

Five Whys Implementation Example

Using the STARR Approach

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No Internet at Customer Site

Situation

I was working on the helpdesk today and a new ticket was logged titled “No Internet”. This was initially put into the triage category, ready for a first line member of staff to pick it up. I assigned myself to this ticket, as I have some experience with dealing with these types of issues.

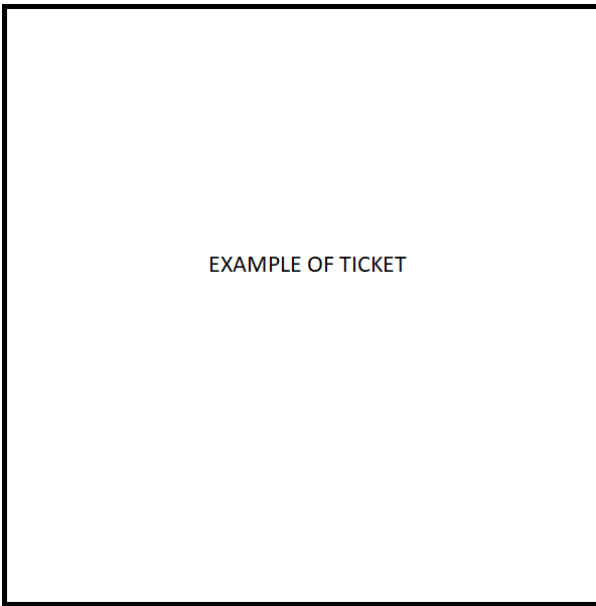


Figure 1 - Ticket Received

Task

After reading the contents of the ticket, it was clear that no member of staff at the organisation could access the Internet, meaning this was a high-level priority ticket. I updated the ticket and set it to a P1 – the highest priority. I knew that I would not be able to email any of the staff, as they could not access the Internet. The aim was to get in contact with the managing director at the company, to get some more details about exactly who this was affecting (i.e. was this localised to just the company, or was it more wide spread at other companies in the same building). I also needed to find out when this first started. This could give me the start of a timeline of events.

There are a couple of problem-solving techniques that I could use with this ticket. I opted for the “5 whys” method to problem solve and to find a resolution to the problem.

I needed to remember that the managing director is not overly technical, so I would have to adjust my language accordingly.

Action

The first thing I did was make contact with the MD from the company. I opted for a phone call, as it was the quickest and most effective method with such as high priority activity. I explained to the

Commented [AT1]: Below is an example of a ticket. Please note, it isn't factual. It is purely fiction. However, it gives you an idea on what information to include.

Please note, to also hit “B2 – Communicates technical and non-technical information in a variety of situations to support effective working with internal or external stakeholders” and to verify communication techniques, a witness testimony should support this document.

Commented [AT2]: S1 - Interpret and prioritise internal or external customer's requirements in line with organisation's policy.

customer that I would be dealing with the issue, but I needed some additional information to take away with me. I asked for:

- Time that incident first occurred
- I asked if the incident was local to the organisation or whether it was affecting other organisations within the building
- I asked if any steps had already been taken to resolve the issue

I made some initial suggestions to the managing director. Firstly, I suggested that where possible, employees should make use out of their hotspots on their work phones – allowing several employees to keep working and to minimise disruption to workflow. I walked the managing director through the steps that each employee would need to take and provided him with a user guide, which he should have been able to access after getting access to the hotspot. I then informed the customer that the problem could take a while, but I would be doing everything I can to restore the issue. I adjusted my tone to keep the customer calm and I reassured him as best as I could, by telling him I would be in contact at various stages of my investigation into the issue.

After my conversations with the managing directory had been completed, I had the information I needed. The problem was localised to the company office, not the building. This meant that the fault was not external and it had to be a problem within the organisation, likely some equipment failure. The incident first occurred at 09:02am, which is within the peak time for users connecting to the organisations internal network. In terms of any steps already taken, the MD said that no steps had been taken to resolve the issue already.

