample Change Management ticket originating from NetSRM and subsequently sent to the HP Service Manager application using a RESTful API. Before this automation, the NetSRM user would have to email a Service Manager user, who would then have to manually create this ticket. This automation saved many man-hours and reduced the time required to complete a network-related service.



I used the NetBeans 8.0.2 IDE for my developer sandbox. It supported the Zend framework, the XDEBUG Extension, and all the usual IDE stuff (auto-complete, breakpoints, watches, bookmarks). It also integrated with our source control (SVN) for inline diffs, merging and resolving conflicts.