



# Asynchronous processing using the job object

## ONTAP Select

David Peterson  
November 21, 2019

This PDF was generated from [https://docs.netapp.com/us-en/ontap-select/concept\\_api\\_async\\_proc.html](https://docs.netapp.com/us-en/ontap-select/concept_api_async_proc.html) on October 28, 2020. Always check docs.netapp.com for the latest.

# Table of Contents

Asynchronous processing using the job object ..... 1

# Asynchronous processing using the job object

Some of the Deploy API calls, particularly those that create or modify a resource, can take longer to complete than other calls. ONTAP Select Deploy processes these long-running requests asynchronously.

## Asynchronous requests described using Job object

After making an API call that runs asynchronously, the HTTP response code 202 indicates the request has been successfully validated and accepted, but not yet completed. The request is processed as a background task which continues to run after the initial HTTP response to the client. The response includes the Job object anchoring the request, including its unique identifier.



You should refer to the ONTAP Select Deploy online documentation page to determine which API calls operate asynchronously.

## Querying the Job object associated with an API request

The Job object returned in the HTTP response contains several properties. You can query the state property to determine if the request completed successfully. A Job object can be in one of the following states:

- Queued
- Running
- Success
- Failure

There are two techniques you can use when polling a Job object to detect a terminal state for the task, either success or failure:

- Standard polling request  
Current Job state is returned immediately
- Long polling request  
Job state is returned only when one of the following occurs:
  - State has changed more recently than the date-time value provided on the poll request
  - Timeout value has expired (1 to 120 seconds)

Standard polling and long polling use the same API call to query a Job object. However, a long polling request includes two query parameters: `poll_timeout` and `last_modified`.



You should always use long polling to reduce the workload on the Deploy virtual machine.

### **General procedure for issuing an asynchronous request**

You can use the following high-level procedure to complete an asynchronous API call:

1. Issue the asynchronous API call.
2. Receive an HTTP response 202 indicating successful acceptance of the request.
3. Extract the identifier for the Job object from the response body.
4. Within a loop, perform the following in each cycle:
  - a. Get the current state of the Job with a long-poll request
  - b. If the Job is in a non-terminal state (queued, running), perform loop again.
5. Stop when the Job reaches a terminal state (success, failure).

## Copyright Information

Copyright © 2020 NetApp, Inc. All rights reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means-graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system-without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

RESTRICTED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.277-7103 (October 1988) and FAR 52-227-19 (June 1987).

## Trademark Information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.