

Usage Monitoring, Budgeting & Approval

Epic, Stories and Wireframe Presentation

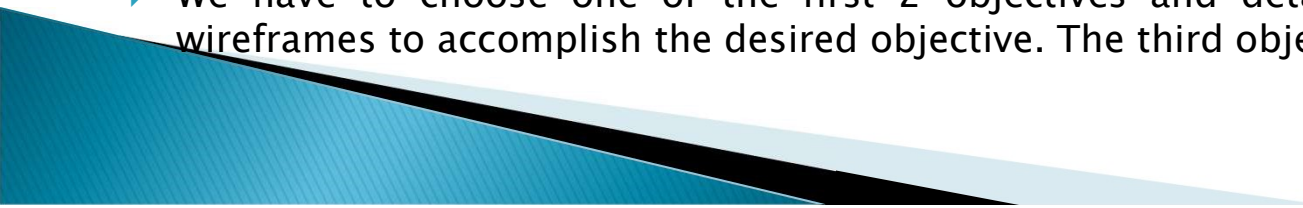
Cloud Automation

Written By

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Business Problem

- ▶ Organizations use Clouds for agility. However, Cloud resources are expensive, particularly in public clouds. Organizations want to monitor the use of cloud resources (assume nodes/instances are the only resource in question) for each team or project and govern who uses what and how much. IT wants to charge business units for the amount of resources used. They want to price the resources based on the cost of underlying infrastructure and an additional amount that captures the devops overheads, licensing fee etc. for the software being provisioned on a resource.
 - ▶
 - ▶ **Below are the objectives**
 - ▶ Budgeting – IT should be able to define budgets per team and track consumption behaviour across all resources provisioned for the team. In many cases organizations want to be notified when a particular individual or team provisions resources beyond their budget.
 - ▶ Monitor consumption of resources in real time via dashboards – The consumption reports should be available per individual, per team, per business unit across a specific time window. Users on the other hand, need to view costs associated with resources they are provisioning, and analyse their ongoing usage, much like they can analyse cell phone usage.
 - ▶ Approvals – In some cases, organizations want requests for provisioning to go through an approval process across the chain of command. The chain of command is typically stored in an LDAP system.
 - ▶
 - ▶ We have to choose one of the first 2 objectives and detail the key epics, stories and supporting wireframes to accomplish the desired objective. The third objective (Approvals) is optional.
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Business Scenario

- ▶ The business scenario is outlined as Epics and Stories based on the Business Requirement Document. To meet the business objectives IT Admin, BU Head, Leaders and Team members need to undergo a process flow which is illustrated. Below screens are necessary and preconditions to perform subsequent business operations. With the flow any user who joins and organization can be added to the system and IT Admin can add the user, assign him/her to a particular role(e.g. team member or leader or manager or BU Head), later the user can be deleted or shifted to a different role inside same BU or same/different role in different BU. The system also provides flexibility to delete a user who is no longer with organization. Also, in case there is any restructuring in the organization, IT Admin can change Group name or Leadership Name as well.
 - IT Admin Login
 - IT Admin Console
 - Create Business Unit
 - Create User Type
 - Create User
 - Update Business Unit
 - Update User Type
 - Update User
 - Delete Business Unit
 - Delete User Type
 - Delete User

Serial	Feature-As a(n) <actor>	I want to<description>	So that<outline>	Screen Name
1	IT Admin	monitor the use of cloud resources	I can know who uses what and how much	Dashboard–Organization Usage
2	IT Admin	usage of resources for each team/project	I can know usage pattern	Dashboard–Business Unit Usage, Dashboard–Team Usage
3	IT Admin	monitor consumption of resources in real time via dashboards	I can analyze	Dashboard–Organization Usage
4	IT Admin	monitor consumption reports per individual	I can know usage pattern	Dashboard–Team Member Usage
5	IT Admin	monitor consumption reports per team	I can know usage pattern	Dashboard–Team Usage
6	IT Admin	monitor consumption reports per business unit	I can know usage pattern	Dashboard–Business Unit Usage
7	IT Admin	monitor consumption across a specific time window	I can know usage pattern	All 4 Dashboards above
8	IT Admin	track consumption per team	all resource usages are accountable	Dashboard–Team Usage
9	IT Admin	calculate cost	underlying infrastructure, overheads, licensing fee etc. taken care of	Calculate IT Expenditure
10	IT Admin	define budgets per team	it is based on provided resources	Define Team Member Budget, Define Team Budget, Define Business Unit Budget, Define Organization Budget
11	IT Admin	charge Business Units accurately	it is based on usage	Dashboard–Business Unit Usage
12	IT Admin	get notified	if particular individual or team provisions resources are beyond their budget	Configure Notification System
13	IT Admin	approve special usage for users who exceeded the quota	operations are uninterrupted	Approval Request–Team Member, Approval Form–Leader, Approval Form–

