

**G-Cloud 15**  
**Service Definition**  
**Lot 2 Cloud Software**

**Passwordless Multi Factor  
Authentication**  
**MIRACL International Limited**

**Version: 2.0**  
**25/01/2026**

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# 1. Introduction

## Company Overview

MIRACL helps any organisation replace insecure passwords, complex 2FA and expensive SMS texts - with a simple PIN. Purpose-built for sectors where any additional security drives users away, it uses cryptography licensed to Experian, Google, the US Military and Intel to block 99.9% of all account attacks.

A combination of user friendliness, hardware independence and cost make it possible to deploy strong multi-factor authentication to large enterprises or diverse customer networks where it was previously impossible or impractical.

## Value Proposition

For over 20 years security experts have been lobbying for the replacement of usernames and passwords with something more secure and suitable to today's interconnected world.

The need for complexity rules has made passwords incredibly hard to remember and as a result 80% of users re-use the same password for multiple services. Usernames and passwords, otherwise known as User Credentials, are directly responsible for 83% of actual breaches and are the target of the vast majority of all attacks such as Credential Stuffing, Password Spraying, Phishing, Replay and Man-in-the-Middle.

User Credentials are both willingly and unwittingly transferred to second parties, giving the authenticating service absolutely no assurance of the identity of the person logging in. This makes fraud prevention and regulation nearly impossible.

So the obvious answer is to improve your security, right? Yes, but that's when the problems start. Many users and even some security experts believe that as you improve the security of your authentication you will invariably increase the complexity or conversely degrade the user experience.

### ***Users assume: Improved Security = Degraded Experience***

To date that has mostly been true, witness the increasingly complex password rules, human verification challenges (CAPTCHA tests) and second or even third authentication steps such as memorable details and SMS texts. The result is almost anyone who has been involved with a new security introduction will have experienced first-hand the resistance, or even anger, users exhibit when they are told "You need to change your passwords - again" or worse yet, "we'll be rolling out Multi Factor Authentication".

But we have to do something, and most organisations recognise the obvious security benefits of Multi-Factor Authentication (MFA). However, MFA solutions have historically failed in replacing usernames and passwords for three reasons:

1. **Cost** - traditional Multi-Factor Authentication solutions have only made inroads into high security enterprise environments where cost is no barrier. Whilst the true cost of usernames and passwords are much higher than most realise, both in terms of actual management but also longer term liability, they are perceived to be “low to no” cost. This makes it almost impossible to justify the deployment of traditional MFA to the vast majority of user networks. The total cost of ownership and the mismatch between the fixed licence cost of MFA and a user that may only login once every few months make most MFA solutions economically unviable.
2. **Complexity** - adding even one additional user step will reduce your traffic by 20-30% or significantly slow the adoption of any new security. Even a “simple” SMS text requires users to register their phone number, have good mobile service in addition to the step of transferring information from the handset to the desktop. In addition to expense, hardware security tokens are prone to loss, theft and simply being elsewhere when needed. Mobile phones have somewhat closed the gap but 75% of users resist installing any business application to their personal phone and all the associated issues with second steps, availability of service or even the mobile itself remain.
3. **Deployability** - usernames and passwords are used on all hardware and all operating systems. Similarly any MFA solution needs to do the same. It is unacceptable to cater for those few individuals who have access to the “correct” mobile, the “latest” operating system or the “right” hardware. Solutions need to operate on every handset, operating system and hardware platform, else you will need to create alternative user journeys for each exception. Every alternative represents significant time and cost to implement and maintain.

## **MIRACL Trust ID addresses all of these issues:**

1. **Inexpensive** - MIRACL Trust ID is charged on a per-use basis. Significantly less than the cost of an SMS text message and able to scale to millions without lag or scalability issues. This means if you have 1,000,000 enrolled users and only 1 person logs in during any month, you only pay the cost of that single login, starting at 1 pence or less as you scale in volume. Further discounts can be applied for prepaid usage and longer term contracts. MIRACL Trust ID has the lowest total cost of ownership of ANY competing system - guaranteed.
2. **Simple** - it replaces complex passwords with an intuitive 4-6 digit pin. A single user step, entering a PIN, is all that is required. No, downloads, no second step, no complexity rules, no additional devices are required, making this familiar user journey a pleasure for any user. Deployed as a SaaS service, integration can take as little as a few hours but can also be customised to fit any user journey seamlessly and transparently to the service and users.

3. **Ubiquitous** - MIRACL Trust ID is the world's only 100% software MFA service with no downloads and no hardware requirements whatsoever. This means it can be deployed to any mobile device, any desktop or even smart TV. There is no other MFA service like this in the world.

