

RED HAT
SUMMIT

10 YEARS *and counting*
SAN FRANCISCO | APRIL 14-17, 2014

Support Best Practices: Optimizing your Support Experience

Guil Barros

Principal Support Architect, Red Hat

Agenda

- Introduction
- About Red Hat Support
- 3 Things to Think About
- Opening a Case
- Search
- SOSReport
- Crash/Panic
- Need our Help?
- Closing

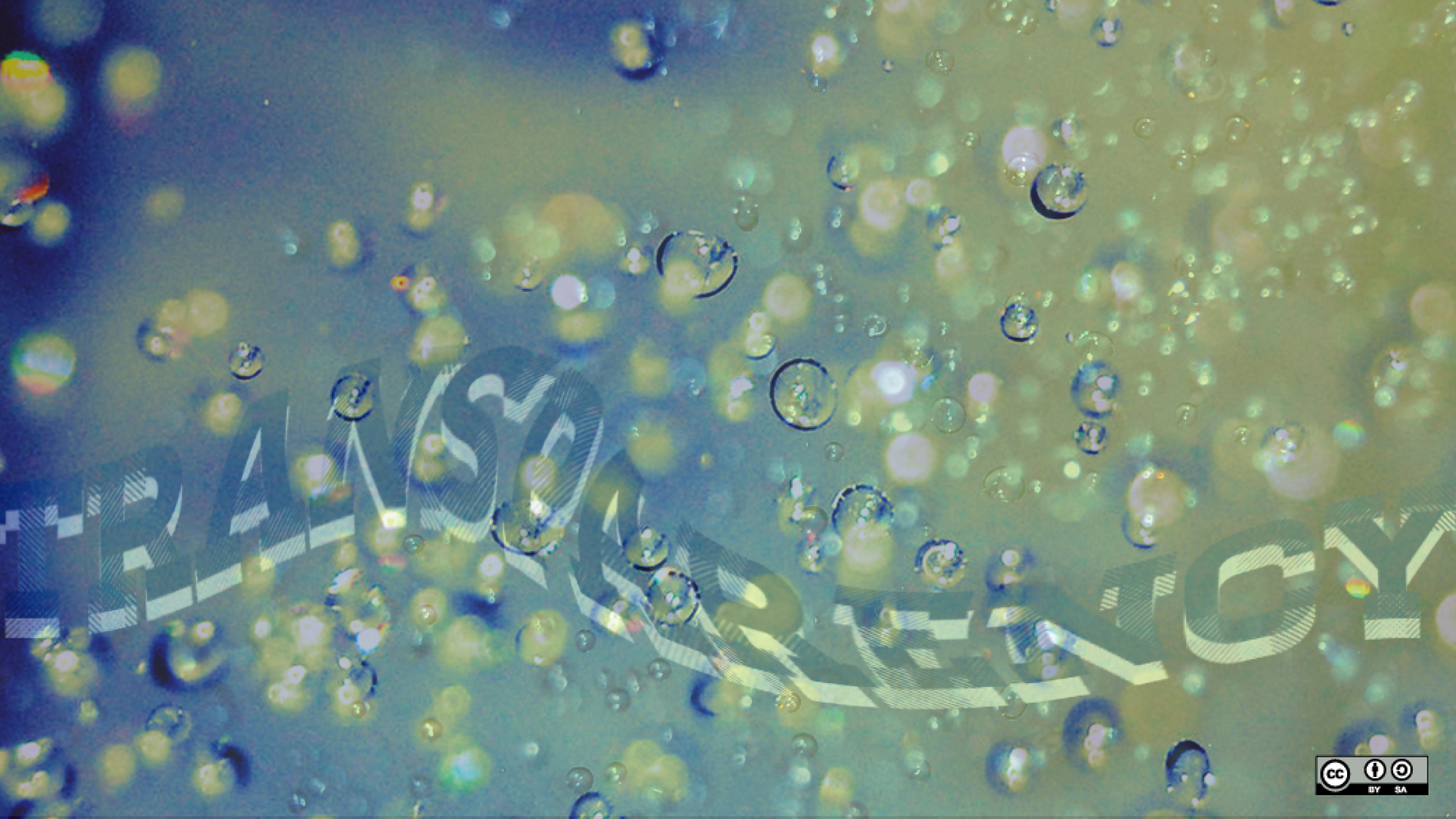
RED HAT
SUMMIT

10 YEARS *and counting*

SAN FRANCISCO | APRIL 14-17, 2014

Introduction

Who am I and why should you care



2023 SPECIAL EAGLE AWARDS

RED HAT
SUMMIT

10 YEARS *and counting*

SAN FRANCISCO | APRIL 14-17, 2014

About Red Hat Support

How the sausage is ~~made~~ supported



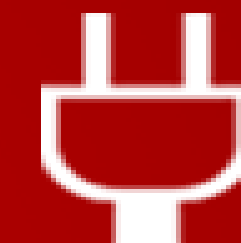
PLAN

with a technical partner, who is knowledgeable of your ecosystem.



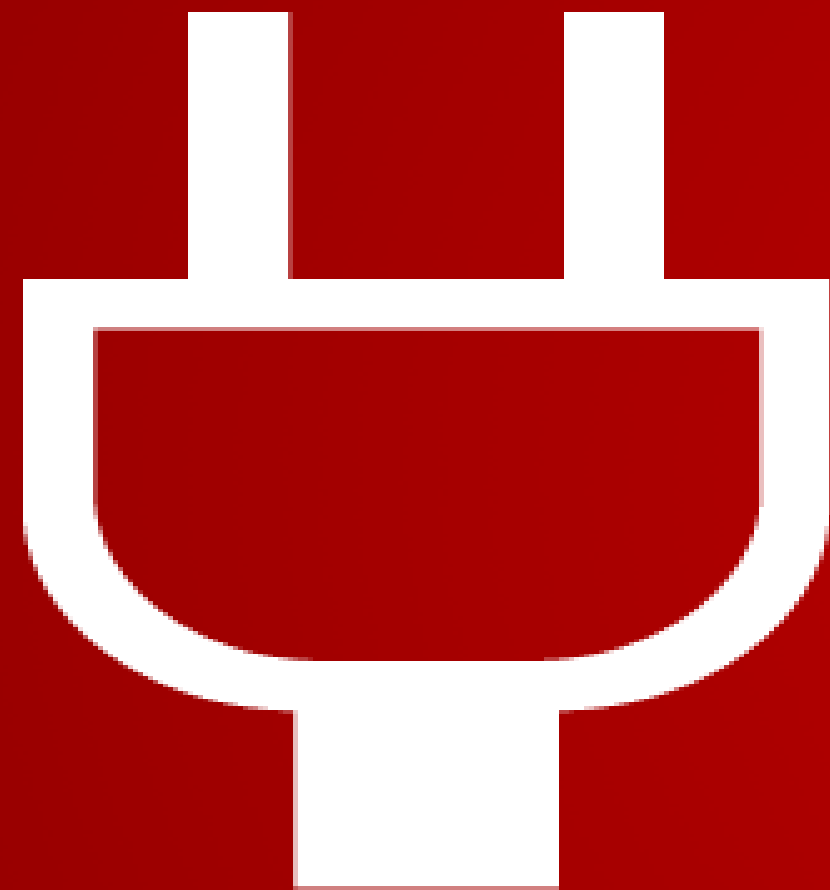
DEPLOY

with confidence in the best solution for your needs.