Serial	Feature-As a(n) <actor>	I want to<description>	So that<outline>	Screen Name
14	IT Admin	approve special usage for users who are approved by approval chain	operations are uninterrupted	Approval Form-IT Admin
15	User	view cost associated with own usage	I can know my usage pattern	Dashboard-Team Member Usage
16	User	analyse ongoing usage	I can be effective	Dashboard-Team Member Usage

IT Admin Login

A Web Page

http://ITAdminLogin

IT Admin

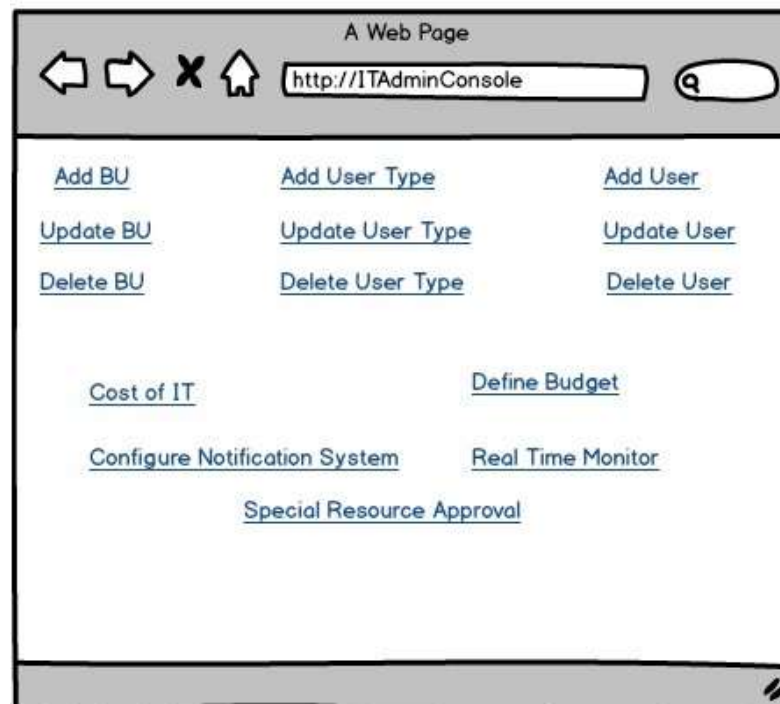
Password

Submit

IT admin logs into system
using UID & PWD

IT Admin Console

Standard IT Admin Console which is displayed once IT Admin logs in successfully to system



Create Business Unit

IT Admin can enter a Business Unit Name and creates it

A Web Page

http://AddBU

Enter BU Name

Purpose

Create User Type

IT Admin selects a particular Business Unit and creates a User Type(BU Head/Leader/Team Member) inside the BU

A Web Page

http://AddUserType

Select BU

1 ▼
2
-
N

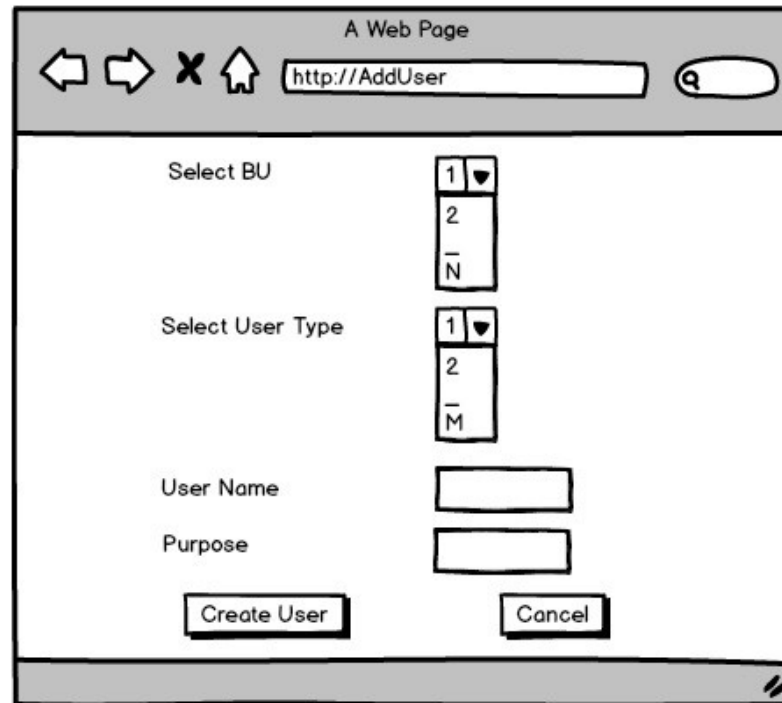
Enter User Type

Purpose

Create User Type Cancel

Create User

IT Admin selects a particular Business Unit, Selects a user type, creates a User inside the BU belonging to a team