### ***MIRACL delivers: Improved Security AND Improved Experience***

*"Protecting the person online and giving them a good user experience of the services they are using is a key goal for us as a business. MIRACL is a pioneering company that will help us achieve that."*

**Nick Mothershaw**, Former UK & I Director of Identity & Fraud at Experian

### **What the Service Provides**

MIRACL Trust ID is a user-friendly, passwordless Multi-Factor Authentication (MFA) Software-As-A Service (SaaS) platform using military grade Zero Knowledge Proof (ZKP) protocols and cryptography. MIRACL Trust ID completely blocks most forms of account attack, rendering Credential Stuffing (botnet), Passwords Spraying, Man-in-the-Middle, Replay and Phishing attacks ineffective. As a result, the deployment of MIRACL Trust ID would result in an IMMEDIATE impact on:

- **Account Breaches** – resulting in a reduction in restitution for breaches, reduction in liability due to theft of personal information and resultant GDPR fines
- **Support costs** – support for forgotten (complex) passwords and a reduction in costs the associated with investigating breaches

MIRACL Trust ID is the only service capable of a single-step multi factor authentication independent of hardware, enabling a direct and secure login on any desktop without the use of a second device such as a security token or mobile phone. This has a huge impact on the accessibility of a service due to:

- **Improved Adoption** - by user groups that cannot, or will not, use a mobile phone to assist in authentication
- **Reduction in "unhappy" user journeys** - caused by either a) forgotten passwords or; b) second steps such as delayed/missing SMS texts, misconfigured authenticator apps, loss of second device, mistyped One Time Passcodes and incorrectly answered captchas to name a few.
- **Reduction in user fatigue** - due to multiple steps, resulting in service abandonment

Once integrated to any web service or mobile application nearly zero ongoing maintenance is required as MIRACL guarantees smooth operation of the service behind the scenes with market leading Service Level Agreements (SLAs). By simplifying the users' experience, user support requirements are reduced and adoption is increased resulting in decreased support time and costs.

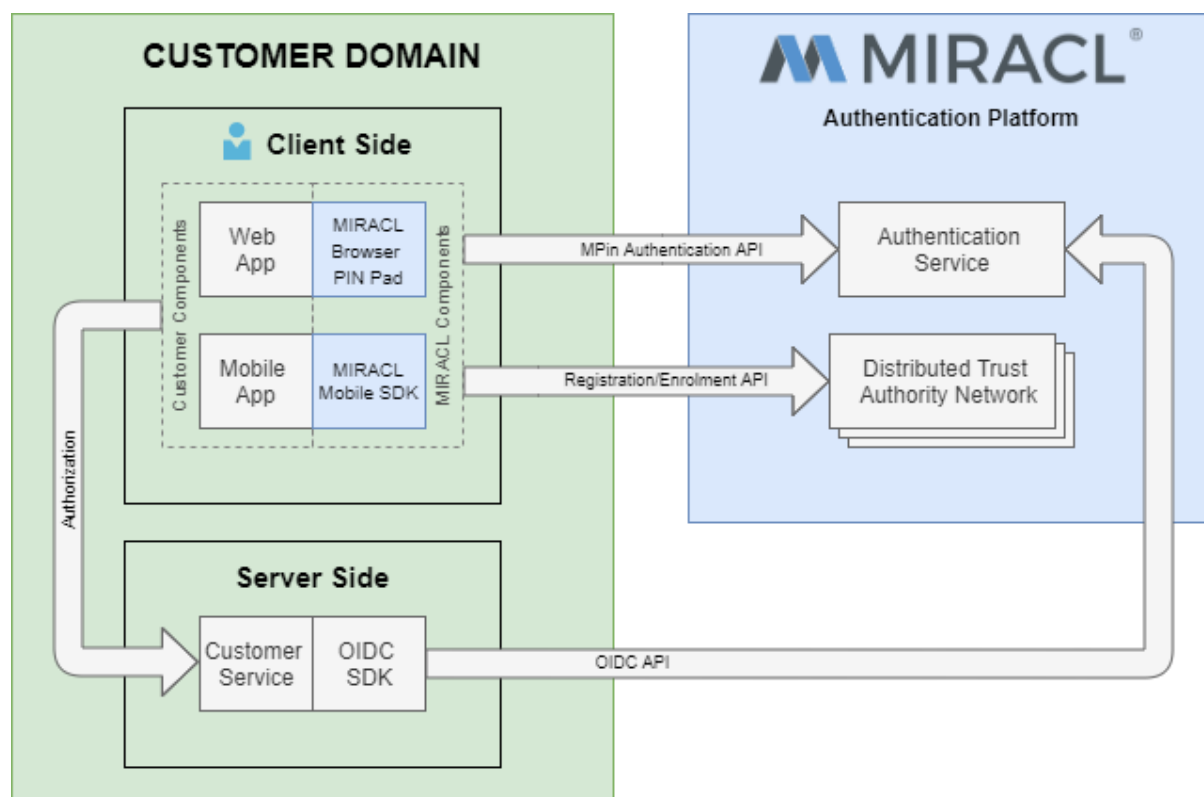
## Overview of the G-Cloud Service

All services, both internal and external have a duty of care to protect the safety and security of every online user. Organisations can no longer rely on usernames and passwords which are universally recognised as not fit for purpose and the target of 99.9% of all attacks by volume. All online services require authentication that:

