|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Initial Access | Persistence | Privilege Escalation | Defense Evasion | Discovery | Lateral Movement | Collection | Command and Control | Exfiltration | Impact |
|  |  |  |  |  |  |  |  |  |  |
| [Cloud Admin Portal](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Cloud%20Admin%20Portal.docx?d=wbf0b9ebe3d40494882692148ee27c853&csf=1&web=1&e=A0LxDF) |  |  |  | [Cloud Admin Portal/API](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Cloud%20Admin%20Portal.docx?d=wbf0b9ebe3d40494882692148ee27c853&csf=1&web=1&e=lY4YrI) | [Abusing Queue Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Abuse%20Queue%20Services.docx?d=w3a4f8bda95784fc5a38413e3c11a8749&csf=1&web=1&e=QD2oaj) |  |  |  |  |
| [Cloud Instance  Metadata API](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Cloud%20Instance%20Metadata%20API.docx?d=wd176df66da774073967e17b7c4b22ca0&csf=1&web=1&e=AX3Bhp) |  | [Managed Identities/Service Principals](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Service%20Principals.docx?d=w60fc88020f8e4ba8a93d6a89787094b2&csf=1&web=1&e=KGl2Kd) |  | [Cloud Security Discovery](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Cloud%20Security%20Discovery.docx?d=wd80fd56ead9447a29b47b74236c4344e&csf=1&web=1&e=c2zmtv) | [CloudTrail/Logging  Exploits](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Cloudtrail%20Logging.docx?d=wc95399682ca9442299056f0565f8ef42&csf=1&web=1&e=SOaXRd) |  |  |  |  |
| [Credentials in Files](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Credentials%20in%20Files%201.1.docx?d=w978e7f89943c4fd8b0a769039690cada&csf=1&web=1&e=vv9HkF) | [Account Manipulation](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Account%20Manipulation.docx?d=w8a38b22b6251478ba8553282e94a32f2&csf=1&web=1&e=yfUo9W) | [Credentials in Files](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Credentials%20in%20Files%201.1.docx?d=w978e7f89943c4fd8b0a769039690cada&csf=1&web=1&e=lyxGlz) | [Cloud Log Scrubbing](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Cloud%20Log%20Scrubbing.docx?d=waa29318ecf4f424b8cf8323ed8f3ca0e&csf=1&web=1&e=Q6w5Yr) | [Discovery using Cloud APIs](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Discovery%20using%20Cloud%20APIs%201.1.docx?d=we30f30b44dbe46e4b7d64b14aa3621d0&csf=1&web=1&e=nsBjnw) | [Credentials in Files](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Credentials%20in%20Files%201.1.docx?d=w978e7f89943c4fd8b0a769039690cada&csf=1&web=1&e=dp1RKL) |  |  |  |  |
| [Exploit FaaS](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/FaaS%20exploits%201.1.docx?d=w3d7306a395b340e29e0c66f0b4c64af8&csf=1&web=1&e=A2FqY6) | [Create New Account](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Create%20Account.docx?d=w4836ffcc48bd4e72a6b86a3175cda798&csf=1&web=1&e=VrcoYO) |  | [Exploit FaaS](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/FaaS%20exploits%201.1.docx?d=w3d7306a395b340e29e0c66f0b4c64af8&csf=1&web=1&e=53zjNs) | [Exploit FaaS](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/FaaS%20exploits%201.1.docx?d=w3d7306a395b340e29e0c66f0b4c64af8&csf=1&web=1&e=9XMfkP) |  |  |  |  |  |