At this point, I had an established problem and it was time for me to go through the “5 whys”. I first phrased the problem as below:

Problem: “Users within the organisations office, cannot connect to the Internet”.

I asked myself, **why?** The users couldn’t connect to the Internet, because it appeared that there was no Internet connection to connect to.

Again, I asked myself why? At this point, I needed a little more information. I needed to check if I could ping the organisations main router.

The reason for doing this, is for this specific organisation, Internet is supplied through to the building and then each organisation has a dedicated router, to handle connections to devices within the organisation itself. By pinging the router, it would let me know if I could make contact with the router.

I used the ping tool via the command prompt and entered the routers IP address. When pinging the machine, it did not make contact. This gave me the answer to the “why” question.

Commented [AT3]: K8 - Methods of communication including level of technical terminology to use to technical and non-technical stakeholders.

S5 - Communicate with all levels of stakeholders, keeping them informed of progress and managing escalation where appropriate.

Commented [AT4]: K3 - Principles of root cause problem solving using fault diagnostics for troubleshooting.

Commented [AT5]: S2 - Apply the appropriate tools and techniques to undertake fault finding and rectification.

```

C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.19044.1706]
(c) Microsoft Corporation. All rights reserved.

C:\Users\AndrewTaylor>ping 82.64.26.32

Pinging 82.64.26.32 with 32 bytes of data:
Reply from 82.64.26.32: Destination host unreachable.

Ping statistics for 82.64.26.32:
    Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Control-C
^C
C:\Users\AndrewTaylor>ping 82.64.26.32

Pinging 82.64.26.32 with 32 bytes of data:
Reply from 82.64.26.32: Destination host unreachable.
Request timed out.
Reply from 82.64.26.32: Destination host unreachable.
Reply from 82.64.26.32: Destination host unreachable.

Ping statistics for 82.64.26.32:
    Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),

C:\Users\AndrewTaylor>

```

Figure 2 - Pinging the route

Why 1: The users couldn't connect to the Internet, because it appeared that there was no Internet connection to connect to

Why 2: The users couldn't connect to the Internet connection, because the router appeared to be down.

I was then ready to ask the next why. Again, I needed more information to get the root cause of the problem. I recontacted the managing director at the company. Again, using the appropriate tone and language, I informed him that I think I have narrowed down the problem to the main router. I asked him did he know where this was located? He asked me what does it look like? I gave him a description of the device and he said that he did know where it was and stayed on the phone why he went over to it. I asked him about any LEDs that was on the router. The managing director said that there was no LEDs on the router that were flashing on even on.

At this point, I had the answer to my next why.

Why 1: The users couldn't connect to the Internet, because it appeared that there was no Internet connection to connect to

Why 2: The users couldn't connect to the Internet connection, because the router appeared to be down.

Why 3: The router was down because there was no power going to the router.

I then needed to ask myself again, why? Like before, I needed more information to find the answer to this. I asked the managing director to follow the power lead from the router to the power source. The managing director found the power source and informed me that the power source was in fact off. This gave me the answer to the next why.

Why 1: The users couldn't connect to the Internet, because it appeared that there was no Internet connection to connect to

Commented [AT6]: S16 - Use basic scripting to execute the relevant tasks for example PowerShell, Linux.

Commented [AT7]: K8 - Methods of communication including level of technical terminology to use to technical and non-technical stakeholders.

S5 - Communicate with all levels of stakeholders, keeping them informed of progress and managing escalation where appropriate.

Why 2: The users couldn't connect to the Internet connection, because the router appeared to be down.

Why 3: The router was down because there was no power going to the router.

Why 4: The power had been router off from the plug.

I then informed the managing director to router the power back on. I told the managing director to wait for 30 seconds and then to get somebody to see if they can connect back to the Internet. After a short wait, the managing director confirmed to me that the Internet connection was back on!

