Utah CTE

Computer Systems 1 (2023)

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13 Microphone 3.6.13

14 Speakers 3.6.14

15 Headset 3.6.15

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3 24-pin motherboard adapter 3.7.3

4 Wattage rating 3.7.4

5 Number of devices/types of devices to be powered 3.7.5

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1 SSD 3.8.1.1

2 High-end video 3.8.1.2

3 Maximum RAM 3.8.1.3

2 Audio/video editing workstation 3.8.2

1 Specialized audio and video card 3.8.2.1

2 Large, fast hard drive 3.8.2.2

3 Dual monitors 3.8.2.3

3 Virtualization workstation 3.8.3

1 Maximum RAM and CPU cores 3.8.3.1

4 Gaming PC 3.8.4

1 SSD 3.8.4.1

2 High-end video/specialized GPU 3.8.4.2

3 High-definition sound card 3.8.4.3

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1 User authentication on the device 3.9.3.2.1

2 Hard drive caching 3.9.3.2.2

4 Print technologies 3.9.4

1 Laser 3.9.4.1

1 Imaging drum, fuser assembly, transfer belt, transfer roller, pickup rollers, separate pads, duplexing assembly 3.9.4.1.1

2 Imaging process: processing, charging, exposing, developing, transferring fusing, and cleaning 3.9.4.1.2

3 Maintenance Replace toner, apply maintenance kit, calibrate, clean 3.9.4.1.3

2 Inkjet 3.9.4.2

1 Ink cartridge, print head, roller, feeder, duplexing assembly, carriage, and belt 3.9.4.2.1

2 Calibrate 3.9.4.2.2

3. Maintenance: Clean heads, replace cartridges, calibrate, clear jams 3.9.4.2.3

3. Thermal 3.9.4.3
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Hardware and Network Troubleshooting 4

1 **Use the best practice methodology to resolve problems.** 4.1

1 Always consider corporate policies, procedures, and impacts before implementing changes. 4.1.1

1 Identify the problem 4.1.1.1

1 Question the user and identify user changes to computer and perform backups before making changes 4.1.1.1.1

2 Inquire regarding environmental or infrastructure changes 4.1.1.1.2

3 Review system and application logs 4.1.1.1.3

2 Establish a theory of probable cause (question the obvious) 4.1.1.2

1 If necessary, conduct external or internal research based on symptoms 4.1.1.2.1

3 Test the theory to determine cause 4.1.1.3

1 Once the theory is confirmed, determine the next steps to resolve problem 4.1.1.3.1

2 If theory is not confirmed re-establish new theory or escalate 4.1.1.3.2

4 Establish a plan of action to resolve the problem and implement the solution 4.1.1.4

5 Verity full system functionality and, if applicable, implement preventive measures 4.1.1.5

6 Document findings, actions, and outcomes 4.1.1.6

2 **Understand the trouble shooting process relating to motherboards, RAM, CPU's, and power.** 4.2

1 Common symptoms 4.2.1

1 Unexpected shutdowns 4.2.1.1

2 System lockups 4.2.1.2

3 POST code beeps 4.2.1.3

4 Blank screen on bootup 4.2.1.4

5 CMOS 4.2.1.5

6 time and setting resets 4.2.1.6

7 Attempts to boot to incorrect device 4.2.1.7

8 Continuous reboots 4.2.1.8

9 No power 4.2.1.9

10 Overheating 4.2.1.10

11 Loud noise 4.2.1.11

12 Intermittent device failures 4.2.1.12

13 Fans pain- no power to other devices 4.2.1.13

14 Indicator lights 4.2.1.14

15 Smoke 4.2.1.15

16 Burning smell 4.2.1.16

17 Proprietary crash screens (BSOD/pin wheel) 4.2.1.17

18 Distended capacitors 4.2.1.18

19 Log entries and error messages 4.2.1.19

3 **Troubleshooting storages devices.** 4.3

1 Common symptoms 4.3.1

1 Read/write failure 4.3.1.1

2 Slow performance 4.3.1.2

3 Loud clicking noise 4.3.1.3

4 Failure to boot 4.3.1.4

5 Drive not recognized 4.3.1.5

6 OS not found 4.3.1.6

7 RAID not found 4.3.1.7

8 RAID stops working 4.3.1.8

9 Proprietary crash screens (BSOD/pin wheel) 4.3.1.9

10 S.M.A.R.T. errors 4.3.1.10

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2 No image on screen 4.4.1.2

3 Overheat shutdown 4.4.1.3

4 Dead pixels 4.4.1.4

5 Artifacts 4.4.1.5

6 Incorrect color patterns 4.4.1.6

7 Dim image 4.4.1.7

8 Flickering image 4.4.1.8

9 Distorted image 4.4.1.9

10 Distorted geometry 4.4.1.10

11 Burn-in 4.4.1.11

12 Oversized images and icons 4.4.1.12

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1 Common symptoms 4.5.1

1 Limited connectivity 4.5.1.1

2 Unavailable resources 4.5.1.2

1 Internet 4.5.1.2.1

2 Local resources 4.5.1.2.2

1 Shares 4.5.1.2.2.1

2 Printers 4.5.1.2.2.2

3 Email 4.5.1.2.2.3

3 No connectivity 4.5.1.3

4 APIPA/link local address 4.5.1.4

5 Intermittent connectivity 4.5.1.5

6 IP conflict 4.5.1.6

7 Slow transfer speeds 4.5.1.7

8 Low RF signal 4.5.1.8

9 SSID not found 4.5.1.9

Operational Procedures 5

1 **Understand proper communication techniques and professionalism.** 5.1

1 Use proper language and avoid jargon, acronyms, and slang, when applicable 5.1.1

2 Maintain a positive attitude/ project confidence 5.1.2

3 Actively listen (taking notes) and avoid interrupting the customer 5.1.3

4 Be respectful of different cultures 5.1.4

1 Use appropriate professional titles, when applicable 5.1.4.1

5 Be on time (if late, contact the customer) 5.1.5

6 Avoid distractions 5.1.6

1 Personal calls 5.1.6.1

2 Texting/social media sites 5.1.6.2

3 Talking to coworkers while interacting with customers 5.1.6.3

4 Personal interruptions 5.1.6.4

7 Dealing with difficult customers or situations 5.1.7

1 Do not argue with customers and/or be defensive 5.1.7.1

2 Avoid dismissing customer problems 5.1.7.2

3 Avoid being judgmental 5.1.7.3

4 Clarify customer statements (ask open-ended questions to narrow the 5.1.7.4

5 scope of the problem, restate the issue, or question to verify understanding) 5.1.7.5

6 Do not disclose experiences via social media outlets 5.1.7.6

8 Set and meet expectations/timeline and communicate status with the customer 5.1.8

1 Offer different repair/ replacement options, if applicable 5.1.8.1

2 Provide proper documentation on the services provided 5.1.8.2

3 Follow up with customer/user at a later date to verify satisfaction 5.1.8.3

9 Deal appropriately with customers' confidential and private materials 5.1.9

1 Located on a computer, desktop, printer, etc. 5.1.9.1