PICKWARE

Wer mag Montagmorgen?

Langweilige Aufgaben per Chatbot lösen

von Niklas Büchner

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Eine kurze Einführung in die Slack API

Langweilige Aufgaben automatisieren

von Niklas Büchner

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Vorstellung

- Niklas
- Softwareentwickler (DevOps)
- E-Commerce
- PHP, JavaScript, (Rust ❤)

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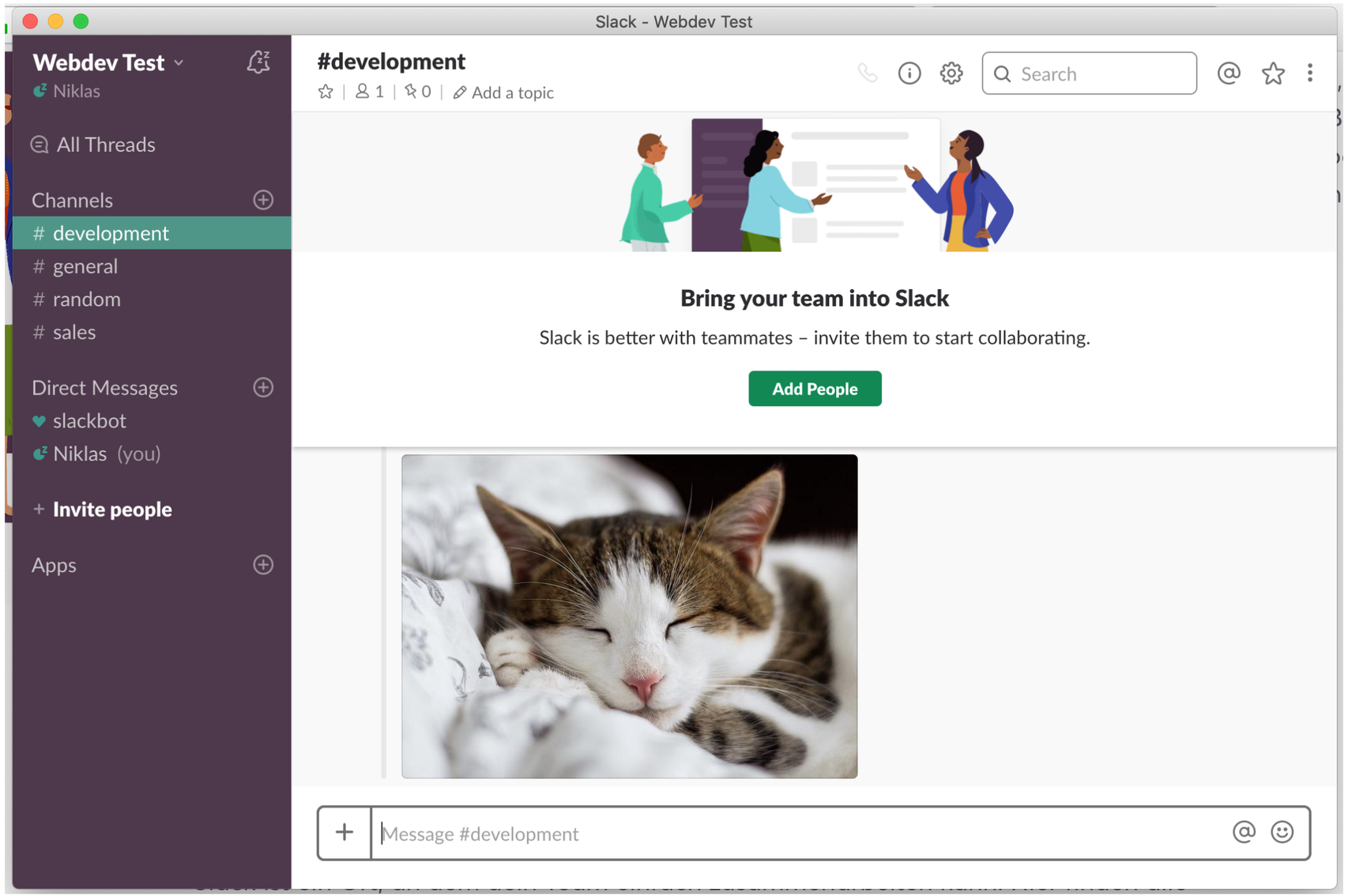
Was ist Slack?



