



# Webhooks in SharePoint Online

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# About Netwoven



- ▶ Microsoft gold partner
- ▶ Enterprise Content collaboration
- ▶ Customer relationship management
- ▶ Cloud productivity and development
- ▶ Since 2001

# Agenda

- ▶ What are Webhooks
- ▶ Who uses Webhooks
- ▶ How webhooks are implemented in SharePoint
- ▶ Demos
- ▶ Advantages/Disadvantages

# What are webhooks?

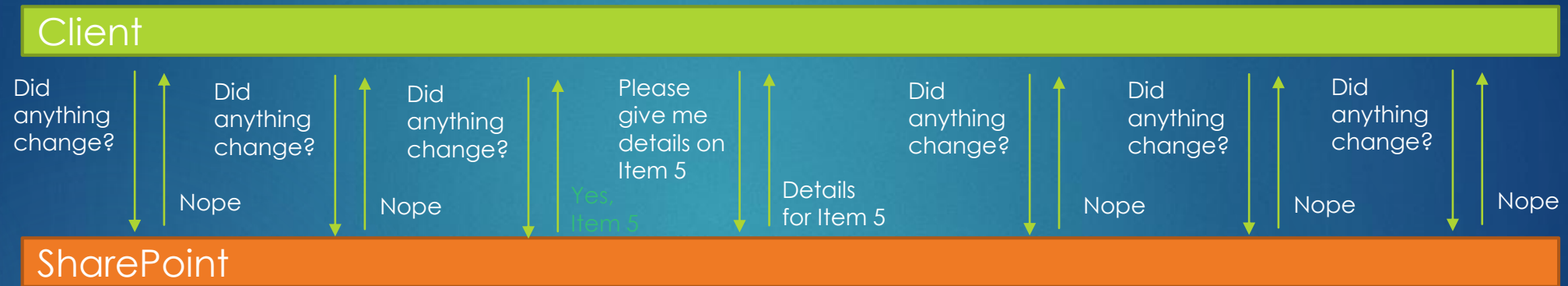
- ▶ A pattern that allows for event driven notification
- ▶ Uses a push not pull concept
- ▶ Supported in most modern platforms
- ▶ SharePoint Implementation
  - ▶ Still in preview for SharePoint Online
  - ▶ Preview only supports Lists and Libraries
  - ▶ No official plans for an on-prem feature pack

# What are the alternatives within SharePoint?

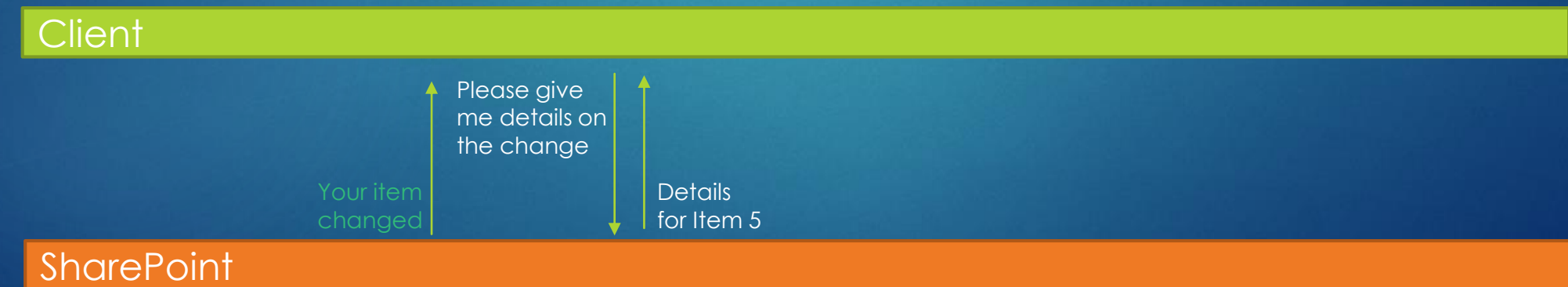
- ▶ Remote Event Receivers
- ▶ Workflows
- ▶ Flow
- ▶ RSS feeds
- ▶ Email Alerts
- ▶ CSOM Change log

# Webhooks vs Traditional API

## Traditional API



## Webhooks



# Who uses webhooks?



# Subscribe

```
{  
  "resource": "https://netwoveninc.sharepoint.com/_api/web/Lists/getbytitle('Documents') ",  
  "notificationUrl": "http://spsaturday.westus.cloudapp.azure.com",  
  "expirationDateTime": "2016-12-02T00:00:00+00:00"  
}
```



