

MEMBER BUSINESS
SOLUTIONS



Agency Express Job Queue Setup

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Purpose of this document

The purpose of this document is to explain the process and function of transmitting data to/ from Agency Express and Ceres 4/4.5.

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Purpose

The purpose of this document is to explain the process of setting up Job Queues to handle the processing of Agency Express transactions to and from Ceres. Job Queues are used to automate the repetitive tasks of managing the web processing queue and processing both the inbox and outbox transactions. Job Queues may be setup to run with the Navision Application Server (NAS) or as logged user. The benefit of using the NAS is the built in restart capability should the Job Queue stop with an error or in the case of the server shutting down unexpectedly. When using the logged user account method of starting the job queue, care must be taken to check the job queue status regularly or any time after shutting down the server, either planned or unplanned. Setting up and configuring the NAS is beyond the scope of this document. Documentation from Microsoft is available to setup and configure NAS and database instances for Navision 2013R2 & 2016.

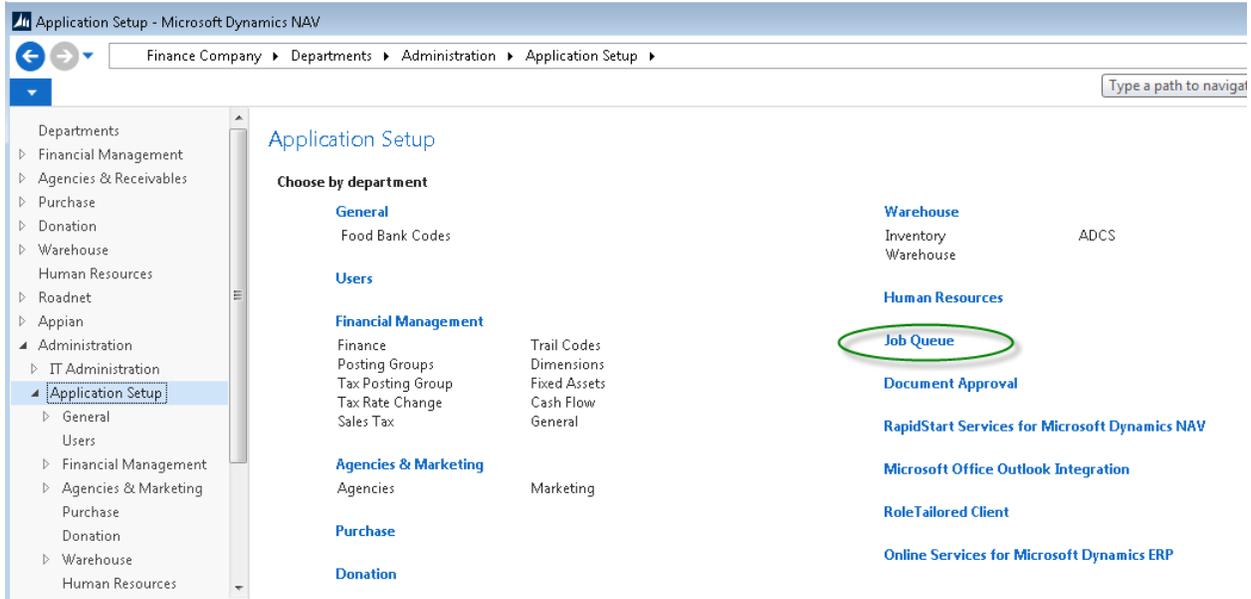
Ceres Object release 4.00.00 & 4.50.78 are required for the functionality described in this document.

Job Queue Options

Before setting up the job queue you must first decide whether or not you will be splitting the transactions into separate processes. Ceres has the ability to process the Item Availability transactions (ITQ Records) separately from all other transactions. In cases of high volume of AE activity this is may be desirable to improve performance and prevent errors due to long processing times. For smaller transaction volume sites it may be preferable to process the transactions in one Job Queue. The other benefit to splitting the transactions is that it allows the separate Job Queues to be assigned to separate database instances, providing better load balancing and possible improving performance. This document will show the setup of 3 job queues called AE, ITQ and NON-ITQ. It is suggested that you setup all 3 job queues regardless of the method you've chosen. Once all 3 are setup you would normally activate just the AE Job Queue when using a single instance to process all transactions. If you've decided to split the item availability transactions from all other transactions then you will be activating the ITQ and NON-ITQ job queues. The ITQ Job Queue will handle the item availability transactions and the NON-ITQ job queue will handle all other transactions.