- Is more secure than Usernames / Passwords
- Is easier for users to remember and use than Passwords
- Has the capability to stop most common attacks such as Phishing, Credential Stuffing (botnet), Passwords Spraying, Replay and Man-in-the-Middle attacks
- Avoids the use of SMS texts and second devices (secure tokens, card readers even authenticating mobiles etc) on a cost but more important, complexity basis
- Supports the use of both desktop and mobile access with one clean, user-friendly step which is familiar to both young and old alike
- Does not exclude users based on technical skills and familiarity
- Does not exclude users based on hardware availability (Win, Mac, Linux, iOS, Android even embedded devices), mobile coverage or handset specifications

MIRACL's authentication is provided as a SaaS service and benefits from extremely rapid integration to any OpenID Connect (OIDC) compliant services. OIDC is an authentication protocol, based on the OAuth 2.0 specifications and provides the following benefits

- ease of deployment: cross platform availability, no downloads or software to install, no hardware required
- ease of integration: integrated to any website service without required any change to user flows. Integrate to mobile native apps with completely self contained SDKs
- ease of use: single step authentication with no dependencies on second devices
- minimal management: no endpoint maintenance, no software to be broken by upgrades, no hardware to be lost or break down
- high security: resistant to most common forms of attack
- lowest total cost of ownership: completely managed authentication service with no associated hosting cost and massively reduced liability due to GDPR and Privacy risks



*Figure 1 MIRACL Authentication Platform*

### Service Management Options

Service configuration and management is normally administered via a dedicated service portal. From here you can set up new authentication endpoints, review logged activities on existing authentication endpoints, manage individual users and administrators of the service.

Our clients have the ability to integrate and extend these functions within their own service platform by utilising the Management APIs

### User Enrolment Options

MIRACL Trust ID can support any enrolment journey as defined by the client. Clients have the option of utilising MIRACL's default, email based, enrolment or validating the users' details (ID Proofing) and subsequently sending that user to MIRACL for enrolment.

## MIRACL Standard SaaS Identity Verification

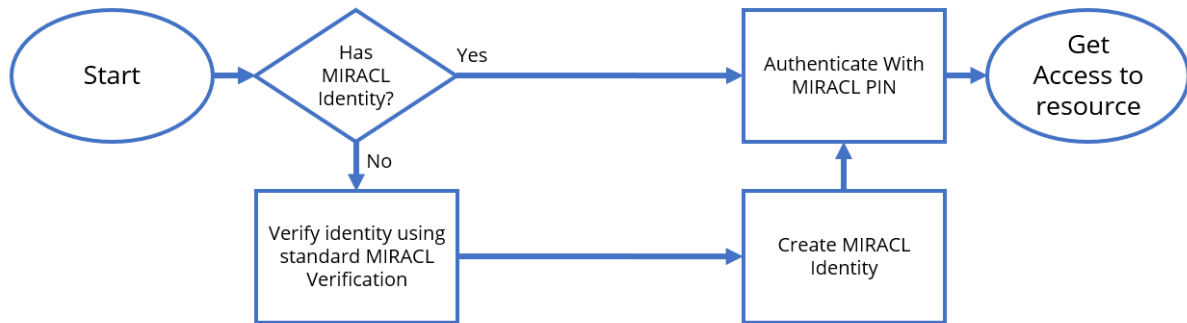


Figure 2 MIRACL Standard SaaS Identity Verification

**Customised Enrolment** is what enables the provision of custom verification methods instead of the default email confirmation process. Importantly, any user verification takes place outside the control and sight of MIRACL ensuring all data used for verification purposes remains tightly controlled by the client.

