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Banner Student Self-Service Release Guide

Release 8.7.1
February 2015



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Revision History

Publication Date	Summary
February 2015	New version that supports Banner Student Self-Service 8.7.1 software.

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Introduction

The Banner® Student Self-Service 8.7.1 release contains updates to self-service pages for the following enhancements.

- Admissions Application PIN
- Security Scan Error Handling
- Self-Service Data Validation

Admissions Application PIN

Banner Student Self-Service 8.7.1 is dependent on Banner Student 8.7.3.

New functionality has been added to enhance admissions application PIN processing and provide strong passwords as requested in IDEA-16385 and IDEA-19248. The changes pertain to first time user account creation and the returning user login process for applicants in Self-Service. Previously, an unsecured PIN of six characters had been created in clear text format. The PIN display is now encrypted, the PIN length has been expanded, and alpha characters can be used in the PIN.

Existing controls on the Enterprise PIN Preferences Form (GUAPPRF) are used for PIN format and length. PINs must conform to the PIN reset format, number or character options, and minimum and maximum length as defined on GUAPPRF. Error messages are displayed if the new PIN does not meet the requirements.



Note: Any changes made to the GUAPPRF preferences for applicants will also apply to current students.

The **PIN** field length on the Electronic Application Process Form (SAAEAPS) has been expanded. The created PIN is displayed as an encrypted value (a series of asterisks). The PIN can be reset by the administrator. It is recommended that the administrator note the PIN before it is reset, so the information can be provided to the applicant.

When first time user login credentials are created in Self-Service Admissions, the rules on GUAPPRF are checked to see if the new password meets the rule criteria. A message is displayed to inform the applicant of the requirements. If the password conforms to the rules, the applicant can continue to log in.

The returning user login is also validated based on the settings on GUAPPRF. If the login does not meet the requirements, the new Change PIN page (`bwskalog.P_DispatchChangePIN`) is displayed. The applicant must change the PIN to continue by entering the old PIN, entering the new PIN, and re-entering the new PIN for confirmation. The old PIN is validated against the stored PIN. Once it has been authenticated, the new PIN is stored.

When the PIN is successfully updated, the applicant is logged in and taken to the Select an Application Type page (`bwskalog.P_DispatchChoice`) to start a new application or the Application Menu (`bwskalog.P_DispatchChoices`) for existing and in process applications.

When the login authentication fails, an error is displayed. Error messages indicate the PIN requirements as defined on GUAPPRF. If an applicant submitted an application before this enhancement was applied, and a PIN was used that does not meet the new requirements, the student will need to change the PIN.

Once the applicant has been admitted to the institution, the secure login and PIN are sent to him/her. The Third Party Access Audit Form (GOATPAD) is then used to manage the PIN.



Note: It is recommended that Info Text for the login pages be reviewed and references to the previous PIN requirements updated.

Refer to the *Banner Student Release Guide 8.7.3* for information on additional changes for this enhancement.

New Self-Service page

A new page has been added for Admissions Self-Service.

Change PIN (bwskaolog.P_DisChangePIN)

The Change PIN page (bwskaolog.P_DisChangePIN) is used to reset the applicant's PIN for access to Self-Service. It is displayed when the applicant logs in with a previously created PIN that does not meet the defined PIN preferences. The controls on the Enterprise PIN Preferences Form (GUAPPRF) are used to validate the PIN.

The **Change PIN** button is used to submit the changed PIN information. When the PIN change is successful, the applicant is logged in and taken to the Select an Application Type page (bwskaolog.P_DisChoice) to start a new application or the Application Menu (bwskaolog.P_DisChoices) for existing and in process applications. When the PIN change is not successful, an error is displayed.

Web Page Fields

This page contains the following fields.

Item	Description/Source Information
Old PIN	Original login PIN.
New PIN	New secured login PIN.
Verify PIN	PIN re-entered for authentication.

Setup Requirements

The following setup is required for this page to work as expected.

Item	Description
Enterprise PIN Preferences Form (GUAPPRF)	Set up controls for: <ul style="list-style-type: none"> • PIN Reset Format • Minimum Length • Maximum Length • Number Required Indicator • Character Required Indicator

Updates to Banner

This page updates the following items.

Item	Description
Old PIN, New PIN, Verify PIN	Electronic Admissions Non-Student Table (SABNSTU)

Links to Other Web Pages

This page does not have links to other Web pages.

Buttons/Icons on This Page

This page contains the following buttons/icons.

Button/Icon	Action
Change PIN	<ul style="list-style-type: none"> • PIN change is successful. <p>Applicant is logged in and taken to the Select an Application Type page (<code>bwskalog.P_DispatchChoice</code>) to start a new application or the Application Menu (<code>bwskalog.P_DispatchChoices</code>) for existing/in process applications.</p> <ul style="list-style-type: none"> • PIN change is not successful. An error is displayed.