Setup

To access Job Queue Setup, select Departments → Administration → Application Setup → Job Queue



This will bring you to the job queue menu

Job Queue

Lists

- Job Queues
- Job Queue Category List
- Job Queue Entries
- Job Queue Log Entries

Job Queue Category List

Select Job Queue Category List from the menu

Job Queue

Lists

- Job Queues
- Job Queue Category List
- Job Queue Entries
- Job Queue Log Entries

This opens the Job Queue Category List. You will need to create 3 entries in this table. Enter the 3 Job Queue Categories as shown here:

Job Queue Category List ▾

Code	Description
AE_ALL	Agency Express All
AE_EXC_ITQ	Agency Express Exclude ITQ
AE_ITQ	Agency Express ITQ

When you've completed setup of the 3 job queue categories, you can return back to the job queue menu.

Job Queue Setup

Select Job Queues from the menu.

Job Queue

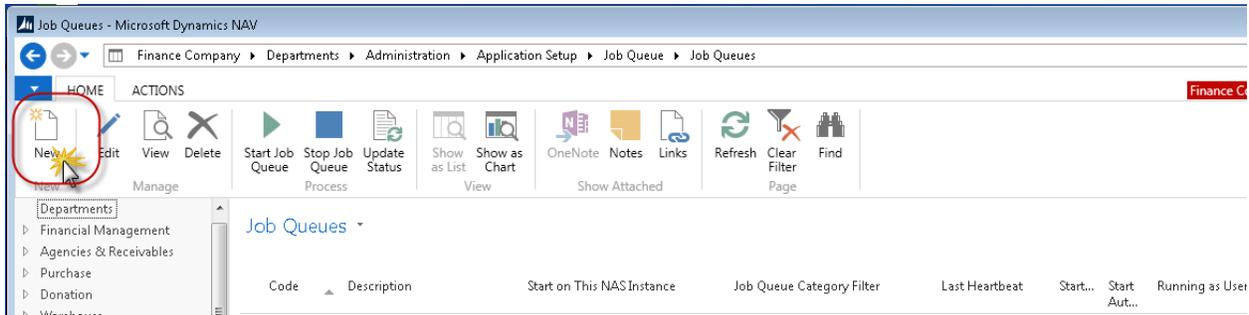
- Lists**
- Job Queues
- Job Queue Category List
- Job Queue Entries
- Job Queue Log Entries

This will open the list of Job Queues. We will be setting up 3 as shown here.

