Why You Should Add Logging To Your Code

(and how to make it more helpful)

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posit::conf(2023)

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In Production Today: Shiny Apps, Plumber APIs, and Scheduled Markdowns

Content / Cloudflare Hourly Logpull

All logs | Render ran 20 days agoiv5b3wtBC | Download Log | Find in log

Render ran 20 days ago

iv5b3wtBQEY3QNDJ on Prod01 for a few seconds

This process ended with an error. For more info about this error: "render-r-code-error" in the User Guide

```
2023/07/25 10:00:53 PM:   $ message: logi TRUE
2023/07/25 10:00:53 PM:
2023/07/25 10:00:54 PM:   Quitting from lines 184-250 (logpull.Rmd)
2023/07/25 10:00:54 PM:   Error in value[[3L]](cond) :
2023/07/25 10:00:54 PM:   Calls: local ... tryCatch -> tryCatchList -> tryCatchOne ->
2023/07/25 10:00:54 PM:   In addition: Warning messages:
2023/07/25 10:00:54 PM:   1: In "data" %in% names(x) : restarting interrupted promise evaluation
2023/07/25 10:00:54 PM:   2: In "data" %in% names(x) : restarting interrupted promise evaluation
2023/07/25 10:00:54 PM:   3: In "data" %in% names(x) : restarting interrupted promise evaluation
2023/07/25 10:00:54 PM:
2023/07/25 10:00:54 PM:   Execution halted
```

```
library(plumber)




#* Return the quotient of two numbers
#* @param a The numerator
#* @param b The denominator
#* @get /divide
function(a = NULL, b = NULL, res) {




    as.numeric(a) / as.numeric(b)

}
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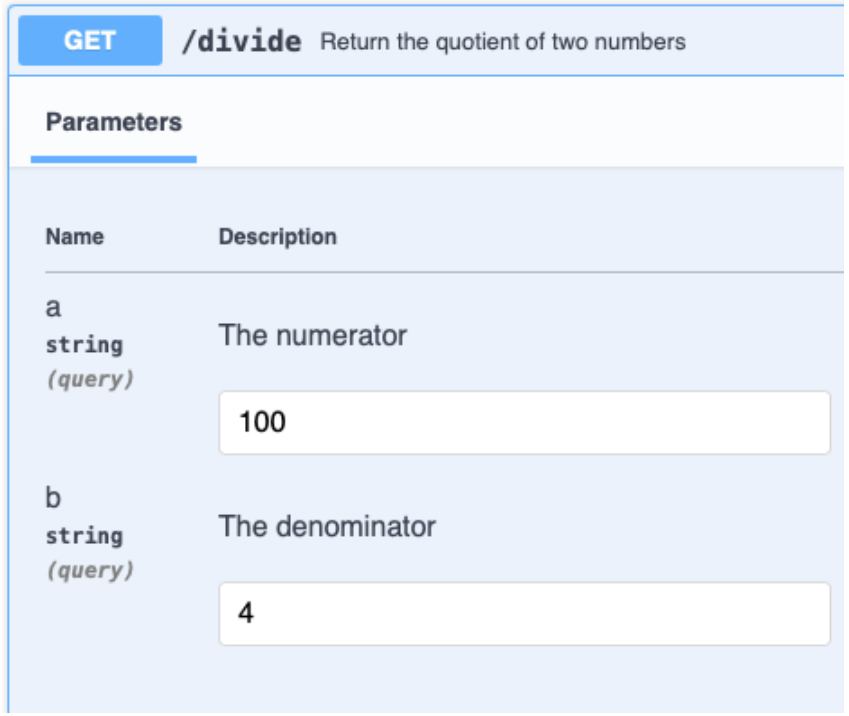

Add the first trail marker (informational)

```
library(plumber)
library(glue)
library(log4r)

logger <- logger()

#* Return the quotient of two numbers
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function(a = NULL, b = NULL, res) {




    info(logger, glue("Attempting to divide {a} by {b}"))
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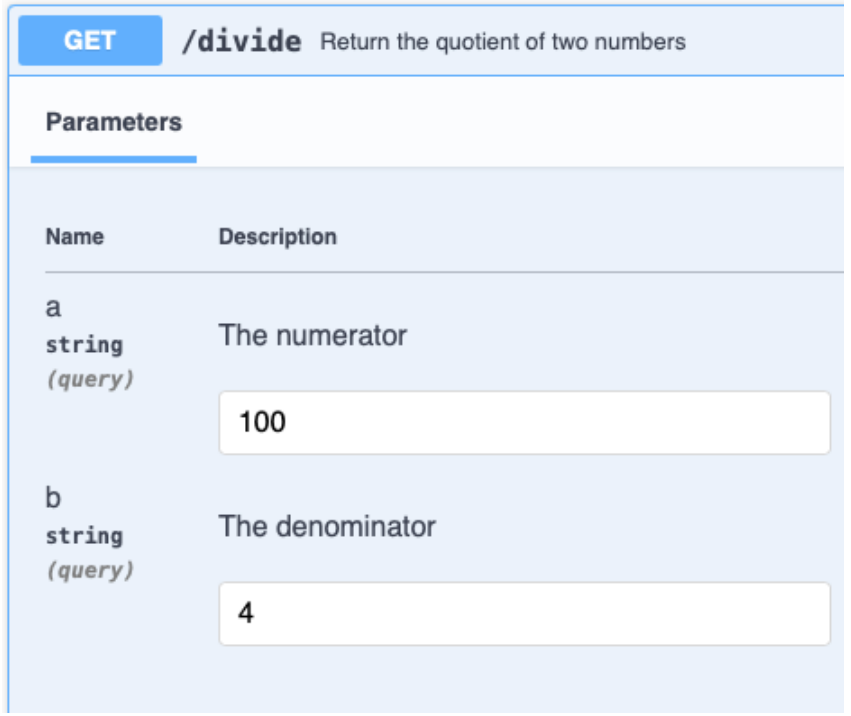

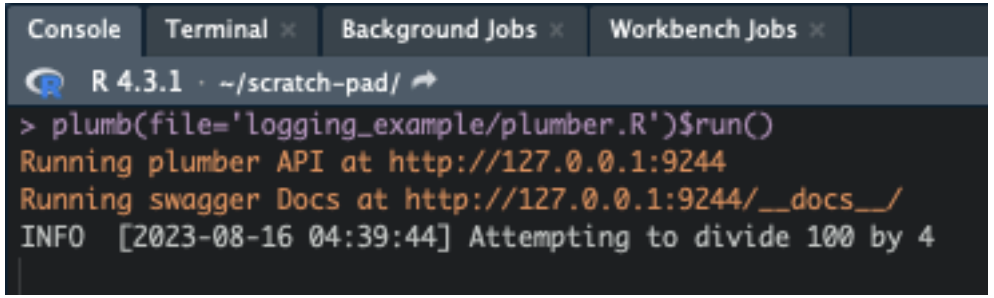

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Add the second trail marker (warning)