CONNECT

to the network of Red Hat relationships.

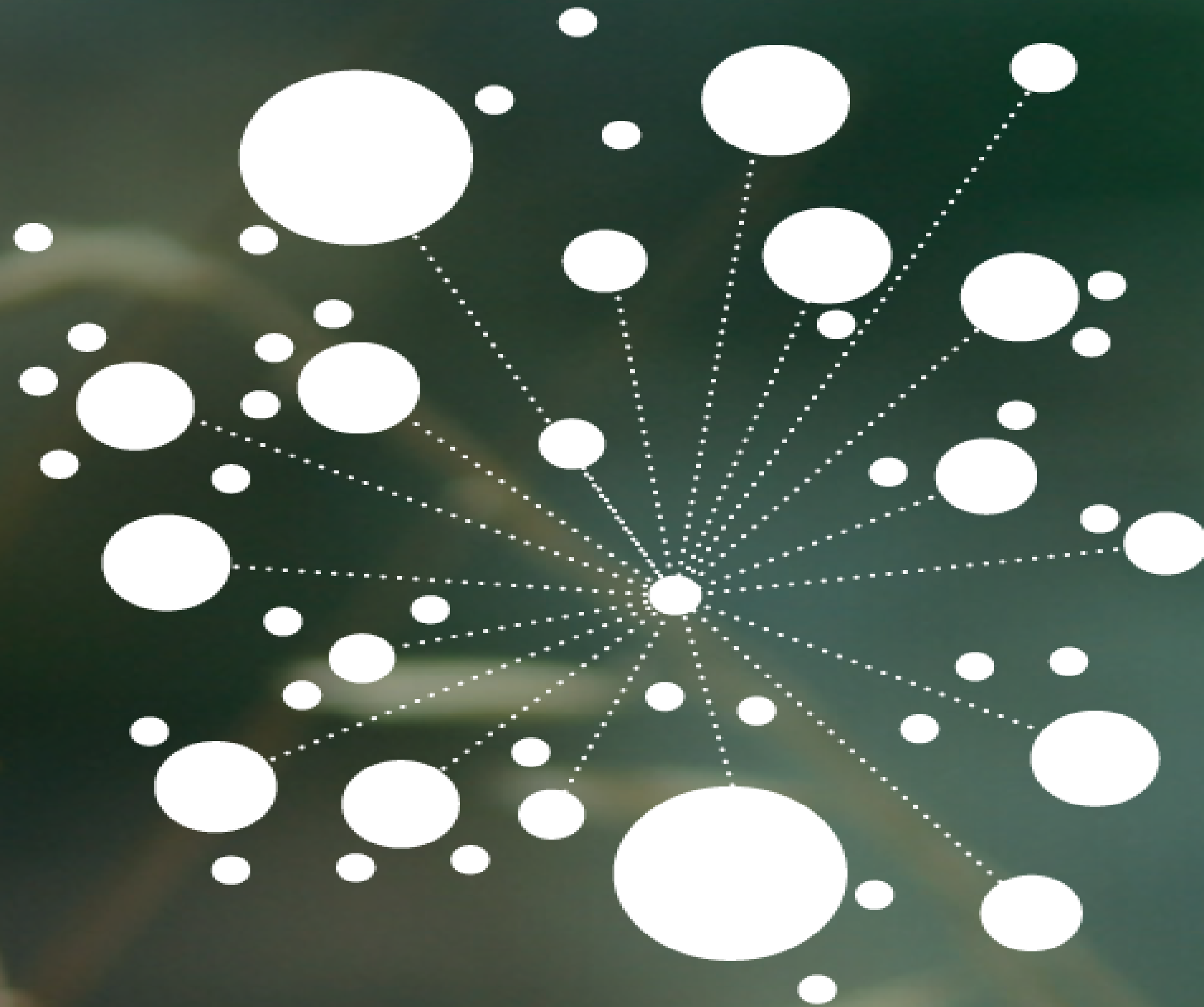


CONNECT

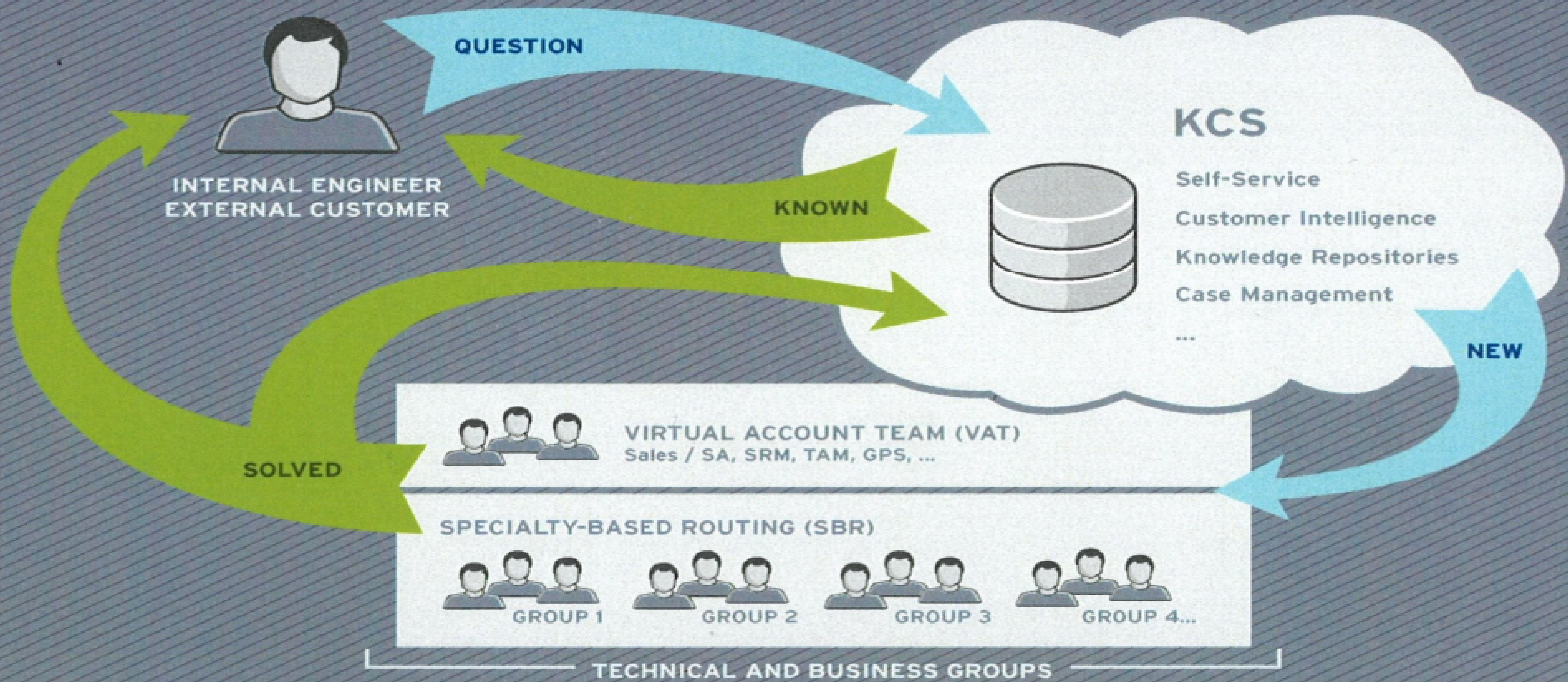
Connect to the industry's best engineers through knowledgebase, expert videos, tech briefs, and the Red Hat online user groups. Find the answers you need, when you need them.