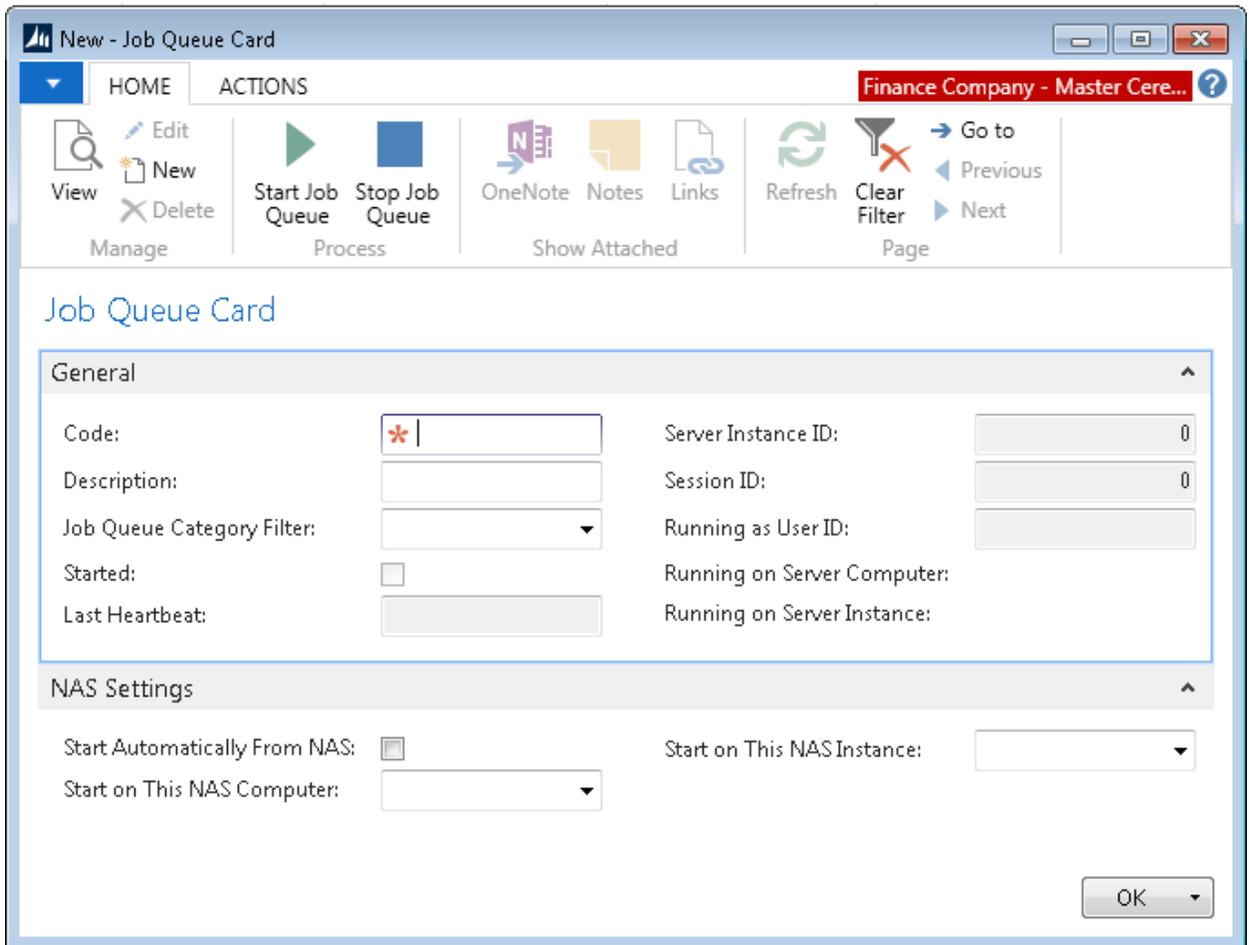
Job Queues ▾ Type

Code	Description	Start on This NAS Instance	Job Queue Category Filter	Last Heartbeat	Start...	Start Aut...	Running as User ID
AE	Agency Express-ALL	masterceres4devae	AE_ALL		<input type="checkbox"/>	<input type="checkbox"/>	
ITQ	Agency Express-ITQ Only	masterceres4devae	AE_ITQ		<input type="checkbox"/>	<input type="checkbox"/>	
NON-ITQ	Agency Express - All Exc. ITQ	masterceres4devae	AE_EXC_ITQ		<input type="checkbox"/>	<input type="checkbox"/>	

Select New from the Ribbon



This will open the Job Queue card where you can enter the information for each job queue.



General Fast Tab

General			
Code:	<input type="text" value="ITQ"/>	Server Instance ID:	<input type="text" value="0"/>
Description:	<input type="text" value="Agency Express-ITQ..."/>	Session ID:	<input type="text" value="0"/>
Job Queue Category Filter:	<input type="text" value="AE_ITQ"/>	Running as User ID:	<input type="text"/>
Started:	<input type="checkbox"/>	Running on Server Computer:	<input type="text"/>
Last Heartbeat:	<input type="text"/>	Running on Server Instance:	<input type="text"/>

Code: Enter the code associated with the Job Queue record.

Description: Enter the description of this Job Queue record.

Job Queue Category Filter: Enter the appropriate Job Queue Category Filter using the drop-down list. Select the correct one to associate with this Job Queue

Note: To create the 3 required records in this table follow this guide:

Code	Description	Job Queue Category Filter
AE	Agency Express-ALL	AE_ALL
ITQ	Agency Express-ITQ Only	AE_ITQ
NON-ITQ	Agency Express- All Exc. ITQ	AE-EXC_ITQ

NAS Settings Fast Tab

NAS Settings			
Start Automatically From NAS:	<input type="checkbox"/>	Start on This NAS Instance:	<input type="text" value="masterceres4devae"/>
Start on This NAS Computer:	<input type="text" value="esp-dev7.swpros..."/>		

Note: you only need to fill in this tab if the Job Queue will be Started Automatically from a NAS.