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logger <- logger()

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#* @param a The numerator
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#* @get /divide
function(a = NULL, b = NULL, res) {
    if (missing(a) | missing(b)){
      err_msg <- "Must supply numerator and denominator"
      res$status <- 400
      warn(logger, err_msg)
      return(list(error = err_msg))
    } else {
    info(logger, glue("Attempting to divide {a} by {b}"))
    as.numeric(a) / as.numeric(b)
    }
}
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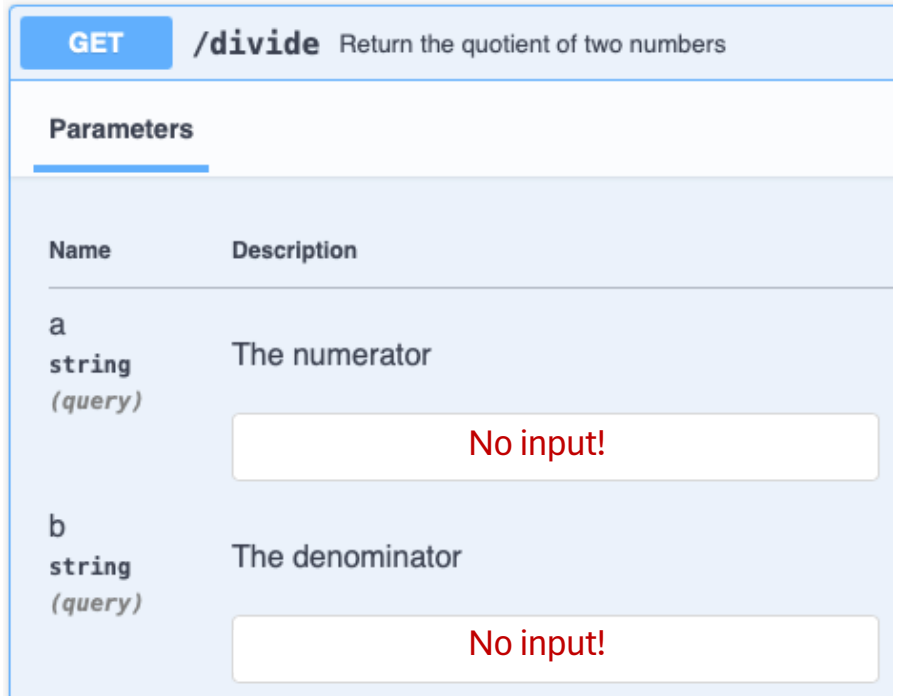