RED HAT KNOWLEDGE-CENTERED SUPPORT



SOLVE ONCE, FOR MANY





**OH HAI
I OHPEN SOARZD
DIS FOR U**

**WE CAN DO MORE
WHEN WE WORK
TOGETHER**



RED HAT
SUMMIT

10 YEARS *and counting*

SAN FRANCISCO | APRIL 14-17, 2014

3 Things You Want to Think About

When interacting with a support organization

show me the data!

The image features the text "show me the data!" in a white, lowercase, monospaced font centered on a dark gray background. Above the text, there are three yellow line graphs. The first graph, positioned above the word "show", consists of two points connected by a line, with the second point being higher than the first. The second graph, positioned above the word "me", consists of three points connected by lines, forming a peak where the middle point is the highest. The third graph, positioned above the word "the", consists of two points connected by a line, with the second point being higher than the first. Below the text, there are three yellow line graphs. The first graph, positioned below the word "show", consists of two points connected by a line, with the second point being lower than the first. The second graph, positioned below the word "me", consists of two points connected by a line, with the second point being lower than the first. The third graph, positioned below the word "data!", consists of three points connected by lines, forming a valley where the middle point is the lowest.





SHOW

METHE

DATA

I Jest! Sorta...

We care about your Time To Resolution, not Time To Close

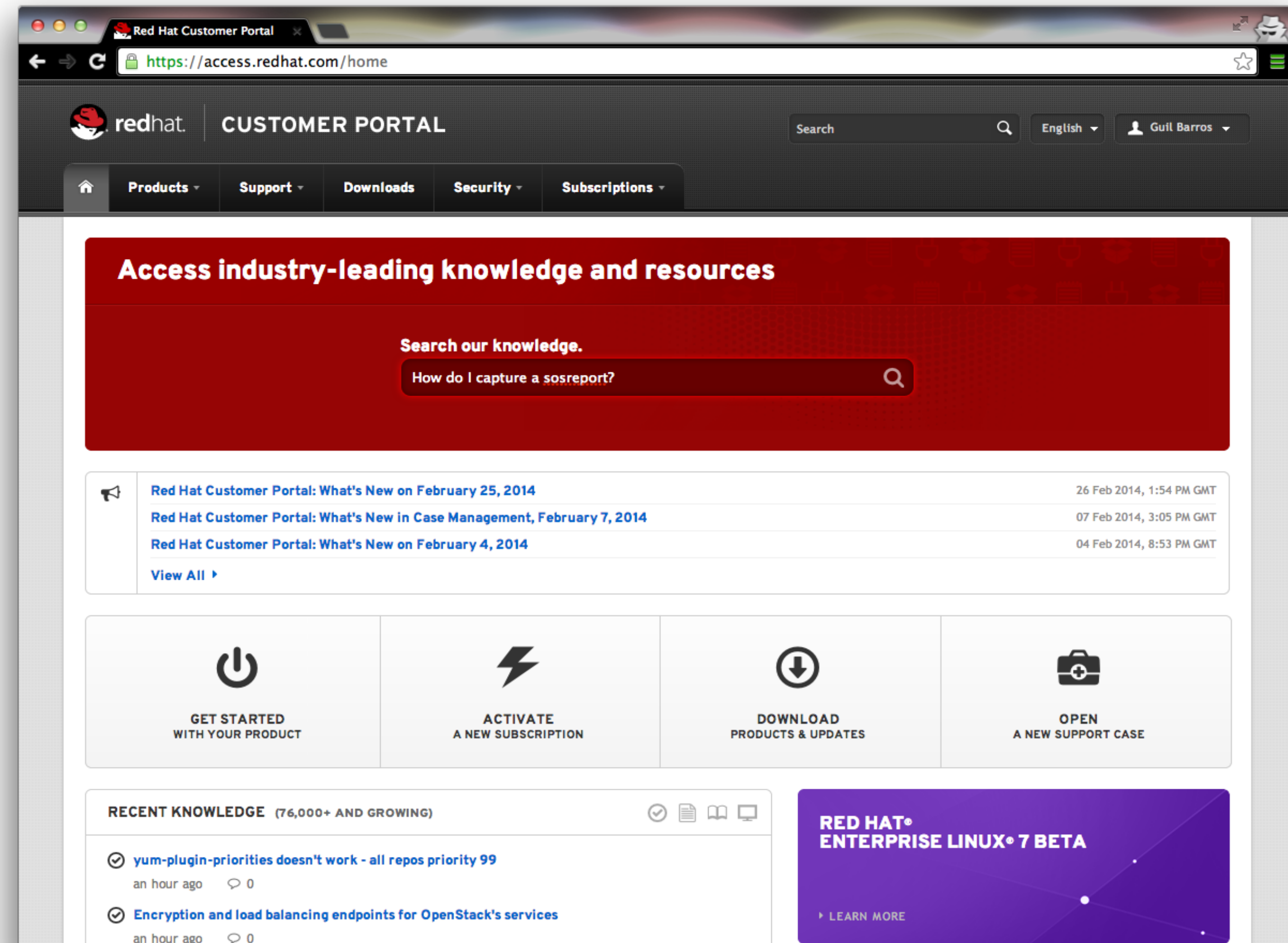
We **both** want your issue RESOLVED, not CLOSED