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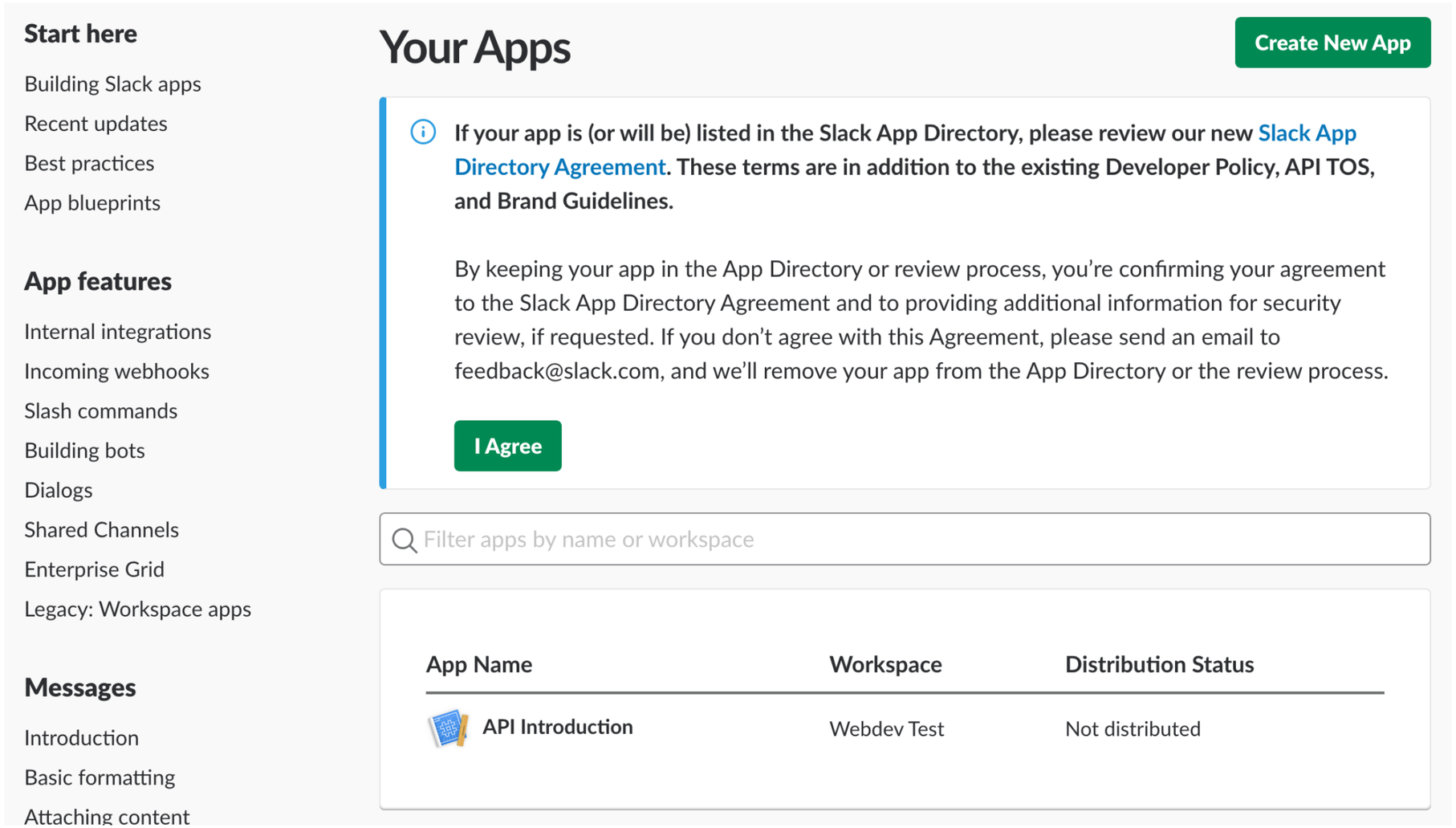
Die Slack API

```
'https://api.slack.com/apps'
```



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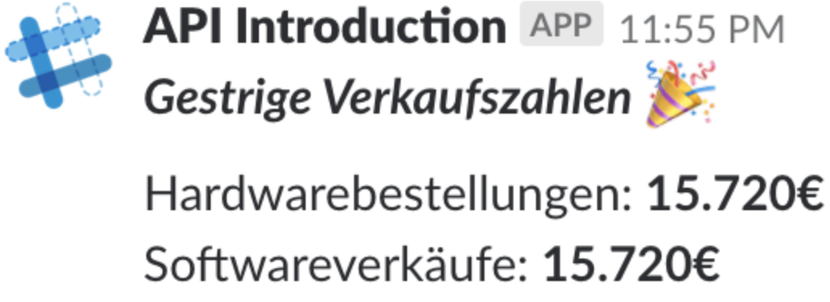
Wie lief es gestern?



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Wie funktioniert der Server?

```
const app = express();
// Weitere Abhängigkeiten

const slackService = require('./services/slack-incoming');
const actions = [
    require('./actions/salesData'),
    // ...
];

slackService.init(app);
actions.forEach((action) => {
    action(app, slackService);
})

app.listen(port);
```

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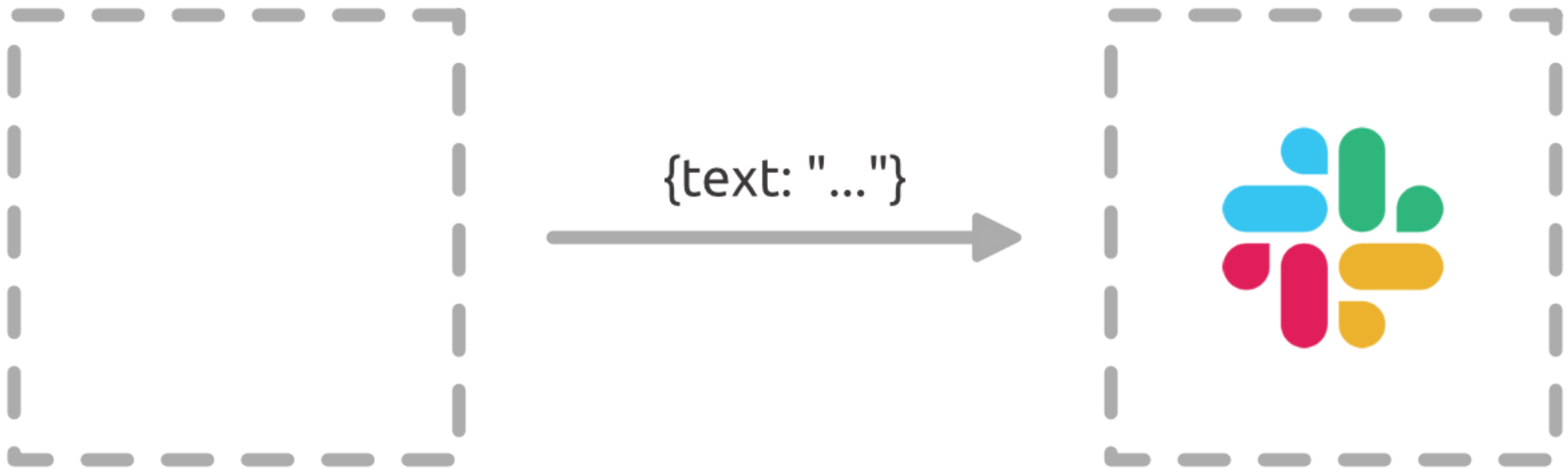
Nachrichten in einen Channel posten

```
'https://hooks.slack.com/services/XXXX/XXXXXX'
```



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Slack-Nachrichten per URL einrichten

Webhook URL	Channel	Added By
https://hooks.slack.com/services/TEHML1 Copy	#sales	Niklas Dec 3, 2018
https://hooks.slack.com/services/TEHML1 Copy	#development	Niklas Dec 10, 2018
https://hooks.slack.com/services/TEHML1 Copy	#random	Niklas Dec 30, 2018