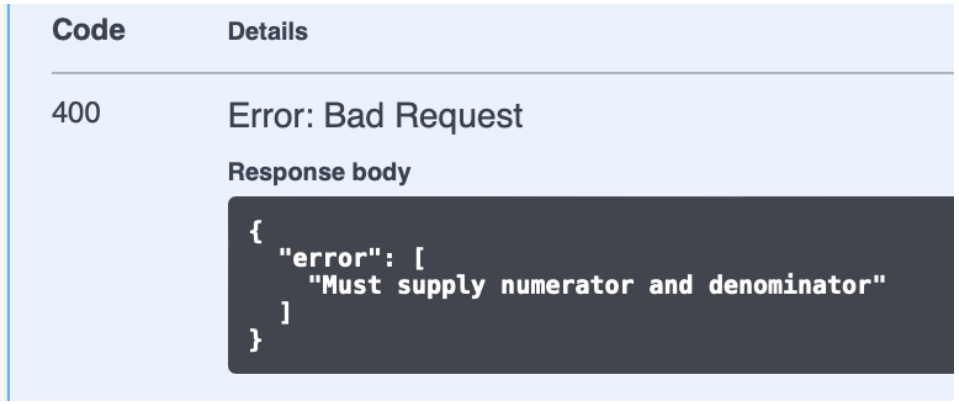

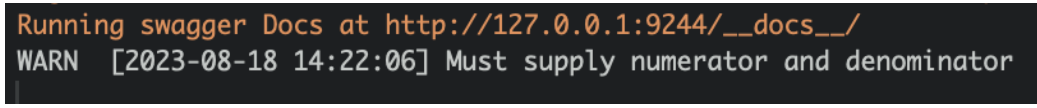

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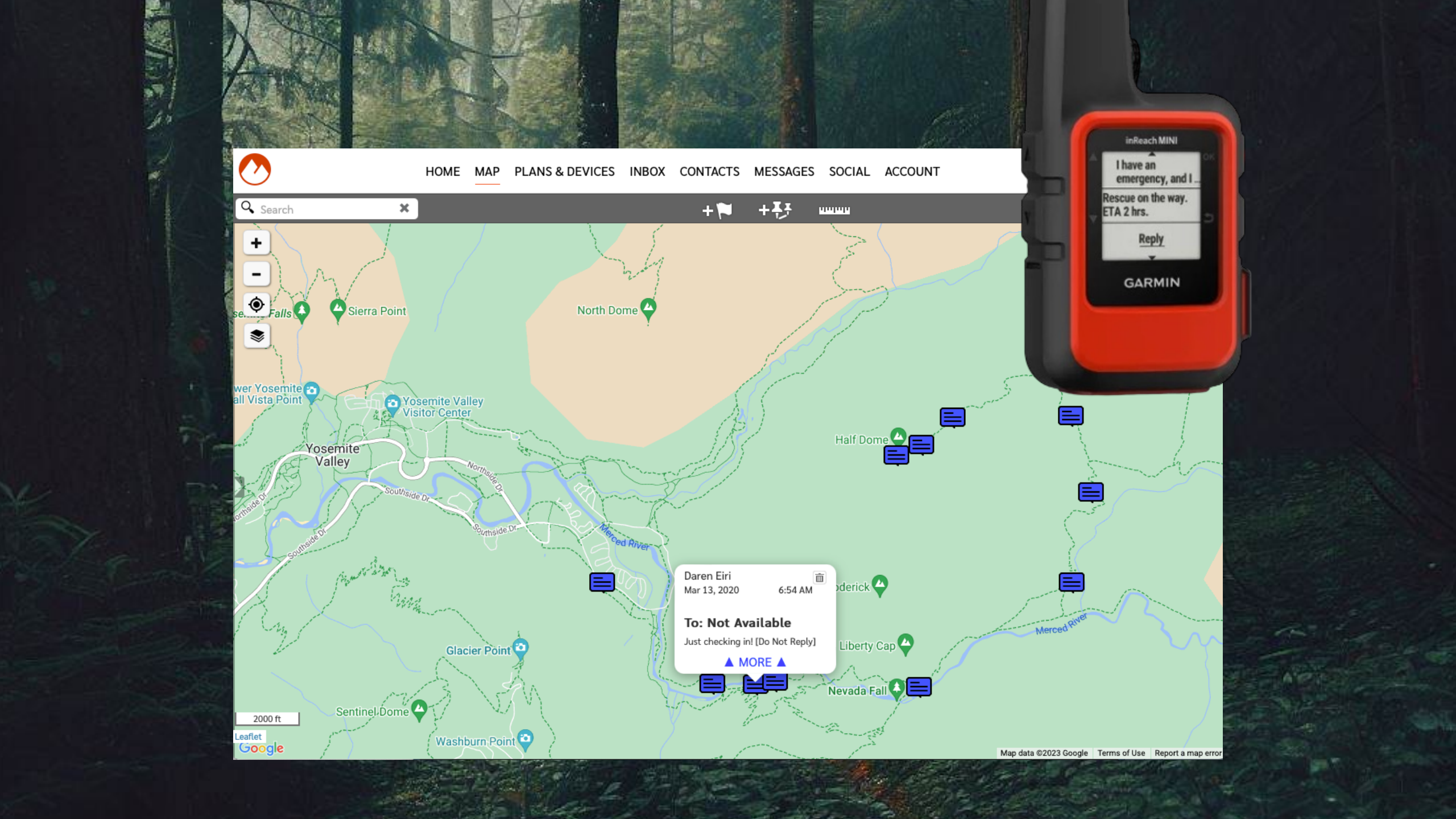
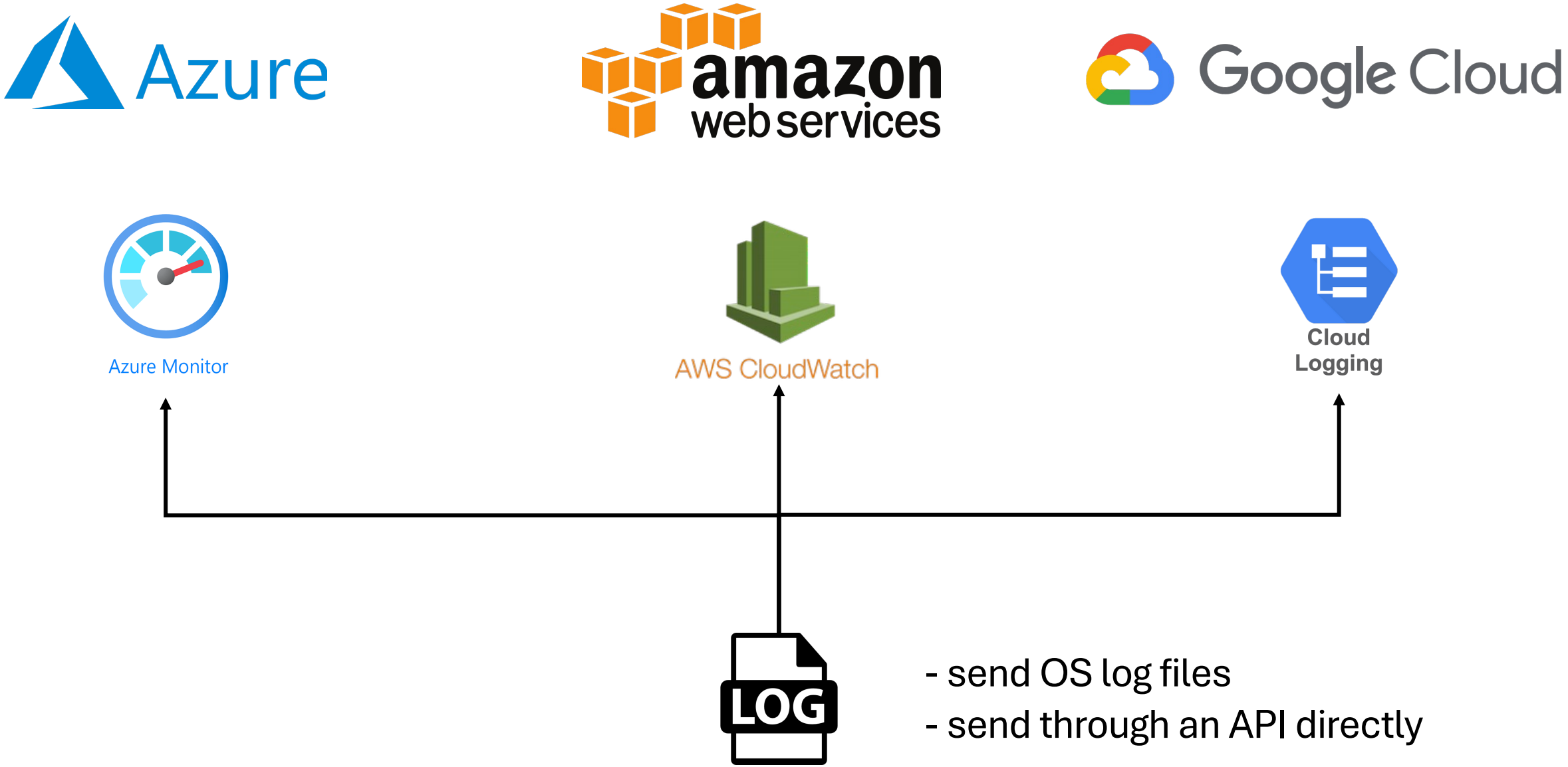

HOME
MAP
PLANS & DEVICES
INBOX
CONTACTS
MESSAGES
SOCIAL
ACCOUNT
Search
inReach MINI
I have an emergency, and I ...
Rescue on the way. ETA 2 hrs.
Reply
GARMIN
Sierra Point
North Dome
Yosemite Valley Visitor Center
Yosemite Valley
Half Dome
Northside Dr
Southside Dr
Merced River
Daren Eiri
Mar 13, 2020
6:54 AM
To: Not Available
Just checking in! [Do Not Reply]
▲ MORE ▲
Glacier Point
Liberty Cap
Nevada Fall
Sentinel Dome
Washburn Point
2000 ft
Leaflet
Google
Map data ©2023 Google
Terms of Use
Report a map error

