Amigopod

Implementing Multiple Visitor Account Creation Forms

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Technical Note

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1   Introduction

This technical note explains how to configure the amigopod Visitor Management Appliance to provide different visitor account creation forms to different operators.

Using this advanced form of role-based access control allows for multiple different types of user to be created by authorized operators.

Audience

This document is intended for network administrators and system integrators deploying an amigopod-based visitor management solution.

Basic familiarity with the amigopod Visitor Management Appliance is assumed. For in-depth information about the features and functions of the amigopod appliance, refer to the amigopod Deployment Guide.

Document Overview

The first section of this technical note describes the fundamental components of the amigopod role-based access control model, including operators, operator profiles, and the application forms and views used for visitor management.

The next section contains a detailed configuration guide for deploying a solution consisting of multiple different forms for visitor account creation. The steps required to customize the fields, forms and operator profiles are explained.

Usage Scenarios

Use the configuration guidelines in this technical note if you want different operators to be able to manage different groups of visitor accounts.

This technical note is also suitable for an environment where different operators must record different information when creating a visitor account, even if all operators will create visitor accounts using the same role.

NOTE   The configuration described here requires all visitor account management to be performed by an authorized operator (i.e. a user of the system that has logged into the amigopod GUI with a username and password). Different visitor self-registration instances may also be implemented to perform similar functions, but a self-registration instance may be accessed without operator authentication. This type of configuration will not be described further in this technical note.

2 About Operator Profiles

An operator profile determines what actions an operator is permitted to take when using the amigopod Visitor Management Appliance.

Some of the settings in an operator profile may be overridden in a specific operator's account settings. These customized settings will take precedence over the default values defined in the operator profile.

Role-based access control

The amigopod Visitor Management Appliance supports role-based access control through the use of **operator profiles**. Each operator using the amigopod is assigned a profile which determines the actions that the operator may perform, as well as global settings such as the look and feel of the user interface.

Using the operator profile editor, the forms and views used in the application may be customized for a specific operator profile, which enables advanced behaviors to be implemented as part of the role-based access control model.

This process is shown in the diagram below.
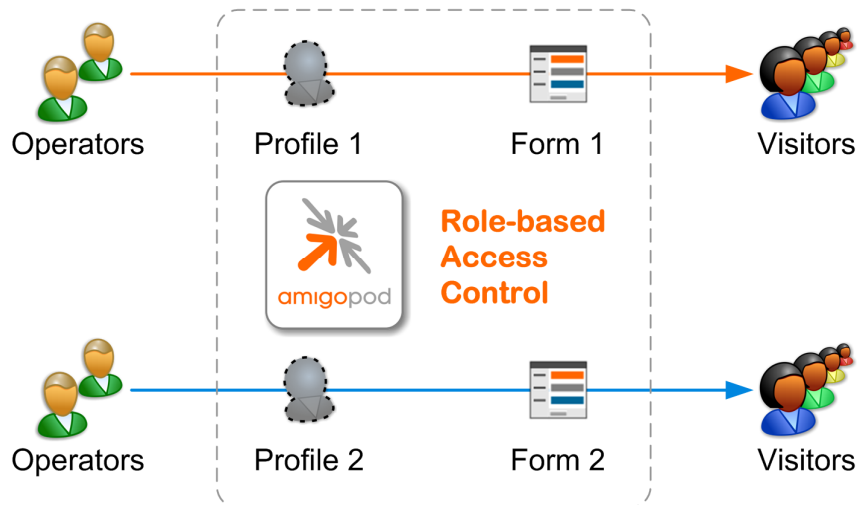
Figure 1: Role-based access control for multiple operator profiles.

3 About Application Forms and Views

The behavior of all visitor management features is controlled through the application's forms and views. For example, creating a user is an action that is carried out by completing the **create_user** form.