Add New Webhook to Workspace

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Wie lief es gestern?

```
const process = require('process');
const axios = require('axios');

async function triggerSalesDataMessage() {
    axios.post(
        'https://hooks.slack.com/services/' + process.env.SLACK_SALES_KEY, {
        text: '*_Gestrige Verkaufszahlen 🎉_*' +
        '\n' +
        '\n' +
        'Hardwarebestellungen: *15.720€*\n' +
        'Softwareverkäufe: *15.720€*',
    }).catch(console.log);
}
```

```
module.exports = function (app) {
    app.get('/sales-data', (req, res) => {
        triggerSalesDataMessage();

        res.redirect('/');
    });
}
```

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Anwendungsbeispiele

Thomas D3V Bot APP 1:55 PM

Neue Bestellung 41,41 €
#23997 am 23.1.2019 12:54
Vorkasse - Offen
DHL Versand
✉ niklas.buechner@viison.com

Rechnung
Pickware GmbH
Herr Niklas Büchner
Goebelstr. 21
64295 Darmstadt

Versand
Pickware GmbH
Herr Niklas Büchner
Goebelstr. 21
64295 Darmstadt

Positionen

1 x 29,90 €
Barcodescanner Schutzhülle iPod Touch 6G / iPhone 5 / 5s / SE

🔎 **Shop Suche**

Mute Bot (LT10) APP 11:45 AM

Heutiges Suppenangebot:
- Bohneneintopf mit „Wienerle"
- Kartoffel-Feta-Möhren Suppe mit Chili und Koriander

Braustübl Bot APP 11:45 AM

Tagesangebot: Südfranzösische Bratwurst in Pfefferjus und Kroketten
Alternative: Kassler-Kamm in Bratenjus mit Fasssauerkraut und Butterkartoffeln
Vegetarisch: Würziger Flammkuchen mit Äpfeln, Zwiebeln und Handkäs

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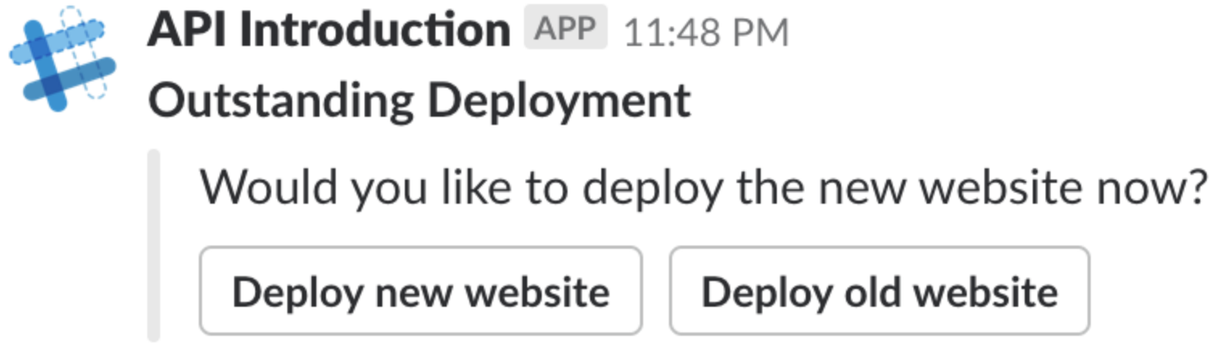
Die neue Webseite deployen



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Die neue Webseite deployen

```
'https://hooks.slack.com/services/' + process.env.SLACK_DEVELOPMENT_KEY
```

```
{
    text: '*Outstanding Deployment*',
    attachments: [{
        text: 'Would you like to deploy the new website now?',
        fallback: 'Oops, looks like we can not deploy the site 🧐',
        callback_id: 'deploy-website',
        actions: [{
            name: 'deploy',
            text: 'Deploy new website',
            type: 'button',
            value: 'deploy',
        }, {
            name: 'deploy',
            text: 'Deploy old website',
            type: 'button',
            value: 'later',
        }]
    }],
}
```

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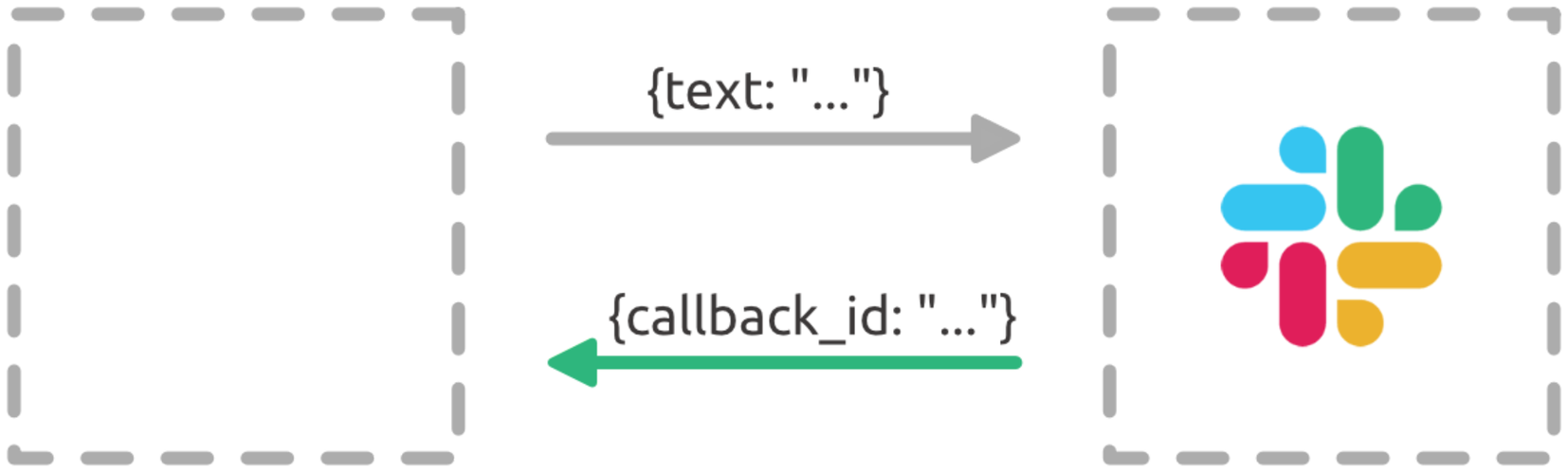
Interaktive Antwort

```
'https://hooks.slack.com/services/XXXX/XXXXXX'
```




```
'https://your.domain.example/slack-incoming'
```