I asked my final why. This time it was directly to the managing director. The managing director explained that the cleaner often accesses the cupboard where the router power is and it could be that she accidentally turned it off. My 5 whys looked like this:

Why 1: The users couldn't connect to the Internet, because it appeared that there was no Internet connection to connect to

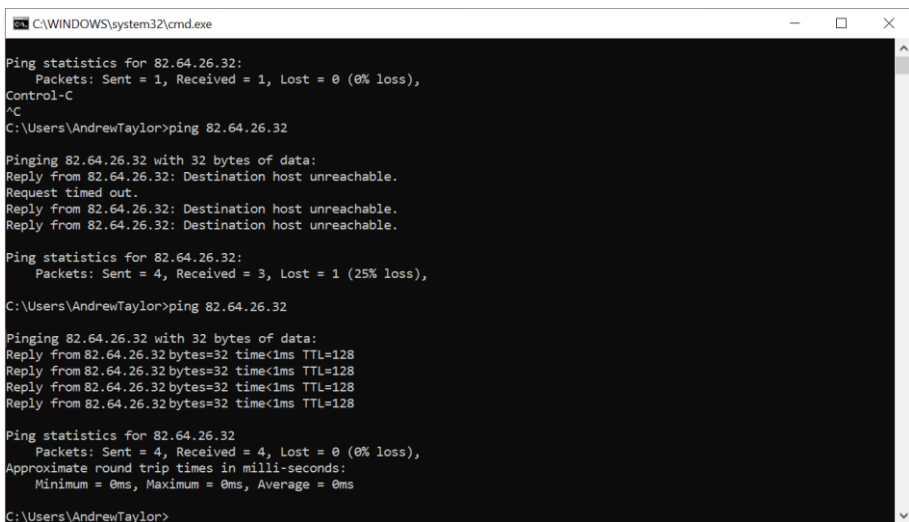
Why 2: The users couldn't connect to the Internet connection, because the router appeared to be down.

Why 3: The router was down because there was no power going to the router.

Why 4: The power had been router off from the plug.

Why 5: The cleaner likely, accidentally knocked the router off

The customer thanked me for my time. I asked the customer if they wouldn't mind leaving feedback for me and that they would get an email. The customer agreed. I then updated the ticket with the ticket notes and marked this as resolved. As you can see in the result section, I was then able to ping the organisations main router.



```
C:\WINDOWS\system32\cmd.exe
Ping statistics for 82.64.26.32:
  Packets: Sent = 1, Received = 1, Lost = 0 (0% loss),
Control-C
^C
C:\Users\AndrewTaylor>ping 82.64.26.32

Pinging 82.64.26.32 with 32 bytes of data:
Reply from 82.64.26.32: Destination host unreachable.
Request timed out.
Reply from 82.64.26.32: Destination host unreachable.
Reply from 82.64.26.32: Destination host unreachable.

Ping statistics for 82.64.26.32:
  Packets: Sent = 4, Received = 3, Lost = 1 (25% loss),

C:\Users\AndrewTaylor>ping 82.64.26.32

Pinging 82.64.26.32 with 32 bytes of data:
Reply from 82.64.26.32 bytes=32 time<1ms TTL=128
Reply from 82.64.26.32 bytes=32 time<1ms TTL=128
Reply from 82.64.26.32 bytes=32 time<1ms TTL=128
Reply from 82.64.26.32 bytes=32 time<1ms TTL=128

Ping statistics for 82.64.26.32:
  Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
C:\Users\AndrewTaylor>
```