## MIRACL Client Customised ID Verification

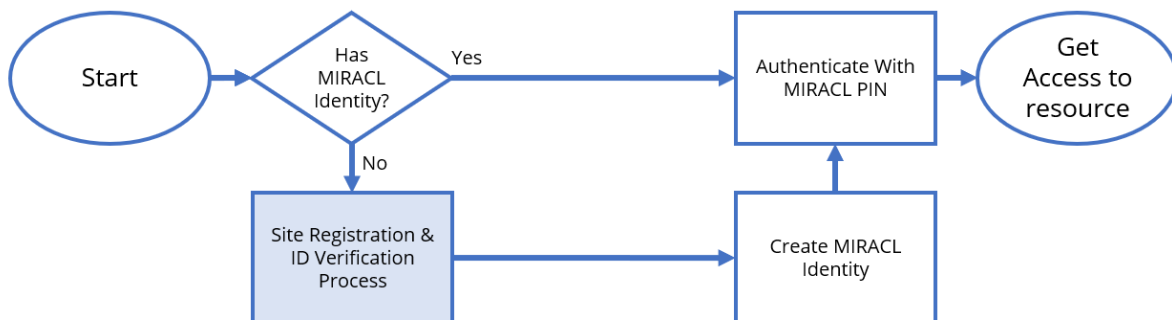
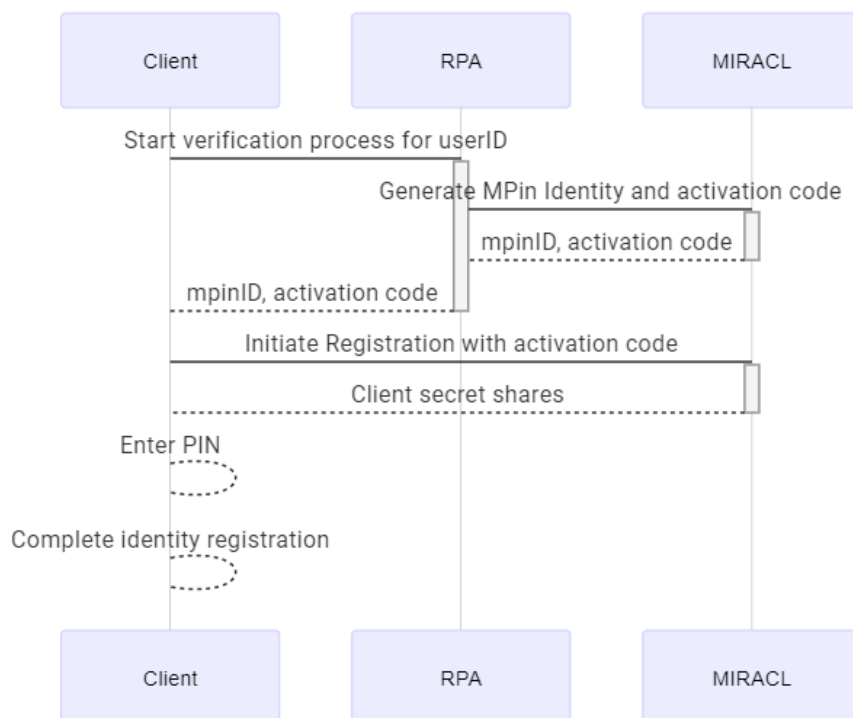


Figure 3 MIRACL Client Customised ID Verification

This flow consists of two parts:

- **External verification** - The Relying Party Application (RPA) creates their own unique verification flow (ID Proofing) based on their needs. Once the verification has passed, the RPA makes a request to the MIRACL platform to register an MPin Identity and receive an activation code for the given user.
- **User Registration** - With the received activation code, the Client activates the user identity and finalizes the registration process on our platform.



*Figure 4 Verification Process*

## Authentication Options

By default, users authenticate with a 4 digit PIN they selected during the enrolment process. This can be extended to 5 or 6 digit PINs by selecting the appropriate option within the SaaS service portal. Alternative authentication options include:

- **One Time Passwords** - Offer One Time Passwords (OTP) based on MIRACL identities
- **RADIUS** - Offer MIRACL identities via a RADIUS server and email, to increase the security of password authentication without altering the legacy client and server product, for example VPN clients, Remote Desktop and Virtual Desktop application.
- **SSO** - Create a Single Sign On framework accessed by MIRACL Trust ID. Managed by LDAP / AD and used by employees to access numerous services which can authenticate via SAML