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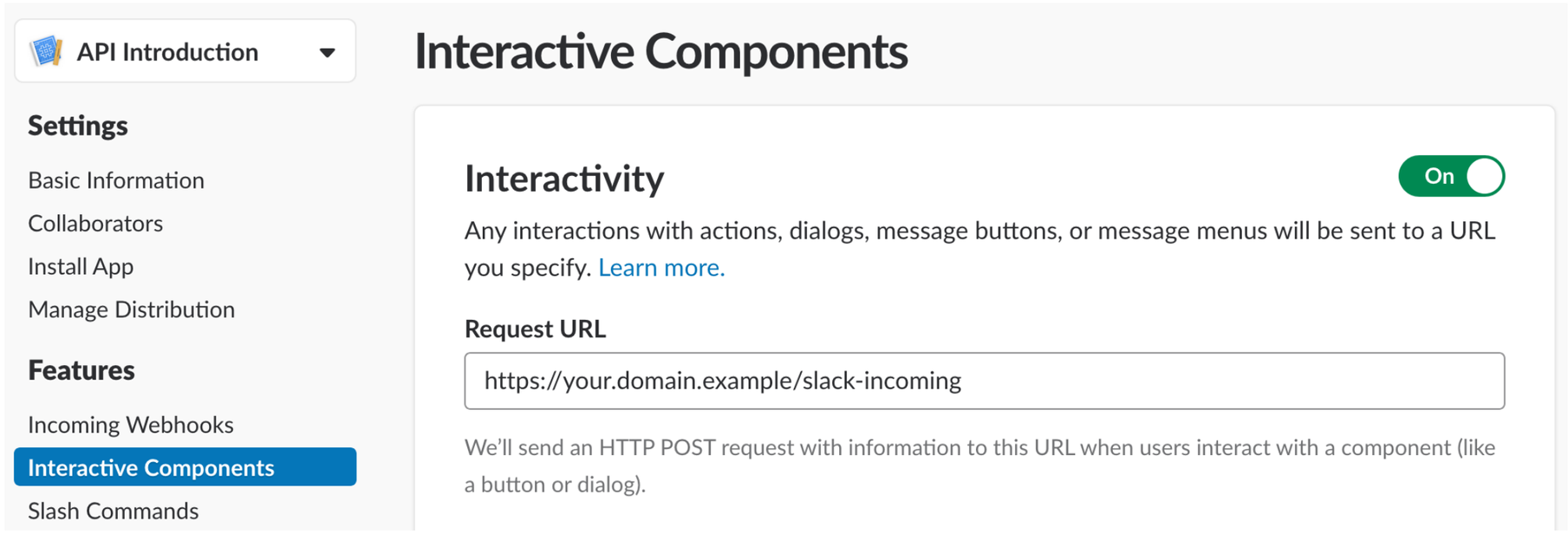
Interaktive URL definieren



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Die neue Webseite deployen

```
var showOldWebsite = false;
slackService.webhook('deploy-website', 'deploy', (value) => {
    showOldWebsite = value === 'later';
});
```

```
app.get('/website', (req, res) => {
    if (showOldWebsite) {
        res.render('old_site');
    } else {
        res.render('new_site');
    }
});
```

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Der Slack Service

```
const incomingWebhooks = {};

function webhook(callbackId, action, callback) {
    incomingWebhooks[callbackId] =
        incomingWebhooks[callbackId] || {};
    incomingWebhooks[callbackId][action] = callback;
}
```

```
app.post('/slack-incoming', (req, res) => {
    const payload = JSON.parse(req.body.payload);

    payload.actions.forEach(action => {
        if (incomingWebhooks[payload.callback_id] &&
            incomingWebhooks[payload.callback_id][action.name]) {
            incomingWebhooks[payload.callback_id][action.name](
                action.value, payload, res
            );
        }
    });

    res.status(200).end();
});
```

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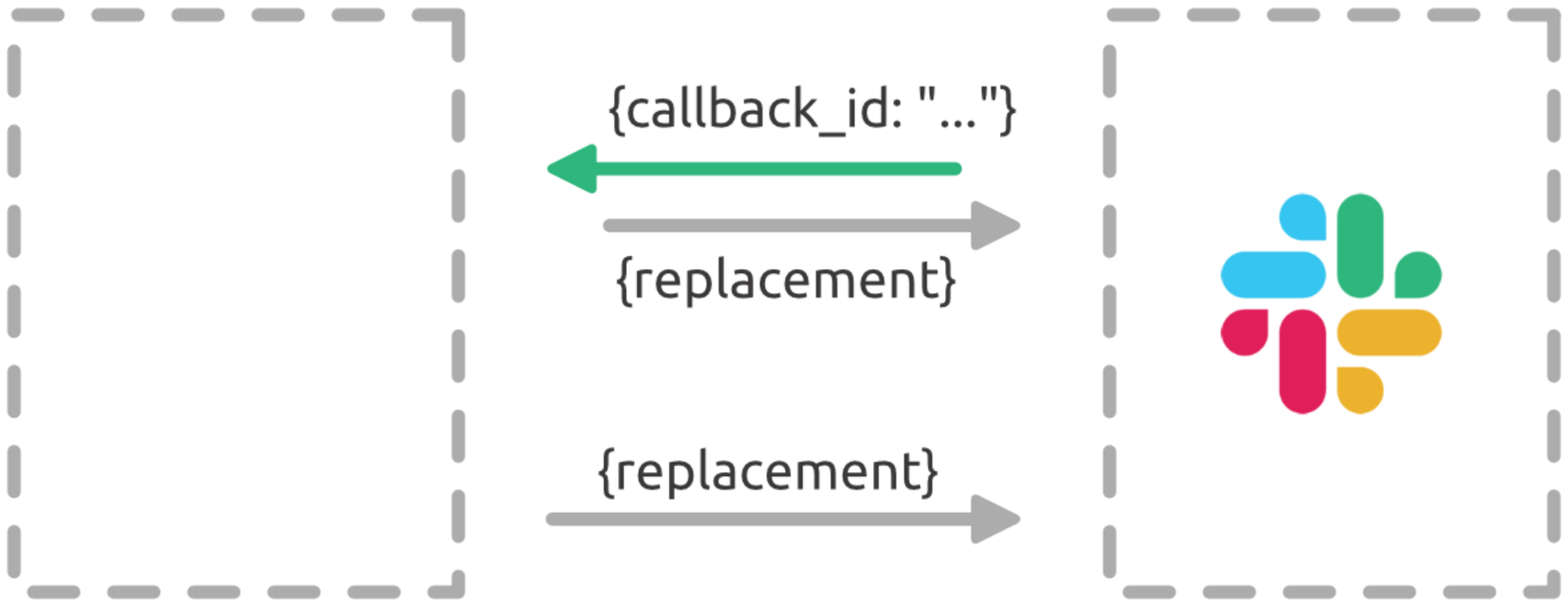
Nachrichten ersetzen