Web Menus With Links to This Page

No menus have links to this page.

Changed Self-Service pages

The following Self-Service pages have been modified.

Admissions Login (bwskaalog.P_DisplLoginNon)

The **PIN** field length on this page has been expanded to display 15 characters. Characters are displayed as dots. A maximum of 99 characters is allowed.

Admissions Login - New User (bwskaalog.P_DisplLoginNew)

The following changes have been made to this page.

- The **Create a PIN** field and **Verify PIN** field lengths have been expanded to display 15 characters. Characters are displayed as dots. A maximum of 99 characters is allowed.
- Info Text for the **Login ID** field instructions is delivered and can be modified in Web Tailor to be specific for your institution.
- Additional Info Text is delivered for PIN creation instructions. The displayed instructions are based on the GUAPPRF control settings.

Changed packages

The following package and package body have been modified.

BWSKALOG/BWSKALO1

New procedures have been added.

Procedure	Description
P_DisplChangePIN	Displays the Change PIN page when the user PIN does not comply with the institution's password security policy defined in GUAPPRF.

Procedure	Description
P_ProcChangePIN	Processes the Old Pin , New Pin , and Verify New Pin values submitted on the Change PIN page. Stores New Pin value in the SABNSTU_PIN column as encrypted. A salt value is generated and stored in the SABNSTU_SALT column. This is used to encrypt the PIN value entered at login and match it with the stored PIN value. The salt value is always unique, even for the same clear text PIN. The encrypted PIN value is also unique for same clear text PIN.
P_DisppIN_Instructions	Displays the PIN creation instructions on the Admissions Login - New User and Change PIN pages. Displays instructions based on GUAPPRF settings.

Existing procedures have been modified.

Procedure	Description
P_DisppLoginNew	Displays Admissions Login - New User page. Previously used to display PIN creation instructions (as hard coded text) from TWGRINFO. The P_DisppIN_Instructions procedure has been added to display PIN creation instructions based on GUAPPRF settings.
P_ProcLoginNon	Submits user ID and PIN information entered by user on Admissions Login - New User page. Multiple code changes have been made.

New scripts

The following scripts are delivered with this enhancement to update Web Tailor.



Note: Unless otherwise noted, new scripts are run as part of the upgrade process for a release.

Script	Result
bwstwgbwmnui_080701.sql	Adds entry to the Web Tailor Main Web Page Settings Table (TWGBWMNU) for procedure to display the Change PIN page (bwskaalog.P_DispChangePIN)
bwstwgrinfoi_080701.sql	Adds entry to the Web Tailor Repeating Information Text Table (TWGRINFO) for procedure to display the Change PIN page (bwskaalog.P_DispChangePIN)
bwstwgrinfou_080701.sql	Updates entry in the Web Tailor Repeating Information Text Table (TWGRINFO) for procedure to display the Admissions Login - New User page (bwakalog.P_DispLoginNew)
bwstwgrwmrli_080701.sql	Adds entry to the Web Tailor Menu Roles Table (TWGRWMRL) for procedure to display the Change PIN page (bwskaalog.P_DispChangePIN)

Updated Security Scan Error Handling

The security scan report lists several types of errors. One type applies to Self-Service pages where exception handling is not present or is not performed properly. The following Oracle errors are in this category.

- ORA-01403 - *No data found.*
- ORA-106502 - *PL/SQL: Numeric or value error: character string buffer too small.*
- ORA-06502 - *PL/SQL: Numeric or value error: character to number conversion error.*
- ORA-01858 - *A non-numeric character was found where a numeric was expected.*

Code for exception handling has been added to Self-Service pages as appropriate. Updated error messages display the page title and the error text and are more informational for the user. The Oracle error number is not displayed. For example, *Error occurred while processing final grade changes. ERROR: No data found.*

Numerous BWSKXXXX packages and the associated procedures have been updated for these changes.

Self-Service Data Validation

The possibility existed for inappropriate information to be displayed in Banner Self-Service pages. Banner Web Tailor has added validation checks to prevent unsanitized HTML from being executed or injected into the pages. Data from HTP calls is now validated before being sent to the Self-Service pages and displayed to the user. The exception to the validation checking is data that is user-defined, such as Information Text (HTML).

See the *Banner Web Tailor 8.6.1.1* patch documentation for more information.

There are three main types of Self-Service data entry that are validated:

- When invalid characters are entered directly into a Self-Service page, an error message is displayed to the user to re-enter the data or contact an administrator.
- When field values are included in a URL, the system displays an access error message or a cross site scripting error.
- When a modified HTML file is used to load invalid data, the system displays an error and code information for the failed execution.

Numerous BWSKXXXX and BWCKXXXX packages and the associated procedures have been modified to use the new validation checks.