A Web Page

http://AddUser

Select BU

1 ▼

2

-

N

Select User Type

1 ▼

2

-

M

User Name

Purpose

Create User

Cancel

Update Business Unit

IT Admin selects a particular BU,
if needed, changes or renames
the same

A Web Page

http://UpdateBU

Select BU

1 ▼

2

-

N

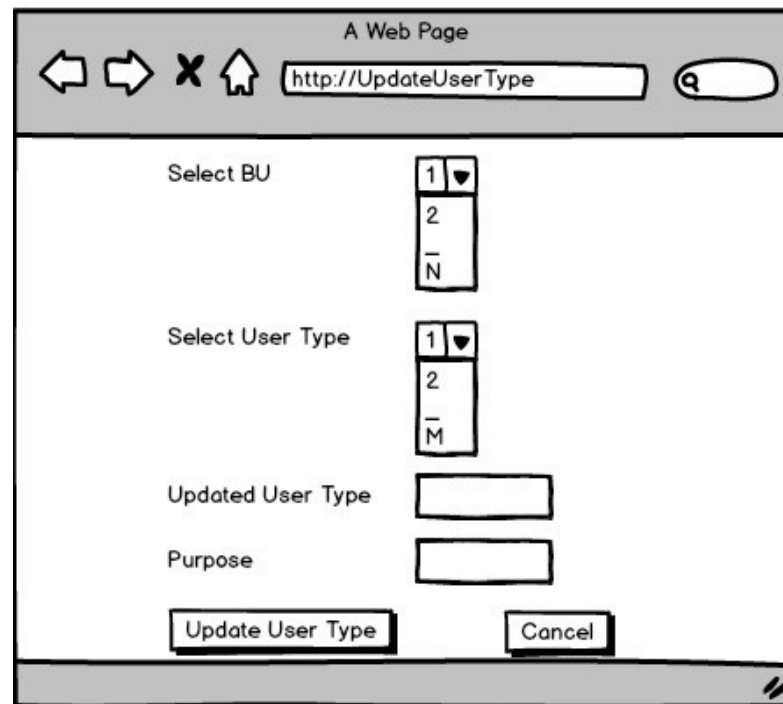
New BU Name

Purpose

Update BU

Cancel

Update User Type



A Web Page

http://UpdateUserType

Select BU

1 ▼
2
N

Select User Type

1 ▼
2
M

Updated User Type

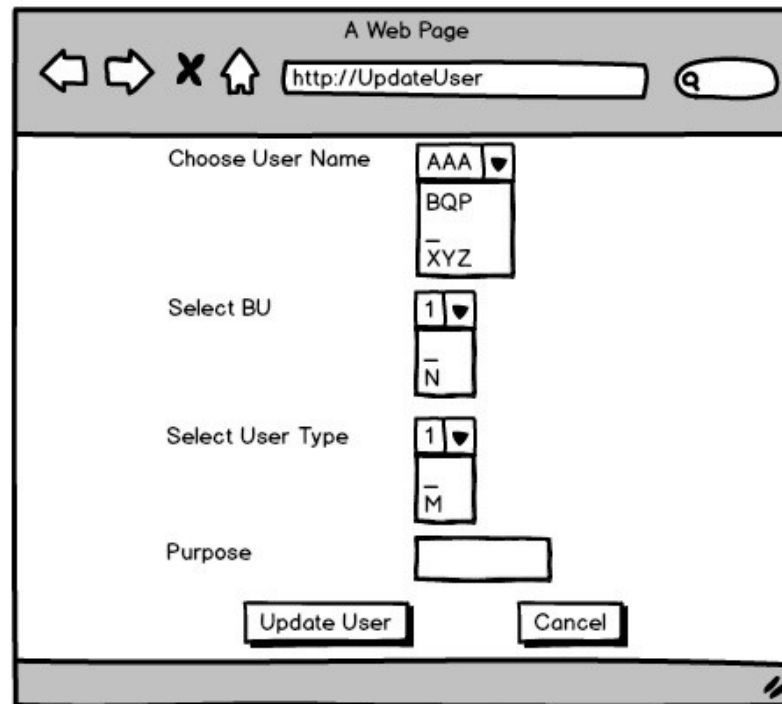
Purpose

Update User Type Cancel

IT Admin selects a BU, selects the user type and can rename the user type(BU Head/Leader/Team Member etc.)