We **both** want to learn from it

We **both** want to document it so if it happens again we know what to do

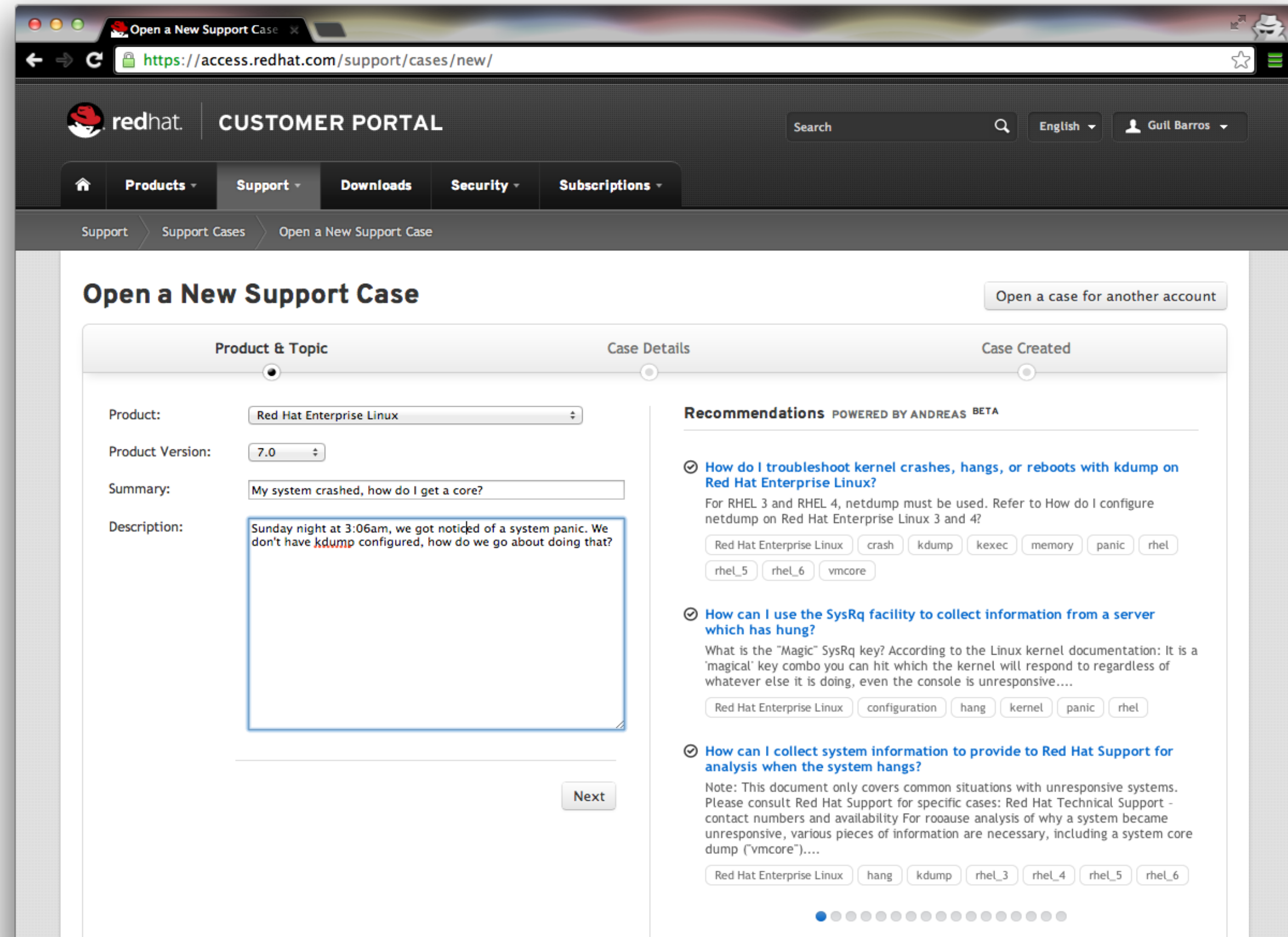
How do we get there?

- Best Practices opening a case
 - You'd be surprised...
 - What NOT to do
- Search First
- SOSReport
- Core