Visitor management functions

The diagram below shows the standard forms and views in the amigopod Visitor Management Appliance.
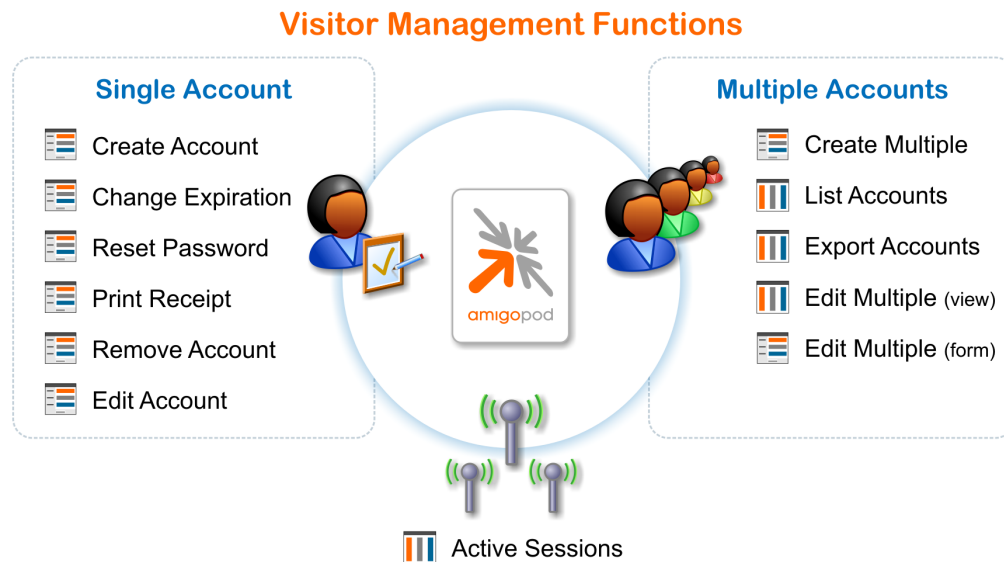
Figure 2: Visitor management functions of the amigopod.

Form and view reference

The table below lists all the forms and views used for visitor management.

Name	Type	Visitor Management Function	Editable?
change_expiration	Form	Change Expiration	Yes
create_multi	Form	Create Multiple	Yes
create_user	Form	Create Account	Yes
guest_edit	Form	Edit Account	Yes
guest_export	View	Export Accounts	Yes
guest_multi	View	Edit Multiple Accounts	Yes
guest_multi_form	Form	Edit Multiple Accounts	Yes
guest_receipt	Form	Print Receipt	No
guest_register	Form	Guest Self-Registration	Yes
guest_register_receipt	Form	Guest Self-Registration Receipt	Yes
guest_sessions	View	Active Sessions	Yes
guest_users	View	List Accounts	Yes
remove_account	Form	Remove Account	No
reset_password	Form	Reset Password	No

4   Configuring Multiple Visitor Account Forms

Example solution architecture

The remainder of this technical note describes the configuration for the following environment:

- The **IT Administrators** operator profile may create visitor accounts using any of the standard roles.

- The **Operations and Marketing** operator profile may only create visitor accounts with the **Employee** role.

- The **Reception and Front Desk** operator profile may only create visitor accounts with the **Guest** role.

- Additionally, different fields will be used to store information with employee and guest accounts at the time of account creation.

  - Visitor accounts with the Employee role will have a Department field that specifies the area to which the visitor account has access.

  - Visitor accounts with the Guest role will have a Visiting field that indicates the person the guest is visiting.

After you have read this technical note, you should be able to adapt and extend the configuration guidelines described here to suit the particular requirements of your amigopod deployment.

Check plugin versions

Per-operator profile visitor management requires the following plugin versions:

- amigopod Operator Logins 2.0.2 or later

- Guest Manager 2.0.3 or later

- amigopod Kernel 2.0.2 or later

To verify you have the correct plugin versions installed, navigate to **Administrator** > **Plugin Manager** > **List Available Plugins** and check the version number in the list.

Use the **Check for Plugin Updates** link to download and install updated plugins.

Define custom fields

Create field to store employee's department

The field to store the employee's department information will be named **employee_department**.

Navigate to Customization > Fields and click the Create New Field link.