Add satellite communicator capability



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Log image from Flaticon.com

Add satellite communicator capability

```
library(plumber)
library(glue)
library(rsyslog)
library(log4r)
logger <- logger(appenders = syslog_appender("division-calculator-api"))

#* Return the quotient of two numbers
#* @param a The numerator
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function(a = NULL, b = NULL, res) {
    if (missing(a) | missing(b)){
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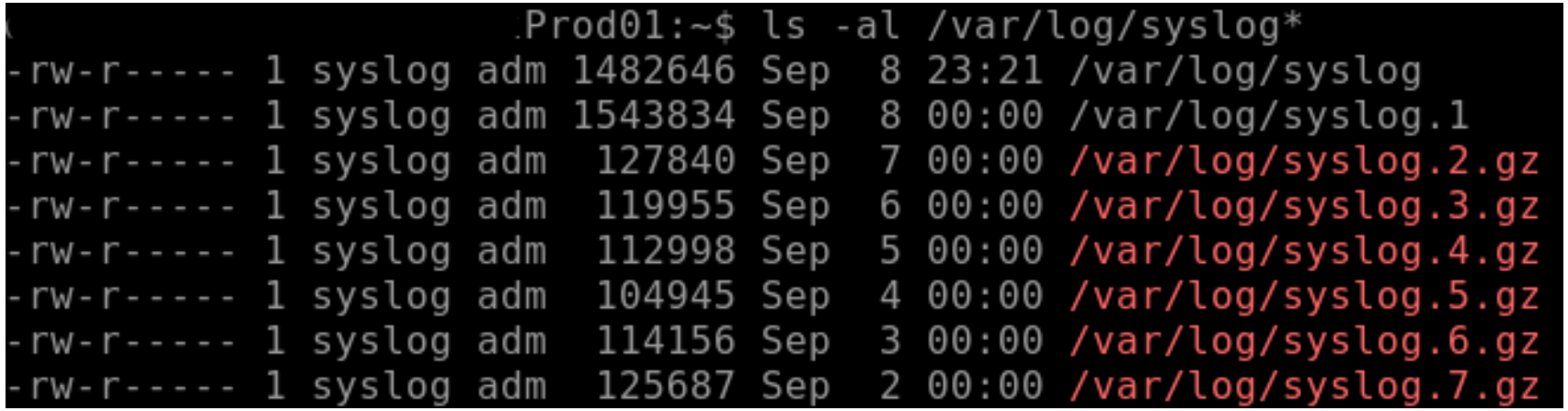
}
```

What Is Syslog?

syslog = system's primary logging file (linux)