Start Automatically From NAS: Check this box to indicate that the Job Queue will be started from a NAS.

Start on This NAS Computer: Use the drop-down to select from previously configured NAS computers. It should be noted here that there is no requirement to setup different NAS Computers and multiple Job Queues may be run and started from the same NAS Computer.

Start on This NAS Instance: Use the drop-down to select from previously configured NAS Instances. It should be noted here that there is no requirement to setup different NAS Instances and multiple Job Queues may be run and started from the same NAS Instance.

Job Queue Entries Setup

Select Job Queue Entries from the menu.

Job Queue

Lists

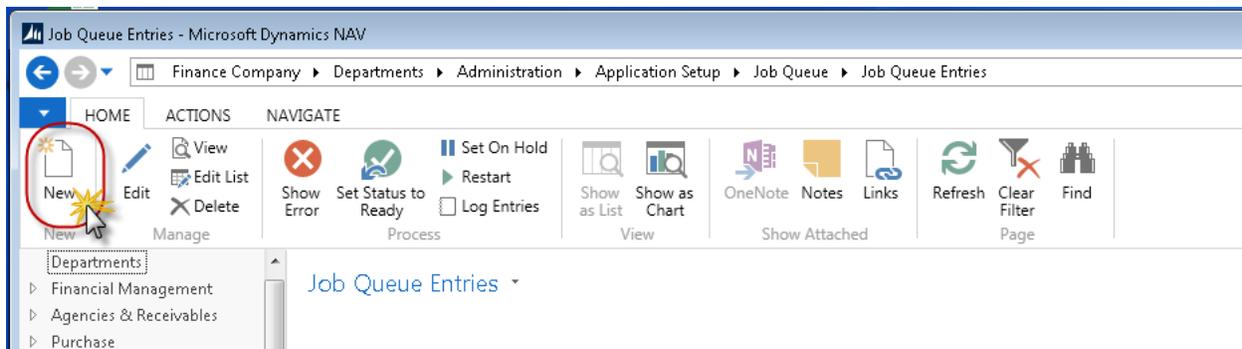
- Job Queues
- Job Queue Category List
- Job Queue Entries
- Job Queue Log Entries

This will open the list of Job Queue Entries. We will be setting up 3 as shown here in yellow.

Job Queue Entries ▾ Type to filter (F3) | Status ▾ | No filters applied

Status	User ID	Object Type t...	Object ID to Run	Object Caption to Run	Description	Job Queue Category...	User Session Started	Earliest Start Date/Time	Rec... Job	No. of Minute...
On Hold	SWPROSDCC	Codeunit	14012266	NAS Web Management	Inbox Processing				<input type="checkbox"/>	0
On Hold	SWPROSWWH	Codeunit	14012266	NAS Web Management	NAS Web Management	AE_ALL		3/30/2015 3:55:22...	<input checked="" type="checkbox"/>	3
On Hold	SWPROSWWH	Codeunit	14012266	NAS Web Management	NAS Web Management	AE_ITQ		3/30/2015 4:10:14...	<input checked="" type="checkbox"/>	2
On Hold	SWPROSWWH	Codeunit	14012266	NAS Web Management	NAS Web Management	AE_EXC_ITQ		3/30/2015 4:10:25...	<input checked="" type="checkbox"/>	2

Select New from the Ribbon



A new Job Queue Entry card will be displayed.

Select New from the Ribbon

General

Object Type to Run:	Report	Maximum No. of Attempts to Run:	0
Object ID to Run:	0	Last Ready State:	4/30/2015 8:29:32.35...
Object Caption to Run:		Earliest Start Date/Time:	
Description:		Expiration Date/Time:	
Parameter String:		Priority:	1000
Job Queue Category Code:		Run in User Session:	<input type="checkbox"/>
User ID:	SWPROS\RXF	Status:	On Hold
Timeout (sec.):	0		

Recurrence

Recurring Job:	<input type="checkbox"/>	Run on Saturdays:	<input type="checkbox"/>
Run on Mondays:	<input type="checkbox"/>	Run on Sundays:	<input type="checkbox"/>
Run on Tuesdays:	<input type="checkbox"/>	Starting Time:	
Run on Wednesdays:	<input type="checkbox"/>	Ending Time:	
Run on Thursdays:	<input type="checkbox"/>	No. of Minutes between Runs:	0
Run on Fridays:	<input type="checkbox"/>		

General Fast Tab

Object Type to Run: Select from the drop-down list to run either a report or codeunit.