Make the following selections to complete the form:

- Field Name: employee_department

- Field Type: String

- Description: The department name of this employee.

- Default View Display Properties

  - Column Type: **Sortable text**

  - Column Title: **Department**

  - Column Width: **100**

  - CSS Class: leave this blank

  - CSS Style: leave this blank

  - Column Format: **Field Value**

- Default Form Display Properties

  - User Interface: **Text field**

  - Label: Department:

  - Description: Enter this employee's department.

  - CSS Class: leave this blank

  - CSS Style: width:240px;

  - Label After: leave this blank

- Form Validation Properties

  - Field Required: [ ] Field value must be supplied

  - Initial Value: leave this blank; a default value for this field may be supplied by inserting it here

  - Validator: (No validation)

Click the **Save Changes** button to create the new field.

The field will be displayed in the Customize Fields list:
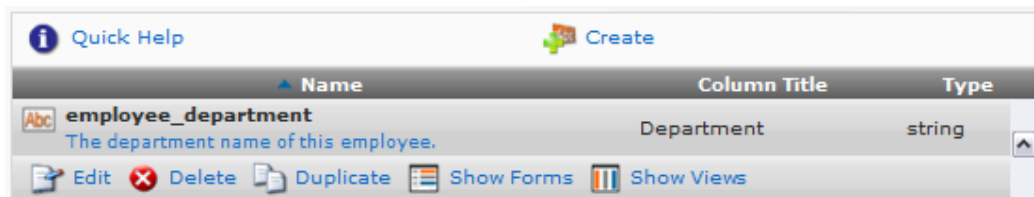
Create field to store guest's visit information

The field to store the guest's visit information will be named **guest_visiting**.

Follow the same procedure as above to create this field, using the following selections for the new field:

- Field Name: guest_visiting

- Field Type: String

- Description: The name of the person this guest is visiting.

- Default View Display Properties
  - Column Type: **Sortable text**
  - Column Title: **Visiting**
  - Column Width: **100**
  - CSS Class: leave this blank
  - CSS Style: leave this blank
  - Column Format: **Field Value**
- Default Form Display Properties
  - User Interface: **Text field**
  - Label: Visiting:
  - Description: Enter the name of the person the guest is visiting.
  - CSS Class: leave this blank
  - CSS Style: width:240px;
  - Label After: leave this blank
- Form Validation Properties
  - Field Required: [x] Field value must be supplied
  - Initial Value: leave this blank; a default value for this field may be supplied by inserting it here
  - Validator: IsNonEmpty
  - Validator Param: (Use argument)
  - Validator Argument: *leave this blank*
  - Validation Error: Cannot be blank

NOTE   By selecting the "Field value must be supplied" check box and adding the IsNonEmpty validator, forms using this field must be filled out with a non-empty value in order to allow the guest account to be creation. Refer to the amigopod Deployment Guide for more details on form processing and field validation.

Click the **Save Changes** button to create the new field.

The field will be displayed in the Customize Fields list:
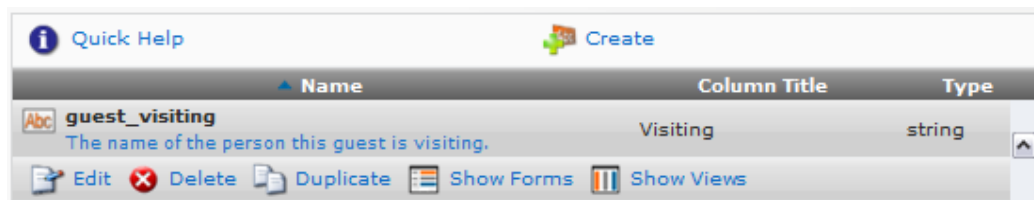
Define additional forms

Navigate to **Customization** > **Forms & Views** and select the **create_user** form in the list view.