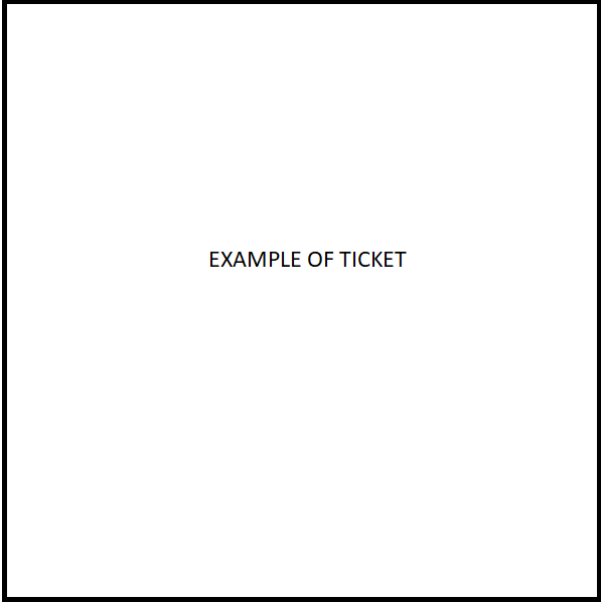
Figure 3 - Successful Ping!

Commented [AT8]: K8 - Methods of communication including level of technical terminology to use to technical and non-technical stakeholders.

S5 - Communicate with all levels of stakeholders, keeping them informed of progress and managing escalation where appropriate.

Commented [AT9]: S6 - Develop and maintain effective working relationships with colleagues, customers, and other relevant stakeholders.

Commented [AT10]: S16 - Use basic scripting to execute the relevant tasks for example PowerShell, Linux.



Commented [AT11]: S8 - Complete documentation relevant to the task and escalate where appropriate.

Figure 4 - Closed Ticket

Result

The result from this ticket, is that the organisation was now able to access their Internet again. This was a good outcome for both us and for the organisation. For the organisation, it meant that they could continue with work activities. For us as support company, we have an improved reputation with the client.

The customer did in fact leave feedback, as seen below. The customer reported that they were happy with the service that they received, and they were happy with the time it taken and the resolution to the issue.

Feedback Form

1. Are you happy with the service you received today?



2. Are you happy with the time it took for us to resolve your issue?



3. Any other info?

A really professional service, thank you!

Figure 5 - Feedback

Reflection

On reflection, I think I did the task well and utilised the appropriate tools for the job. In the end, it was quite a simple task, and the solution was an easy fix. The “5 whys” was a successful problem-solving technique. It did involve me going back and finding out additional information, but the structured approach led to the solution.

I think my communication with the customer was also good. I used the appropriate tone to keep the conversation calm. These kinds of issues often cause stress for customers, as they are unable to carry on with their day-to-day duties.

As you can see from the feedback, the customer was happy, and this means that we are likely to be continued as the support company of choice by the organisation.

As a proactive activity, I created a printable sheet that could be put into the various rooms where IT equipment is, but that people may have access to. As you can see below, it's really simple, but it could be effective. I emailed a copy of this document and advised that the contact put this in several locations around the room and on the door to where the router is located.

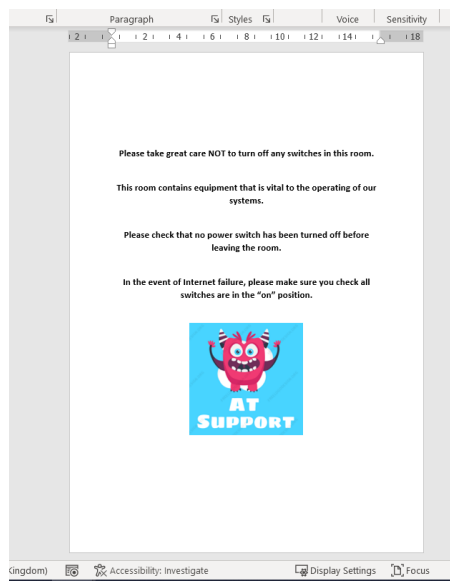


Figure 6 - Proactive Poster

Commented [AT12]: K9 - Different types of maintenance and preventative measures to reduce the incidence of faults.