

# fireflyMobile™ Two Factor Authentication

Building a robust Two Factor Authentication solution with the Firefly Authentication Server

fireflyMobile™ is a cost-effective two factor authentication solution that is suitable for small, medium and mass deployment locally or across the globe.



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## fireflyMobile

fireflyMobile™ is locally developed software solution that delivers a one-time password to a customer's mobile phone in a text message. Based on "Something you know and something you have", fireflyMobile is a secure and cost-effective alternative to access secure web sites, VPNs and to provide step-up authentication and account management.

fireflyMobile one time passwords are a convenient and easy-to-use authentication solution that eliminates the need for dedicated hardware tokens making it convenient for the customer and cost-effective for mass deployment.

fireflyMobile supports both web based and network access SMS Two Factor Authentication.

Customers are able to securely login online or perform online transactions while employees can access corporate Virtual Private Networks to connect to today's leading VPN gateways such as Cisco, Juniper and Check Point through the added security of a one-time password delivered to their mobile phone.

And for Software Developer, fireflyMobile ships with a software development kit (SDK) that makes it easy as possible to integrate with existing or new .NET and Java applications.

All designed to make life easier, more convenient and secure, fireflyMobile benefits include:

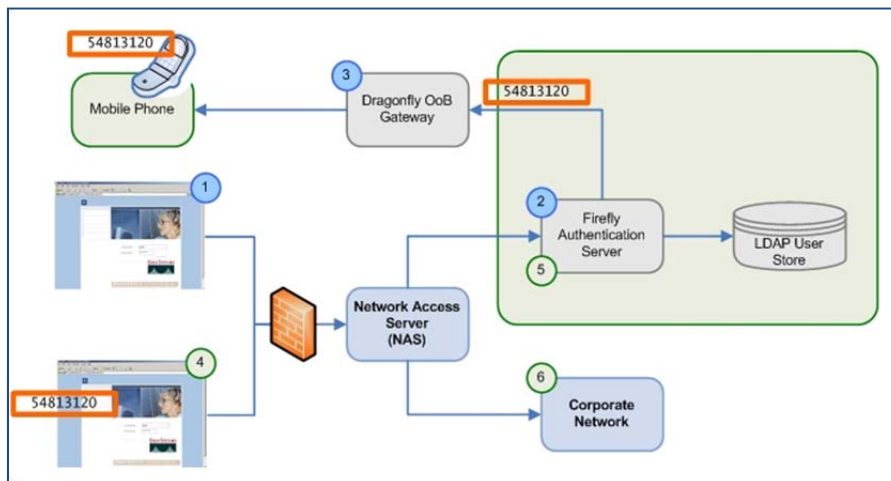
- Reduces threats from phishing, malware and trojan horse exploits
- Two Factor Authentication that is suitable for mass deployment
- No hardware tokens to purchase, replace or maintain
- Convenient use of mobile phone
- Reduce support costs and increase productivity
- One time passwords delivered via a secondary channel
- Rapid deployment across the organisation
- Cost-effective solution

Ultimately, the Firefly solution is a cost effective two factor authentication solution that is suitable for small medium and mass deployment locally or across the globe.

## Real-World Scenarios

### fireflyMobile Remote Access VPN Integration

The following diagram illustrates fireflyMobile with Remote Access VPN. This is one example.



**Step 1** User provides credentials (username and password)

**Step 2** Firefly Authentication Server authenticates user's credentials and generates the Firefly one-time password

**Step 3** The Firefly Authentication Server transmits the one-time password to the customer's mobile phone via an out-of-band SMS gateway

**Step 4** User enters their Firefly one-time password

**Step 5** The Firefly Authentication Server authenticates the user's Firefly one-time password

**Step 6** The user is granted access to secure network resources

## The Firefly Authentication Server

The Firefly Authentication Server has been specifically designed to support SMS one-time password Authentication. The Firefly Authentication server communicates through a framework built on Firefly Adapters.

The Firefly adapter framework allows you to easily configure fireflyMobile to meet your authentication requirements.

### Firefly Adapters

The Firefly authentication solution is built on a framework of pluggable adapters. Each adapter separates itself from the core authentication server thereby providing a flexible and scalable solution.

#### Firefly Authentication Adapters

Firefly Authentication Adapters control the authentication mechanism between the core Firefly Authentication Server and the end-user. This Authentication Adapter ultimately drives the end-user experience; for example, a sign on form, single sign on or transaction level authentication.

#### Firefly User Repository Adapter

Firefly User Repository Adapters make integration with popular enterprise user databases such as Microsoft Active Directory as easy as possible.

#### Firefly Gateway Adapter

Firefly Gateway Adapters communicate between the Firefly Authentication Server and third-party providers of SMS services for fast and reliable delivery of SMS text messages.

The Firefly Gateway has been specifically design to integrate with the Firefly Authentication Server while separating the various standards and third-party Application Programming Interfaces (APIs) allowing new providers to be added and removed with ease.

#### Firefly Management Adapter

The Firefly Management Adapter is responsible for the configuration and overall management of the Firefly Server. Software Developers can make direct calls to the Firefly Authentication Server for Account Provisioning and Account Maintenance via the management adapter.

The Firefly Authentication Server also ships with the Firefly Management Console, FireflyMC, providing a graphical interface to for Server and Account management.