

UAccess ANALYTICS

Advanced Working with Agents:
Delivering Data to Everyone's Desktop

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THE UNIVERSITY OF ARIZONA

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Record of Changes		
Date	Version #	Description
08/01/2013	1.00	Original
08/13/2013	1.10	Added an <i>IMPORTANT</i> note on page 6, step 3.g about using multiple values in a filter.
08/15/2013	1.20	Added the new Determining What Type of Agent to Create section on page 3. This can be an important step in determining how you will use this booklet and your agent.
08/22/2013	1.30	Added explanatory paragraphs on pages 5 and 11. Added a new note and image on page 13 regarding using a prompted analysis on the Condition tab. Updated page numbers and pagination.

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About this Booklet

This UAccess Analytics booklet is designed to help you become familiar with agents. For more extensive and specific information, please refer to the Delivering Content section of the UAccess Analytics online Help documentation at https://analytics.uaccess.arizona.edu/analytics/olh/l_en/biee0133.htm.

This booklet is generic by necessity, but will provide you with the information you need to build and maintain your own cadre of basic agents.

For information on workshops in which you can learn how to build analyses and dashboards, as well as other brown bag demonstrations, please go to the Workshops and Training Team website at <http://workshops.arizona.edu>.

Access to Analytics Data

Request for Individual access to UAccess Analytics can be submitted to <https://request.uaccess.arizona.edu>.

UAccess Community

The UAccess Community is an online networking resource available to everyone on campus who use UAccess systems.

If you have an official UA email address, you can request membership in the UAccess Community. Just go to <http://community.uaccess.arizona.edu> and click the Sign Up link in the upper right corner of the screen.

Once your membership is confirmed – usually within a few hours – you’ll have access to valuable information about all of the various aspects of the UAccess systems. You’ll want to join one or more of the groups within the Community, because that’s where the value comes in.

There is a Welcome Center available through a link on the Home page, as well as a great set of frequently asked questions (FAQs) linked through the top menu. Be sure to browse through the different Forums, check out upcoming Events, and peruse the extensive Resources provided through the Community.

Please take advantage of the opportunity and become a member of the UAccess Community now.

Prerequisites

You should be familiar with agents in general, probably having created several agents you're using for your own analyses.

If you haven't created agents of your own, you should certainly be familiar with the process.

At a minimum, you should have read and understand the contents of the **Working with Agents: Delivering Data to Your Desktop** booklet. You can download a copy of that document from **UAccess Community > Resources > Analytics Resources**.

You should also be familiar with variables and how they're used. You can find all of the variables that can be used in Analytics on the **UAccess Analytics > Variables** dashboard.

Advanced Working with Agents

What do you mean "Advanced"?

As you know, an agent is a combination of a scheduling tool and a delivery person. A typical agent delivers one analysis to one person, typically the person who created both the analysis and the agent.

In this booklet, you will learn about creating an agent that will deliver an analysis from a shared dashboard to multiple people in your department.

A very similar procedure would be used to deliver an analysis you've saved in your shared college or department folder.

We will also cover the requirements and steps for letting an agent determine who the recipients of an analysis should be, and how to tell the agent to deliver just the right information to just the right people.

Examples

There are several examples of how and when you might use advanced agents toward the back of this booklet. Turn to the **Examples of Advanced Agents** section on page 19.

Preliminary Work

In the example used for this section, you will be creating an agent that will deliver the **Current Account Balances** report from the **General – Financial Management** dashboard to the **responsible employees** in your department. The report should be delivered on the **7th** of **every month**, showing data through the end of the **previous fiscal period**.

Locating the Report

The first thing you'll have to do is identify a report from a shared dashboard that would be of use to a group of individuals in your department or college. For example, you might select the **Current Account Balances** analysis from the **Financial > General – Financial Management** dashboard.

The benefit of using one of the analyses directly from the shared dashboard is that you don't have any responsibility for maintenance or upkeep of that analysis. If modifications are made to the analysis from the shared dashboard, the agent automatically delivers the new updated version.

Procedure

1. Open Analytics.
2. Navigate to the desired dashboard.
3. Note the path you took to get there; remember the path or *write it down*:
 - a. **Dashboards > Financials > General – Financial Management > Current Account Balances**

*If the dashboard analysis you've selected has multiple views, only the default (top) view will be delivered via the agent. If you wish to deliver a different view or wish to modify the analysis in any way, you will have to **Analyze** the report, save it in a shared college or department folder, and use that analysis with the agent.*

Determining Which Prompts to Use

Since the analysis you're going to be delivering lives on a shared dashboard page, it has been designed and created to work with a dashboard prompt. Agents can take advantage of that fact. You will select appropriate values for the prompt fields when you create the agent.