What Is Syslog?

```
Sep  8 22:15:36 Prod01 dbus-daemon[736]: [system] Successfully activated service 'org.freedesktop.timedate1'
Sep  8 22:15:36 Prod01 systemd[1]: Started Time & Date Service.
Sep  8 22:15:37 Prod01
Sep  8 22:15:37 Prod01
Sep  8 22:15:37 Prod01
Sep  8 22:15:38 Prod01
Sep  8 22:15:41 Prod01
Sep  8 22:15:41 Prod01
Sep  8 22:15:41 Prod01
Sep  8 22:15:41 Prod01
Sep  8 22:15:42 Prod01
Sep  8 22:16:06 Prod01
Sep  8 22:17:01 Prod01
Sep  8 22:18:27 Prod01 division-calculator-api: Must supply numerator and denominator
Sep  8 22:19:48 Prod01 systemd[1]: Starting Time & Date Service...
Sep  8 22:19:48 Prod01 dbus-daemon[736]: [system] Successfully activated service 'org.freedesktop.timedate1'
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Sep  8 22:19:49 Prod01
Sep  8 22:19:49 Prod01
Sep  8 22:19:49 Prod01
Sep  8 22:19:50 Prod01
Sep  8 22:19:50 Prod01 division-calculator-api: Attempting to divide 3 by 1
Sep  8 22:19:53 Prod01
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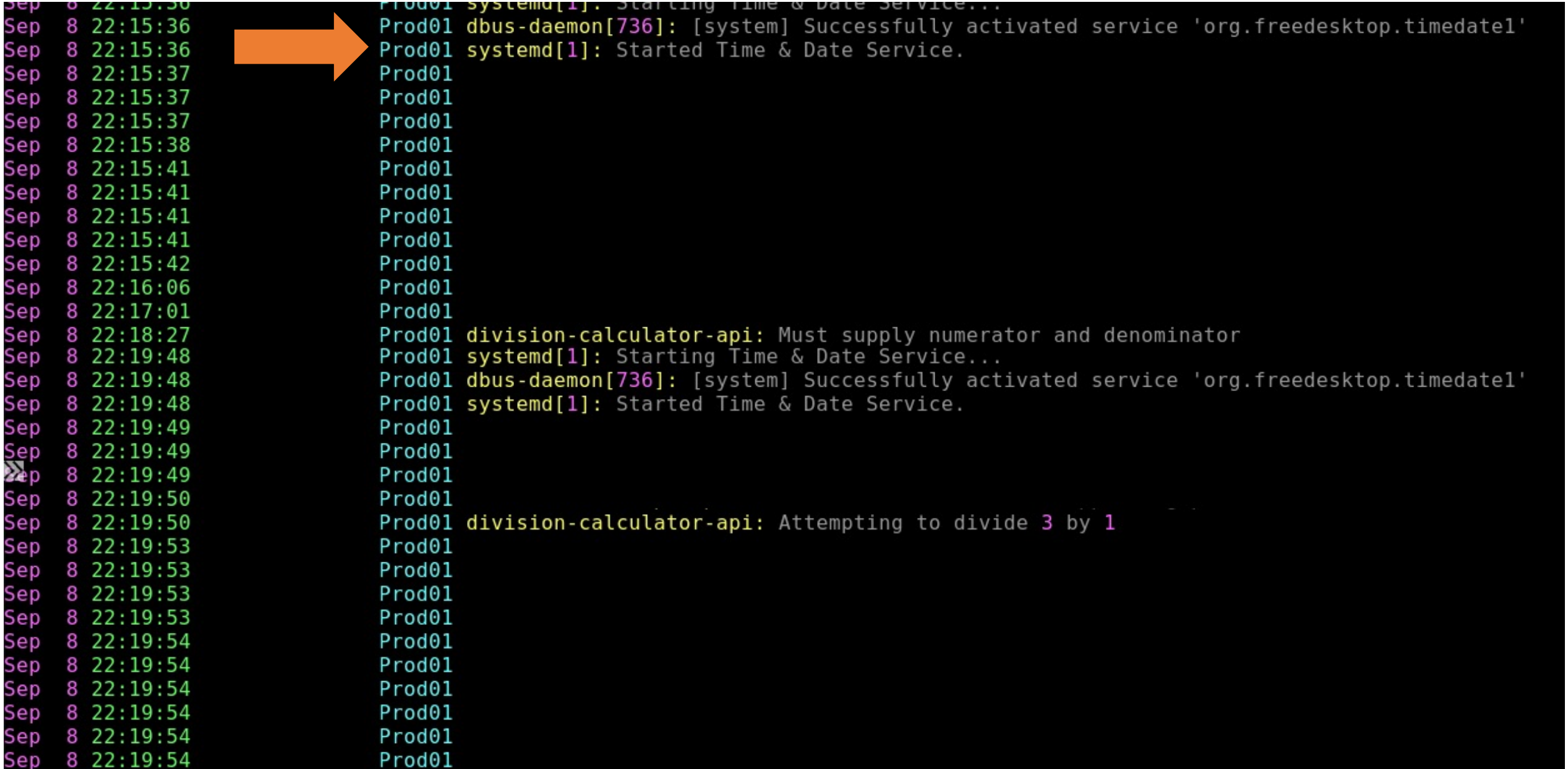