Object ID to Run: Enter the object ID of the report or codeunit to run.

Description: Enter a description of the entry task being run.

Parameter String: Enter any parameter that must be passed to the report or codeunit. The report or codeunit must be setup to accept a parameter string. If the object is not setup to handle a parameter this field should be left blank.

Job Queue Category Code: Enter a valid Job Queue Category Code from the drop-down list if desired. This field is used to tie Job Queue with Job Queue Entries to determine which Job Queue will execute the Job Queue Entry. This can be used for segregation of jobs or load balancing.

User ID: this field will be updated automatically with your user ID.

Timeout (sec.): Enter the number of seconds when this entry should timeout. This can be useful to prevent a run-away job consuming resources with completing. If this field is used you should allow enough time for the Job Entry to complete normally and some buffer time. Leave this field set to 0 to indicate that the job should not timeout automatically and should continue until completion.

Maximum No. of Attempts to Run: This field can be used in conjunction with the timeout to automatically restart a job a number of times if it times out. If left at zero (0), the job will not attempt restart if it times out. These fields are used primarily when it is known that a certain condition will routinely occur that will interfere with the normal job completion and the user wants to restart it a number of times before entering into an error condition.

Last Ready State: This field is automatically updated by the system and reports the Job Queue Entries last known time that the job was at the job status of ready. This can be useful information to determine how long a job entry has been inactive.

Earliest Start Date/Time: Specifies the first date and time on which the job runs. This can be left blank to indicate a job that will run continuously or until changed by the user.

Expiration Date/Time: Specifies the last date and time on which the job runs. The job will not run after this date. This can be left blank to indicate a job that will run continuously or until changed by the user.

Priority: Specifies the priority of the job queue entry compared to other entries in the job queue. For example, 1. The lower the number, the higher the priority. The default priority is set to 1000.

Run as User: Indicates that the job queue entry will be processed in a session that has already been started by the user at the time the job was queued. This field is automatically updated.

Status: Ceres sets the initial status of a job to **On Hold**. This allows time for you to finish set up before a job is run. To change the status, on the **Home** tab, in the **Process** group, choose **Set Status to Ready**. After job queues are set up and running, Ceres gives you updated status information. The following is a list of the available **Status** codes:

- **On Hold**
- **Ready**
- **In Process**
- **Error**
- **Finished**

After a job is run successfully, it is removed from the list of job queue entries unless it is a recurring job. If it is a recurring job, the earliest start time field is adjusted to be the next time that the job is expected to run.

Recurrence Fast Tab

Recurring Job: This field is updated automatically and will be checked if any of the “Run on Day of Week” fields is checked.

Run on Mondays – Run on Sundays: Place a check in any of the days that you wish this job to run. Check all seven if the job is to run every day.

Starting Time: Enter a starting time that the job should begin running during the day. Leave it blank if the job should run throughout the day (24 hours).

Ending Time: Enter an ending time that the job should stop running during the day. Leave it blank if the job should run throughout the day (24 hours).

No. of Minutes between runs: Enter the number of minutes between job runs. This number should be large enough to allow the job to complete normally. As all jobs will consume resources care should be taken to ensure that the job runs as often as needed without impacting performance.

Setting up the AE_ALL Job Queue Entry

These are the recommended settings for the AE_ALL Job Queue Entry. The time between runs will need to be adjusted based on volume of transactions.

Codeunit · 14012266 · NAS Web Management

General	
Object Type to Run:	Codeunit
Object ID to Run:	14012266
Object Caption to Run:	NAS Web Management
Description:	NAS Web Management
Parameter String:	ALL
Job Queue Category Code:	AE_ALL
User ID:	SWPROS\WWH
Timeout (sec.):	0
Maximum No. of Attempts to Run:	5
Last Ready State:	3/30/2015 11:29:00.740 AM
Earliest Start Date/Time:	3/30/2015 3:55:22.937 PM
Expiration Date/Time:	
Priority:	1000
Run in User Session:	<input type="checkbox"/>
Status:	On Hold