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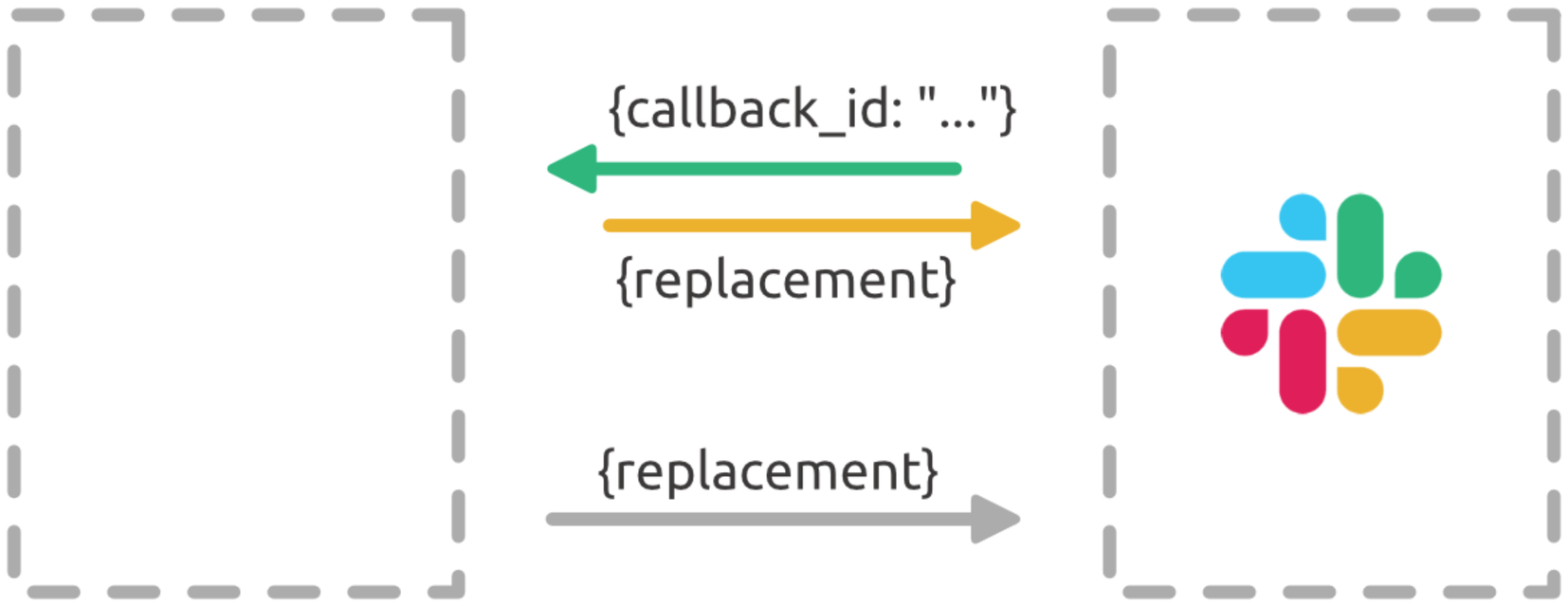
Nachrichten ersetzen



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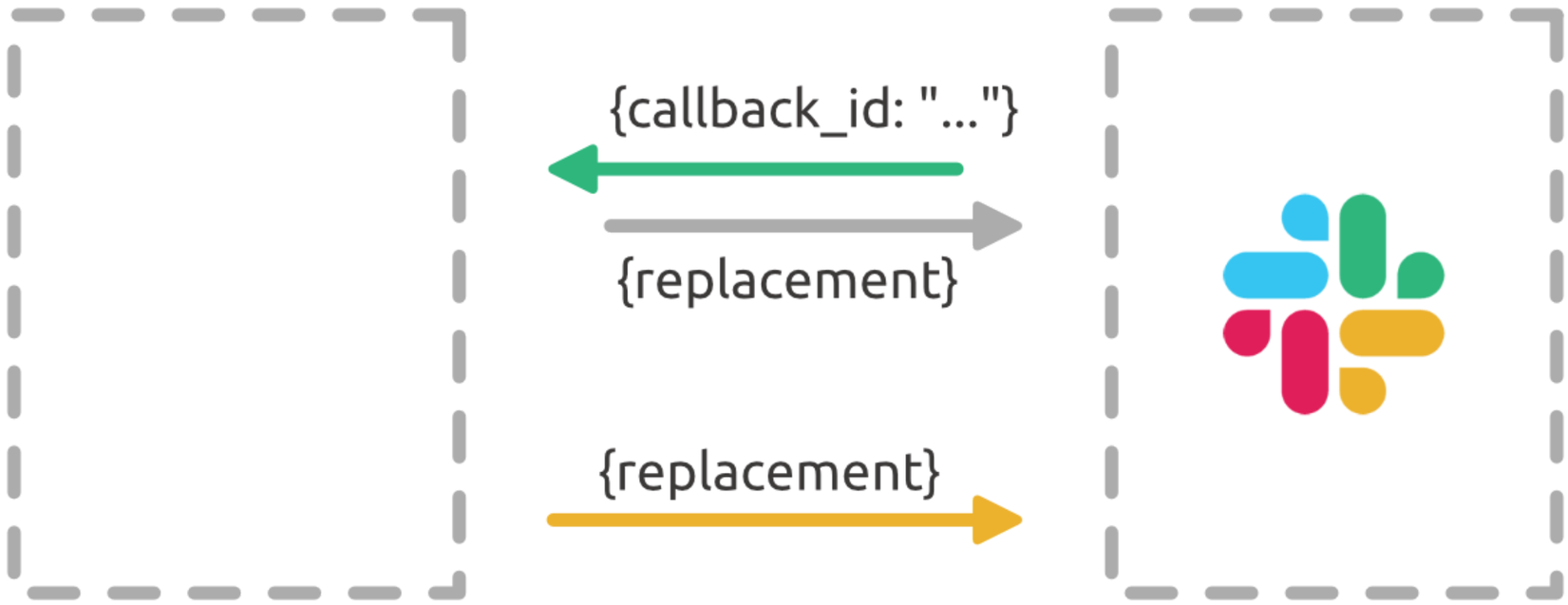
Nachrichten ersetzen



