## Raw Data and Results in our Experiment

We have tested up to 100 employees on all four factors. Employee's IDs (ID 001-100) presented are pseudonymized. The results focuses on accuracy in different perspectives. The raw data are presented in four tables/factors.

## 1. Results on Something you know

The results show an accuracy when employees log in through our system. The accuracy means whether the results of their attempts to login in our system is similar to the results of their attempts to login to the organization's existing Intranet (LDAP/Active Directory). They are asked to make an intention for successful login or login failure (due to invalid password). This is to confirm that in this factor, negative error and positive error will not occur.

| Employee ID | Intend to succeed in logging | Intend to fail in logging | O verall Accuracy |
| :---: | :---: | :---: | :---: |
| 001 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 002 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 003 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 004 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 005 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 006 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 007 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 008 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 009 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 010 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 011 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 012 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 013 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 014 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 015 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 016 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 017 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 018 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 019 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 020 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 021 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 022 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 023 | Accurate (Successful) | Accurate (Access denied) | Accurate |
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| 026 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 027 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 028 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 029 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 030 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 031 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 032 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 033 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 034 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 035 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 036 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 037 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 038 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 039 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 040 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 041 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 042 | Accurate (Successful) | Accurate (Access denied) | Accurate |


| 043 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| :---: | :---: | :---: | :---: |
| 044 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 045 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 046 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 047 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 048 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 049 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 050 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 051 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 052 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 053 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 054 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 055 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 056 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 057 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 058 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 059 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 060 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 061 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 062 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 063 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 064 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 065 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 066 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 067 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 068 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 069 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 070 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 071 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 072 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 073 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 074 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 075 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 076 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 077 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 078 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 079 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 080 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 081 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 082 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 083 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 084 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 085 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 086 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 087 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 088 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 089 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 090 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 091 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 092 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 093 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 094 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 095 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 096 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 097 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 098 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 099 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 100 | Accurate (Successful) | Accurate (Access denied) | Accurate |

2. Results on Something you have

| Employee ID | Use registered own de vice | Use another unregistered de vice | O verall Accuracy |
| :---: | :---: | :---: | :---: |
| 001 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 002 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 003 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 004 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 005 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 006 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 007 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 008 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 009 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 010 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 011 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 012 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 013 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 014 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 015 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 016 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 017 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 018 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 019 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 020 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 021 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 022 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 023 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 024 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 025 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 026 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 027 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 028 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 029 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 030 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 031 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 032 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 033 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 034 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 035 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 036 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 037 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 038 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 039 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 040 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 041 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 042 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 043 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 044 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 045 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 046 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 047 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 048 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 049 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 050 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 051 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 052 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 053 | Accurate (Successful) | Accurate (Access denied) | Accurate |


| 054 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| :---: | :---: | :---: | :---: |
| 055 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 056 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 057 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 058 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 059 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 060 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 061 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 062 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 063 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 064 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 065 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 066 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 067 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 068 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 069 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 070 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 071 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 072 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 073 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 074 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 075 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 076 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 077 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 078 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 079 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 080 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 081 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 082 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 083 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 084 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 085 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 086 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 087 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 088 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 089 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 090 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 091 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 092 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 093 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 094 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 095 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 096 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 097 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 098 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 099 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 100 | Accurate (Successful) | Accurate (Access denied) | Accurate |

While it is assumable that the MAC can be spoofed, the hacker can get an initial access only in case he/she know the target MAC (registered device). Also, he/she needs to know the target's password. If the hacker fails to obtain one of them data, his/her access will be denied immediately. The results below shows an attempt to access to the system by using a MACspoofing device, but (a) the spoofing MAC is registered and (b) the spoofing MAC is not registered, and the hacker does not know the target's password.

| Employee ID who is spoofed | Do not know the MAC's target | Know the MAC's target | O verall Accuracy |
| :---: | :---: | :---: | :---: |
| Not identified \#1 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#2 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#3 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#4 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#5 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#6 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#7 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#8 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#9 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#10 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#11 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#12 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#13 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#14 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#15 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#16 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#17 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#18 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#19 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#20 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#21 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#22 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#23 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#24 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#25 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#26 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#27 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#28 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#29 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#30 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#31 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#32 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#33 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#34 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#35 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#36 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#37 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#38 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#39 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#40 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#41 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#42 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#43 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#44 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#45 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#46 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#47 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#48 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#49 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| Not identified \#50 | Accurate (Access denied) | N/A | Accurate (Access denied) |
| 001 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 002 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 003 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |


