



CVE-2018-16098

[MITRE](#)[NVD](#)[CVE.ORG](#)[Print: PDF !\[\]\(e3f8612927870f2e0f9f5989e6dd3064_img.jpg\)](#)

Summary

| | |
|------------------------|---|
| CVE | CVE-2018-16098 |
| State | PUBLIC |
| Assigner | psirt@lenovo.com |
| Source Priority | CVE Program / NVD first with legacy fallback |
| Published | 2019-01-24 22:29:00 UTC |
| Updated | 2019-05-08 22:11:00 UTC |
| Description | In some Lenovo ThinkPads, an unquoted search path vulnerability was found in various versions of the Synaptics Pointing |

Risk And Classification

Problem Types: CWE-428

NVD Known Affected Configurations (CPE 2.3)

| Type | Vendor | Product | Version | Update | Edition | Language |
|------------------|--------|-----------------------------------|-------------|--------|---------|----------|
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 16.2.19.23 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 18.0.7.119 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 18.1.27.42 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 19.0.17.140 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 19.3.4.219 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 19.5.19.33 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 16.2.19.23 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 18.0.7.119 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 18.1.27.42 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 19.0.17.140 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 19.3.4.219 | All | All | All |
| Application | Lenovo | Synaptics Thinkpad UltrNAV Driver | 19.5.19.33 | All | All | All |
| Hardware | Lenovo | Thiankpad L430 | - | All | All | All |
| Hardware | Lenovo | Thiankpad L430 | - | All | All | All |
| Operating System | Lenovo | Thiankpad L430 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad L430 Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad L530 | - | All | All | All |

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|------------------|--------|----------------------------|---|-----|-----|-----|
| Hardware | Lenovo | Thiankpad L530 | - | All | All | All |
| Operating System | Lenovo | Thiankpad L530 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad L530 Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad P1 | - | All | All | All |
| Hardware | Lenovo | Thiankpad P1 | - | All | All | All |
| Operating System | Lenovo | Thiankpad P1 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P1 Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad P50s | - | All | All | All |
| Hardware | Lenovo | Thiankpad P50s | - | All | All | All |
| Operating System | Lenovo | Thiankpad P50s Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P50s Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad P51 | - | All | All | All |
| Hardware | Lenovo | Thiankpad P51 | - | All | All | All |
| Hardware | Lenovo | Thiankpad P51s | - | All | All | All |
| Hardware | Lenovo | Thiankpad P51s | - | All | All | All |
| Operating System | Lenovo | Thiankpad P51s Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P51s Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P51 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P51 Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad P52s | - | All | All | All |
| Hardware | Lenovo | Thiankpad P52s | - | All | All | All |
| Operating System | Lenovo | Thiankpad P52s Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P52s Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad P70 | - | All | All | All |
| Hardware | Lenovo | Thiankpad P70 | - | All | All | All |
| Operating System | Lenovo | Thiankpad P70 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad P70 Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad S1 Yoga | - | All | All | All |
| Hardware | Lenovo | Thiankpad S1 Yoga | - | All | All | All |
| Operating System | Lenovo | Thiankpad S1 Yoga Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad S1 Yoga Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad S430 | - | All | All | All |
| Hardware | Lenovo | Thiankpad S430 | - | All | All | All |
| Operating System | Lenovo | Thiankpad S430 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad S430 Firmware | - | All | All | All |

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|------------------|--------|-------------------------------|---|-----|-----|-----|
| Hardware | Lenovo | Thiankpad T420 | - | All | All | All |
| Hardware | Lenovo | Thiankpad T420 | - | All | All | All |
| Hardware | Lenovo | Thiankpad T420i | - | All | All | All |
| Hardware | Lenovo | Thiankpad T420i | - | All | All | All |
| Operating System | Lenovo | Thiankpad T420i Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad T420i Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad T420 Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad T420 Firmware | - | All | All | All |
| Hardware | Lenovo | Thiankpad X1 Extreme | - | All | All | All |
| Hardware | Lenovo | Thiankpad X1 Extreme | - | All | All | All |
| Operating System | Lenovo | Thiankpad X1 Extreme Firmware | - | All | All | All |
| Operating System | Lenovo | Thiankpad X1 Extreme Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad Helix | - | All | All | All |
| Hardware | Lenovo | Thinkpad Helix | - | All | All | All |
| Operating System | Lenovo | Thinkpad Helix Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad Helix Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad S230u | - | All | All | All |
| Hardware | Lenovo | Thinkpad S230u | - | All | All | All |
| Operating System | Lenovo | Thinkpad S230u Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad S230u Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T420s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T420s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T420si | - | All | All | All |
| Hardware | Lenovo | Thinkpad T420si | - | All | All | All |
| Operating System | Lenovo | Thinkpad T420si Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T420si Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T420s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T420s Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T430i | - | All | All | All |
| Hardware | Lenovo | Thinkpad T430i | - | All | All | All |
| Operating System | Lenovo | Thinkpad T430i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T430i Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T430s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T430s | - | All | All | All |
| Operating System | Lenovo | Thinkpad T430s Firmware | - | All | All | All |

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| Operating System | Lenovo | Thinkpad T430s Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T431s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T431s | - | All | All | All |
| Operating System | Lenovo | Thinkpad T431s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T431s Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T440 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T440 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T440p | - | All | All | All |
| Hardware | Lenovo | Thinkpad T440p | - | All | All | All |
| Operating System | Lenovo | Thinkpad T440p Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T440p Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T440s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T440s | - | All | All | All |
| Operating System | Lenovo | Thinkpad T440s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T440s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T440 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T440 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T460s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T460s | - | All | All | All |
| Operating System | Lenovo | Thinkpad T460s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T460s Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T470 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T470 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T470s | - | All | All | All |
| Hardware | Lenovo | Thinkpad T470s | - | All | All | All |
| Operating System | Lenovo | Thinkpad T470s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T470s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T470 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T470 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T520 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T520 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T520i | - | All | All | All |
| Hardware | Lenovo | Thinkpad T520i | - | All | All | All |
| Operating System | Lenovo | Thinkpad T520i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T520i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T520 Firmware | - | All | All | All |