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Nachrichten ersetzen

```
slackService.webhook('deploy-website', 'deploy', (value, payload) => {
    // ...
    if (!finalizeDeployment || showOldWebsite) {
        return;
    }

    axios.post(payload.response_url, {
        text: '*Outstanding Deployment*',
        attachments: [{
            text: 'Would you like to deploy the new website' +
                ' now?\n<@' + payload.user.id +
                '> deployed the *new website*.'
        }],
    });
});
```

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Anwendungsbeispiele

Pickware Shop Bot APP 5:00 PM

Die Bestellung *23982* kann gepickt werden. Zeig unseren Kunden wie schnell mit Pickware versandt wird!

> Wer kommissioniert?
>
> **Ich**

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Neue GitHub Labels hinzufügen

API Introduction APP 12:16 AM

New GitHub Issue created

Please add labels to the issue #3

> **Website looks really bad!!**
>
> The new website I deployed via Slack looks terrible.
>
> **bug** **duplicate** **enhancement** **help wanted** **good first issue**

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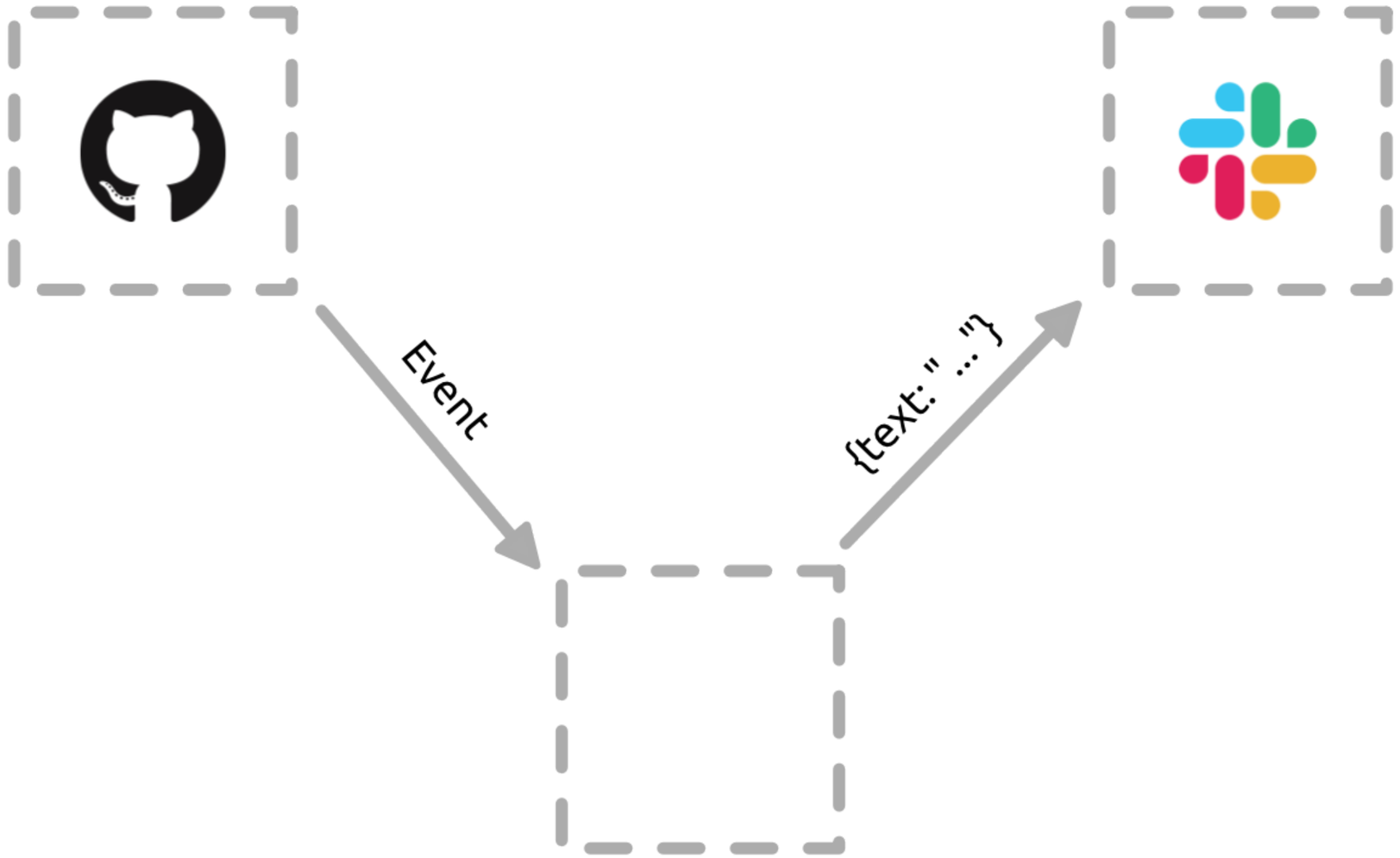
GitHub Issue Event