| [Exploit Public-Facing  Applications](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Exploit%20Public.docx?d=w9c134b6e695a44eba5acde3367f9a790&csf=1&web=1&e=6fdFnS) | [Creating new FaaS - AWS Lambda Azure Functions](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Lambda.docx?d=wd512ae040f2d483e9341cd8ba3ac2d93&csf=1&web=1&e=VBd3hU) | [Abusing Queue Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Abuse%20Queue%20Services.docx?d=w3a4f8bda95784fc5a38413e3c11a8749&csf=1&web=1&e=OHEwBj) | [Manipulate Cloud  Configuration](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Manipulate%20Cloud%20Config.docx?d=wae35a6d59acd4f6e8c2d0faceed2b9ec&csf=1&web=1&e=HT7lMy) | [Network Connection Discovery](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/System%20Network%20Connections%20Discovery.docx?d=w94a73f5e05e14ed390e80c8825041139&csf=1&web=1&e=qhog8O) |  |  | Standard C&C Techniques |  |  |
| Exploit S3 Permissions | [Implant Container image](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Implant%20Container%20Image.docx?d=w83d9c2e47a5c4d1ebea1a07388ee2a0a&csf=1&web=1&e=nknhow) | [Exploit FaaS](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/FaaS%20exploits%201.1.docx?d=w3d7306a395b340e29e0c66f0b4c64af8&csf=1&web=1&e=0xZ8td) | [Redundant Access](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Redundant%20Access.docx?d=w1db751cc418c49b39eedc2c6c31f85fc&csf=1&web=1&e=q4TeRH) | [Network Service Scanning](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Network%20Service%20Scanning.docx?d=w1f92da37229a44fa99a30ae704c7a44e&csf=1&web=1&e=xtAI9m) |  |  |  |  |  |
| Harvesting Credentials via Cloud APIs | [Manipulate CI/CD Pipeline](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Manipulating%20CICD%20Pipeline.docx?d=wb4dab65c56ae46a7ab27fda01af50a5c&csf=1&web=1&e=aP66lg) | [Manipulate CI/CD Pipeline](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Manipulating%20CICD%20Pipeline.docx?d=wb4dab65c56ae46a7ab27fda01af50a5c&csf=1&web=1&e=aP66lg) | [Manipulate CI/CD Pipeline](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Manipulating%20CICD%20Pipeline.docx?d=wb4dab65c56ae46a7ab27fda01af50a5c&csf=1&web=1&e=aP66lg) | [Exploiting New Vulnerabilities in Managed Cloud Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/_layouts/15/Doc.aspx?sourcedoc=%7B0f9949ce-67da-48ba-aff6-703a28fa641a%7D&action=edit&wdPid=369c6099) |  | [Data from Backups](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/data%20backups.docx?d=w5e3a997aa7584d7496f2da6ac7e103ba&csf=1&web=1&e=D29mUk) | Leveraging Cloud Storage Services |  | [Denial of Data](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Denial%20of%20Data.docx?d=w664d87273e274f69908fb1b44f3c6212&csf=1&web=1&e=Qf5XPT) |
| [Implant Container image](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Implant%20Container%20Image.docx?d=w83d9c2e47a5c4d1ebea1a07388ee2a0a&csf=1&web=1&e=NEcn6q) |  | [Exploit Containers](https://gbc-word-edit.officeapps.live.com/we/wordeditorframe.aspx?ui=en%2DUS&rs=en%2DUS&wopisrc=https%3A%2F%2Fmitre.sharepoint.com%2Fsites%2FCAVEaT%2F_vti_bin%2Fwopi.ashx%2Ffiles%2Fd79aab3892134f83a920739b6452ed6d&wdenableroaming=1&mscc=1&hid=7C00619F-4093-A000-EA2D-A1F46E7D2B5D&wdorigin=ItemsView&wdhostclicktime=1593396883694&jsapi=1&newsession=1&corrid=78c0ad91-e94b-453e-8498-1db76ed96b26&usid=78c0ad91-e94b-453e-8498-1db76ed96b26&sftc=1&instantedit=1&wopicomplete=1&wdredirectionreason=Unified_SingleFlush&rct=Minor&ctp=LeastProtected) |  |  |  |  |  |  |  |