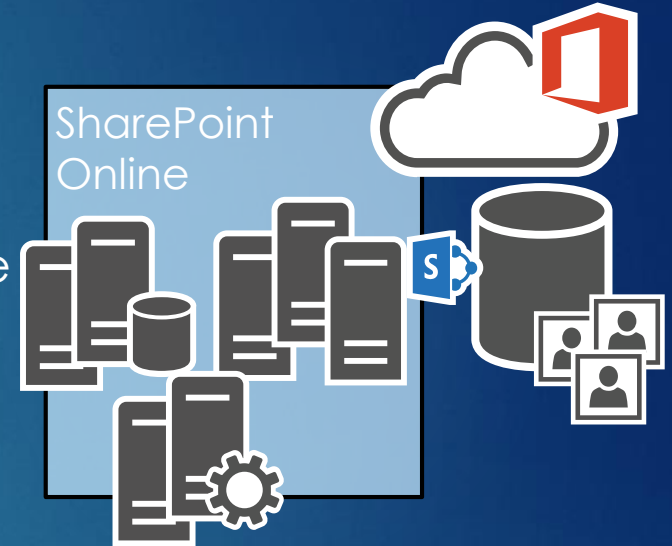
POST /\_api/web/lists('list-id')/subscriptions



WebHook  
notification  
endpoint

POST https://{your host}/your/webhook/service  
?validationtoken={GUID}

HTTP/ 200 OK  
{GUID}

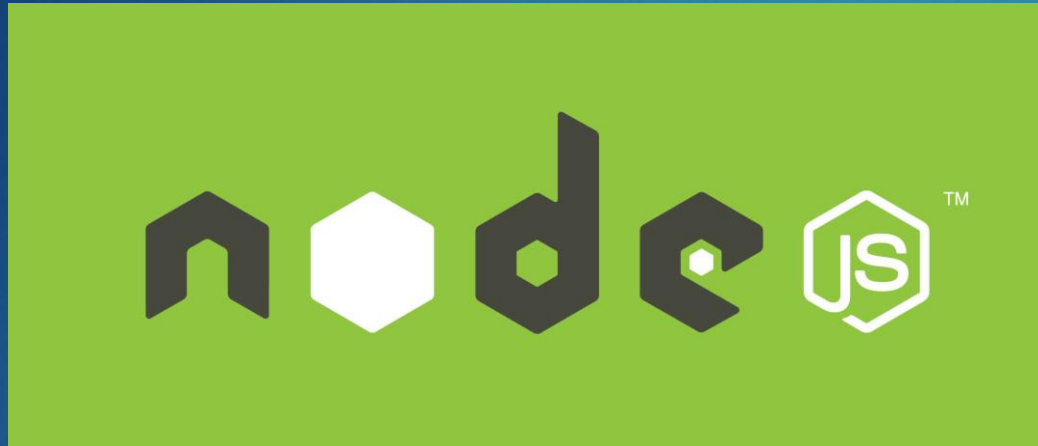


HTTP/ 201 Created

```
{  
  "id": "a8e6d5e6-9f7f-497a-b97f-8ffe8f559dc7",  
  "expirationDateTime": "2016-12-27T16:17:57Z",  
  "notificationUrl": " http://spsaturday.westus.cloudapp.azure.com ",  
  "resource": "{list or library id}"  
}
```