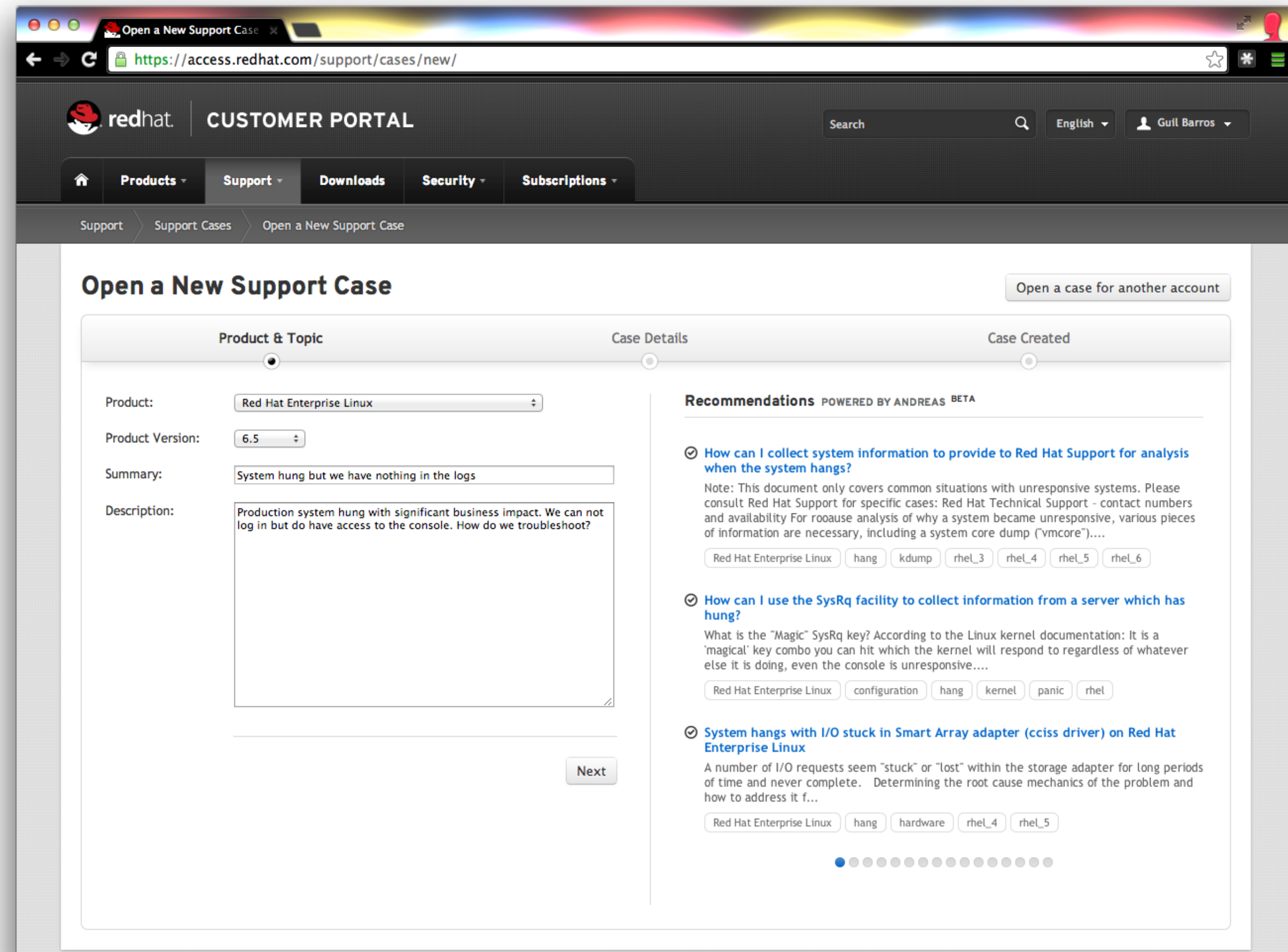
A Perfect Case

- Chances are good that we have seen this before
 - We **always** document issues in the public Knowledge Base
- The very best case is one where **you** find the solution fast without having to spend time explaining it



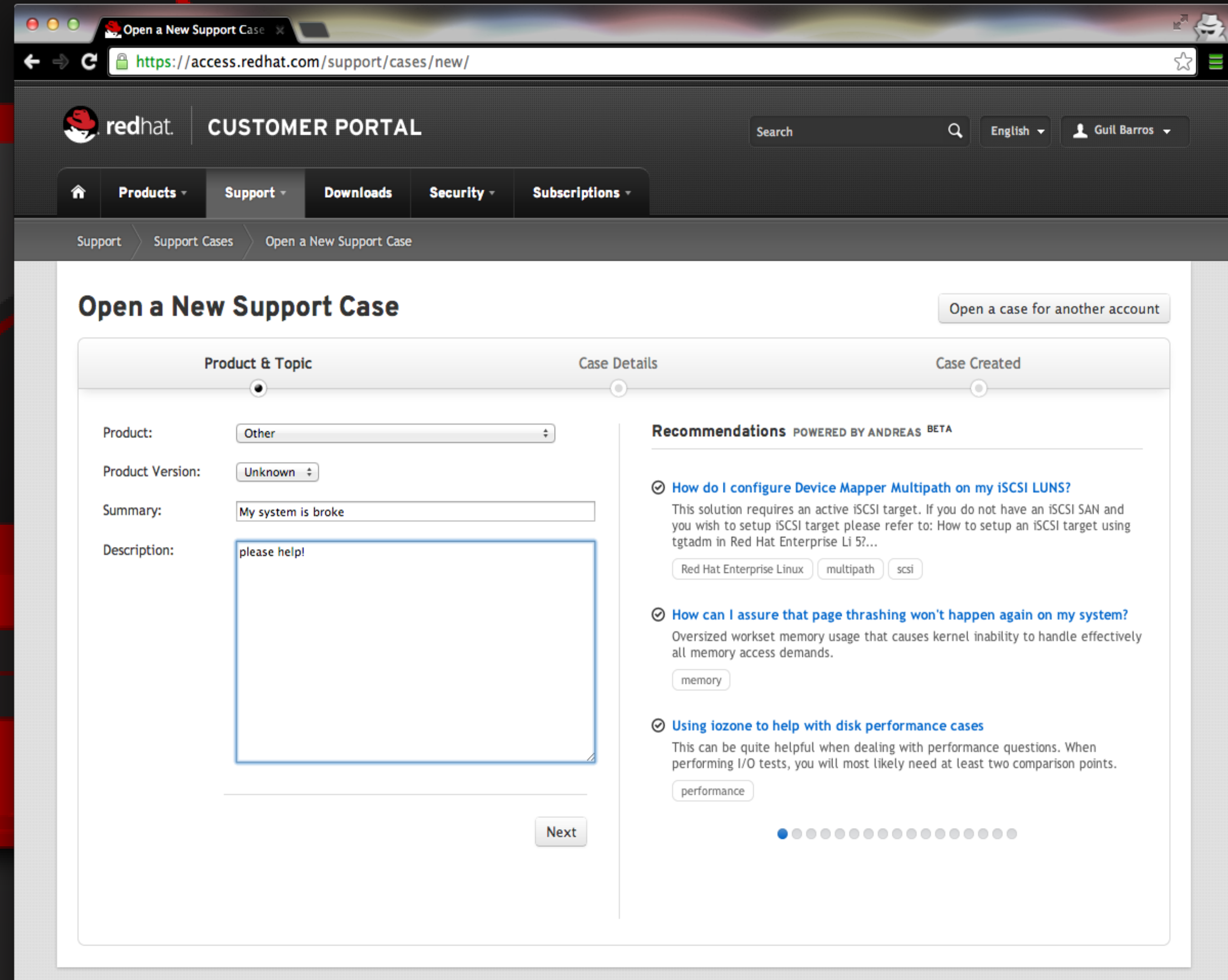
A Great Case

- Has a succinct but descriptive Subject line
- Has a detailed Description
 - When it happened
 - Can you reproduce? How?
 - Did anything change? (never...)
- Includes at least a SOSReport



A Bad Case

- Has a generic description
 - “My system crashed”
- Has few details
 - “please help find RCA, thanks!”
- Has no SOSReport
- Has poor Severity
 - In both directions!



Open a New Support Case

redhat CUSTOMER PORTAL

Search English Guill Barros

Products Support Downloads Security Subscriptions

Support Support Cases Open a New Support Case

Open a New Support Case

Open a case for another account

Product & Topic Case Details Case Created

Product: Other

Product Version: Unknown

Summary: My system is broke

Description: please help!