Procedure

1. Identify the prompt fields you wish to use every time the agent runs, i.e. **Fiscal Year, Fiscal Period, and Organization Code**.

2. Are the values for those prompt fields static or do they change? In this instance, the values for the first two prompts would regularly change and the third is static. For prompt values which change over time, you need to use a variable rather than a specific value.

Determining Which Variables to Use

For the Fiscal Year and Fiscal Period prompts, you will need to use a **Repository Variable** to fill in the prompt field. You don't want to use hard-coded values like "2014" or period "03." If you did, you'd have to edit the agent every month! What's the point of even creating the agent if you have to do that?!?

Procedure

1. Navigate to **Dashboards > UAccess Analytics > Variables**.
2. Identify the **Repository Variables** that return the same or similar values to those you would have entered into the prompt fields on the dashboard.
 - a. You would have entered 2014 in the Fiscal Year prompt field. Select the **CURR_FISCALYEAR** variable, which will return the appropriate value.
 - b. You would have entered 01, 02, 03, etc., in the Fiscal Period prompt field. Select the **PREV_FISCALPERIOD_NBR** variable, which will return the appropriate value.

*If you wanted the analysis to show data from the current month instead of the previous month, the appropriate variable would be **CURR_FISCALPERIOD_NBR**.*

Determining What Type of Agent to Create

The data columns used to create the analysis can help determine how you'll build your agent. If the analysis does not include a NetID column and you don't wish to edit the analysis to include that column, you can move on to **page 5** and create your agent.

If the analysis includes a NetID column or you've decided to edit the analysis and add a NetID column, and if that NetID column identifies the individuals who will be receiving the analysis, you could consider skipping ahead to **page 11** and allow Analytics to determine who the recipients of the analysis will be.

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Creating the Advanced Agent

This section of the booklet will help you create an agent in which you will decide who the recipients of the analysis will be, and will specifically select the recipients. If you want to let Analytics select the recipients, you should turn to **page 11**.

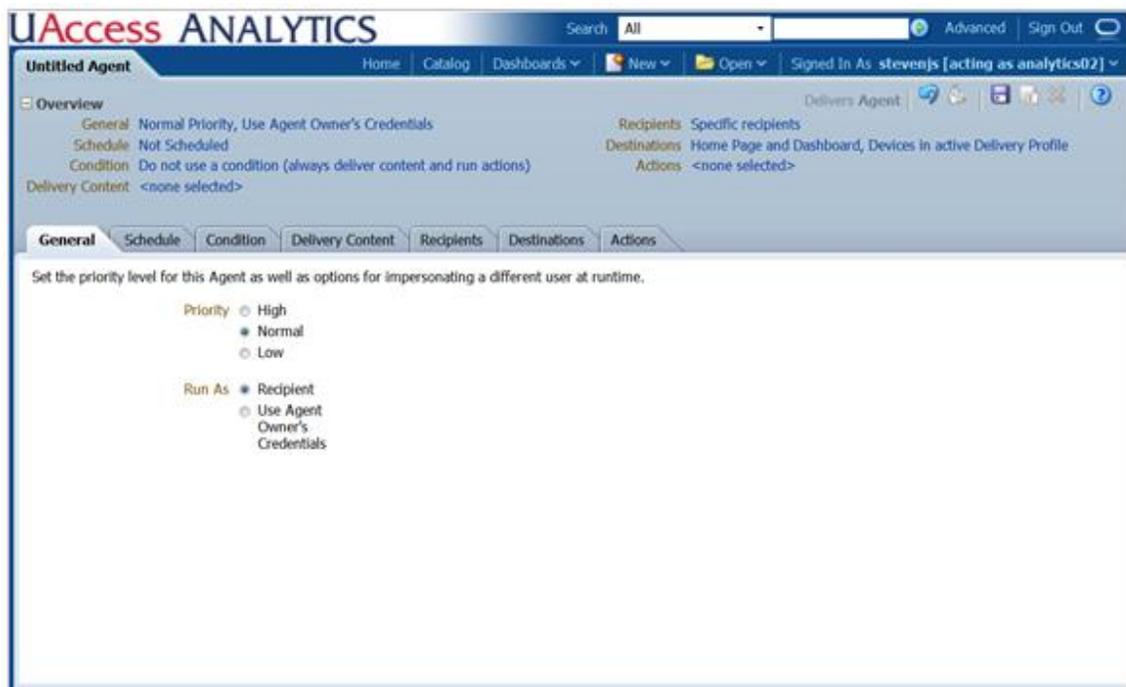
Accessing the Agent Editor

The agent editor is where you begin the process of creating your agent.

