

# Password Self Help – Password Reset for IBM i



Nick Blattner, System Engineer

White Paper from Safestone Technologies

---

## Contents

Overview .....	2
Making the Case.....	2
Setting the Stage.....	3
1. Configure Product Settings .....	4
2. Register Users .....	4
3. Enable Users to Access Self-Help Questions.....	5
The User Experience .....	6
Reporting Ability .....	8
Summary .....	8
About Safestone.....	9
Safestone’s Solutions for Audit and Compliance.....	9

---

## Overview

Resetting disabled passwords is an inevitable activity which all companies face, regardless of the systems they use. In the case of IBM i shops, however, it is crucial. This is because most companies with an “i”, use it to run their core applications; users who can’t sign-on are unable to do the essential jobs that drive their organization’s business.

Safestone’s Password Self Help application provides administrators with the ability to allow users to reset their own passwords. It is a simple application both to install and to implement, and it provides genuine Return on Investment for any organization that uses it.

Once in place, it is no longer necessary for external support to assist a user in resetting their password, if it has been disabled for any reason. The Help Desk staff’s time can then be better spent on higher priority issues and on improving the company’s effectiveness in the marketplace.

Best practices dictate that any password reset process must be completely secure and fully audited. Password Self Help meets both these requirements and does it simply and efficiently. Users are able to get back on the system quickly and securely, and an administrator can track all activity.

## Making the Case

- 20% to 50% of all help desk calls are for password resets – Gartner estimate
- The average help desk labor cost for a single password reset is \$70 – Forrester estimate

Many regard these statistics as being too conservative. Indeed, password resets are a constant and will never go away as long as users need a password to authenticate to a system. Resetting passwords wastes enormous amounts of time and money, as the Forrester statistic points out. Even substituting a more conservative amount for the cost to reset a user’s password, the number of users and how often they need their passwords resetting results in worryingly high costs – in both time and money. Multiply that number by \$25, \$50 or \$70 to understand how quickly benefits can be realized when using a system which automates and simplifies the process.

Laws and regulations such as PCI DSS, Sarbanes-Oxley and HIPAA have reviewed password requirements and now encourage or demand greater complexity. Some recent changes that have taken place include:

- Best practices have established passwords be changed more often, sometimes as often as every 30 days
- The number of attempts a user has to authenticate has been reduced to as few as 3 times before their password is disabled
- Passwords tend to be longer, often with a minimum password length of 8 characters, and have added complexity, requiring digits in addition to characters
- i5/OS now has the option of allowing upper/lower case passwords, passwords longer than 10 characters, the inclusion of special characters and punctuation, and embedded blanks.

## Setting the Stage

So what does Safestone's Password Self-Help do and how does it work? The answer is pretty simple:

Users who have disabled themselves sign-on to a profile that presents a selection of challenge questions, for which they have previously provided answers. If they answer successfully, their disabled profile is re-enabled and they can sign back on.

Password Self Help can be installed on any IBM i. It is a standalone green screen application and doesn't require client code on a PC or Windows server. It is simple to install and administer, as it resets only i5/OS passwords without any effect to Active Directory user id's. Below is an example of how this process happens: -

```
Self Help for OS/400

 5. Update Company Name

10. Work with Questions/Configuration

15. Work with Registered Profiles

20. Work with User/Question admin.

40. Run Audit Reports/Purge Data
50. Message Monitor
60. Command Display Screen

90. Signoff

Option ==> _
```

It can be downloaded from the web and once installed only 3 steps are required to start using it.