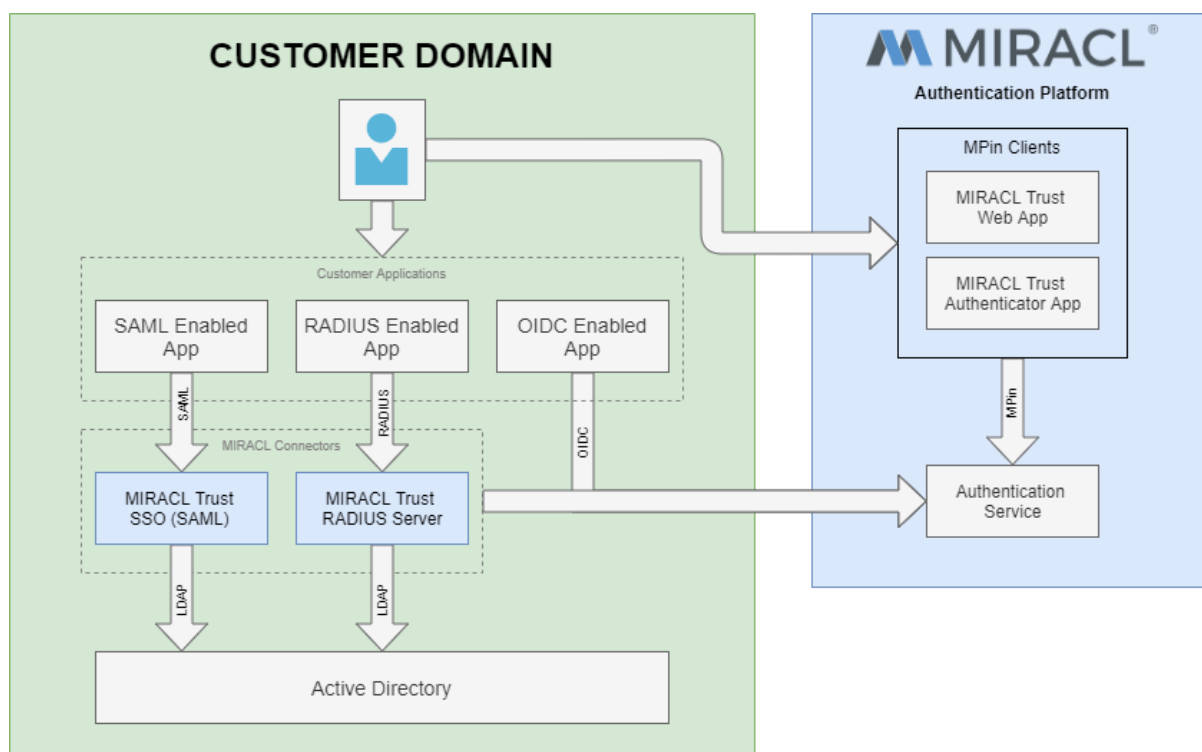


Figure 5 MIRACL Authentication Platform

## **SLA Options**

By default MIRACL Trust ID is provided with a 100% service level agreement through the provision of various options including multiple redundancies, geographic and cloud diversity.

## **Support Options**

All contracts are provided with office hour (9am-5pm GMT) phone and email support for client staff. This can be extended to 24 x 7 support for mission critical applications or even direct end user support as agreed between the parties.

## **Consultancy and Development Resources**

Standard support includes assisting our clients to design and integrate the MIRACL Trust ID within their service platform. We can provide any missing skills and take a more proactive approach. For example designing user flows, creating integration plans, project managing the integration and even providing the hands-on development resources to integrate the service.

## **Associated Services**

MIRACL Trust ID is provided as a SaaS service and easily integrated into any OIDC compliant platform. For that reason both internal teams and independent 3rd party contractors will be able to integrate the service with minimal or no assistance from MIRACL. See integration documentation here:

<https://miracl.com/resources/docs/get-started/overview/>

Actual integration to a web service takes little more than a day BUT basic design of user flows and security procedures can take longer. By using established user flow templates the entire process can be completed within a week for most web services.

MIRACL's current service stack has capacity to service in the order of 10,000,000 additional users depending on usage frequency and time distribution patterns. Engineered on a highly scalable and flexible Kubernetes stack, additional capacity can be brought online within one or two minutes.

If required, we can also implement entirely independent authentication service stacks on Hybrid or Multi cloud infrastructures.

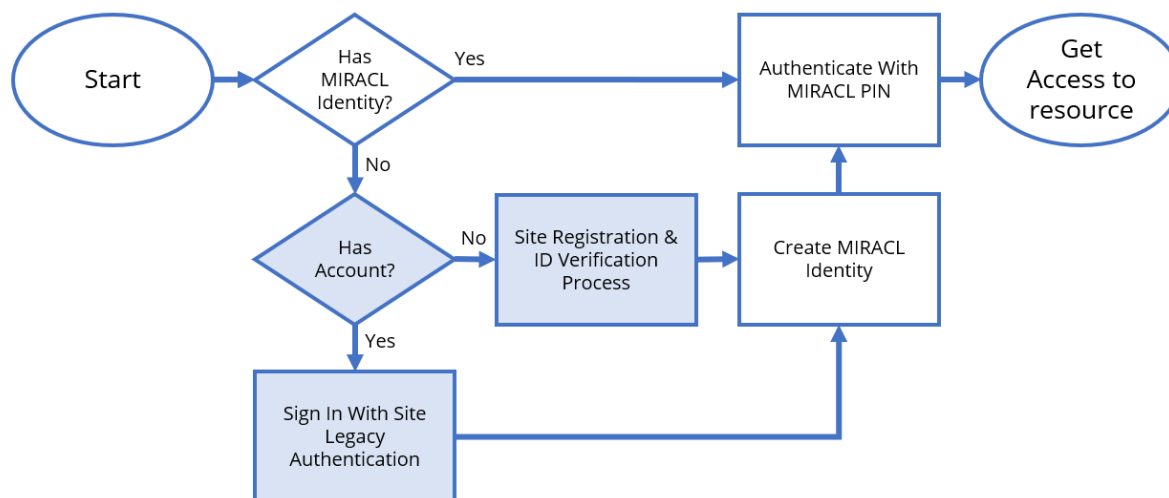
Creation of different tailored multi cloud or hybrid cloud infrastructures will increase minimum charges. Please refer to our pricing document for final details of costs.