Update User

IT Admin, chooses an user,
selects a BU and User type as
and when user is moved to a
different BU or team



A Web Page

http://UpdateUser

Choose User Name

AAA ▼
BQP
-XYZ

Select BU

1 ▼
-N

Select User Type

1 ▼
-M

Purpose

Update User Cancel

Delete Business Unit

Rare case scenario, in case a BU is obsolete, IT admin can delete it (Precondition: All team and users connected to the BU Must be deleted/moved to other BU before that)

A Web Page

Navigation icons: back, forward, close, home

Address bar: <http://DeleteBU>

Business Unit Selection:

- ☐ Business Unit 1
- ☐ Business Unit 2
- ☐ Business Unit 3
- ☐ (CXO/Management)
- ☒ Business Unit 4
- ☐ Business Unit 5

Navigation buttons: Prev, Current, Next

Purpose:

Buttons: Delete, Cancel

This action is done by IT Admin when a particular team is dissolved inside a BU or organization restructuring happens (Precondition: All user under the team must be deleted/moved to other team)

Delete User Type

A Web Page

http://DeleteUserType

Select BU

1 ▼

—

N

☐ User Type 1

☒ User Type 2

☐ User Type 3

☐ User Type 4

Prev Current Next

Purpose

Delete Cancel

Delete User

IT Admin can delete a user when he/she leaves organization

A Web Page

Navigation icons: back, forward, stop, home, search

URL: <http://DeleteUser>

Select BU: 1 ▼
N

Select User Type: 1 ▼
M

☐ User 1
☒ User 2
☐ User 3
☐ User 4
☐ User 5
☐ User 6

Prev Current Next

Delete Cancel

Calculate IT Expenditure

IT Admin enters the details like underlying infrastructure, overheads, licensing fee etc. and calculate cost for an year

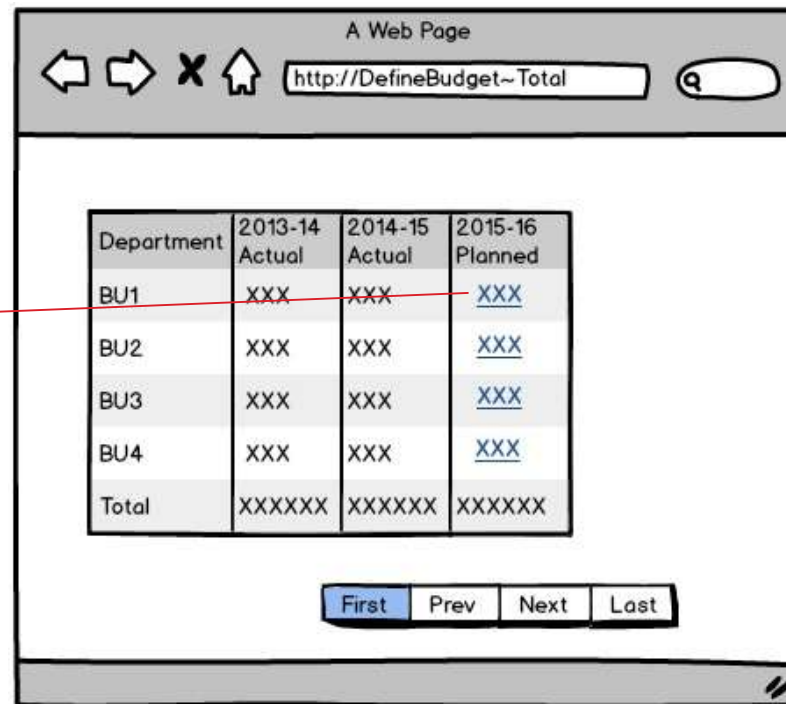
A Web Page

http://ITExpenditure

Cost of Node	<input type="text"/>	Total Cost <input type="text"/>
No of Nodes	<input type="text"/>	
Instance Cost	<input type="text"/>	
No of Instances	<input type="text"/>	
Annual Maintenance	<input type="text"/>	
License Cost	<input type="text"/>	
Upgradation Cost	<input type="text"/>	
<input type="button" value="Calculate"/>		

Define Organization Budget

Once IT Admin defines the budget against all Business Units, entire Organization budget can be defined for a year. A link is provided against all "BU", where on clicking the link IT Admin is redirected to individual "BU" budget.