| [Exploiting New Vulnerabilities in Managed Cloud Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/_layouts/15/Doc.aspx?sourcedoc=%7B0f9949ce-67da-48ba-aff6-703a28fa641a%7D&action=edit&wdPid=369c6099) | [Leveraging Cloud Shells](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Leveraging%20Cloud%20Shells.docx?d=waf8d61f5678e48e194c5a861deabad96&csf=1&web=1&e=6wWq4n) | [IAM Abuse](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/IAM%20Abuse.docx?d=w25f35db716ff4b03bae1a4f3b00e6463&csf=1&web=1&e=A5fHhv) | [Revert Cloud Instance](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Revert%20Cloud%20Instance.docx?d=w5fcda7681efa49b0b53f9637e4c9c4d2&csf=1&web=1&e=Y2t3Kb) | [Network Share Discovery](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Network%20Share%20Discovery.docx?d=w9f4459113c53451ca7e5e68c6a64123c&csf=1&web=1&e=nxgy9T) |  | [S3 Blob Manipulation](https://mitre.sharepoint.com/:w:/s/CAVEaT/EQoQbAZZrzZNl3xX98FK2iEBNCmKKXvnVPWKy9e91GTzmA?e=W3UDxg) |  |  |  |
| [Steal Application  Access Token](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Application%20Access%20Token.docx?d=waed5d65d2329497c93036b68992818ea&csf=1&web=1&e=BnF3n9) |  |  | [Tagging Falsely](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Tagging%20Falsely.docx?d=w5f14d971cfa948d0a51bd0b7ca48cd87&csf=1&web=1&e=vbEdFf) |  |  |  |  | [S3/Blob manipulation](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/S3-Blob%20manipulation.docx?d=w066c100aaf594d36977c57f7c14ada21&csf=1&web=1&e=IZ7OR5)  (combined with 2 other docs) | [Loss of Availability](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Loss%20of%20Availability.docx?d=w7bcec02e9e8c4d0d87da04c858258ba4&csf=1&web=1&e=007ycc) |
| [S3 Blob Manipulation](https://mitre.sharepoint.com/:w:/s/CAVEaT/EQoQbAZZrzZNl3xX98FK2iEBNCmKKXvnVPWKy9e91GTzmA?e=W3UDxg) | [Redundant Access](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Redundant%20Access.docx?d=w1db751cc418c49b39eedc2c6c31f85fc&csf=1&web=1&e=VWq9hv) | [Kubernetes API Abuse](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Kubernetes%20API%20Abuse.docx?d=w0e247aa4140e48b0a334689ac5202928&csf=1&web=1&e=fR4fwf) | [Unused Cloud Regions](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Unused.docx?d=w8ffaf1a4999b44789e25f311d277d823&csf=1&web=1&e=d6tEhj) | [Permission Groups  Discovery](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Permission%20Groups%20Discovery.docx?d=wc29c65b031e24935957c2f6ed168c695&csf=1&web=1&e=kIJ5ZY) |  | [Data from Databases](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Accessing%20Databases%20Data.docx?d=w59e8db29ea3743948b6ef829ee1803ce&csf=1&web=1&e=NY2M3b) |  |  |  |
| [Stealing Valid Credentials  from Local Machines](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Stealing%20Valid%20Credentials.docx?d=w84e9c0cd1a624d7ab3ced3ca05f3b876&csf=1&web=1&e=YiD6cx) | [Stealing Valid Credentials  from Local Machines](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Stealing%20Valid%20Credentials.docx?d=w84e9c0cd1a624d7ab3ced3ca05f3b876&csf=1&web=1&e=fpf7Xc) | [Stealing Valid Credentials  from Local Machines](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Stealing%20Valid%20Credentials.docx?d=w84e9c0cd1a624d7ab3ced3ca05f3b876&csf=1&web=1&e=MHjxKH) | [Use Deprecated API's](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Deprecated%20Cloud%20APIs.docx?d=w20b906937a6c4dbfa594148695e6170a&csf=1&web=1&e=0QulkR) | [VM