## **Rapid Integration to Other Platforms Or From Legacy Service**

Significant time and effort can be saved by integrating MIRACL Trust ID to existing identity or access management platforms supplied by companies such as Auth0, ForgeRock, Okta, OneLogin and WSO2 to name but a few. Please speak to us to discuss integration options for the access management platform of your choice.

In almost all cases it should be relatively simple to migrate existing end users from your authentication framework to MIRACL Trust ID.

### MIRACL Suggested User Migration From Legacy Authentication



*Figure 6 MIRACL Suggested User Migration from Legacy Authentication*

## 2. Data Protection

### Information Assurance

We do not store any of the Buyer's users' information with the exception of an identity token, and an authentication history. We comply with Cyber Essentials and IASME governance standards.

### Data Back-Up and Restoration

MIRACL runs full backups monthly. Incremental backups are run weekly and then daily. Users cannot control these, but we could agree something different for a user should they need it. Effectively, in the unlikely event of a complete outage, all users who had registered since the last backup would need to re-register. Registration typically takes only a few seconds.

### Business continuity statement/plan

The MIRACL business continuity plan covers production systems, staff, support and general operations. The service runs of course from the Google Cloud and has been architected for being resilient. Staff are fully capable of performing all functions from home or any other location. Support staff are backed up by developers where necessary. Effectively, we do not expect any downtime for the service unless due to extreme circumstances.

A more detailed plan can be provided to the buyer on request.

### Privacy by Design

MIRACL adopts privacy by design. We do not have access to any of the Buyers' users' data and do not have a database of any identifiable information as we use an industry leading zero knowledge proof to carry authentications.

## 3. Using the service

### Ordering and Invoicing

To order the MIRACL Trust Service, the buyer should email their requirements to be discussed by email first to [sales@miracl.com](mailto:sales@miracl.com).

Assistance will be provided in completing an Order Form thereafter as needed.

### Availability of Trial/Free Tier Service

All users of MIRACL Trust ID service get the first 10,000 authentication/month free of charge. This includes basic email support and basic customisation, which is great for larger organisations to trial the service in their test environment and smaller organisations to use indefinitely.

The Trial Service can be signed up to online in minutes at:

<https://miracl.com/get-started/>

### On-Boarding, Off-Boarding, Service Migration, Scope etc.

It is possible for a Buyer to use the service completely without interaction with MIRACL or our staff, i.e. in a completely self-service model. They would create a login on our portal, do a small amount of configuration, and begin testing, or even go-live, completely without assistance. We have had a client integrate with our service in a matter of hours. However, it is typical to have a technical resource on our side discuss their solution and requirements, and work with them to onboard. Full documentation is provided, and all questions will be answered promptly by the implementation team.

Whilst we have yet to have a customer leave us, off-boarding would be even more trivial. We keep no customer data other than an identity token, secure keys and an authentication history. Migrating from MIRACL would involve the customer changing their configuration to use a different provider, or changing their configuration to perhaps go back to using username / passwords. As they rolled this out over time, the authentications to MIRACL would reduce (as would their bill, as we bill per use of the service) until ultimately they had no further users using MIRACL. They could then ask for a download (should they want it) of authentication history, and we would then simply remove their account.

As noted above, we have not yet had a customer migrate away from our service, but we would be honourable and give every assistance should a customer wish to do so. All and any exit plans would be considered. If we deemed the exit plan a large effort, we may ask for some commercial consideration for such assistance.

## **Training**

Introductory onboarding is provided to the Buyer's service implementor/admin to go through the main features of MIRACL Trust ID. For end-users steps are described on the services page and user guide.

## **Implementation Plan**

MIRACL Trust ID can be implemented in as little as one hour, depending on the Buyers existing infrastructure. Service implementation is described in the documentation and if further information is required a detailed implementation plan can be provided to the buyer on request.

## **Service Management**

MIRACL attempts to provide a fully available service. Upgrades are done out-of-hours, and when such upgrades occur, the downtime is only during the services re-start, which is often / typically measured in a handful of seconds. Even during this downtime, authentications will still be processed (by another server) it is only new registrations that will fail.

As we work on an agile basis, sometimes we do not upgrade / restart the service for months, and other times we may do an upgrade once, maybe even twice a month, but as noted above, each such upgrade will only affect new registrations, and as such, will only be for a small number of seconds.

## **Service Constraints**

No constraints on performance and service hosted on a leading cloud provider allowing elastic increase/decrease of resources as required at the time of authentication. service availability and support hours as agreed between the Buyer and MIRACL. Maintenance and service updates carried out outside of business hours and last seconds, to minimise planned downtime.

Customisation includes Buyer logo, colours, service name.

## **Service Levels**

MIRACL provides 100% SLA. Support from a 48 hour email response through to a 24x7 telephone. In addition to the standard service levels, a tailored one can be discussed and agreed prior to an order being placed with the Buyer.

## **Outage and Maintenance Management**

MIRACL has architected the service around 100% availability. This includes using predictive auto-scaling on elastic cloud servers that scale based on usage.