Recurrence	
Recurring Job:	<input checked="" type="checkbox"/>
Run on Mondays:	<input checked="" type="checkbox"/>
Run on Tuesdays:	<input checked="" type="checkbox"/>
Run on Wednesdays:	<input checked="" type="checkbox"/>
Run on Thursdays:	<input checked="" type="checkbox"/>
Run on Fridays:	<input checked="" type="checkbox"/>
Run on Saturdays:	<input checked="" type="checkbox"/>
Run on Sundays:	<input checked="" type="checkbox"/>
Starting Time:	
Ending Time:	
No. of Minutes between Runs:	5

Setting up the AE_ITQ Job Queue Entry

These are the recommended settings for the AE_ITQ Job Queue Entry. The time between runs will need to be adjusted based on volume of transactions.

Codeunit · 14012266 · NAS Web Management

General	
Object Type to Run:	Codeunit
Object ID to Run:	14012266
Object Caption to Run:	NAS Web Management
Description:	NAS Web Management
Parameter String:	ITQ_ONLY
Job Queue Category Code:	AE_ITQ
User ID:	SWPROS\WWH
Timeout (sec.):	0
Maximum No. of Attempts to Run:	0
Last Ready State:	3/30/2015 4:08:15.860 PM
Earliest Start Date/Time:	3/30/2015 4:10:14.760 PM
Expiration Date/Time:	
Priority:	1000
Run in User Session:	<input type="checkbox"/>
Status:	On Hold

Recurrence	
Recurring Job:	<input checked="" type="checkbox"/>
Run on Mondays:	<input checked="" type="checkbox"/>
Run on Tuesdays:	<input checked="" type="checkbox"/>
Run on Wednesdays:	<input checked="" type="checkbox"/>
Run on Thursdays:	<input checked="" type="checkbox"/>
Run on Fridays:	<input checked="" type="checkbox"/>
Run on Saturdays:	<input checked="" type="checkbox"/>
Run on Sundays:	<input checked="" type="checkbox"/>
Starting Time:	
Ending Time:	
No. of Minutes between Runs:	5

OK

Setting up the AE_EXC_ITQ Job Queue Entry

These are the recommended settings for the AE_EXC_ITQ Job Queue Entry. The time between runs will need to be adjusted based on volume of transactions.

Codeunit · 14012266 · NAS Web Management

General			
Object Type to Run:	Codeunit	Maximum No. of Attempts to Run:	0
Object ID to Run:	14012266	Last Ready State:	3/30/2015 4:08:26.967 PM
Object Caption to Run:	NAS Web Management	Earliest Start Date/Time:	3/30/2015 4:10:25.910 PM
Description:	NAS Web Management	Expiration Date/Time:	
Parameter String:	EXCLUDE_ITQ	Priority:	1000
Job Queue Category Code:	AE_EXC_ITQ	Run in User Session:	<input type="checkbox"/>
User ID:	SWPROS\WWH	Status:	On Hold
Timeout (sec.):	0		

Recurrence			
Recurring Job:	<input checked="" type="checkbox"/>	Run on Saturdays:	<input checked="" type="checkbox"/>
Run on Mondays:	<input checked="" type="checkbox"/>	Run on Sundays:	<input checked="" type="checkbox"/>
Run on Tuesdays:	<input checked="" type="checkbox"/>	Starting Time:	
Run on Wednesdays:	<input checked="" type="checkbox"/>	Ending Time:	
Run on Thursdays:	<input checked="" type="checkbox"/>	No. of Minutes between Runs:	5
Run on Fridays:	<input checked="" type="checkbox"/>		

OK

Alternative Job Queue Setup to Minimize Table Locking (CERES4.50.78)

When Agency Express is configured with separate Job Queues for ITQ and Non-ITQ processes (according to the instructions above) one process or the other can fail due to a table lock error. If table locking is an issue, combining both the ITQ and Non-ITQ processes under one Job Queue will minimize table locking.

To access Job Queue setup, select Departments → Administration → Application Setup → Job Queue.