Next

Recommendations POWERED BY ANDREAS BETA

- ✓ [How do I configure Device Mapper Multipath on my iSCSI LUNS?](#)
This solution requires an active iSCSI target. If you do not have an iSCSI SAN and you wish to setup iSCSI target please refer to: How to setup an iSCSI target using tgtadm in Red Hat Enterprise Linux 5...
Red Hat Enterprise Linux multipath scsi
- ✓ [How can I assure that page thrashing won't happen again on my system?](#)
Oversized workset memory usage that causes kernel inability to handle effectively all memory access demands.
memory
- ✓ [Using izone to help with disk performance cases](#)
This can be quite helpful when dealing with performance questions. When performing I/O tests, you will most likely need at least two comparison points.
performance

**RED HAT WILL NOT ARGUE WITH YOU ABOUT
THE URGENCY OF YOUR SUPPORT ISSUES.**

**IT IS, AFTER ALL,
YOUR BUSINESS
ON THE LINE**



RED HAT
SUMMIT

10 YEARS *and counting*

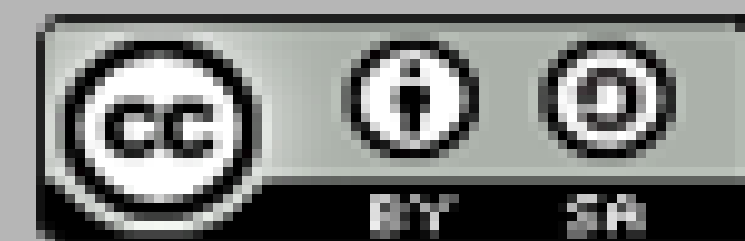
SAN FRANCISCO | APRIL 14-17, 2014

Why should I spend time doing this?

Searching...

- We create Knowledge Articles for all Issues
- Of cases where an Article was linked shortly after we received a SOSReport, **15%** were resolved almost immediately
- Average time it took us to get that SOSReport?

15 Hours



Searching...

How are we making this easier?

- We search for you while you create the case

Open a New Support Case

redhat. CUSTOMER PORTAL

Search English Guil Barros

Products Support Downloads Security Subscriptions

Support Support Cases Open a New Support Case

Open a case for another account

Product & Topic Case Details Case Created

Product: Red Hat Enterprise Linux

Product Version: 6.5

Summary: EDAC errors in logs

Description: Seeing the following repeated a few times a day in the logs:
EDAC MC0: CE page 0xc6397, offset 0x0, grain 4096, syndrome 0xfc1, row 4, channel 0, label '': e752x CE

Next

Recommendations POWERED BY ANDREAS BETA

- ✓ Error Detection and Correction (EDAC) Support available in Red Hat Enterprise Linux
Memory error checking on a memory module used to be accomplished with a parity checking bit that was attached to each byte of memory.
Red Hat Enterprise Linux ecc rhel_4 rhel_5 rhel_6
- ✓ "kernel: EDAC k8 MC1: extended error code: ECC chipkill x4 error" in messages log
It is possibly a memory module problem. EDAC is Error Detection and Correction, it will try to detect and correct hardware problems.
Red Hat Enterprise Linux ecc hardware pki rhel rhel_4 rhel_5 rhel_6
- ✓ Why are EDAC errors still being logged after replacing the faulty hardware?
EDAC errors are not always considered as hardware error.
Red Hat Enterprise Linux hardware rhel

Searching...

- Search for and view knowledge content directly from the console.

```
Welcome to the Red Hat Support Tool.
Command (? for help): search How to configure device mapper multipath

Type the number of the solution to view or 'e' to return to the previous menu.
 1 [ 66281:VER] How to configure device mapper multipath
 2 [ 16976:VER] How do I configure Device Mapper Multipath on my iSCSI LUNS?
 3 [ 47894:VER] How do I setup multipath on a system that already has LVM configured?
 4 [ 3689:VER] How to setup device-mapper multipathing in Red Hat Enterprise Linux ?
 5 [ 272153:VER] How to create Oracle ASM disks using DM Multipath devices in Red Hat Enterprise Linux 6?
 6 [ 194133:UNV] How to set up persistent owner/group/mode permission on multipath devices in Red Hat Enterprise Linux 6?
 7 [ 6387:VER] How to configure the iscsi-initiator in Red Hat Enterprise Linux?
 8 [ 10163:VER] How do I add raw device mapping in Red Hat Enterprise Linux 5?
 9 [ 2989:VER] Why do I see 'found duplicate pv' warnings when using LVM with multipath storage in RHEL?
10 [ 97323:WIP] How to install Red Hat Enterprise Linux version 5 (RHEL5) boot from SAN with multipath
11 [ 65960:UNV] Is there an easy way to set a proper LVM filter?
11 of 23 solutions displayed. Type 'm' to see more, 'r' to start from the beginning again, or '?' for help with the codes d
isplayed in the above output.
Select a Solution: █
```