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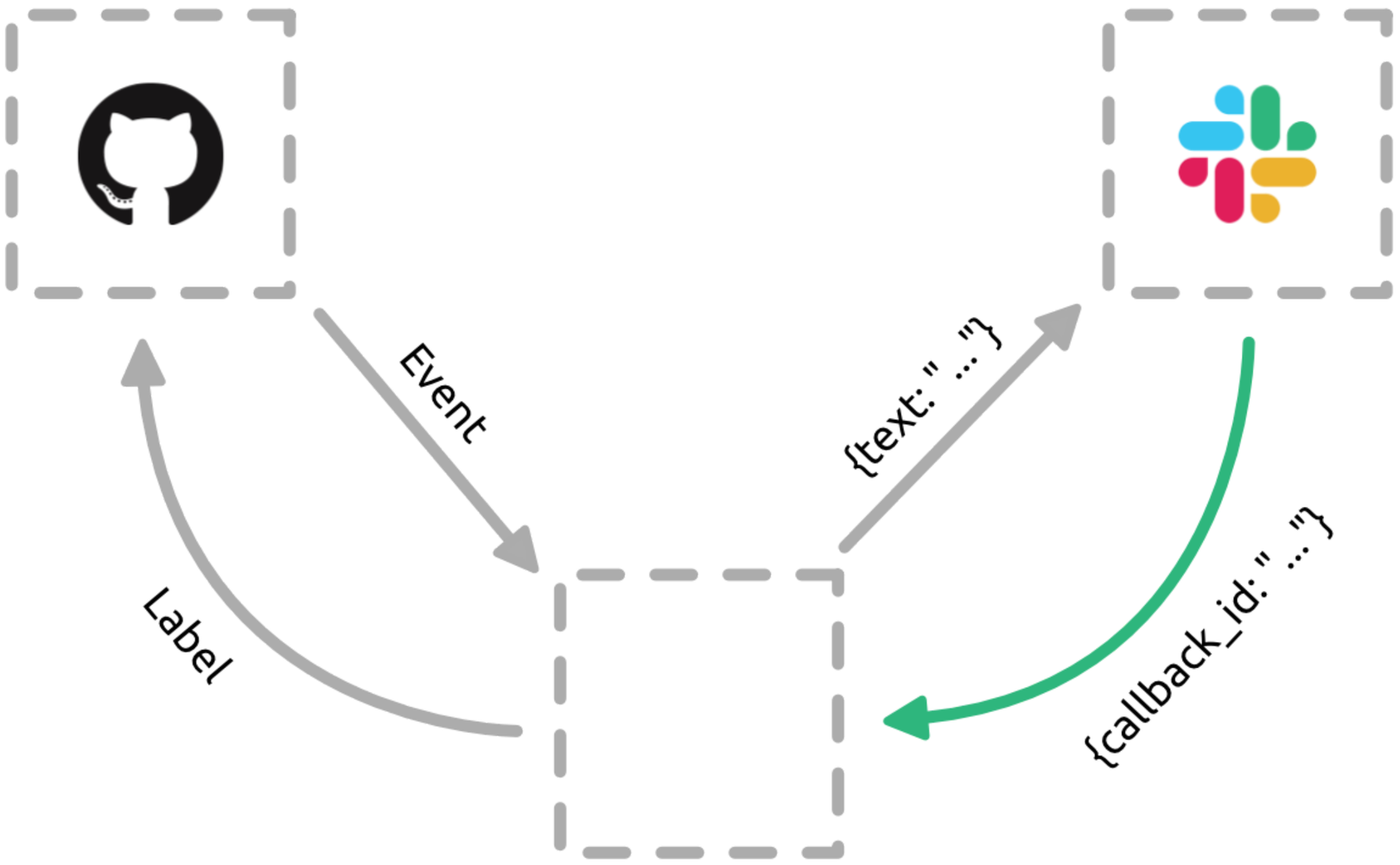
Label hinzufügen



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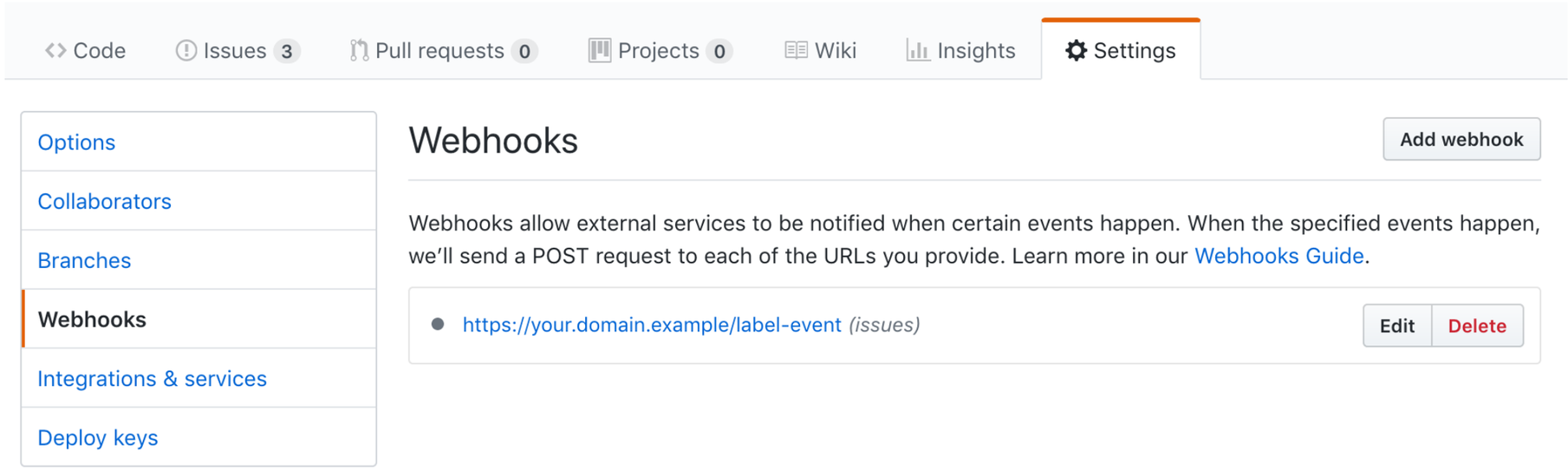
GitHub Events empfangen



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GitHub Events verarbeiten

```
app.post('/label-event', (req, res) => {
    if (!req.body.issue) {
        res.send('NO');
        res.status(502).end();

        return;
    }

    const issue = req.body.issue;
    triggerGithubIssueMessage(issue.title, issue.body, issue.number);

    res.send('YES');
    res.status(200).end();
});
```

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Vorhandene Labels auslesen

```
const query =
`query ($repositoryOwner: String!, $repositoryName: String!) {
    repository(owner: $repositoryOwner, name: $repositoryName) {
        labels(first: 20) {
            nodes {
                id,
                name,
            }
        }
    }
}`;
```