Job Queue Category List

Select Job Queue Category List from the menu

Job Queue

Lists

Job Queues

Job Queue Category List

Job Queue Entries

Job Queue Log Entries

This opens the Job Queue Category List. You will need to create 1 additional entry in this table as shown below:

Job Queue Category List ▾

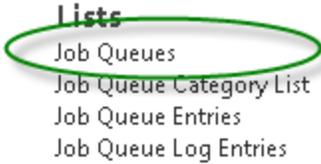
Code	Description
AE_BOTH	Agency Exp both ITQ & Non ITQ

When you've completed setup of the additional Job Queue Category, you can return back to the job queue menu.

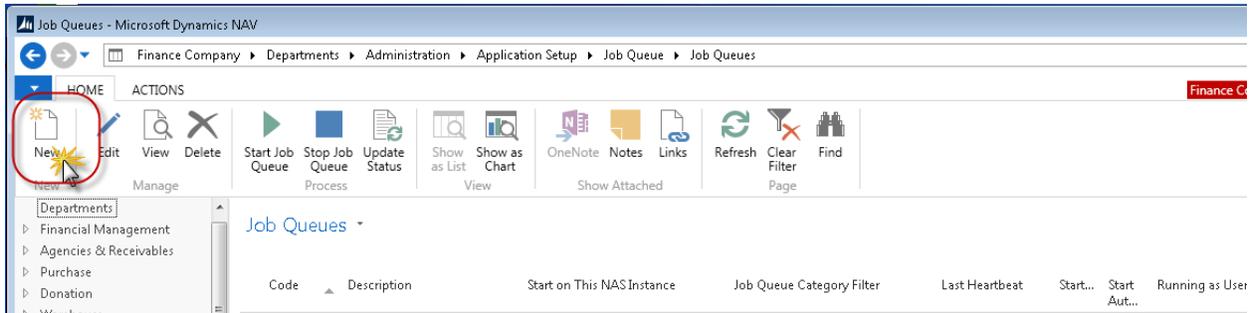
Job Queue

Select Job Queues from the menu.

Job Queue



Select New from the Ribbon



This will open the Job Queue card where you can enter the information for the new job queue.

Job Queue Card

The screenshot shows the 'Job Queue Card' form. The 'General' section contains the following fields:

Code:	AE_BOTH	Server Instance ID:	0
Description:	AE Both ITQ & Non-ITQ	Session ID:	0
Job Queue Category Filter:	AE_BOTH	Running as User ID:	
Started:	<input type="checkbox"/>	Running on Server Computer:	
Last Heartbeat:		Running on Server Instance:	

The 'NAS Settings' section contains the following fields:

Start Automatically From NAS:	<input type="checkbox"/>	Start on This NAS Instance:	masterceres45testing_47042
Start on This NAS Computer:	esp-st.swpro.com		

General Fast Tab

Code: Enter the code associated with the Job Queue record.

Description: Enter the description of this Job Queue record.

Job Queue Category Filter: Enter the appropriate Job Queue Category Filter using the drop-down list. Select “AE_BOTH” to associate with this Job Queue

NAS Settings Fast Tab

Note: you only need to fill in this tab if the Job Queue will be Started Automatically from a NAS.

Start Automatically From NAS: Check this box to indicate that the Job Queue will be started from a NAS.

Start on This NAS Computer: Use the drop-down to select from previously configured NAS computers. It should be noted here that there is no requirement to setup different NAS Computers and multiple Job Queues may be run and started from the same NAS Computer.

Start on This NAS Instance: Use the drop-down to select from previously configured NAS Instances. It should be noted here that there is no requirement to setup different NAS Instances and multiple Job Queues may be run and started from the same NAS Instance.

Job Queue Entries Setup

Select Job Queue Entries from the menu.