Procedure

1. Click the **New** link on the Global Header.
2. Click the **Agent** link on the menu.

The screen changes to show you a new, untitled agent.



General Tab

Use the General tab to set the priority level for the agent, as well as options for impersonating a different user at runtime.

Procedure

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1. Set the **Priority** level for this agent. Setting the priority level to either High or Low will set the priority for the email announcement.
2. Set the **Run As** radio button to **Recipient**.

This is a very important step. Selecting Recipient ensures Analytics will only deliver analyses to those people who are authorized to see the data.

Schedule Tab

Use the Schedule tab to set the delivery schedule for this agent.

Procedure

1. Set the **Frequency** for this agent to
 - a. **Monthly**
 - b. On **Day 7** of **every month**,
 - c. Starting **today**.

*The agent will run at the default (**current**) time unless you specify otherwise. If you are going to set a specific time, consider using something other than 7:00 AM, 8:00 AM, etc. Everyone uses those times, and the system slows down just a bit. Try using a time like 7:08 AM or 7:51AM, rather than on the hour. It works!*

Condition Tab

The Condition Tab will not be used in this example. We will use this tab in the **Letting Analytics Determine Recipients and Content** section on page 11.

Delivery Content Tab

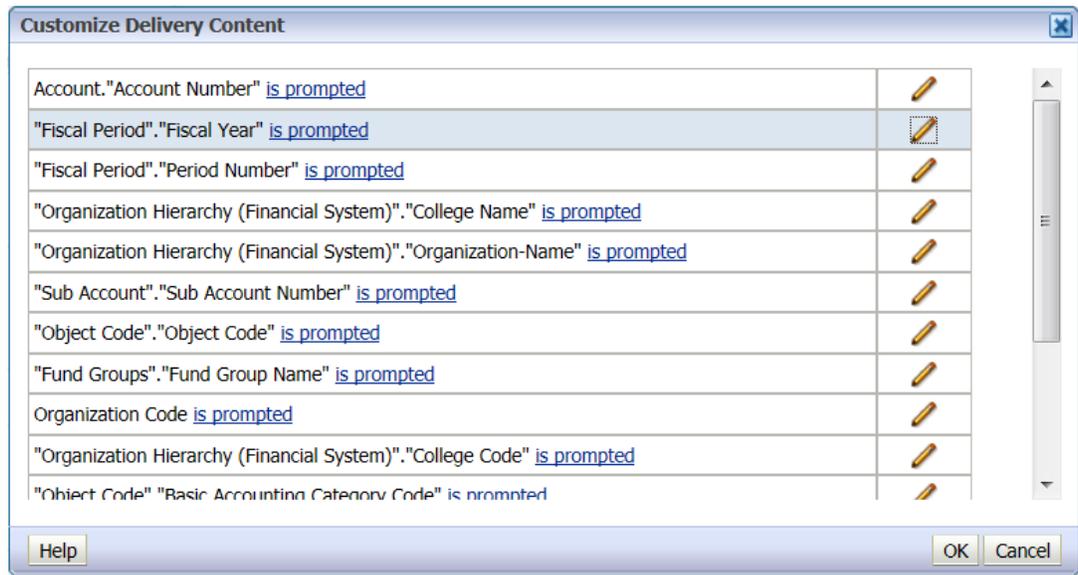
Use the Delivery Content tab to specify the content that will be delivered when the agent is triggered.

Procedure

1. Enter the **Subject** for the agent. The subject will be the name of the alert and/or the subject line of any email generated for the alert.
2. **Select the Content** for the agent.
 - a. Click the **Browse** button.
 - b. Browse to the location you identified and wrote down earlier when you located the analysis on the dashboard:

**Shared Folders > Financial > General – Financial Management
> Current Account Balances > Current Account Balances**

You could alternatively select an analysis you've saved in a shared college or departmental folder. In that instance, you may not have to work through any prompted values. That would depend on how the analysis had been constructed.