# Webhook Subscribe - Demo



# Event notification in action

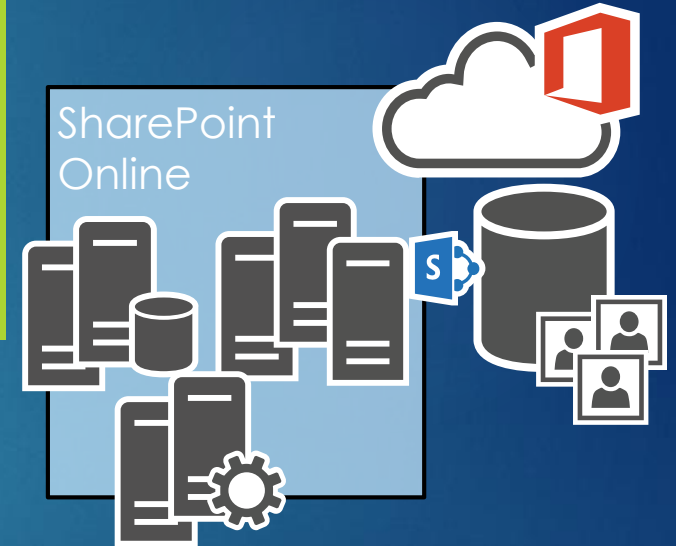


WebHook  
notification  
endpoint

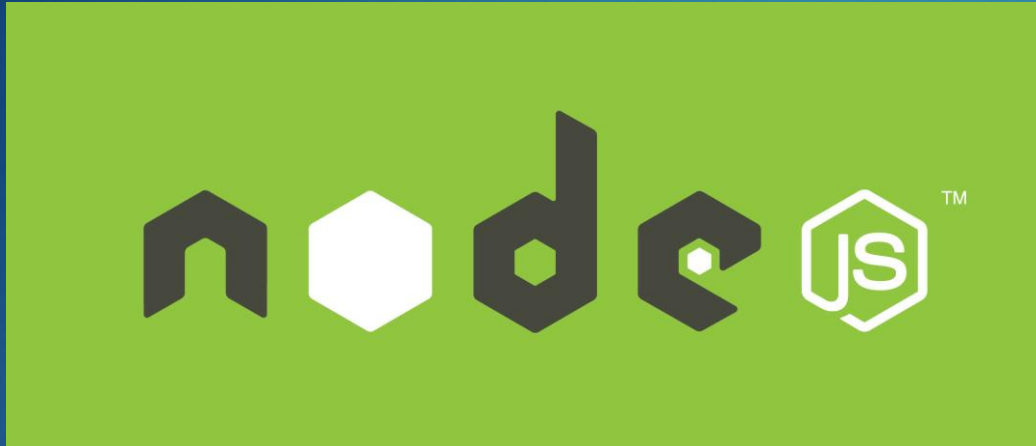
```
{  
  "value": [  
    {  
      "subscriptionId": "91779246-afe9-4525-b122-6c199ae89211",  
      "clientState": "00000000-0000-0000-0000-000000000000",  
      "expirationDateTime": "2016-04-30T17:27:00.0000000Z",  
      "resource": "b9f6f714-9df8-470b-b22e-653855e1c181",  
      "tenantId": "00000000-0000-0000-0000-000000000000",  
      "siteUrl": "/",  
      "webId": "dbc5a806-e4d4-46e5-951c-6344d70b62fa"  
    }  
  ]  
}
```

← POST https://{your host}/your/webhook/service

→ HTTP/ 200 OK



# Webhook Notification - Demo



# Webhooks Advantages

- ▶ Simple subscription and notification
- ▶ Retry ability
- ▶ Support delete events
- ▶ Industry standard approach to notifications
- ▶ In line with modern development stack of SPFx

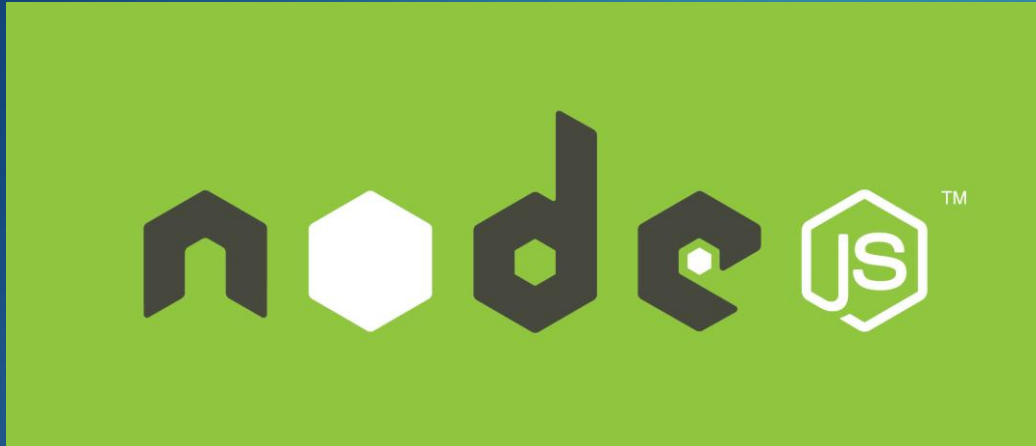
# Webhooks Disadvantages

- ▶ 6 month max expiration
- ▶ Bare minimum information from SPO
- ▶ Only Lists and Libraries are supported in SPO preview
- ▶ Acknowledgement must be received quickly
- ▶ May take upwards of 5 minutes to receive the notification
- ▶ No synchronous events from SPO
- ▶ Subscriptions and notifications go over the same URL

# Webhooks Best Practice

- ▶ Always implement an asynchronous process
- ▶ Your App should update its subscriptions on a timed interval
- ▶ Keep limited number of event subscriptions to minimize http requests to server
- ▶ Log processed events to avoid duplicate event processing
- ▶ Webhook notification acknowledgement has to be within 5 sec
- ▶ BPM engines should still be used for more complex processes
- ▶ Webhooks to replace your Nintex or SharePoint workflows

# Webhook client notification - Demo



# Resources

- ▶ Video: <https://dev.office.com/blogs/introducing-sharepoint-webhooks>
- ▶ MSDN Details: <https://dev.office.com/sharepoint/docs/apis/webhooks/overview-sharepoint-webhooks>
- ▶ Webhook events: <https://dev.office.com/sharepoint/docs/apis/webhooks/lists/overview-sharepoint-list-webhooks>
- ▶ Github sample: <https://github.com/SharePoint/sp-dev-samples/tree/master/Samples/WebHooks.Nodejs>



Questions?



THANK YOU