This is the standard visitor account creation form, and will be used by operators with the IT Administrator profile and any other default profiles. It will also be used as the basis for the new visitor account creation forms.
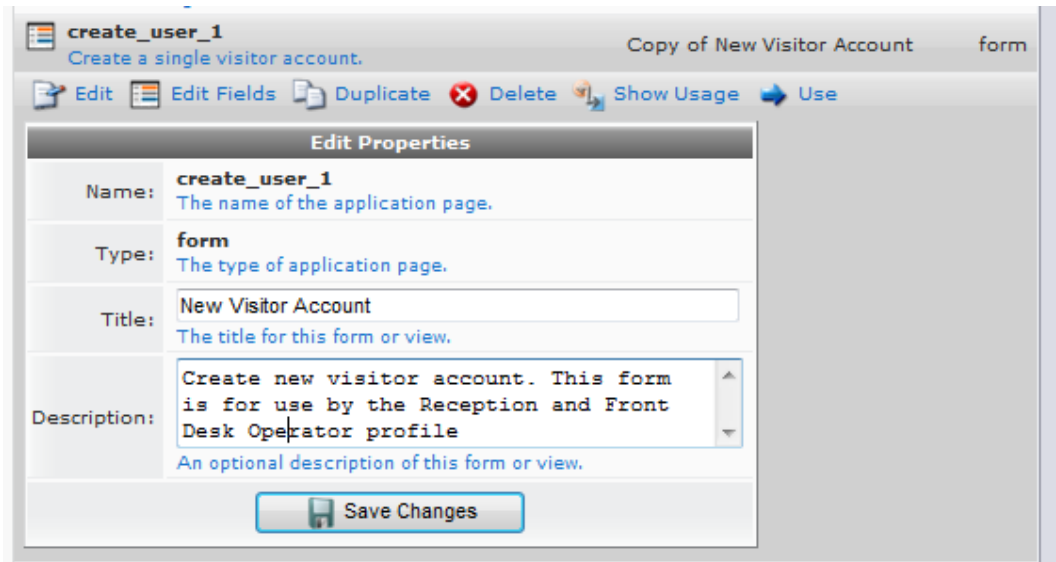
Create form for guest account creation

Click the **Duplicate** icon link to create a new copy of the **create_user** form, which will be named **create_user_1**.

Select the **create_user_1** form and click the **Edit** link.

Make the following changes in the Edit Properties form:

- Title: New Guest Account

- Description: Create a new guest account. This form is for use by the Reception and Front Desk operator profile.

Click the **Save Changes** button to update the form's properties.

Modify fields on guest account creation form

Now click the **Edit Fields** link to modify the layout of the form's fields.

The first change to make is to remove the account role selection field. This is achieved by changing the **role_id** field to a hidden field and specifying a fixed value that corresponds to the Guest role:

- Click the **role_id** field in the list, and then click the **Edit** link.

- Change the User Interface to **Hidden field**.

- Enter an Initial Value of **2**. This corresponds to the ID of the Guest role, which is displayed in the list of RADIUS User Roles.

Form Field Editor

* Field Name: role_id
Select the field definition to attach to the form.

Form Display Properties
These properties control the user interface displayed for this field.

Field: ☑ Enable this field
When checked, the field will be included as part of the form.

* Rank: 70
Number indicating the relative ordering of user interface fields, which are displayed in order of increasing rank.

* User Interface: Hidden field
The kind of user interface element to use when entering or editing this field.

Form Validation Properties
These properties control how the value of this field is checked.

Field Required: ☑ Field value must be supplied
Select this option if the field cannot be omitted or left blank.

Initial Value: 2
Value to initialize this field with when the form is first displayed.

* Validator: NwaGuestManagerIsValidRoleId
The function used to validate the contents of a field.

Validator Param: (None)
Optional name of field whose value will be supplied as the argument to a validator.

Validator Argument:
Optional value to supply as the argument to a validator.

Validation Error: Please choose from one of the available roles
The error message to display if the field's value fails validation and the validator does not return an error message directly.

Advanced Properties
These properties control conversion, display and dynamic behaviours.

Advanced: ☐ Show advanced properties

Type Error: Please choose from one of the available roles
The error message to display if the field's value is not supplied, has an incorrect type, or if conversion fails.