1. Configure Product Setting (point 5 in the above screen graphic)
2. Register Users (point 10)
3. Enable Users to Access Self Help Questions (point 20)

## 1. Configure Product Settings

Configuring settings is a one-off event which allows you to tailor Password Self Help to meet your company's security requirements. Examples of some of the configurations setting are: -

- how many challenge questions a user must answer
- whether the answers are case sensitive
- what rules the answers to the challenge questions must meet

For instance, in terms of the password, it is possible to set the minimum number of characters the answer must be, and whether repetition of characters is allowed.

```

Set Up General Configuration Details                                     14:56:52
System Name. . . . . : V142097                                         Amend
Language ID and Description. . 01 DEMO LANGUAGE Default Lang? . Y
Invalid Attempts Allowed . . . 3
No of Questions to Ask . . . . 3
Retain Self Help Audit(Days) . 5 0-999
Display User Input Text? . . . N Y/N
Question Allocation By?. . . . B A=Administrator U=User B=Both X=Automatic
Display User Text Screens? . . N B=Bulletin Text H=Help Text Y=Both N=None
Display to Unregistered Users. N Y/N
Automatic Action . . . . . Y S=Re-enable Prf P=Reset Pwd Y=Both N=None

Default Question rules
Minimum length of response . . 000 0 to 50 (0 = No default rules applied)
Characters not allowed . . . . _____
_____ *NONE,*SYSTEM,Blank,Specific characters. *NONE/Blank = No Restriction

Repeating characters allowed . 00 00 to 50 ('00' = No Restriction )
Case sensitive . . . . . _ ' ' or 'N'

Enter=Continue F3=Exit F8=Set PWD F10=Help Text F11=Bulletin Text F12=Cancel

```

## 2. Register Users

Users have to first be registered in Password Self Help before they can reset their password. Registering profiles is done by the Password Self-Help administrator, using a command which can also be run from a Command Line program to simplify registering large numbers of users. If a user is not registered, their profile cannot be reset. This provides the security necessary to protect powerful profiles, such as QSECOFR from having their passwords reset. If you don't want a particular profile to be reset in Password Self Help, then don't register it.

### 3. Enable Users to Access Self-Help Questions

The final step in setting up Password Self Help is undertaken by the user. A user must create the answers to the challenge questions presented when they reset their password. A Password Self Help command is provided to give access to the questions; it can either be run from a command line or embedded in a menu. Users can be assigned their questions or choose which questions to answer, depending on which option is deemed to be more secure and the easiest to administer.

```

01 DEMO LANGUAGE                               Select Question                               14:58:35
ALERTSH
                                           Position to Question ID . . . . . _____
Type options, press Enter.
  1=Select question
03 Questions MUST be answered in order to use the password reset system.

Opt User Name  Ques. ID  Question Text
-----
  —           Q00001  What was your childhood nickname?
  —           Q00002  What was the name of your first school?
  —           Q00003  What is your favorite food?
  —           Q00004  What is your Mothers Maiden Name?
  —           Q00005  What is the name of the company you first worked for?

Enter=Continue  F3=Exit  F5=Refresh  Roll
  
```

Finding out the answers to the challenge questions would be a serious security exposure if someone were to access them, either from within Password Self Help, or by viewing the file where they are stored. To address this concern, there is no option within Password Self Help to view the user's answers; only the user can see them if they choose to maintain their own questions. Furthermore, the answers have been encrypted, so viewing the file will provide no information.

## The User Experience

There are only a few, easy-to-follow steps for a user to reset their password using Password Self Help: -

- Sign-on as user SELFHELP
- Enter your profile
- Answer your challenge questions
- Sign-on as yourself and reset your password

Once a user has disabled their profile, typically after 3 invalid sign-on attempts, they sign-on as profile SELFHELP. This profile was created when Password Self Help was installed, and is very limited in what it can do on the system. It displays the challenge question screens, has no command line access, and has no special authority. It is created with a default password which can be changed if required.

```
Self Help Password Reset Request Screen

This is the standard text is input. You could explain the steps needed for a
user to reset their password.

Profile. . . . . _____
Reason for Reset . . _____

Enter=Continue      F3=Exit
```

After the user signs on as SELFHELP, they are presented with a screen which requests their own profile and reason for the reset. If they have already been registered in Password Self Help and have already provided answers to their challenge questions, they will now be presented with those challenge questions.

```
Self Help Password Reset Request Screen

You need to answer 03 questions. This is question 01

Question:
What was the name of your first school?

Answer
_
~ ~ ~ ~ ~

NB: Answers are Non-Displayed

NB: Answer is case sensitive (e.g. 'HELLO' is not the same as 'Hello')

Enter=Continue      F3=Exit
```

Assuming the correct answers are provided, the user's password is reset to their profile name, or to a default password already chosen by the user. The password is set to "expire". Doing this causes i5/OS to force the user to change it as soon as they next sign-on. And their profile is changed from \*DISABLED to \*ENABLED.

