Aware IM

Version 8.8

Quick Tour

CONTENTS

Introduction

This document is intended to walk you through *Aware IM* in action to give you a feeling of what working with the system is like. You can simply read on or follow the material by reproducing it step by step in *Aware IM*.

We are going to use an intentionally simplistic example of an application to make the tour short. Naturally, *Aware IM* is designed to manage much more complex applications, which will be clear from reading further sections. The example of a more complex system is provided in the "Configuration Case Study" document.

Let us suppose that our hypothetical application should allow staff members of an organization to register and maintain various details about company customers. The system should automatically send personalized e-mail greetings to customers on their birthdays.

The following description assumes that *Aware IM* has been installed and the *Aware IM* Server has been started (see the "Aware IM Installation Guide" for details).

Configuration

The first step is to enter into *Aware IM* the instructions on how our application should work, in other words to configure the application. To do this we start the Configuration Tool. You can start the Configuration Tool by clicking on the "Start Configurator" button at the top of Aware IM Control Panel. When the Configuration Tool prompts you to enter credentials, enter the name of the application you specified when running Aware IM Control Panel for the first time. Enter "admin" as the default user name and enter the word "password" as the initial password.

The left-side panel of the Configuration Tool shows the configuration elements tree (see the "Configuration Tool Overview" section in the Aware IM User Guide). The tree shows the default business space with the name you specified and the two business space versions (1.0 and 1.1). Version 1.1 one is ready to be modified. We will be doing our configuration in this version – this will include configuration of the application details, testing the application and making it operational (see the "Business Space Versions and Version Control" section in the Aware IM User Guide for details on working with business space versions).

Customer management

We will begin our configuration work by specifying the elements allowing staff members to register, find and maintain customers. First we need to define a Customer business object that is going to represent a company customer in the system. There are several

facts that need to be registered for a customer. Each of these facts is stored in a separate attribute with the type that best suits the nature of the fact (see the "Business Objects as Carriers of Data" section in the Aware IM User Guide for more details on business objects and their attributes). For the purpose of our exercise the Customer object will have the following attributes (the attribute name is followed by the attribute type):

- Name: Plain Text
- DateOfBirth: Date
- EmailAddress: Plain Text
- Gender: Plain Text (Male or Female)
- Address: Plain Text

To create a new business object click on the little plus sign to the left of the business space version 1.1 to see the items it contains, select the "Business Objects" item and choose the "New" command from the toolbar (or select "File/New" in the menu or right click and select "New" from the popup menu). The business object editor appears in the working panel. There is also a list of properties of the object and a list of properties of a selected attribute underneath. Click on the "Name" property in the list of properties of the object and enter 'Customer'. Then click on the ✚ icon to enter the attributes of the object. Specify the name of the attribute and choose the type of the attribute. The first three attributes are essential for the purpose of our exercise, as we will see shortly, so when entering the attributes tick the 'Required' checkbox in the list of attribute properties for each of them. This will instruct *Aware IM* to validate the data entered by staff members and disallow empty entries.

Since our system is going to send e-mails to customers, we need to nominate `Customer` as an intelligent business object. In *Aware IM* intelligent objects are those that can receive and process information (see the "Intelligent Business Objects" section in the Aware IM User Guide for more information on intelligent objects). Communication with such objects is performed via communication channels. In this case we need to define the e-mail channel. Click on the "Communication" property in the list of properties of the object and tick the checkbox next to the "E-mail" communication channel. We then enter the parameters required to connect to the mail server. These are the same parameters you use to set up your e-mail program. When the definition of the Customer object is finished, we click on the "Save" button in the application toolbar to save the object configuration (or select File/Save command from the menu).

All information processing in *Aware IM* is controlled by rules. Most rules are attached to business objects. A single object may have many rules attached to it. Such rules are independent of each other. For example, we may add a validation rule to the Customer object that instructs *Aware IM* to disallow registration of customers under 16 years old:

```
IF
   AGE(Customer.DateOfBirth) < 16
THEN
   REPORT ERROR 'Customer cannot be under 16 years old'
```

To we click on the "Update Rules" tab at the bottom of the screen. The rule editor appears in the working area. Click on the ✚ icon – the dialog comes up where we enter 'Age validation' as the rule name. Click OK on the dialog and the entry for the rule is displayed in the list of rules. The rule editor is shown underneath. We will enter the first line of the rule text shown above as the rule condition (without the 'IF' part) and the second line of the rule text shown above as the rule action (without the 'THEN' part). Click on the 📄 icon to save the rule. Click on the "Save" button in the application toolbar to save all rules of the Customer object.