[💾 Save Changes]

- Click the **Save Changes** button to update this field.

The second change is to remove the Expire Action field from the form.

- Click the **do_expire** field in the list, and then click the Edit link.

- Change the User Interface to **Hidden field**.

- Leave the Initial Value as **4**. This value indicates that the visitor account should be deleted and all active sessions logged out when the account's expiration time is reached.

- Click the **Save Changes** button to update this field.

Next, the Account Activation fields will be hidden, as all visitor accounts are to be immediately activated on creation:

- Click the **modify_schedule_time** field in the list, and then click the **Disable Field** link.

- Click the **schedule_time** field in the list, and then click the **Disable Field** link. This field must also be disabled, or else a date and time picker will be displayed to allow an activation time for the account to be set.

Finally, the new field for recording the visit information must be added to the form:

- Click the **email** field in the list, and then click the **Insert After** link.

- In the Form Field Editor, make the following selections:

  - Field Name: guest_visiting

  - Field: [x] Enable this field

  - Field Required: [x] Field value must be supplied

- Leave all other options as default and click the **Save Changes** button to add the field to the form.

The Preview Form tab at the top of the form editor may be used to see the effect of these changes on the form:

You can test the validation rules for the form by completing it and clicking the Create Account button; if the form fields are successfully validated, the result is shown in the form field editor.

Create form for employee account creation
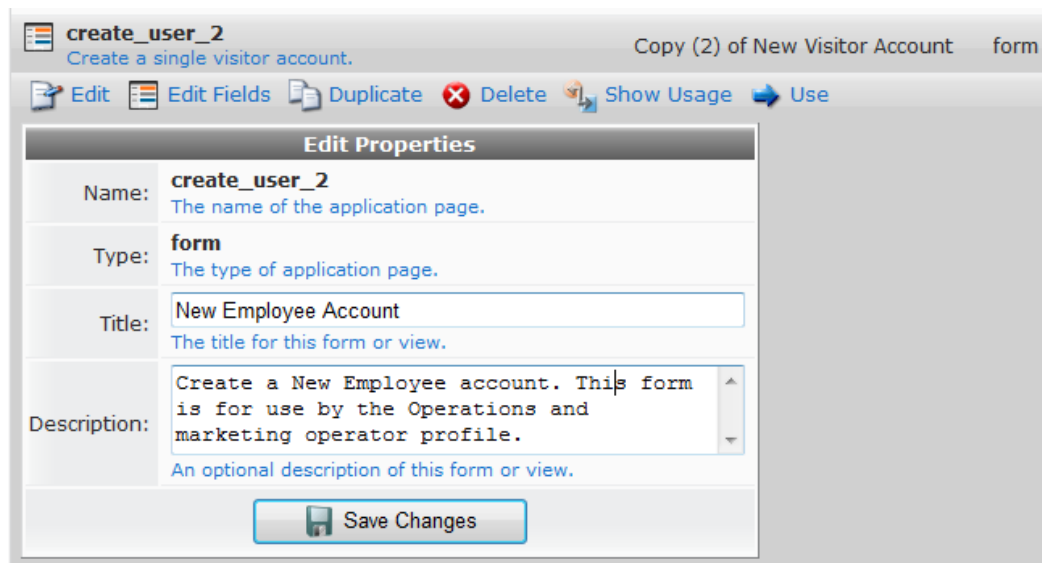
Navigate to **Customization** > **Forms & Views** and select the **create_user** form in the list view.

Click the **Duplicate** icon link to create a second copy of the **create_user** form, which will be named **create_user_2**.

Select the **create_user_2** form and click the **Edit** link.

Make the following changes in the Edit Properties form:

- Title: New Employee Account

- Description: Create a new employee account. This form is for use by the Operations and Marketing operator profile.

Click the **Save Changes** button to update the form's properties.

Modify fields on guest account creation form

Now click the **Edit Fields** link to modify the layout of the form's fields.