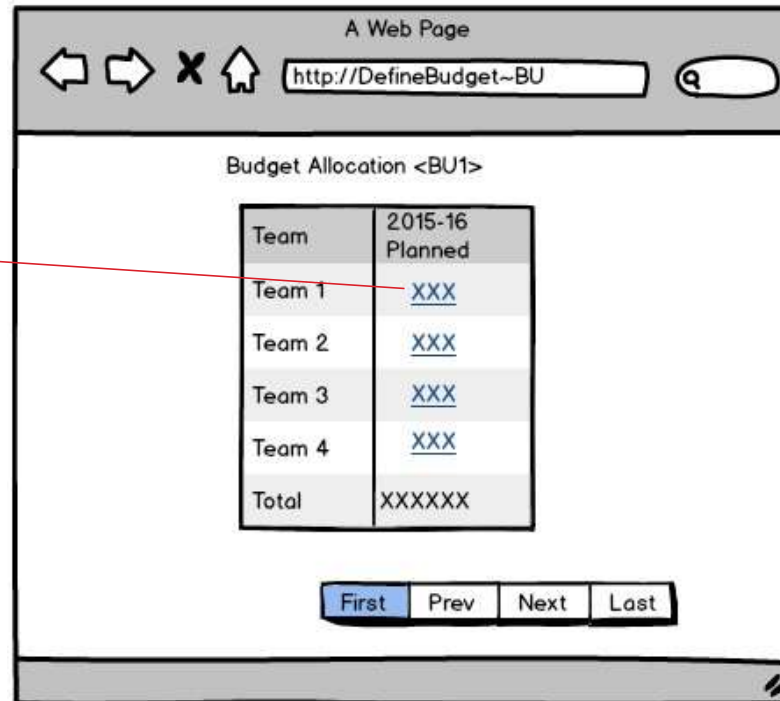


Department	2013-14 Actual	2014-15 Actual	2015-16 Planned
BU1	XXX	XXX	XXX
BU2	XXX	XXX	XXX
BU3	XXX	XXX	XXX
BU4	XXX	XXX	XXX
Total	XXXXXX	XXXXXX	XXXXXX

First Prev Next Last

Define Business Unit Budget

Once IT Admin defines the budget against all the teams, entire BU budget can be defined for a year. A link is provided against all "Team", where on clicking the link IT Admin is redirected to individual "Team" budget.



A Web Page

http://DefineBudget-BU

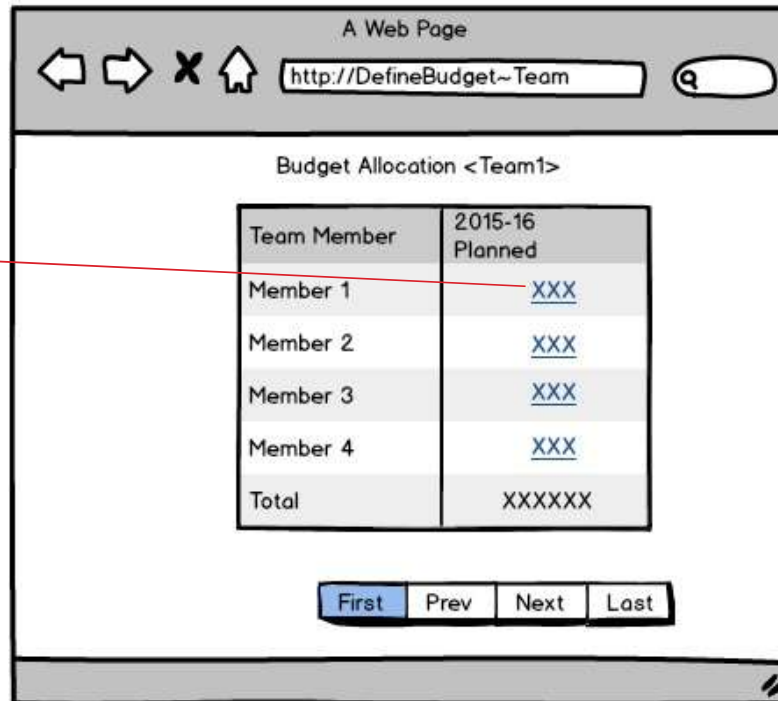
Budget Allocation <BU1>

Team	2015-16 Planned
Team 1	XXX
Team 2	XXX
Team 3	XXX
Team 4	XXX
Total	XXXXXX

First Prev Next Last

Define Team Budget

Once IT Admin defines the budget against all team members, entire team budget can be defined for a year. A link is provided against all "Member", where on clicking the link IT Admin is redirected to individual "Team Member" budget, which he can change too.



A Web Page

http://DefineBudget~Team

Budget Allocation <Team1>

Team Member	2015-16 Planned
Member 1	XXX
Member 2	XXX
Member 3	XXX
Member 4	XXX
Total	XXXXXX

First Prev Next Last

Define Team Member Budget

IT Admin can define the budget against a team member by providing the resources and quantity against them. These are calculated and summed up as Total budget per team member.

A Web Page

http://DefineBudget~Member

Budget Allocation <Member1>

Member 1	Quantity	2015-16 Planned
Node	X	XXX
Instance	XX	XXX
Maintenance	XX	XXX
License	X	XXX
Upgrade Fee	X	XXX
Total	XX	XXX