3. Customize the Delivery Content

Because the analysis is set to work with a dashboard prompt, the system wants to know what values you wish to use in the prompted fields. You will use the two variables you identified earlier, along with your department code.

- Click the **Modify the operator/value for this parameter** (pencil) button for the **Fiscal Year** prompt.
- Change the Operator to **is equal to / is in**.
- Click the **Value** drop-down and select **Repository Variable**.
- Type **CURR_FISCALYEAR** in the field.
- Click **OK**.
- Repeat for **Fiscal Period**, using the **PREV_FISCALPERIOD_NBR** repository variable.
- Repeat for **Organization Code**, entering your **department number** directly in the Value field.

IMPORTANT: If you are selecting multiple values, each value must be entered into its own individual Value field.

- Click **OK** to close the Customize Deliver Content window.

4. Set the desired **Format**.

If you leave this field set to **(Device default)**, the agent will deliver the content directly in an email or on-screen, in HTML format. That format is the same as that seen within Analytics.

Recipients Tab

Use the Delivery Content tab to specify to whom the content will be delivered when the agent is triggered on the 7th of every month.

Note: Only content that is saved in a shared folder that is accessible to the planned recipients can be delivered to multiple people. If the analysis being delivered by this agent is saved in your own personal folder, you are the only authorized recipient. In addition to access to the folder, the recipient must also have proper roles assigned in order to be able to view the content.

Procedure

1. Click the green PLUS sign (+) to begin adding new recipients.
2. Enter the **NetID** of the desired recipient in the **Name** field on the Select User screen.
3. Set the **List** box to **Users**.
4. Click **Search**.
5. Move the listed user to the **Selected Members** list by using the arrow buttons in the center of the screen.

Destinations Tab

Use the Destinations tab to specify where you wish the content to be delivered when the agent is triggered. The default destinations will send an alert to the Analytics Home Page, the recipient's personal dashboard, and their email inbox.

Procedure

1. Select or deselect any options on this screen.

Actions Tab

Use the Actions tab to specify any actions you wish the system to take once the agent is triggered. This tab will not be used in this example.

Note: For more information on this screen, click the **Help** button in the upper-right corner.

Saving an Agent

Once you have created the agent, save it, then test it.

Procedure

1. Click the **Save** button in the upper-right corner of the screen.

*Be sure you save your agent in **your own personal folder**. You won't be able to edit the agent later if you save it into a shared folder.*

2. Name the agent and click **OK**.

3. Test the agent with the **Try Agent Now** button.

Remember that everyone you listed on the Recipients tab is going to receive a copy of the analysis delivered as instructed on the Destinations tab.

You may wish to test the agent with just your NetID in place first, adding the other recipients later.

Letting Analytics Determine Recipients and Content

This section of the booklet will help you create an agent in which Analytics will decide who the recipients of the analysis will be. If you want to select the recipients yourself, you should turn to **page 5**.

Analytics has the ability to determine for you who the recipients should be for any given agent, and can even determine what content should be delivered to what recipient!

The requirements for what must be included in the analysis are more exacting than those for use in a simpler agent, and setting up an agent that will do all of those things is a bit more involved than the previous example, but the results are pretty amazing.

Requirements

There are several requirements that **must** be fulfilled if you wish Analytics to deliver specific information from an analysis to specific people.

- The analysis **must** include a column that contains the recipients' NetIDs. This could be an analysis you've created yourself, or it could be an analysis you're using directly from a shared dashboard. It doesn't matter, provided the right data is included in that analysis.
- Any recipients **must** be authorized to see the type of data being delivered by the agent.
- The analysis **must** be saved into a shared college or department folder to which any recipient has access.

For your example in this section, you will use a simple analysis named **My Paycheck**, constructed as shown below. One of the columns contains the NetIDs of prospective recipients, as required.

Check Date	Contact Information	Fact Pay Check
Check Date	NetID	Employee Id
	Employee Name	Gross Pay
		- Total Taxes
		- Total Deductions
		= Net Pay

The analysis has been filtered to show paycheck information from the previous pay end date, using a repository variable, and for just the employees in the selected department, as shown here:

Pay End Date is equal to / is in @{{UA_HRTL_PREV_PAYEDT}} AND Department Id is equal to / is in 9305
--

*For more examples of how this type of agent could be used, turn to the **Examples of Advanced Agents** section on page 19.*

You now need to create an agent to deliver personal paycheck information to each member of the department.