| 004 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to <br> invalid password) |
| :--- | :--- | :--- | :--- |
| 005 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to <br> invalid password) |
| 006 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to <br> invalid password) |
| 007 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to <br> invalid password) |
| 008 | N/A | Nccurate (Initial access allowed) | Accurate (Access denied due to <br> invalid password) |
| 009 | N/A | N/A | Accurate (Initial access allowed) | | Accurate (Access denied due to |
| :--- |
| invalid password) |


| 034 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| :---: | :---: | :---: | :---: |
| 035 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 036 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 037 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 038 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 039 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 040 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 041 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 042 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 043 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 044 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 045 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 046 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 047 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 048 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 049 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |
| 050 | N/A | Accurate (Initial access allowed) | Accurate (Access denied due to invalid password) |

## 3. Results on Something you are

The results show an accuracy of the results when an employee scan his/her face after passing the two previous factors. Employee ID 89 and 98 are identical twins that our system is unable to differentiate. Therefore, the overall accuracy is $98 \%$, while the negative error rate is $2 \%$. It is assumable that these twins do not share password and device to each other, thus they finally do not get an access or cannot check-in on behalf successfully.

| Employee ID | Use own face | Use another face | O verall Accuracy |
| :--- | :--- | :--- | :--- |
| 001 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 002 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 003 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 004 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 005 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 006 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 007 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 008 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 009 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 010 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 011 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 012 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 013 | Accurate (Successful) | Accurate (Access denied) | Accurate |


| 014 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| :---: | :---: | :---: | :---: |
| 015 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 016 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 017 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 018 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 019 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 020 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 021 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 022 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 023 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 024 | Accurate (Successful) | Accurate (Access denied) | Accurate |
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| 027 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 028 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 029 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 030 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 031 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 032 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 033 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 034 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 035 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 036 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 037 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 038 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 039 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 040 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 041 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 042 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 043 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 044 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 045 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 046 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 047 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 048 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 049 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 050 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 051 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 052 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 053 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 054 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 055 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 056 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 057 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 058 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 059 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 060 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 061 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 062 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 063 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 064 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 065 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 066 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 067 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 068 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 069 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 070 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 071 | Accurate (Successful) | Accurate (Access denied) | Accurate |
| 072 | Accurate (Successful) | Accurate (Access denied) | Accurate |

\(\left.\begin{array}{|l|l|l|l|}\hline 073 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 074 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 075 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 076 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 077 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 078 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 079 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 080 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 081 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 082 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 083 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 084 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 085 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 086 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 087 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 088 \& Accurate (Successful) \& Accurate (Access denied) \& Accurate <br>
\hline 089 (identical twin \& Accurate (Successful) \& Inaccurate (Access allowed) - \& Inaccurate <br>

to 098) \& \& using the face of ID 098\end{array}\right]\)| 090 |
| :--- |

## 4. Results on Somewhere you are

The results show the results of when an employee accesses within a designated area, outside corporate WiFi and via a corporate VPN.

| Employee ID | Within a designated <br> area | Outside corporate WiFi | Via a corporate VPN | O verall accuracy |
| :--- | :--- | :--- | :--- | :--- |
| 001 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 002 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 003 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 004 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 005 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 006 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 007 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 008 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 009 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 010 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 011 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 012 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 013 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 014 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 015 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 016 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 017 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 018 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 019 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |


| 020 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| :---: | :---: | :---: | :---: | :---: |
| 021 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 022 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 023 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 024 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 025 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 026 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 027 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 028 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 029 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 030 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 031 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 032 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 033 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 034 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 035 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 036 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 037 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 038 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 039 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 040 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 041 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 042 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 043 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 044 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 045 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 046 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 047 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 048 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 049 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 050 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 051 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 052 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 053 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 054 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 055 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 056 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 057 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 058 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 059 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 060 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 061 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 062 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 063 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 064 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 065 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 066 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 067 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 068 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 069 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 070 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 071 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 072 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 073 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 074 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 075 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 076 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 077 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 078 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |


| 079 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| :--- | :--- | :--- | :--- | :--- |
| 080 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 081 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 082 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 083 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 084 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 085 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 086 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 087 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 088 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 089 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 090 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 091 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 092 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 093 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 094 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 095 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 096 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 097 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 098 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 099 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |
| 100 | Accurate (Successful) | Accurate (Access denied) | Accurate (Access denied) | Accurate |