First Prev Next Last

Configure Notification System

A Web Page

http://ConfigureNotification

Notification Matrix

Select BU: All, BU1, BUUn

Team: All, TM1, TMm

Member: All, ABC, XYZ

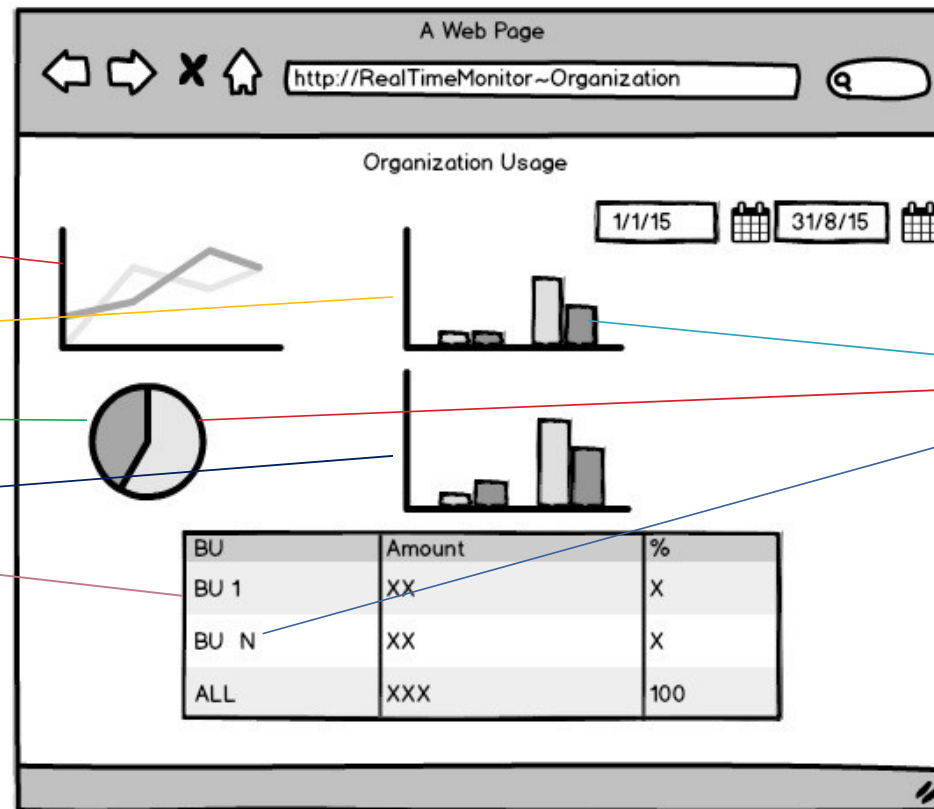
	IT Admin	BU Head	Leader	User
On 90%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Above Quota	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Confirm Cancel

IT Admin can define notification system at all level, based on 90% usage or when quota is exceeded. Can be done at team member, team, BU or all BU level.

Dashboard-Organization Usage

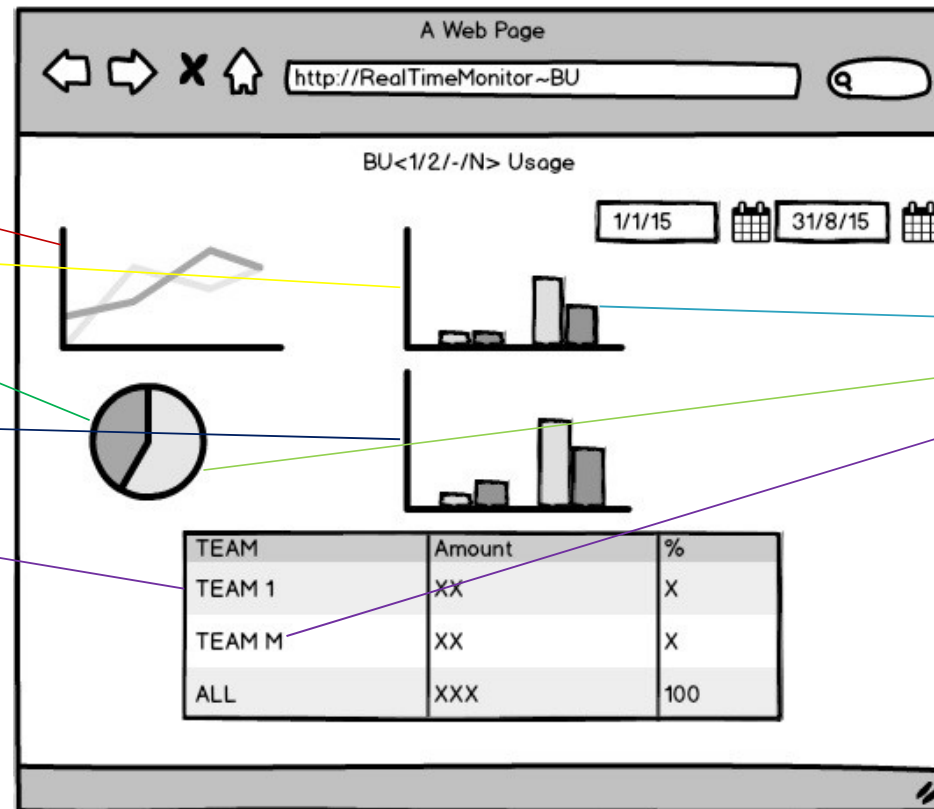
- 1) Resource Cost Vs Organization Usage, quota is light shaded, usage is dark shaded
- 2) BU Wise(BU1..BUn) Usage Distribution, Light line(< Defined Budget), Dark Line(> Defined Budget)
- 3) Distribution of BU usage(BU1..BUn), % wise
- 4) Monthly usage(Jan..Dec), Light line(< Defined Budget), Dark Line(> Defined Budget)
- 5) BU wise(BU1..BUn) Cost, % wise