You may not be able to create the analysis depicted here, depending on your access to the requisite subject area. This same procedure will work equally well with any analysis so long as it contains a column containing NetIDs and meets the other requirements listed above. See the Examples section later in this booklet for other ideas.

General Tab

Use the General tab to set the priority level for the agent, as well as options for impersonating a different user at runtime.

Procedure

1. Set the **Priority** level for this agent.
2. Set the **Run As** radio button to **Recipient**.

This is a very important step. Selecting Recipient ensures Analytics will only deliver analyses to those people who are authorized to see the data.

Schedule Tab

Use the Schedule tab to set the delivery schedule for this agent.

Note: *You must fill out this tab even if you are creating a conditional agent.*

Procedure

1. Set the **Frequency** for this agent to:
 - a. **Weekly** every **2 weeks**.
 - b. On **Friday**.
 - c. Starting **today**.

Edit the date in the Start field to select a date that is an actual payday. This agent must start on a payday Friday.

*The agent will run at the default (**current**) time unless you specify otherwise. If you are going to set a specific time, consider using something other than 7:00 AM, 8:00 AM, etc. Everyone uses those times, and the entire system slows down just a bit. Try using a time like 7:08 AM or 7:51AM, rather than on the hour. It works!*

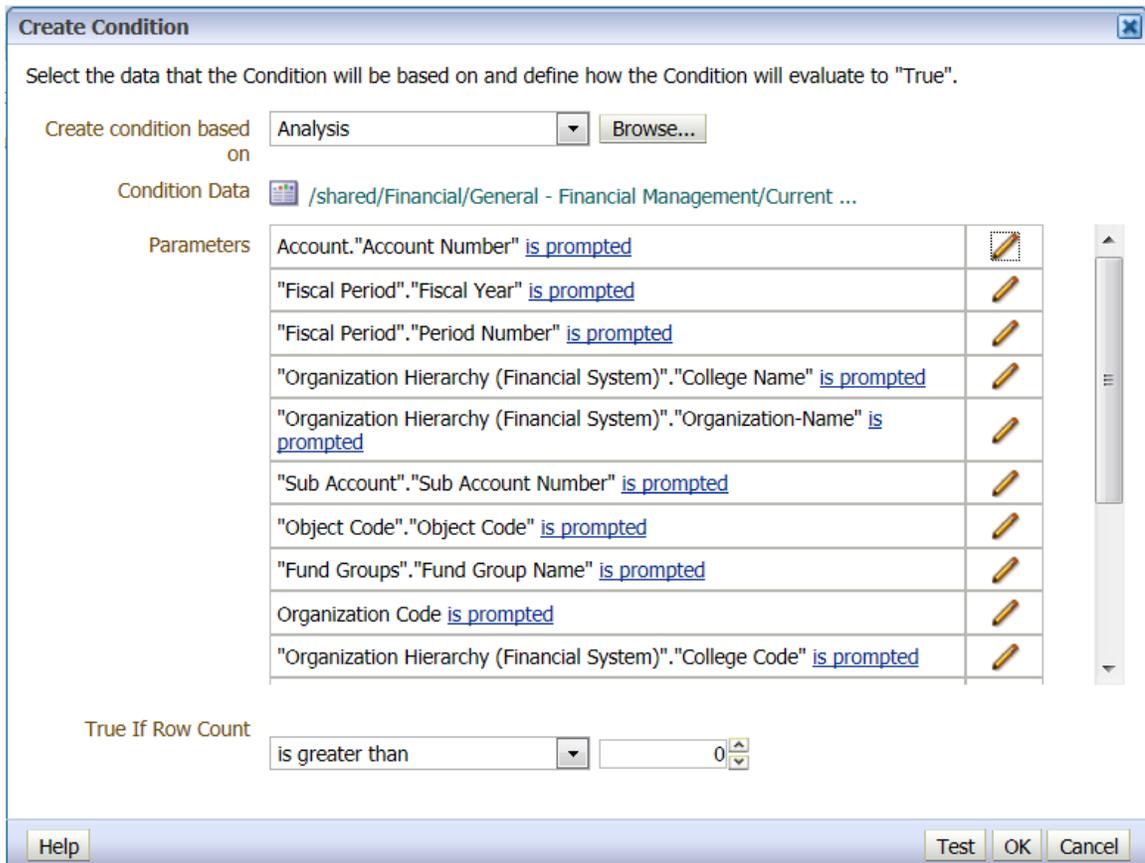
Condition Tab

Use the Condition tab to help Analytics determine the recipients.