Similarly we could add as many rules as necessary to the Customer object to instruct *Aware IM* on what our system should do when a customer is registered or updated. See the Rule Evaluation section in the Aware IM User Guide for details on how rules work.

Next we will define a query, also called "Customer", to allow staff members to find a particular customer. Queries are used in *Aware IM* to find information of interest in the system (see the "Data Retrieval" section in the Aware IM User Guide for more on queries). This simple query will find and display all Customer objects with names containing text entered by the user and sorted by customer's name. To add the query select the "Queries" item in the tree under version 1.1 and choose the "New" command from the application toolbar. The query editor appears in the working area. Enter 'Customer' as the name of the query (using the Name property), select Customer business object from the drop down of business objects in the "What to look for" section of the editor and enter a condition in the "Where" section as follows:

-    Attribute: Customer.Name
-    Criterion: Contains
-    Value: (Ask at run-time)

In the 'Sorting of results' section select the "Name" attribute and "Ascending" order.

Click on the 'Display as" property in the list of query properties to display the "Display Query Results" dialog. In the 'Attributes to Display' table tick "Name", "DateOfBirth" and "Address". We now want to add a button next to each record of the customer to allow users to navigate to the form of this record. To do this, click on the Add button next to the "Operations with Items" table. In the operation dialog specify Edit as the name of the operation and then select "Edit Object" as operation type. Click OK to close the operation dialog.

Click on the OK button to close the "Display Query Results" dialog and then click on the "Save" button to save the query.

We want operations that are commonly performed by staff members to be readily available on the screen. This can be achieved by placing such operations in the main menu of the system that will always be visible on the screen. We will add two operations to the menu:

- New Customer. This operation will allow registration of new customers. It will display a form where staff members can enter details of new customers.
- Find Customer. This operation will allow staff members to find registered customers.

The menu, as well as many other details related to screen layout and visual settings, can be configured in the visual perspective editor (see the "Visual Perspective" section in the Aware IM User Guide for more information on visual perspectives). Expand the item 'Visual perspectives' in the tree under version 1.1 and double click on the item named "Administrator". This is the visual perspective provided by *Aware IM* for the system with default settings. Expand the 'Top Bar' entry in the table to show the menu of the system. Click on the 'Menu' entry in the tree and then click on the 🛨 icon to add a new menu item. In the dialog that appears enter 'New Customer' as the name of the new item and click on the Details button next to the Command to execute entry. Select the 'Create Object' as the item type and tick the Customer object as the parameter of the command. Click OK twice to submit the dialogs. The new menu item appears in the table.

To configure the 'Find Customer' operation, select the 'Menu' entry and click on the 🛨 icon to add another menu item. Enter 'Find Customer' as the item name and select 'Run Query' as the command type. Select the "Customer" query as the parameter of the "Run Query" command. Click on the "OK" button twice to save the changes to the menu and then click on the "Save" button in the application toolbar to save changes to the visual perspective.

This concludes the configuration work necessary to let the staff members register and maintain company customers. To save the work, right click on the business space version 1.1 in the tree section of the Configuration Tool and select the "Update" command from the popup menu.

Birthday greetings

Let us now add a few configuration elements to prepare the system for sending birthday greeting e-mails.

The personalized greeting e-mail is configured as a notification that we will call BirthdayEmail. In *Aware IM* notifications are used to send messages to people or other software systems via different channels. The content of notifications is held in attributes, like those of business objects (see the "Communication with Other Systems" section in the Aware IM User Guide for more details on notifications). Some channels expect certain attributes from notifications sent through the channels. Since we are going to send BirthdayEmail via the e-mail channel, it should have the following two attributes:

- Subject: Plain Text – used as the email subject line
- Message: Plain Text – used as the email body

Unlike business objects, users do not enter the contents of notifications on the screen. Instead, it can be either set upfront or added dynamically by rules. For the `BirthdayEmail` notification we are going to initialize the required attributes with some contents that *Aware IM* can personalize before the e-mail is sent to a customer.