Track and monitor consumption of resources in real time via dashboards at Organization level. On clicking the BU, IT admin can see the insight about BU detailed level usage(shown at next screen)

Dashboard-Business Unit Usage

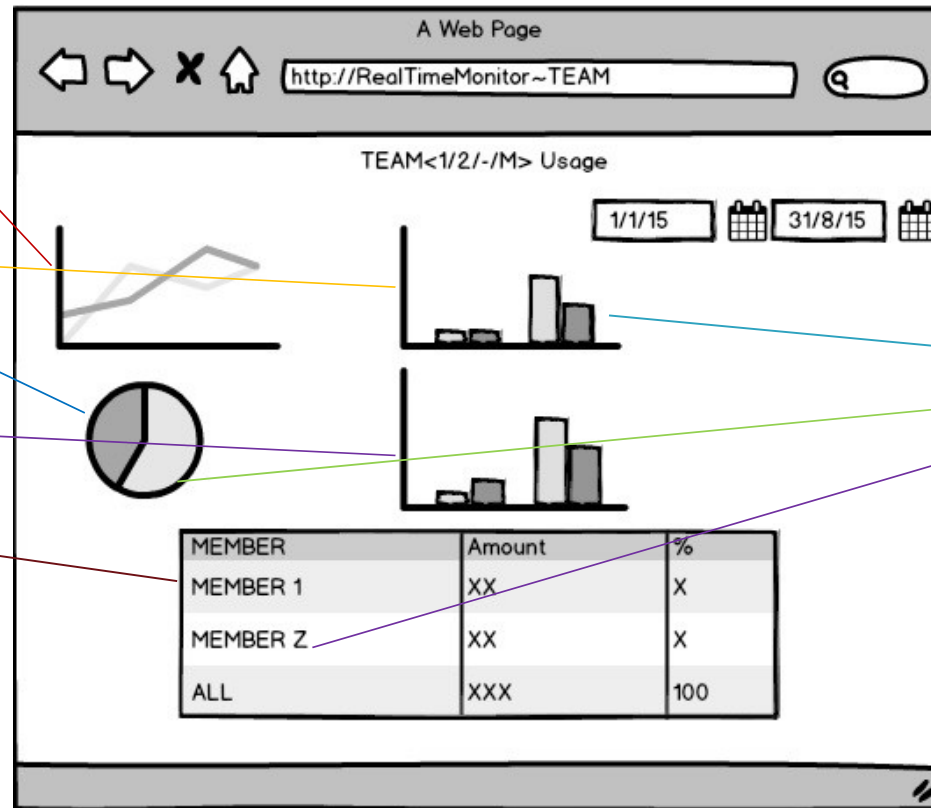
- 1) Resource Cost Vs BU Usage, quota is light shaded, usage is dark shaded
- 2) Team Wise(Team1..TeamM) Usage Distribution, Light line(< Defined Budget), Dark Line(> Defined Budget)
- 3) Distribution of Team usage(Team1..TeamM), % wise
- 4) Monthly usage(Jan..Dec), Light line(< Defined Budget), Dark Line(> Defined Budget)
- 5) Team wise(Team1..TeamM) Cost, % wise



Track and monitor consumption of resources in real time via dashboards at BU level. On clicking the Team, IT admin can see the insight about Team detailed level usage(shown at next screen)