Procedure

1. Select the **Use a condition** radio button for this agent's Settings.
2. Click the **Create** button.
3. Click the **Browse** button on the Create Condition screen.
 - a. Navigate to the shared folder where the analysis has been saved and select the analysis.
 - b. Leave the **True if Row Count** settings as they are.
 - c. **Test** the condition, keeping in mind the report is date driven.
 - d. Click **OK** when you're done.

Note: If the condition analysis you've selected comes from a shared dashboard or otherwise has prompted filters, you will be asked to set the parameters (fill out the prompts) for that analysis. The Create Condition screen will resemble the image here.



Create Condition

Select the data that the Condition will be based on and define how the Condition will evaluate to "True".

Create condition based on: Analysis

Condition Data: /shared/Financial/General - Financial Management/Current ...

Parameters	
Account."Account Number" is prompted	
"Fiscal Period"."Fiscal Year" is prompted	
"Fiscal Period"."Period Number" is prompted	
"Organization Hierarchy (Financial System)"."College Name" is prompted	
"Organization Hierarchy (Financial System)"."Organization-Name" is prompted	
"Sub Account"."Sub Account Number" is prompted	
"Object Code"."Object Code" is prompted	
"Fund Groups"."Fund Group Name" is prompted	
Organization Code is prompted	
"Organization Hierarchy (Financial System)"."College Code" is prompted	

True If Row Count: is greater than

Delivery Content Tab

Use the Delivery Content tab to specify the content to be delivered when the agent is triggered.

Procedure

1. Enter the **Subject** for the agent. The subject will be the name of the alert and/or the subject line of any email generated for the alert.
2. Click the drop-down arrow for the **Content** field and select **Condition Analysis**. This option will deliver the analysis previously identified and selected on the Condition tab.

Recipients Tab

Use the Delivery Content tab to specify to whom the content will be delivered when the agent is triggered every payday.

***Note:** Only content that is saved in a shared folder that is accessible to the planned recipients can be delivered to multiple people. If the analysis being delivered by this agent is saved in your own personal folder, you are the only authorized recipient. In addition to access to the folder, the recipient must also have proper roles assigned in order to be able to view the content.*

Procedure

Because you're relying on Analytics to determine both recipients and delivered content, you should remove your NetID from the Select Recipients grid. If you wish to receive a copy of the entire analysis, you can leave your information in the grid.

1. Click on your **NetID** in the Select Recipients grid.
2. Click the **Delete** button (red X) to delete yourself from the list of recipients.
If you are a member of the department, you will still receive an email with your paycheck information included.

Use Analysis

Get Recipients from the Analysis Used in the Agent Condition

Analysis My Paycheck

Settings

Column Containing Recipients

2nd Column Containing Recipients (optional)

Only Return Rows Relevant to the User Running the Agent

- Put a check in the **Use Analysis / Get Recipients from the Analysis Used in the Agent Condition** checkbox on the right side of the screen.
- Select the column containing the **NetID** in the **Column Containing Recipients** field.
- Put a check in the checkbox labeled **Only Return Rows Relevant to the User Running the Agent**.

If you reread and think about that last selection, you'll realize that you'd earlier selected a radio button on the General tab that requires the agent to run as the recipient. So the "user," in this case, is each individual recipient, and each recipient will get just their own paycheck information!

Destinations Tab

Use the Destinations tab to specify where you wish the content to be delivered when the agent is triggered. The default destinations will send an alert to the Analytics Home Page, the recipient's personal dashboard, and their email inbox.

Procedure

- Select or deselect any options on this screen.

Actions Tab

Use the Actions tab to specify any actions you wish the system to take once the agent is triggered. The Actions tab will not be used in this example.

Note: For more information on this screen, click the Help button in the upper-right corner.

Saving an Agent

Once you have created the agent, save it, then test it.