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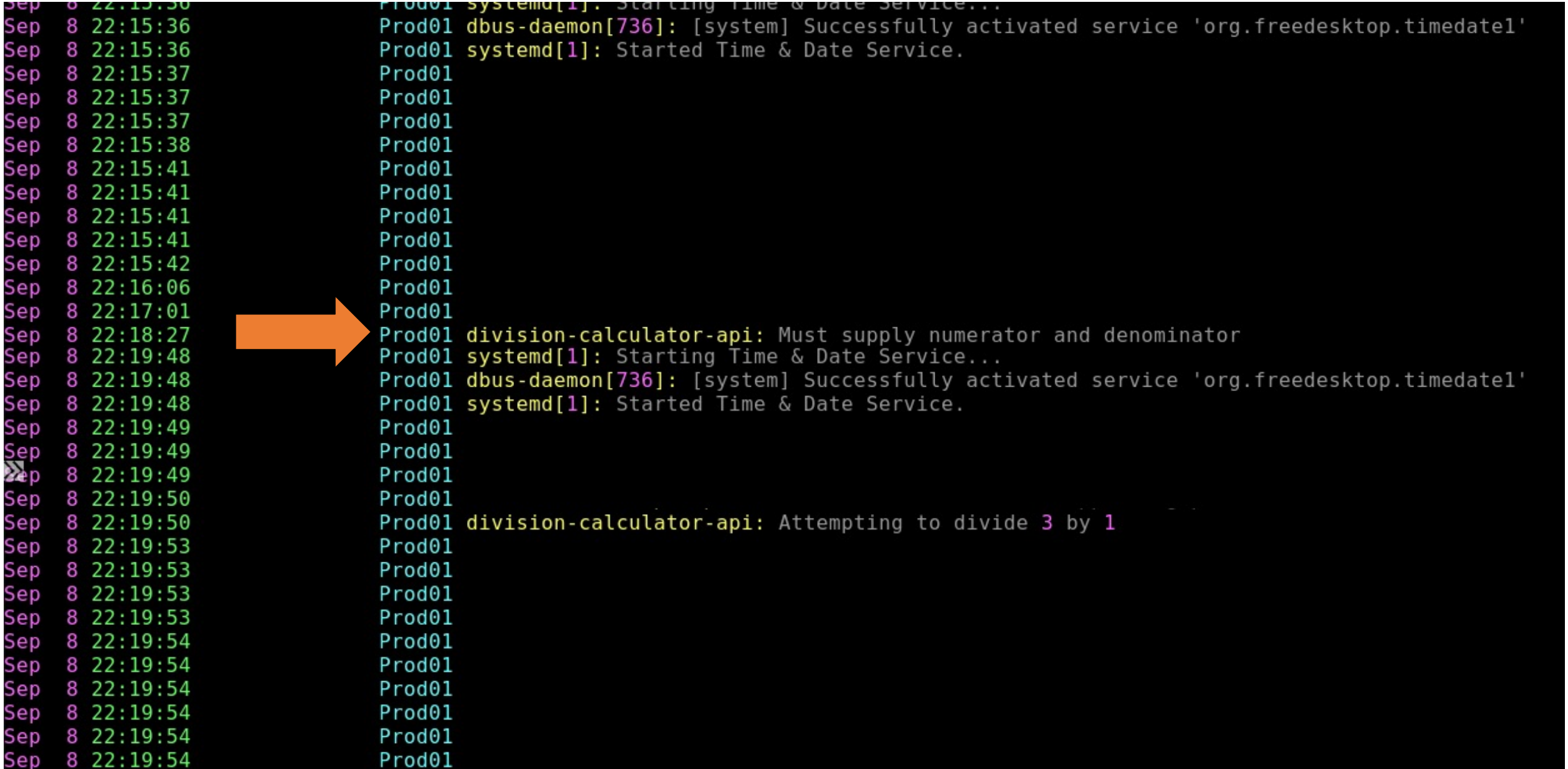

Add satellite communicator capability
Send syslog to Azure Monitor

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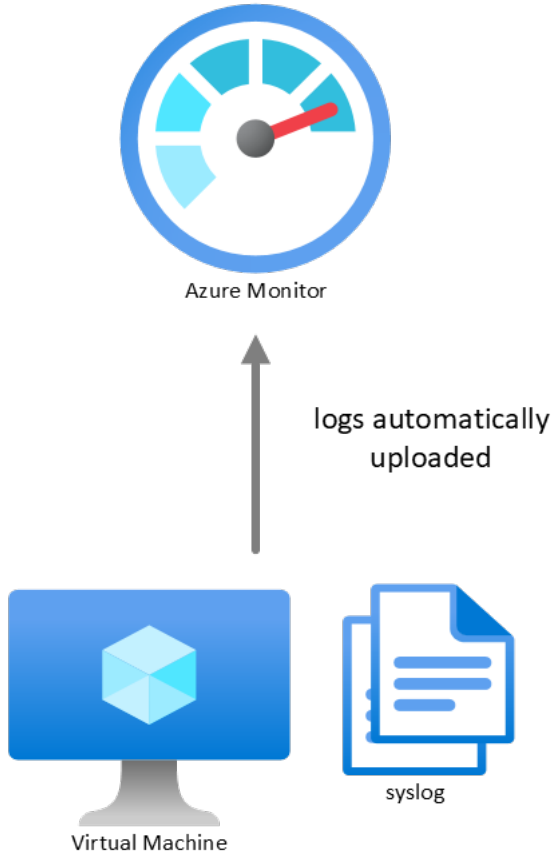
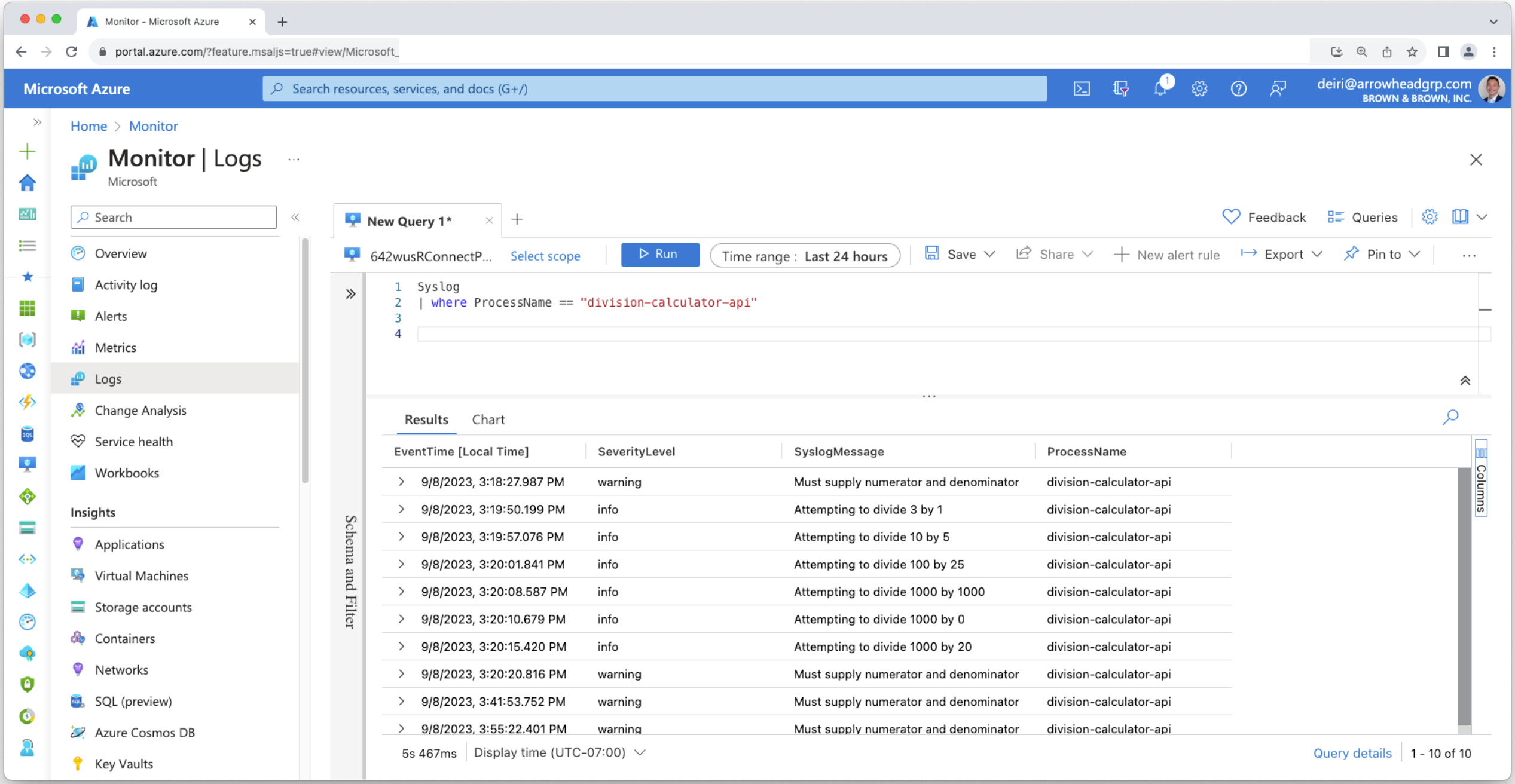
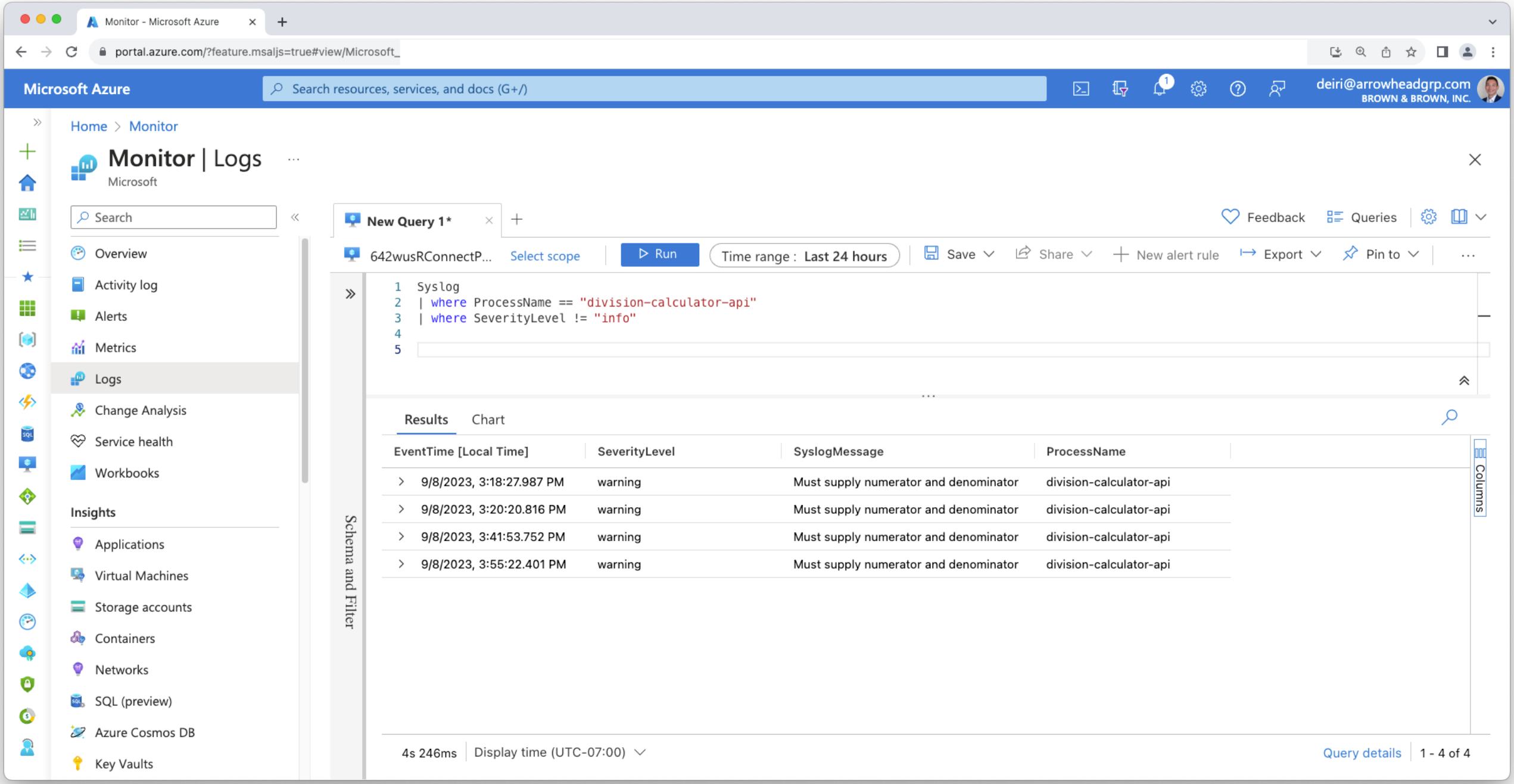
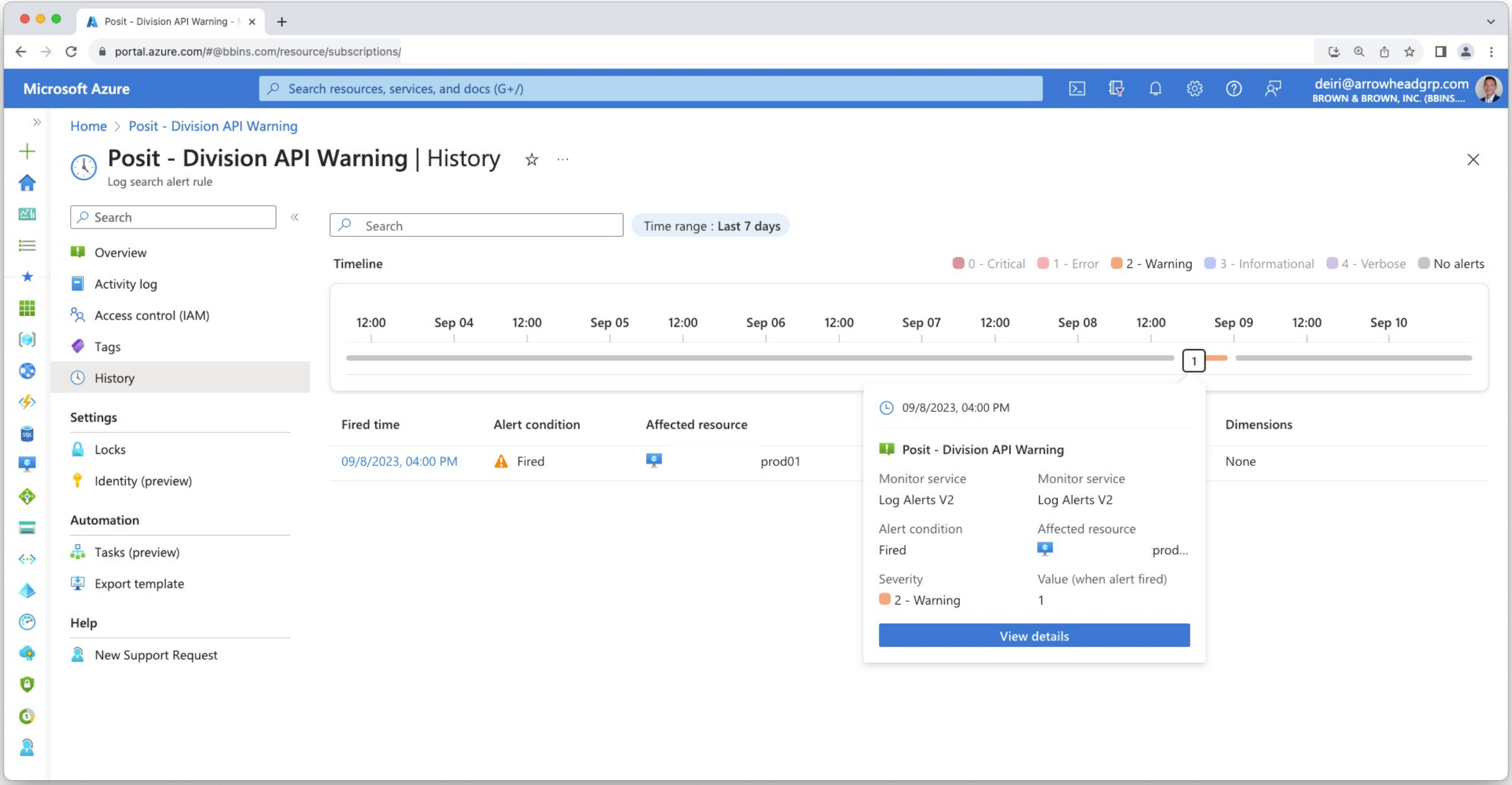
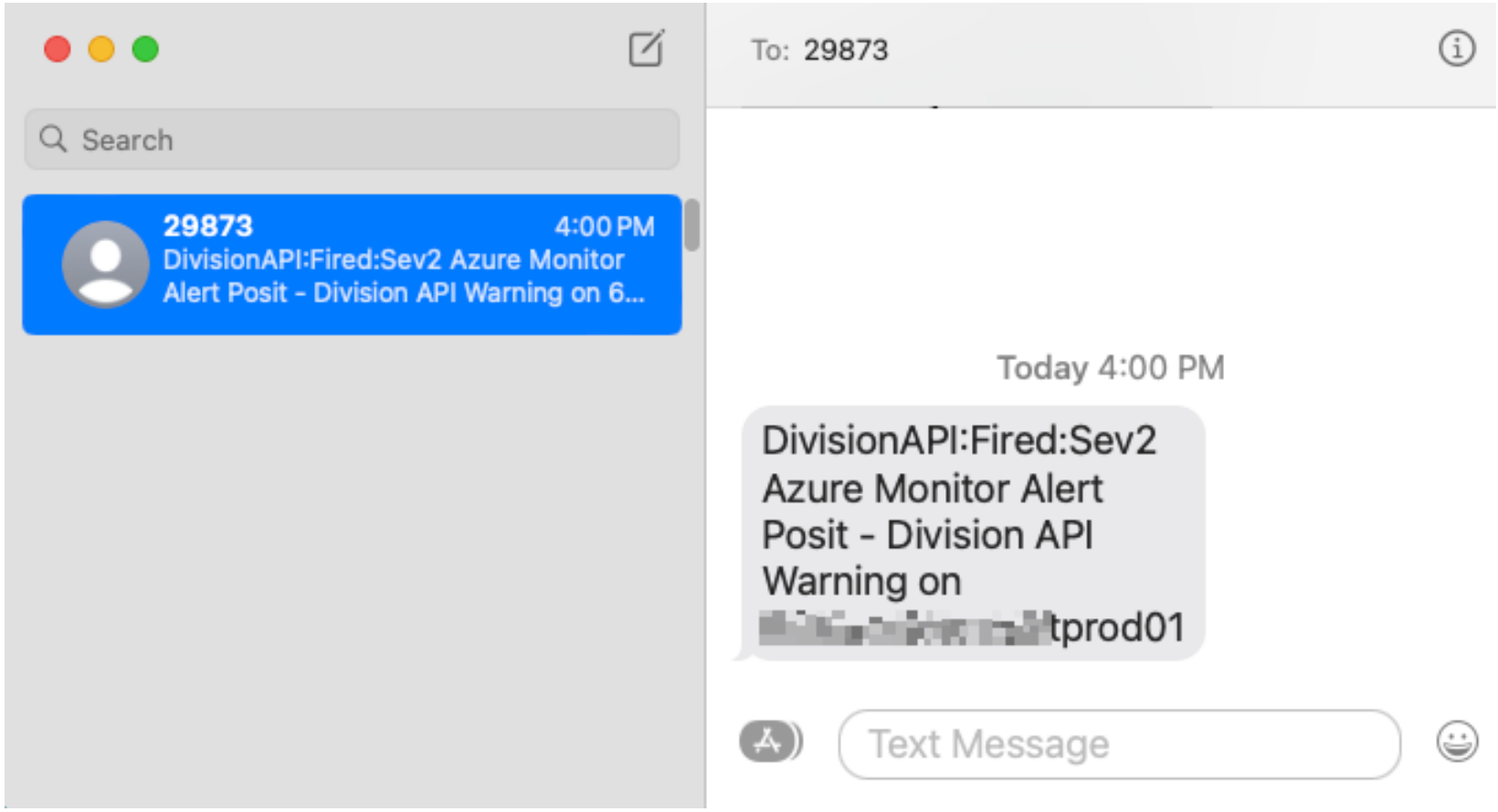








Add satellite communicator capability
Receive Text Alerts