We run not only internal availability tests, but also continuously run actual authentications from 6 points on the globe to ensure absolute knowledge about

end-to-end availability of the service, and this information is used to define our downtime statistics.

### Financial Recompense Model for not Meeting Service Levels

Service Level Agreement Credit. We provide a credit on monthly fees should our service level be less than we are bound to provide. SLA credit is not a refund, cannot be exchanged into a cash amount, requires you to have paid any outstanding invoices and expires upon termination of your customer contract. SLA credit is the sole and exclusive remedy for any failure by MIRACL to meet its obligations under this SLA. Look down the left column to find the service level you are contracted for. Look across the column headings to find what the uptime of the service was for the month and the cell intersection shows the credit calculated as a percentage of fees paid for the period being assessed. Please see "Service Level Guarantee" table for a detailed breakdown of support levels.

|                                |      | Achieved |             |            |               |
|--------------------------------|------|----------|-------------|------------|---------------|
|                                |      | 100%     | 98% to 100% | 95% to 98% | Less than 95% |
| <b>Service Level Guarantee</b> | 100% | 0%       | 10%         | 25%        | 50%           |

*Figure 7 Service Level Guarantee*

## 4. Provision of the service

### Customer Responsibilities

The Customer acknowledges that the data held by MIRACL in connection with the Service is minimal and shall, unless otherwise agreed, be limited to the username and email address of each user. The Customer shall own the right to all of the Customer data and has the sole responsibility for the legality, reliability, integrity, accuracy and quality of all such Customer data.

The Customer acknowledges that the Services may enable or assist it to access the website content of, correspond with, and purchase products and services from, third parties via third-party websites and that it does so solely at its own risk. MIRACL makes no representation, warranty or commitment and shall have no liability or obligation whatsoever in relation to the content or use of, or correspondence with, any such third-party website, or any transactions completed, and any contract entered into by the Customer, with any such third party. Any contract entered into and any transaction completed via any third-party website is between the Customer and the relevant third party, and not MIRACL. MIRACL recommends that the Customer refers to the third party's website terms and conditions and privacy policy prior to using the relevant third-party website. MIRACL does not endorse or approve any third-party website nor the content of any of the third-party website made available via the Services

Furthermore, the Customer shall, without affecting any of its other obligations:

- comply with all applicable laws and regulations with respect to its activities under the Agreement;
- ensure that the Authorised Users use the Services and the Documentation in accordance with the Agreement and shall be responsible for any Authorised User's breach of the Agreement;
- be responsible for all actions and omissions of its Users, including but not limited to the addition by Users of any applications or the subscription of additional features relating to the Services;
- obtain and shall maintain all necessary licences, consents, and permissions necessary for MIRACL, its contractors and agents to perform their obligations in connection with the Services
- ensure that its network and systems comply with any relevant specifications provided by MIRACL from time to time; and
- be, to the extent permitted by law and except as otherwise expressly provided in the Agreement, solely responsible for procuring, maintaining and securing its network connections and telecommunications links from its systems to the MIRACL's data centres, and all problems, conditions, delays, delivery failures and all other loss or damage arising from or relating to the Customer's network connections or telecommunications links or caused by the internet.

## Technical Requirements and Client-Side Requirements

MIRACL Trust ID only requires an active internet connection and works on all browsers on any device.

If the Buyer wishes to integrate MIRACL Trust ID with their native mobile then iOS8 and Android 4.1 or later are required.

## Outcomes/Deliverables

The client will get industry leading passwordless multi factor authentication for all their users.

## Development life cycle of the solution

MIRACL uses the Agile software methodology, working in two weeks sprints. This gives us immense flexibility over the project duration to assign additional resources, or bring in other assistance if required. Tasks are prioritised and categorised to include:

- issues / bug-fixes
- customer feature request
- product improvement
- strategic product change

MIRACL uses a CI/CD (continuous integration/continuous deployment) methodology for continually integrate, deploy and test all code changes. Production changes are also automated, but under manual control (of at least 2 people).

## After-sales Account Management

At MIRACL we pride ourselves in great customer satisfaction and strive for long-term successful and growing business relationships. We will manage the relationship with frequent communication as agreed. Whilst we will work in any reasonable way requested by our clients, typically we allocate an account manager to every client who will be the first point of contact for queries and requests as well as the channel via which customer product improvements and suggestions can be requested.

## Termination Process

MIRACL Trust ID is a software only solution so the termination process is very simple with a one month minimum period, which is automatically renewed on a month-by-month basis if the buyer continues using the service. To terminate, the buyer simply needs to stop using the service and the contract will be terminated at the next month's renewal date. There are no early termination costs. The customer has complete ownership and flexibility should they want to wind-down the service. We will provide every assistance to them should they want to do this.