To configure the `BirthdayEmail` notification select the Notifications item in the tree under version 1.1, right-click on it and choose "Add Outgoing E-mail Notification" from the popup menu. The notification editor appears in the working area. Enter 'BirthdayEmail' as the notification name in the list of properties of the notification. In the attribute table select "Subject" and then click on the Initial Value property in the list of properties of the attribute. Enter the following as the initial value for the attribute:

```
Happy birthday!
```

Select "Message" attribute in the table of attributes and click on the Initial Value properties to enter the following:

```
Dear <<Customer.Name>>,

Happy birthday to you!
We wish you all the best for the future.

Sincerely,
The company
```

The tag enclosed in the angle brackets in the first line contains the name of an attribute that *Aware IM* will use to replace the tag when the notification is constructed, thereby personalizing the text (see the "Document Generation" section in the Aware IM User Guide for details on working with tags). Click on the "Create" button to save the notification.

We will also need a query that finds all customers whose birthday is on the current date. The query is called 'Birthday customers' and looks like this:

```
FIND Customer WHERE MONTH(Customer.DateOfBirth) =
CURRENT_MONTH AND
DAY_OF_MONTH(Customer.DateOfBirth) = CURRENT_DAY_OF_MONTH
```

We can enter the query in almost the same way as how we entered the "Customer" query, except that we click on the 'Textual view'" tab at the top of the query editor. We then enter the above text into the editor and click on the "Save" button to save the 'Birthday customers' query.

Now we need to bring together the parts that find birthday customers and send greetings to them. In *Aware IM* this is done using processes, which are usually configured as a sequence of rules (more information on processes can be found in the "Processes as Links

between User Interface and Business Logic" section in the Aware IM User Guide). We will call the process `CongratulateBirthdayCustomers`, and it will contain the following two rules:

```
FIND 'Birthday customers'
SEND BirthdayEmail TO Customer
```

To configure this process select the "Processes" item in the tree under version 1.1 and choose the "New" command from the application toolbar. The process editor appears in the working area. Enter 'CongratulateBirthdayCustomers' as the process name in the list of process properties and click on the ✚ icon to add a new rule. Enter the name of the new rule and then enter the two lines above into the light yellow-colored cells in column Action 1 on the right as actions for Rule 1 and Rule 2 respectively. Note that both rules have no conditions. Click on the "Save" button to save the process.

The last element we need to configure is a scheduling rule instructing *Aware IM* to start our process on a daily basis, say at 7 o'clock in the morning (see the "Scheduling" in the Aware IM User Guide section for details on how the scheduling works). Click on the "Scheduling" item in the tree under version 1.1 and choose the "New" command from the application toolbar. The scheduling rule editor comes up. Click on the ✚ icon to enter a new rule and enter 'Greet customers' as the rule name. The entry for the rule will appear in the list. Select the 'Daily' radio button in the 'Recurrence pattern' section of the rule editor, select the 'CongratulateBirthdayCustomers' process in the "Actions" section and enter 07:00 as the start time. Click on the "Save" button to save the scheduling rule.

The configuration work for our application is done.

Testing

The next step is to try out the newly configured system to ensure it works as expected. This is done by instructing *Aware IM* to create a testing environment for the system. Select the business space version 1.1 in the tree section of the Configuration Tool, right click and select the "Put under test" command from the popup menu. The state of the business version changes to "Under Test" indicating that it is now possible to work with the business space in the testing mode (see the "Testing Mode" in the Aware IM User Guide section for more on operation and testing modes).

We start a standard web browser, such as Internet Explorer, Google Chrome or Mozilla Firefox, and log into the system by entering the following in the address bar of the browser:

```
http://localhost:8080/AwareIM/logonAdmin.html
```

Alternatively we can just select the "Tools/Browser login" menu item of the Configuration Tool menu.