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| Operating System | Lenovo | Thinkpad T520 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T530 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T530 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T530i | - | All | All | All |
| Hardware | Lenovo | Thinkpad T530i | - | All | All | All |
| Operating System | Lenovo | Thinkpad T530i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T530i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T530 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T530 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T540 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T540 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T540p | - | All | All | All |
| Hardware | Lenovo | Thinkpad T540p | - | All | All | All |
| Operating System | Lenovo | Thinkpad T540p Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T540p Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T540 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T540 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T550 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T550 | - | All | All | All |
| Operating System | Lenovo | Thinkpad T550 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T550 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T560 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T560 | - | All | All | All |
| Operating System | Lenovo | Thinkpad T560 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T560 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T570 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T570 | - | All | All | All |
| Operating System | Lenovo | Thinkpad T570 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T570 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad T580 | - | All | All | All |
| Hardware | Lenovo | Thinkpad T580 | - | All | All | All |
| Operating System | Lenovo | Thinkpad T580 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad T580 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad Twist | - | All | All | All |
| Hardware | Lenovo | Thinkpad Twist | - | All | All | All |

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| Operating System | Lenovo | Thinkpad Twist Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad Twist Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad W530 | - | All | All | All |
| Hardware | Lenovo | Thinkpad W530 | - | All | All | All |
| Operating System | Lenovo | Thinkpad W530 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad W530 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad W540 | - | All | All | All |
| Hardware | Lenovo | Thinkpad W540 | - | All | All | All |
| Operating System | Lenovo | Thinkpad W540 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad W540 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad W541 | - | All | All | All |
| Hardware | Lenovo | Thinkpad W541 | - | All | All | All |
| Operating System | Lenovo | Thinkpad W541 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad W541 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad W550s | - | All | All | All |
| Hardware | Lenovo | Thinkpad W550s | - | All | All | All |
| Operating System | Lenovo | Thinkpad W550s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad W550s Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 Carbon | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 Carbon | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Carbon Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Carbon Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 Hybrid | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 Hybrid | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Hybrid Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Hybrid Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 Yoga | - | All | All | All |
| Hardware | Lenovo | Thinkpad X1 Yoga | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Yoga Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X1 Yoga Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X220 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X220 | - | All | All | All |

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|------------------|------------------------|--|---|-----|-----|-----|
| Hardware | Lenovo | Thinkpad X220 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X220i | - | All | All | All |
| Hardware | Lenovo | Thinkpad X220i | - | All | All | All |
| Operating System | Lenovo | Thinkpad X220i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X220i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X220 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X220 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X220 Tablet | - | All | All | All |
| Hardware | Lenovo | Thinkpad X220 Tablet | - | All | All | All |
| Operating System | Lenovo | Thinkpad X220 Tablet Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X220 Tablet Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230i | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230i | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230i Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230i Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230i Tablet | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230i Tablet | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230i Tablet Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230i Tablet Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230s | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230s | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230 Tablet | - | All | All | All |
| Hardware | Lenovo | Thinkpad X230 Tablet | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230 Tablet Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X230 Tablet Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X240 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X240 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X240s | - | All | All | All |
| Hardware | Lenovo | Thinkpad X240s | - | All | All | All |
| Operating System | Lenovo | Thinkpad X240s Firmware | - | All | All | All |

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|------------------|-----------|----------------------------|---|-----|-----|-----|
| Operating System | Lenovo | Thinkpad X240s Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X240 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X240 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X250 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X250 | - | All | All | All |
| Operating System | Lenovo | Thinkpad X250 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X250 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad X280 | - | All | All | All |
| Hardware | Lenovo | Thinkpad X280 | - | All | All | All |
| Operating System | Lenovo | Thinkpad X280 Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad X280 Firmware | - | All | All | All |
| Hardware | Lenovo | Thinkpad Yoga 11e | - | All | All | All |
| Hardware | Lenovo | Thinkpad Yoga 11e | - | All | All | All |
| Operating System | Lenovo | Thinkpad Yoga 11e Firmware | - | All | All | All |
| Operating System | Lenovo | Thinkpad Yoga 11e Firmware | - | All | All | All |
| Operating System | Microsoft | Windows 10 | - | All | All | All |
| Operating System | Microsoft | Windows 10 | - | All | All | All |
| Operating System | Microsoft | Windows 7 | - | All | All | All |
| Operating System | Microsoft | Windows 7 | - | All | All | All |
| Operating System | Microsoft | Windows 8.1 | - | All | All | All |
| Operating System | Microsoft | Windows 8.1 | - | All | All | All |
| Operating System | Microsoft | Windows 8.1 | - | All | All | All |
| Operating System | Microsoft | Windows 8.1 | - | All | All | All |

References

| Reference | Source | Link | Tags |
|--|---------|---|------------------------|
| Synaptics Pointing Device Driver Vulnerability - Lenovo Support BG | MISC | support.lenovo.com | Patch, Vendor Advisory |
| Synaptics Pointing Device Driver Vulnerability - Lenovo Support US | CONFIRM | support.lenovo.com | Broken Link |
| CVE Program record | CVE.ORG | www.cve.org | canonical |
| NVD vulnerability detail | NVD | nvd.nist.gov | canonical, analysis |

No vendor comments have been submitted for this CVE.

There are currently no legacy QID mappings associated with this CVE.

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