## 5. Our experience

### Case Studies

#### 1 Financial services

Experian uses our white-labelled version of MIRACL Trust ID to secure UK citizens on the GOV.UK Verify program. This enables users accessing online government services to prove their identity, log in and transact

Experian chose MIRACL Trust ID due to its industry leading experience and unmatched user experience from all multi factor authentication solutions in the market. MIRACL Trust ID is the only cross-platform, single-step passwordless multi factor authentication solution.

Control with Cloud: Experian uses hybrid cloud option and so hosts one of the Distributed Trust Authorities (DT-A) to retain control of the authorisation of all enrolled identities while benefiting from the scale and resilience of the cloud.

*"Protecting the person online and giving them a good user experience of the services they are using is a key goal for us as a business. MIRACL is a pioneering company that will help us achieve that."*

**Nick Mothershaw**, Former UK&I Director of Identity & Fraud at Experian

#### 2 Charity use case

A UK charity uses MIRACL Trust ID to secure their users for Microsoft Office 365 suite and a number of associated applications. The charity chose MIRACL Trust ID due to its simple user experience which does not require any additional hardware or security token, and yet provides multi factor authentication.

The charity has a number of users who are provided with a means of logging in from a public computer (e.g. library terminal) securely using their mobile phone, but without leaving any trace of their keys, PIN or identity on the computer when they log out.

#### 3 Healthcare

*The Health Insurance Portability and Accountability Act (HIPAA) mandates the use of strong two-factor authentication and access controls relating to patient data. Due to the nature of work, shared devices often mean shared credentials and passwords alone cannot be considered secure enough for access to patient data & medical systems. Healthcare professionals need quick and easy access to patient data and medical systems, whilst maintaining the highest levels of security.*

Data breaches and hacking scandals can damage reputation and revenue. It negatively impacts loyalty and trust of patients and IT breaches can be potentially life-threatening.

Due to multiple identity solutions in place, a consistent, complete and non-repudiation audit log for health data access can not be maintained. Hardware tokens for user authentication often get lost or stolen and are often

MIRACL Trust® provides a HIPAA Compliant and easy to adopt software based multi-factor authentication. A “Software-as-a-Service” platform without any need of hardware based tokens: a simple PIN provides fast but still highly secure authentication for authorised users. Integrates with existing services, whether hosted on premise or in a private or public cloud and allows quick, easy provisioning in SDK based web and mobile apps. Supports multiple identities for web and mobile services on shared devices. With MIRACL Trust, every user can register and use their personal digital MIRACL identity for daily tasks, facilitating an authentic multi-user environment and a consistent audit log for health data access.

“Customised verification” approach allows integration with existing user verification processes. Flexible license options, on average 90% less TCO than classic solutions.

#### **4 Education**

*Remove password database threats completely for all students, administration, employees, patients, and participants, whilst simplifying access at the same time. Meets LOA3 Rating for GP44 and IL3 rating for NIST SP-80083B Guidelines. Supports RADIUS authentication, federation through SAML and OIDC protocols.*

Educational institutions from primary all the way to higher education suffer from similar problems. A growing proliferation of online services representing increasingly critical functions whilst at the same time being attacked by new and innovative threat vectors. This impacts both students and staff equally with the least secure authentication solution, usernames/passwords, still representing the single authentication option for the vast majority of those services.

Users have to maintain too many passwords. Password chaos or identity chaos also known as password fatigue is often the consequence. If confronted with multiple logins, users tend to use simple to remember passwords and/or maintain a written list of passwords. Also, the more password databases exist in the data centre the more points of compromise exist. Distributed logins come with distributed management which increases security risk.

On/off-boarding users or resetting user passwords is complex and results in a high amount of helpdesk calls and reduced productivity. Enforcing new password policies and maintaining control of the users’ access to information across the enterprise is an error prone process with too many separate user databases.

The result is that an institution of more than 500 students and staff can easily occupy the full time of one person simply to manage passwords and multitude of service entry points for its users.

Even where those institutions have historically adopted Multi Factor Authentication, it has been on a point by point basis, limited by factors such as cost, complexity or simply the ability to integrate against those underlying services.

For those reasons MIRACL offers Trust® SSO coupled with MIRACL Trust ID. Increase user satisfaction and experience by implementing MIRACL Trust® SSO and replacing multiple user passwords and identities with one MIRACL identity.

Solve user frustration with MIRACL Trust® SSO. Instead of multiple passwords the user has to remember only one MIRACL PIN. Also, MIRACL Trust® reduces points of compromise by reducing the amount of password databases down to zero. No passwords mean zero password reset requests which again means less helpdesk calls. Less helpdesk calls free up time of administrators so they can focus on other topics instead.

MIRACL Trust® SSO helps you stay compliant because it reduces IT complexity and allows you to embrace cloud and digitisation initiatives thanks to its cloud-based focus, MIRACL Trust® not only allows integration with on-premise systems, but also with cloud-based environments such as Office365, AWS, Azure, Google Cloud, etc.

## Clients

Our clients include:



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