Information  Discovery](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/System%20Information%20Discovery.docx?d=w7ca368fb37e0479abca2c51eb7bc2e4b&csf=1&web=1&e=hGzcW1) | [Virtual Network Peering](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/virtual%20network%20peering.docx?d=w0f8525c28deb4bf99e18306d3fc41900&csf=1&web=1&e=PWRUz1) | [Data from VM](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Data%20from%20VM.docx?d=wc7d03e9d0db348648cd995c28d122340&csf=1&web=1&e=HkezHv) |  | [Using Web Servers](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Web%20Servers.docx?d=w02923b965c8440118353cc868badb933&csf=1&web=1&e=sdkD4Q) | [Loss of Reputation/Value](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Loss%20of%20Reputation.docx?d=w54e173ba915e4f92968ea31c168252a4&csf=1&web=1&e=bmyUdm) |
| [Trusted Relationship](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Trusted%20Relationship.docx?d=wed1f072bf4d14680b7f24444ef5ecb39&csf=1&web=1&e=SUSsQZ) |  | [Harvesting Credentials via Cloud APIs](https://mitre.sharepoint.com/:w:/s/CAVEaT/EeJb5nM1QNFMpsqzUMOdGGEBiwhjpAsu-3G_ljz36HBzIA?e=jjM90u) | [White Listing](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/White%20Listing.docx?d=w54bda99a33d0403383e34dcf6050addc&csf=1&web=1&e=NwdEYI) |  | [Exploiting New Vulnerabilities in Managed Cloud Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/_layouts/15/Doc.aspx?sourcedoc=%7B0f9949ce-67da-48ba-aff6-703a28fa641a%7D&action=edit&wdPid=369c6099) | [Exploiting New Vulnerabilities in Managed Cloud Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/_layouts/15/Doc.aspx?sourcedoc=%7B0f9949ce-67da-48ba-aff6-703a28fa641a%7D&action=edit&wdPid=369c6099) |  | [Utilizing Cloud accounts](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Transfer%20Data%20to%20Cloud%20Account.docx?d=wb0a6ade42b32438a900051d9676d1343&csf=1&web=1&e=aA1rOD) | [Resource Hijacking](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Resource%20Hijacking.docx?d=w736c155f2e844fcc97f1091ecd78c1bc&csf=1&web=1&e=XmXNlM) |
| [Unencrypted Network Traffic](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Unecrypted%20Traffic.docx?d=wbc754bdd61f44f10b9ef10f6f658a468&csf=1&web=1&e=SAtZr9) |  | [Sensitive Information Exposed on A Public Platform](https://mitre.sharepoint.com/:w:/s/CAVEaT/Eb39xx_C3gZNil2pe2dz5sgBY7CYMQ7zy0BpRWikyUICDQ?e=iLHRJ6) | [Disable or Modify Security Tools](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Disable%20or%20Modify%20Security%20Tools.docx?d=wf1d048823b744d34ab03f98e12b55226&csf=1&web=1&e=JVm8S8) |  |  |  |  |  |  |
| [Utilize Breach Replay](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Utilize%20Breach%20Replay.docx?d=w295b891535ec4f6abbaf1d7d21bcb2a7&csf=1&web=1&e=SI0VlA) |  | [Exploiting New Vulnerabilities in Managed Cloud Services](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/_layouts/15/Doc.aspx?sourcedoc=%7B0f9949ce-67da-48ba-aff6-703a28fa641a%7D&action=edit&wdPid=369c6099) |  |  |  |  |  |  |  |
| [Weak Passwords](https://mitre.sharepoint.com/:w:/r/sites/CAVEaT/Shared%20Documents/General/CAVEAT%202/Weak%20Passwords.docx?d=we5732f6c19324accb0140783b565f1da&csf=1&web=1&e=YAC76c) |  |  |  |  |  |  |  |  |  |
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Note: Add port knocking to command and control