Procedure

1. Click the **Save** button in the upper-right corner of the screen.
*Be sure you save your agent in **your own personal folder**. You won't be able to edit the agent later if you save it into a shared folder.*
2. Name the agent and click **OK**.
3. Test the agent with the **Try Agent Now** button.
Remember that everyone who's been included in the analysis delivered by the agent is going to receive a copy of that analysis delivered as instructed on the Destinations tab.
You may wish to test the agent with just your NetID in place first, adding the other recipients later.

Editing an Agent

Once you've created an agent, there may come a point at which you wish to change or edit that agent. Begin on the Home page in Analytics.

Procedure

1. Click the **My Agents** link in the **Browse/Manage** section of the Home page.
2. Locate the agent you wish to edit.
3. Click the **Edit** link below the agent's name.
4. Make the necessary changes.
5. **Save** the modified agent.

Deleting an Agent

Once you've created an Agent, there may come a point at which that agent is no longer needed or wanted. You can delete an agent, if you wish. Begin on the Home page in Analytics.

Procedure

1. Click the **My Agents** link in the **Browse/Manage** section of the Home page.
2. Locate the agent you wish to delete.
3. Click the **More** option below the agent's name and select Delete from the menu.
4. Click **OK** to confirm the deletion.

Accessing Analytics Alerts

Analytics Alerts appear by default on the Home page, on the Global Header, and on your personal dashboard. You may also receive an email which contains the desired analysis.

To view the alert from the Home page, click the View link for the displayed alert.

When Analytics Delivers is enabled, you can add an Alerts section to any dashboard page. When alerts are present, the **Alerts!** link appears at the top of each Analytics page.

Procedure

1. Click the **View** link for the displayed alert.
 - a. Clear the link using the Clear button on the pop-up window.
2. Other options are available through the More link for the displayed alert.

Examples of Advanced Agents

Time Approvers – Time Pending Approval

Create an agent for the **Reported Time Pending Approval** analysis from the **Employee > Time & Labor > Time & Labor – Live** dashboard.

Select one of the College or Department prompt fields and enter the appropriate information for that field, and use the **UA_HRTL_CUR_PAYEDT** variable in the Pay End Date prompt.

This analysis contains the NetID field for the time approver, so it's possible you could allow the agent to determine the recipients. The agent would deliver information to *all* of the time approvers in your department who had time that needed to be approved. Be sure you work with your time approvers beforehand to let them know what you're doing.

Schedule this agent to deliver the analysis to the recipients at 7:53 AM every other Monday, starting the Monday after a Pay End Date.

PCards – Previous Month's Transactions

Create an agent for the **Transaction Detail by Organization** analysis from the **Financials > General – Purchasing Card > Card Transactions** dashboard.

Enter your organization information in the College Name or Organization Name prompts as you create the agent, and use the **PREV_FISCALPERIOD_ST_DT** and **PREV_FISCALPERIOD_END_DT** variables in the Post Date prompt fields so that the agent always looks at the previous month.

Set the schedule to deliver this agent to you at 9:17 AM a few days into the new month.

Leave Management – Excessive Leave Accrual

Create an agent for the **Hours Exceeding Allowed Carry Forward** analysis from the **Employee > Leave Tracking > Leave Accrual** dashboard.

Enter your organization information to get a report for your entire department or college, or consider entering specific Employee IDs or Names to get a shorter list

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for your work team. Use the **UA_HRTL_PREV_PAYEDT** variable in the Pay End Date prompt field.

Schedule delivery at 8:11 AM on the first Monday of every quarter (January, April, July, October) to keep track of those employees who need to take some vacation time.

Student Enrollment – Sections Reaching Capacity

Create an agent for the **Sections Reaching Capacity** analysis from the **Student > Class Schedule Live > Enrollment Overview** dashboard.

Enter appropriate information in the various prompt fields as you create the agent. You could use the **UA_FUT_TERM_41** variable for the term prompt field. That variable always looks forward to the upcoming fall or spring term.

Use the Condition tab so that the agent only delivers information to you if and when information pertinent to you comes in.

Set the schedule to deliver this agent to you DAILY at 8:09 AM. You could even re-run the agent every 120 or 180 minutes until 6:09 PM if you're the person who needs to get those new sections created. Select an end date to turn off the agent after a few weeks. You'd want to be judicious with this, not running the agent twelve times a day for months and months.

This agent will have to be edited and restarted for each major term, but it works great while it's running.

You could create a very similar but opposite agent to run the Low Enrollment Courses analysis from the same dashboard page.