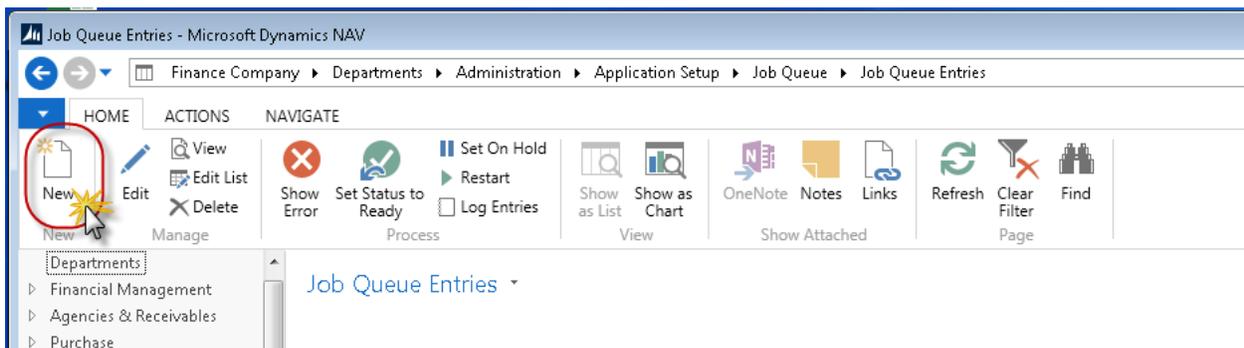
Job Queue

Lists

- Job Queues
- Job Queue Category List
- Job Queue Entries
- Job Queue Log Entries

This will open the list of Job Queue Entries. We will be setting up 2 additional Job Queue Entries.

Select New from the Ribbon



A new Job Queue Entry card will be displayed.

Setting up the AE_BOTH_EXC_ITQ Job Queue Entry

These are the recommended settings for the AE_BOTH_EXC_ITQ Job Queue Entry. The time between runs will need to be adjusted based on volume of transactions.

Codeunit · 14012266 · NAS Web Management

General	
Object Type to Run:	Codeunit
Object ID to Run:	14012266
Object Caption to Run:	NAS Web Management
Description:	NAS Web Management
Parameter String:	EXCLUDE_ITQ
Job Queue Category Code:	AE_BOTH
User ID:	SWPROS\WWH
Timeout (sec.):	0
Maximum No. of Attempts to Run:	0
Last Ready State:	8/28/2017 1:43 PM
Earliest Start Date/Time:	
Expiration Date/Time:	
Priority:	1000
Run in User Session:	<input type="checkbox"/>
Status:	On Hold

Recurrence	
Recurring Job:	<input checked="" type="checkbox"/>
Run on Mondays:	<input checked="" type="checkbox"/>
Run on Tuesdays:	<input checked="" type="checkbox"/>
Run on Wednesdays:	<input checked="" type="checkbox"/>
Run on Thursdays:	<input checked="" type="checkbox"/>
Run on Fridays:	<input checked="" type="checkbox"/>
Run on Saturdays:	<input checked="" type="checkbox"/>
Run on Sundays:	<input checked="" type="checkbox"/>
Starting Time:	
Ending Time:	
No. of Minutes between Runs:	5

Setting up the AE_BOTH_ITQ Job Queue Entry

These are the recommended settings for the AE_BOTH_ITQ Job Queue Entry. The time between runs will need to be adjusted based on volume of transactions and should not be less than double the AE_BOTH_EXC_ITQ time between runs.

Codeunit · 14012266 · NAS Web Management

General			
Object Type to Run:	Codeunit	Maximum No. of Attempts to Run:	0
Object ID to Run:	14012266	Last Ready State:	8/28/2017 1:40 PM
Object Caption to Run:	NAS Web Management	Earliest Start Date/Time:	
Description:	NAS Web Management	Expiration Date/Time:	
Parameter String:	ITQ_ONLY	Priority:	1000
Job Queue Category Code:	AE_BOTH	Run in User Session:	<input type="checkbox"/>
User ID:	SWPROS\VAWH	Status:	On Hold
Timeout (sec.):	0		

Recurrence			
Recurring Job:	<input checked="" type="checkbox"/>	Run on Saturdays:	<input checked="" type="checkbox"/>
Run on Mondays:	<input checked="" type="checkbox"/>	Run on Sundays:	<input checked="" type="checkbox"/>
Run on Tuesdays:	<input checked="" type="checkbox"/>	Starting Time:	
Run on Wednesdays:	<input checked="" type="checkbox"/>	Ending Time:	
Run on Thursdays:	<input checked="" type="checkbox"/>	No. of Minutes between Runs:	10
Run on Fridays:	<input checked="" type="checkbox"/>		

Note: Once the setup is completed, use “Set on Hold” for the other Agency Express Job Queue Entries and stop the related Job Queue. Use “Set Status to Ready” on the two new Job Queue Entries and start the related Job Queue.

Related Topics:

1. Agency Express Item Validate and Reservation Revisions
2. Agency Express Managing Web Orders
3. Agency Express Overview of File Structure and Data Synching