The first change to make is to remove the account role selection field. This is achieved by changing the **role_id** field to a hidden field and specifying a fixed value that corresponds to the Employee role:

- Click the **role_id** field in the list, and then click the **Edit** link.

- Change the User Interface to **Hidden field**.

- Enter an Initial Value of **3**. This corresponds to the ID of the Employee role, which is displayed in the list of RADIUS User Roles.

- Click the **Save Changes** button to update this field.

The second change is to remove the Expire Action field from the form.

- Click the **do_expire** field in the list, and then click the Edit link.

- Change the User Interface to **Hidden field**.

- Change the Initial Value to **2**. This value indicates that the visitor account should be disabled and all active sessions logged out when the account's expiration time is reached.

- Click the **Save Changes** button to update this field.

Next, the expiration time for the account will be disabled so that the account does not have an automatic expiration time.

- Click the **modify_expire_time** field in the list, and then click the **Disable Field** link.

- Click the **expire_time** field in the list, and then click the **Disable Field** link. This field must also be disabled, or else a date and time picker will be displayed to allow an expiration time for the account to be set.

- Click the **expire_after** field in the list, and then click the **Disable Field** link.

Finally, the new field for recording the employee's department must be added to the form:

- Click the **visitor_company** field in the list, and then click the **Insert After** link.

- In the Form Field Editor, make the following selections:

  - Field Name: employee_department

  - Field: [x] Enable this field

  - Leave all other options as default and click the **Save Changes** button to add the field to the form.

The Preview Form tab at the top of the form editor may be used to see the effect of these changes on the form:

Configure form overrides

The form overrides are used to specify that different operator profiles should use different forms for visitor management.

Override forms for Reception and Front Desk

Navigate to Administrator > Operator Logins > Manage Operator Profiles, select the Reception and Front Desk operator profile, and then click the Edit link.

To specify that this operator profile should use a different form when creating a new visitor account, select the **Override the application's forms and views** check box, and then select the forms and views that should be used from the options displayed under Custom Forms and Views:

In this example, the option for New Visitor Account form should be changed from the default to the "New Guest Account" form that has been created.

Click the **Save Changes** button to update the operator profile.

Override forms for Operations and Marketing

Navigate to Administrator > Operator Logins > Manage Operator Profiles, select the Operations and Marketing operator profile, and then click the Edit link.

To specify that this operator profile should use a different form when creating a new visitor account, select the **Override the application's forms and views** check box, and then select the forms and views that should be used from the options displayed under Custom Forms and Views.

For this example solution, the option for the New Visitor Account form should be changed from the default to the "New Employee Account" form that has been created:

Click the **Save Changes** button to update the operator profile.

Test operator access

First, log in to the amigopod using credentials for an operator with the Reception and Front Desk profile.

The Create Account form will now appear with different fields as configured by the administrator:

After submitting the form, a new guest account is created and the receipt indicates that the visitor's role has been set to Guest:

Now, log out and then log in again using credentials for an operator with the Operations and Marketing profile.

The Create Account form for this operator profile contains different fields:

After submitting the form, a new guest account is created and the receipt indicates that the visitor's role has been set to Employee. The receipt also indicates that no expiration time exists for the new account:

Additional configuration steps

Once you have the basic visitor account creation form customized for different operator profiles, the same process can be used to customize the other forms and views.

To complete the visitor management feature set for both types of operator profile, the following additional configuration steps could be undertaken:

- Customize the **guest_users** view to display a column with the **employee_department** field to operators with the Operations and Marketing operator profile, and display the **guest_visiting** field to operators with the Reception and Front Desk operator profile.

- Customize the **guest_edit** form to allow the values stored in the **employee_department** and **guest_visiting** fields to be edited by the respective operator profiles.

- Customize the **guest_export** view to add new fields, depending on which operator profile uses the export view.

- Customize the **guest_multi** view to display the **employee_department** field, and customize the **guest_multi_form** to allow the value of this field to be changed for multiple employee accounts at the same time.

Summary

Using the advanced role-based access control features of the amigopod Visitor Management Appliance, it is possible to create completely independent user interfaces tailored for specific visitor management requirements.