The browser shows the generic login form where we enter the following:

-   Business space: the business name you specified when installing *Aware IM*. This is the same business name you used when starting the Configuration Tool.
-   Login name: 'admin'. This is the only user registered in the new business space.
-   Password: the password you specified when installing *Aware IM*. This is the same password you used when starting the Configuration Tool.
-   Test mode flag: check the box to indicate we want to login into the testing mode, not the regular operation mode.

This login address will work if *Aware IM* is installed on the same computer. See the "Login" section in the Aware IM User Guide for more login options.

If all parameters are entered correctly, *Aware IM* will display the main page of our application, as configured in the "Administrator" visual perspective, including the "New Customer" and "Find Customer" items in the menu.

Click on the "New Customer" menu item. *Aware IM* displays a form for the new Customer object showing fields for the configured attributes. Enter some fictitious, but legitimate data for the new customer and click the "Create" button. The system validates the entered data and registers our first customer. Create another customer and enter a birthday date, which makes the customer too young to be registered. Upon clicking the "Create" button the system should check the 'Age validation' rule we specified, give an error message and refuse to register the customer. Correct the birthday field and re-submit the form. In the same way create a few more fictitious customers using different names and birthdays.

Next we will try searching for customers. Click on the "Find Customer" menu item, enter a part of a customer name when prompted and click on the "Search" button. *Aware IM* should present a table showing the customers whose names contain the text we entered for the search (note that the search is case-sensitive). If you click on the "Edit" button next to a customer name in the query result table *Aware IM* will display the form with details for that customer. You can make changes and click on the "Save" button to update the customer details. The system will accept the changes only if they pass validation.

Now we can test how our system greets the customers on their birthdays. To do that, make sure of the following:

-   The computer where *Aware IM* is installed can connect to the mail server, in other words it is possible to send outgoing e-mails from the computer. Typically it means that the computer should be connected to the Internet.
-   Some of the fictitious customers have birthdays on the current date.

- Those birthday customers have e-mail addresses that we can check to see the e-mails they receive.

We need to check how the system generates and sends greeting emails, but we do not want to wait until seven o'clock in the morning for the process to run. Instead, we can start the greeting process manually via the main menu. Click on the "Standard" menu item to see its sub-menu, and then click on the 'Start process' item. *Aware IM* will run the "CongratulateBirthdayCustomers" process and inform us when it finishes.

This is what actually happens during the process run. First, it finds all customers with birthdays on the current date. Second, for each found customer it generates an e-mail and personalizes it by replacing the `<<Customer.Name>>` tag with the actual customer name. Third, it sends the personalized email to each customer.

We now need to check the mailbox for the e-mail address we entered for our test customers to verify that the greeting e-mail has arrived and its contents is correct.

Application Deployment

Once we are happy with the way our system works we make the system operational. To move the system into production right click on the business space version 1.1 (the state of which is now "Under Test") in the tree section of the Configuration Tool and choose the "Publish" command from the popup menu. The state of the business version changes to "Current", indicating that our application is now ready to be used in production. The fictitious customer data we used for testing will not be transferred into the production database. This database starts with blank data.

We can login into the production system using the web browser in a similar way to the testing mode, except that the Test Mode flag on the login form should be cleared. The appearance of the production system will be identical to the test system, including the configured menu items and all other visual settings.

Since staff members will be using the system, we need to register these members so they can access the system. *Aware IM* provides a business object called `RegularUser` for the registration of users who can login into the application. The object has two essential attributes: login name and password. Click on the "Standard" menu item to see its sub-menu, and then click on the 'New Object'. Select object RegularUser from the list in the main area of the screen and click on the "Submit button". *Aware IM* displays a form for the new `RegularUser` object showing fields for the login name and password attributes. Enter both values for the first staff member being registered and click on the "Submit button". The first staff member is now registered. You can repeat the registration steps for each staff member who needs to access the system.

Now the registered staff members can log into the system using their own login name and password. Since they are going to do it on a day-to-day basis you can optimize their login

process by choosing a login option where they do not have to enter the business space name (see the "Login" section in the Aware IM User Guide). They can also add the login address to the list of favorites maintained by the browser so they do not need to type this address every time in the browser address bar.

The process `CongratulateBirthdayCustomers` will start automatically at the time we specified when configuring the system. No manual intervention is required.

Our system is ready for operation.