Now the user can sign-off as SELFHELP and sign-on to their own profile. i5/OS will sign them on, and force them to change their password.

```
Self Help Password Reset Request Screen

You have successfully reset your password to your profile name.

Press ENTER to sign back on as NICK

Enter=Continue      F3=Exit
```

---

## Reporting Ability

Password Self Help has the capability to run reports and track users' password reset activities. It can run an audit report to show a full range of user activities and configurations. In addition, its Message Monitor provides alerts to mobile administrators, so that immediate notifications of unsuccessful self help resets can be sent to administrators, no matter where they are.

## Summary

Password Self Help is a simple application that can provide real return on investment for any business with almost immediate effect. Industry-cited figures estimate each password reset costs between \$30-\$70, with 20%-50% of all calls to the Help Desk being password-related. By empowering users to reset and synchronize their own passwords, the immediate reduction in numbers of calls to the Help Desk eradicates these costs. Added to which, the increase in productivity for both the administrator (who previously spent time resetting passwords, at an average of 15 minutes per password), and for the user (who is no longer ineffective while waiting for their passwords to be reset), enables the company to reclaim the majority of the costs associated with lost productivity.

Furthermore, the application includes full audit traceability, with the ability to run reports of all users' password reset activities.

---

## About Safestone

Safestone is the leading supplier of security, audit and compliance solutions for IBM Power Systems (i, AIX, Linux). Their module-based solutions are flexible, scalable, easy to implement and use, and they address all varying degrees of audit, compliance and security requirements.

An Advanced IBM Business Partner and long-standing member of the IBM i ISV Advisory Council, Safestone helps businesses meet compliance regulations (Sarbanes-Oxley, PCI DSS, Basel II, HIPAA) and information.

Partner of choice for global financial and banking institutions with the most stringent security and compliance requirements, Safestone provides the most comprehensive solution in System i security to over 500 blue-chip customers worldwide.

Their global network, developed over more than 21 years provides localized sales, consultancy and professional services to help organizations manage all their System i security requirements.

## Safestone's Solutions for Audit and Compliance

**Security Audit and Detection** – Comprehensive real-time intrusion detection and alerting, allowing proactive management of security events and potential breaches.

**Risk & Compliance Monitor** – Identifies policy compliance vulnerabilities by reporting against off-the-shelf policies (Sarbanes-Oxley, PCI DSS, Basel II, ISO 27002 etc.) and in so doing helping to prepare organizations for audit.

**Powerful User Passport** – enables system administrators to limit the number of powerful users. It provides auditors and management a comprehensive audit trail of user activities.

**DetectIT Password Self Help** – enables users to reset their own passwords on System i immediately, without needing to call the Help Desk and wait for the request to be processed. The user is presented with a series of challenge-response questions to validate their authenticity. If approved, the password reset is made instantly.

**Network Traffic Controller** – Exit point management and reporting tool for controlling remote access requests from networked devices

**Multiple Systems Administrator** – Enables centralized management of networked System i servers and partitions through a single point of control

**Compliance Center** – is a powerful and flexible query-based reporting solution that simplifies the task of collecting and converting a vast array of audit, compliance and security events into compliance reports. Reports can be scheduled and automated with easily read graphics.

**User Profile Manager** – provides full identity management systems across multiple System i machines / partitions.

**iConnect for RSA enVision** – Monitors, captures, filters and configures data from the IBM i into relevant security event messages for correlation and aggregation into the enVision console.

For more information please contact - email: [info@safestone.com](mailto:info@safestone.com)

Call: 800 558 3544 (US) or +44 (0) 1494 442396 (UK)