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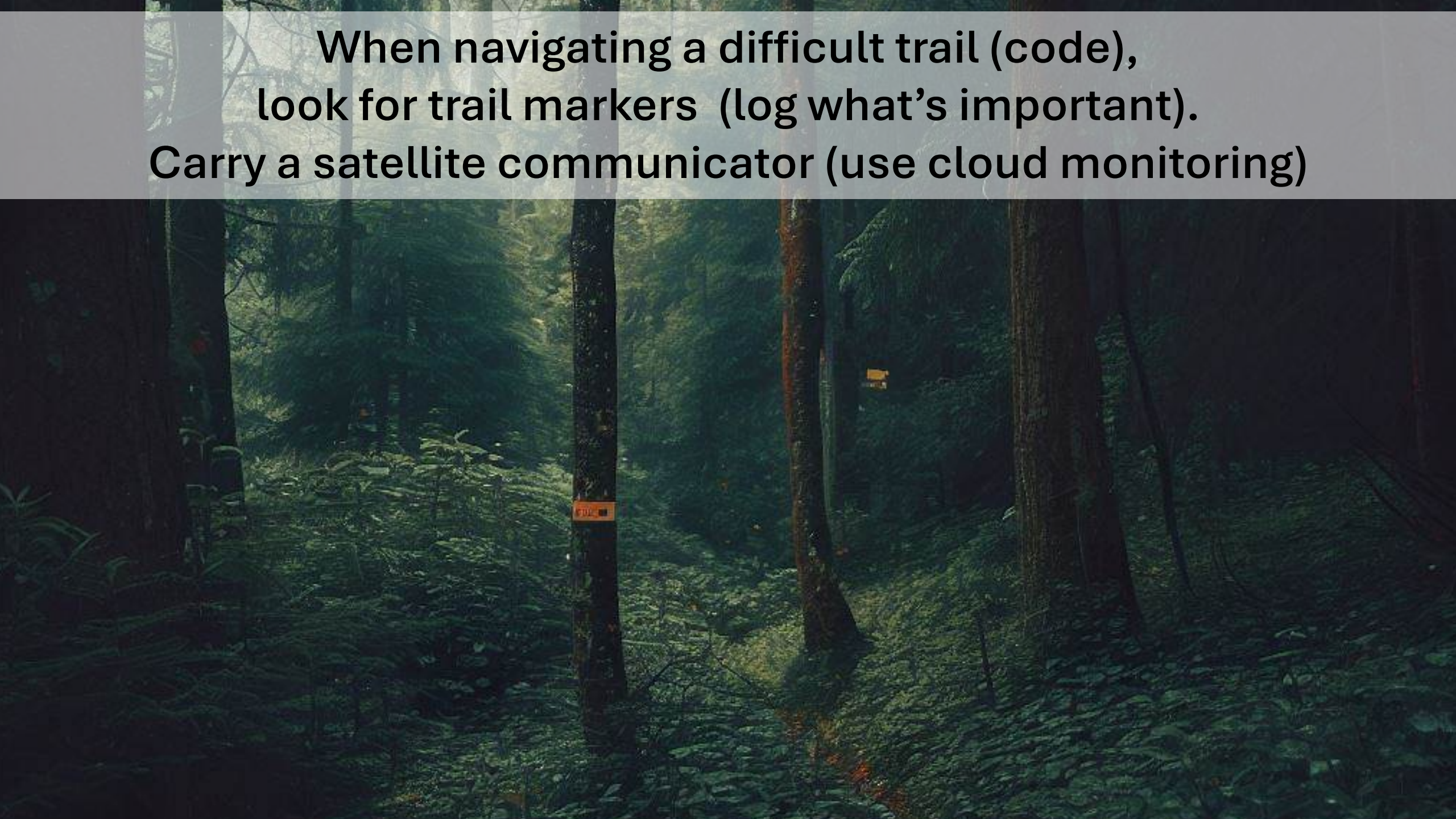
When navigating a difficult trail (code),
look for trail markers (log what’s important).
Carry a satellite communicator (use cloud monitoring)

Let’s Connect!

PhD dropout. Studied honey bee behavior

On call 24/7 for California - San Diego County Search and Rescue Team

Dad to a 2-year-old daughter

Additional Resources

Visit the URL or use the QR code to learn more about logging in R

bit.ly/deiri-posit2023

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