RED HAT
SUMMIT

10 YEARS *and counting*

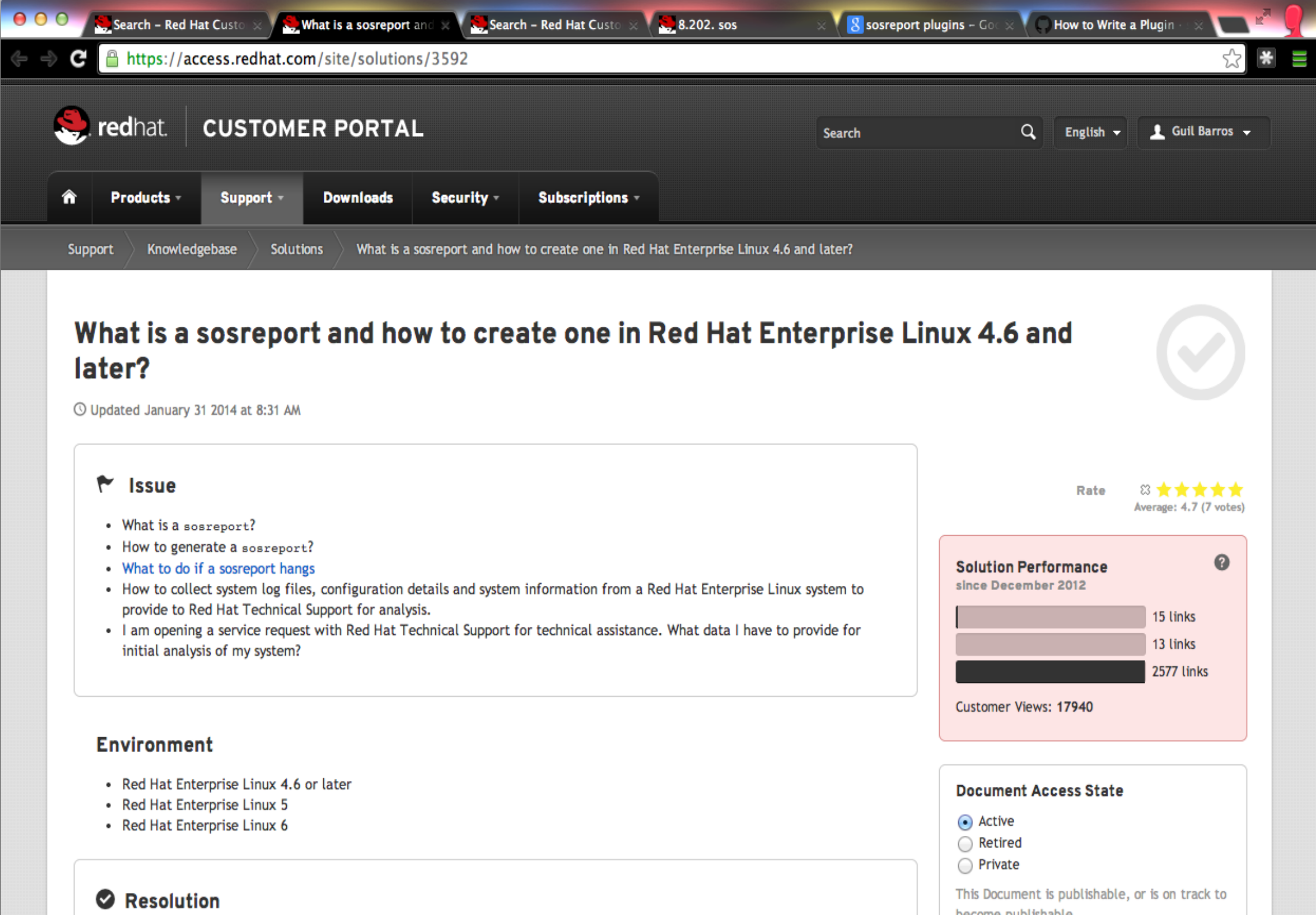
SAN FRANCISCO | APRIL 14-17, 2014

SOSReports

What/Why/Where/How?

SOSReports are Easy!

- We need one in almost every case
 - Remember those 15 hours?
- Worried about your proprietary data?
 - Check it out, it's just a tarball
 - NDA
 - Purge it

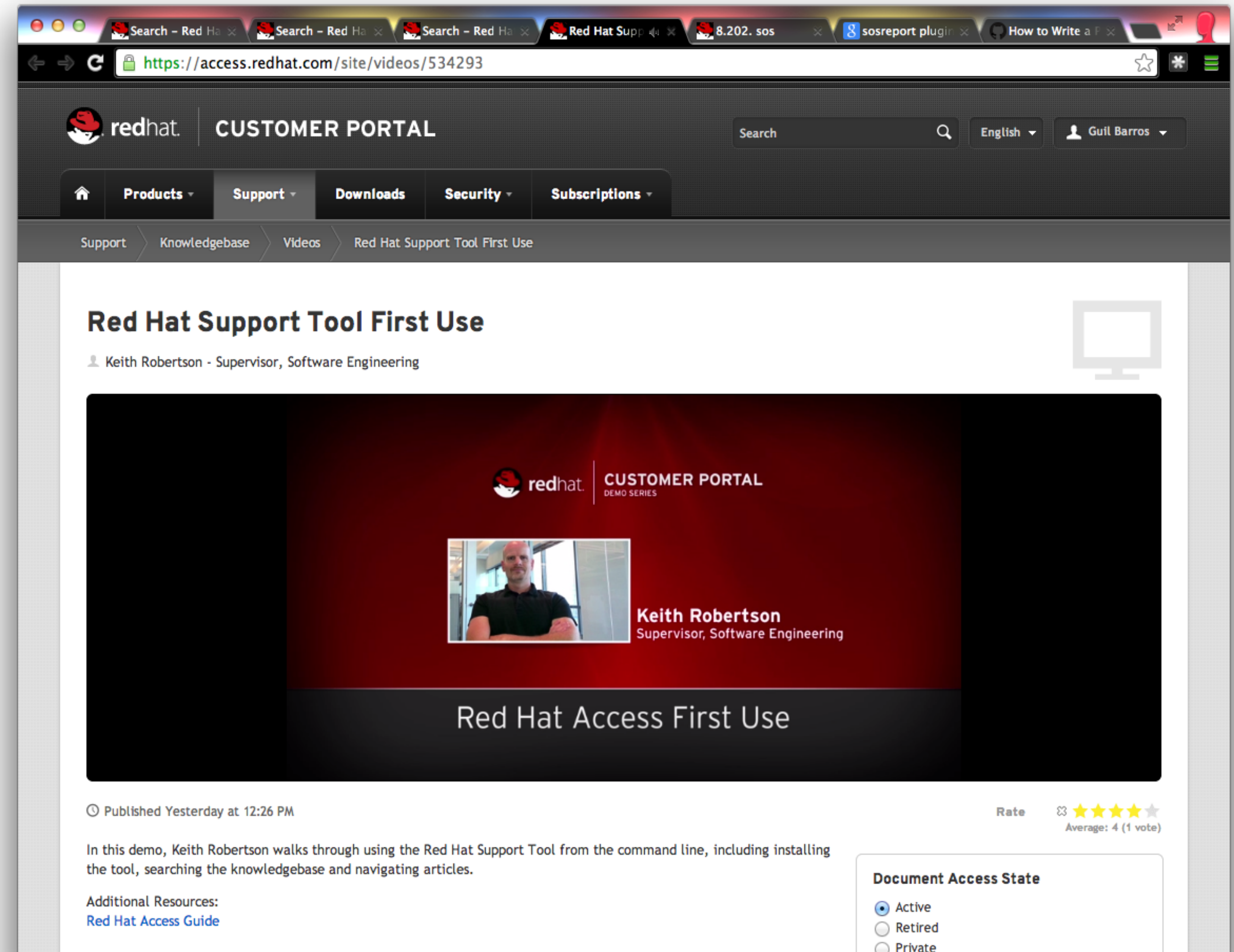


The screenshot shows the Red Hat Customer Portal interface. The browser address bar displays the URL <https://access.redhat.com/site/solutions/3592>. The page title is "What is a sosreport and how to create one in Red Hat Enterprise Linux 4.6 and later?". The article is dated "Updated January 31 2014 at 8:31 AM" and has a rating of 4.7 (7 votes). The "Issue" section lists several topics: "What is a sosreport?", "How to generate a sosreport?", "What to do if a sosreport hangs", "How to collect system log files, configuration details and system information from a Red Hat Enterprise Linux system to provide to Red Hat Technical Support for analysis.", and "I am opening a service request with Red Hat Technical Support for technical assistance. What data I have to provide for initial analysis of my system?". The "Environment" section lists "Red Hat Enterprise Linux 4.6 or later", "Red Hat Enterprise Linux 5", and "Red Hat Enterprise Linux 6". The "Resolution" section is marked with a checkmark. On the right side, there is a "Solution Performance" section showing "15 links", "13 links", and "2577 links" with a "Customer Views: 17940" count. Below that is a "Document Access State" section with options for "Active", "Retired", and "Private".