Dashboard-Team Usage

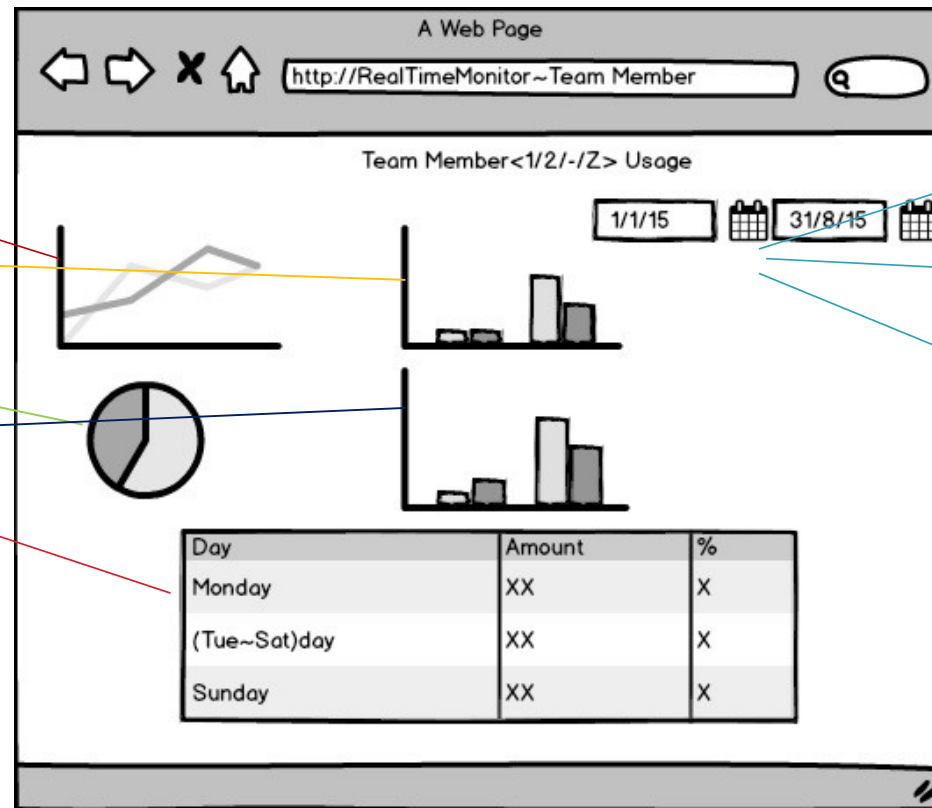
- 1) Resource Cost Vs Team Usage, quota is light shaded, usage is dark shaded
- 2) Member Wise(Member1..MemberZ) Usage Distribution, Light line(< Defined Budget), Dark Line(> Defined Budget)
- 3) Distribution of Member usage(Member1..MemberZ), % wise
- 4) Monthly usage(Jan..Dec), Light line(< Defined Budget), Dark Line(> Defined Budget)
- 5) Team wise(Member1..MemberZ) Cost, % wise



Track and monitor consumption of resources in real time via dashboards at Team level. On clicking the Member, IT admin can see the insight about Member detailed level usage(shown at next screen)

Dashboard-Team Member Usage

- 1) Resource Cost Vs Member Usage, quota is light shaded, usage is dark shaded
- 2) Month Wise(Jan..Dec) Usage Distribution, Light line(< Defined Budget), Dark Line(> Defined Budget)
- 3) Day Wise(Mon..Sun) Usage Distribution
- 4) Week Wise(Week1..Week4) Usage Distribution, Light line(< Defined Budget), Dark Line(> Defined Budget)
- 5) Day wise(Mon..Sun) Cost, % wise



- 1) IT Admin can track and monitor consumption of resources in real time via dashboards at Member level.
- 2) User can view cost associated with own usage, he/she can know my usage pattern once logged into system.
- 3) Also, an user can analyse ongoing usage and can be effective.

Approval Request–Team Member

Team member logs into system using UID and PWD. The login screen is common and not shown for simplicity. He/she request for additional resources by submitting this form.

A Web Page

http://TeamMemberApprovalForm

Request for Approval

Request For Node ☐ Quantity

Request For Instances ☐ No of Instances

Request Cancel

Approval Form-Leader

Leader logs into system using UID and PWD. The login screen is common and not shown for simplicity. System displays the pending approval list to leaders based on the hierarchy defined at Org->BU->Team->Team Member(LDAP). He/She approves and rejects the selected requests.

A Web Page

http://LeaderApproval

Approval List

Emp Name	Node	Approve(Yes/No)	Instance	Approve(Yes/No)
Giacomo Guilizzoni	7	<input checked="" type="checkbox"/>	8	<input type="checkbox"/>
Marco Botton	4	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Mariah MacLachlan	3	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Valerie Liberty	4	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Guido Jack Guilizzoni	8	<input checked="" type="checkbox"/>	1	<input type="checkbox"/>

Request

Approval Form–Business Unit Head

BU Head logs into system using UID and PWD. The login screen is common and not shown for simplicity. System displays the pending approval list based on the hierarchy defined at Org->BU->Team->Team Member(LDAP). He/she approves and rejects the selected requests.

A Web Page

http://BUHeadApproval

Approval List

Emp Name	Node	Approve(Yes/No)	Instance	Approve(Yes/No)
Giacomo Guilizzoni	7	<input type="checkbox"/>	NIL	<input type="checkbox"/>
Marco Botton	4	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Mariah Maclachlan	3	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Valerie Liberty	4	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Guido Jack Guilizzoni	8	<input type="checkbox"/>	NIL	<input type="checkbox"/>

Request

Approval Form-IT Admin

By clicking "Special Resource Approval" link, IT Admin can see the pending approval list to leaders based on the hierarchy defined at Org->BU->Team->Team Member(LDAP). He/she approves and rejects the selected requests.

A Web Page

http://ITAdminApproval

Approval List

Emp Name	Node	Approve(Yes/No)	Instance	Approve(Yes/No)
Marco Botton	4	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>
Mariah MacLachlan	3	<input checked="" type="checkbox"/>	1	<input checked="" type="checkbox"/>
Valerie Liberty	4	<input type="checkbox"/>	1	<input checked="" type="checkbox"/>

CompleteApproval

Thank You