SOSReports are Easy!

How are we making this easier for you?

- Red Hat Support Tools
 - Generates SOSReport for you & attaches to your case
 - Summit Presentation
 - Watch the video!
- Coming soon!
 - Data Obfuscation plugin



The screenshot shows a web browser window displaying a Red Hat Customer Portal page. The URL is <https://access.redhat.com/site/videos/534293>. The page features a navigation bar with 'redhat. CUSTOMER PORTAL' and a search bar. Below the navigation bar, there are tabs for 'Products', 'Support', 'Downloads', 'Security', and 'Subscriptions'. The main content area is titled 'Red Hat Support Tool First Use' and is authored by Keith Robertson, Supervisor, Software Engineering. The video player shows a thumbnail of Keith Robertson with the text 'Red Hat Access First Use'. Below the video, there is a 'Published Yesterday at 12:26 PM' timestamp, a 'Rate' section with a 4-star average rating, and a 'Document Access State' section with radio buttons for 'Active', 'Retired', and 'Private'. The 'Active' option is selected.

SOSReports are Easy!

- Lets try it...

SOSReports are Easy!

- Create and upload from RHT Support Tools

```
Welcome to the Red Hat Support Tool.
Command (? for help): search How to configure device mapper multipath

Type the number of the solution to view or 'e' to return to the previous menu.
 1 [ 66281:VER] How to configure device mapper multipath
 2 [ 16976:VER] How do I configure Device Mapper Multipath on my iSCSI LUNS?
 3 [ 47894:VER] How do I setup multipath on a system that already has LVM configured?
 4 [ 3689:VER] How to setup device-mapper multipathing in Red Hat Enterprise Linux ?
 5 [ 272153:VER] How to create Oracle ASM disks using DM Multipath devices in Red Hat Enterprise Linux 6?
 6 [ 194133:UNV] How to set up persistent owner/group/mode permission on multipath devices in Red Hat Enterprise Linux 6?
 7 [ 6387:VER] How to configure the iscsi-initiator in Red Hat Enterprise Linux?
 8 [ 10163:VER] How do I add raw device mapping in Red Hat Enterprise Linux 5?
 9 [ 2989:VER] Why do I see 'found duplicate pv' warnings when using LVM with multipath storage in RHEL?
10 [ 97323:WIP] How to install Red Hat Enterprise Linux version 5 (RHEL5) boot from SAN with multipath
11 [ 65960:UNV] Is there an easy way to set a proper LVM filter?
11 of 23 solutions displayed. Type 'm' to see more, 'r' to start from the beginning again, or '?' for help with the codes d
isplayed in the above output.
Select a Solution: █
```


Remember:
15 Hours

RED HAT
SUMMIT

10 YEARS *and counting*

SAN FRANCISCO | APRIL 14-17, 2014

Crashes & Panics

Yes, you really do want kdump configured.

Crashes & Panics

Customers mentioned Crashes and Panics in 5% of cases for 2013

- We asked for a system core in **64%** of those cases
- Kdump was not configured in **40%** of them

In an additional 5% of cases we ended up also requesting a core

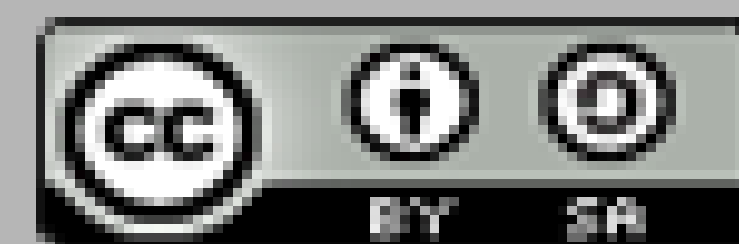
What does this mean?

- In 8% of **all** cases a core was required
- Customers usually had to incur a 2nd outage to get the core

Crashes & Panics

How long did it take us to receive the average core?

33 *HOURS*



Crashes & Panics

Kdump is Easy!

- We can help with more complex configurations
- Probably the same config for most of your environment
- Shared storage, dump to NFS, SSH, SAN
- Remember to test!

How are we making this easier?

- Videos, Documentation, services

Crashes & Panics

```
[root@localhost ~]# redhat-support-tool
Welcome to the Red Hat Support Tool.
Command (? for help): btextract --all ~/vmcore

Select the crash command output to view or 'e' to return to the previous menu.
1 Output from crash 'bt -a'
2 Diagnose 'bt -a' output
3 Output from crash 'bt -e'
4 Output from crash 'foreach bt'
5 Output from crash 'log'
6 Output from crash 'ps'
7 Output from crash 'files'

Selection: █
```


Crashes & Panics

One more thing...

- Seeing the backtrace & RIP code *might* be enough to identify the problem
- Check the console and attach it to your case while we wait for a core



Crashes & Panics

- Lets try it...

RED HAT
SUMMIT

10 YEARS *and counting*

SAN FRANCISCO | APRIL 14-17, 2014

Closing

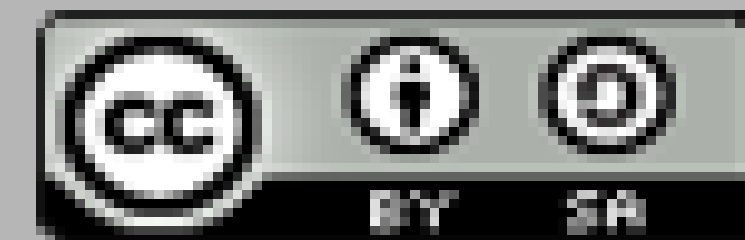
What we have learned from all this blabber...

Take Aways

The 3 lessons I promised?

- Search, Search, Search
- Send us a SOSReport immediately when you open a case
- Configure kdump on all your systems

48 *Hours*



Closing

Did this resonate with you, think your organization could benefit from a premium support resource like me? Lets chat!

Guil Barros

Principal Support Architect, Red Hat

gbarros@redhat.com



Thanks

Images from:

Flickr Commons, opensourceway, Red Hat, Library of Congress, crossfirecw. All images CC or other appropriate licenses.

SHARPE