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Vorhandene Labels auslesen

```
const response = await axios.post(
    'https://api.github.com/graphql', {
        query,
        variables: {
            repositoryOwner: owner,
            repositoryName: name,
        }
    },{
        headers: {
            'Content-Type': 'application/json',
            'Authorization': ' token ' + process.env.GITHUB_TOKEN,
        },
});

return response.data.data.repository.labels.nodes;
```

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Slack-Nachricht erstellen

```
{
    text: '*New GitHub Issue created*\n'
        + 'Please add labels to the issue #' + number + '\n',
    attachments: [{
        text: '*' + labelTitle + '*\n' + labelMessage,
        fallback: 'Oops, looks like we can\'t add labels',
        callback_id: 'add-labels',
        actions: [{
            name: 'labels',
            text: 'enhancement',
            type: 'button',
            value: label.name + '-' + number,
        }],
    }]
}
```

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Label in GitHub hinzufügen

```
const githubRepo = process.env.GITHUB_REPOSITORY;
await github.addLabel(githubRepo, number, name);
```

```
const githubToken = process.env.GITHUB_TOKEN;
async function addLabel(repo, number, label) {
    return axios.post(
        'https://api.github.com/repos/' + repo +
            '/issues/' + number + '/labels',
        {
            labels: [label],
        }, {
            headers: {
                'Content-Type': 'application/json',
                'Authorization': ' token ' + githubToken,
            },
        }
    );
}
```

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State in Nachrichten speichern

```
{
    text: '*New GitHub Issue created*\n'
        + 'Please add labels to the issue #' + number + '\n',
    attachments: [{
        text: '*' + labelTitle + '*\n' + labelMessage,
        fallback: 'Oops, looks like we can\'t add labels',
        callback_id: 'add-labels',
        actions: [{
            name: 'labels',
            text: 'enhancement',
            type: 'button',
            value: label.name + '-' + number,
        }],
    }]
}
```

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Anwendungsbeispiele

Pollo APP 2:02 PM

@Niklas Büchner has a poll for you!

How do you like my presentation?

👍 🆗 👎

Delete Poll

Türklingel (Nello) APP 1:34 PM

@here Es hat geklingelt! Kann bitte jemand die Tür öffnen?

Tür öffnen

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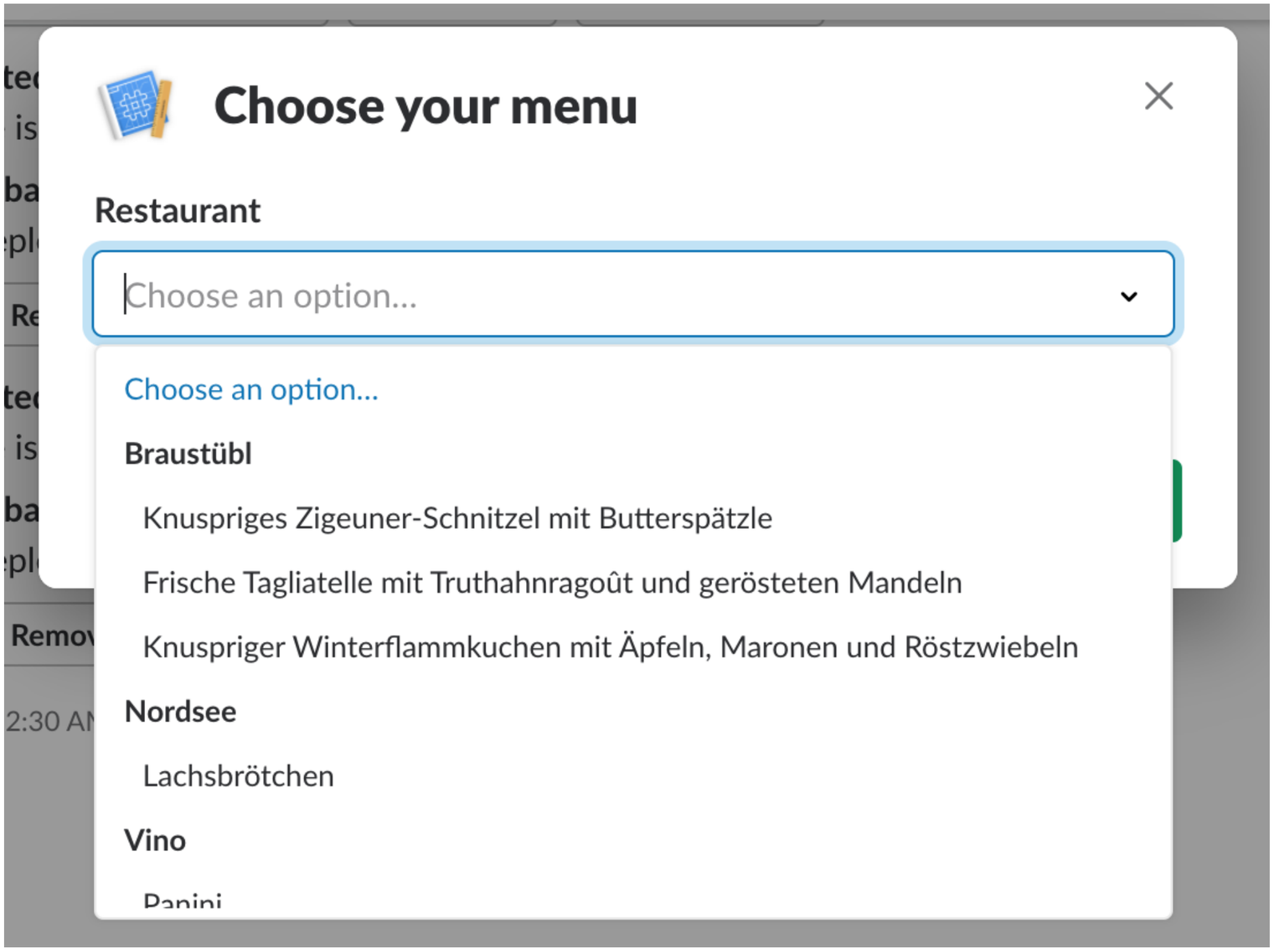
Mittagessen per Dialog



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Mittagessensnachricht

```
{
    text: '*Order lunch*',
    attachments: [{
        text: '',
        callback_id: 'order-lunch',
        actions: [{
            name: 'order',
            text: 'Order lunch',
            type: 'button',
            value: 'order',
        }],
    }],
}
```

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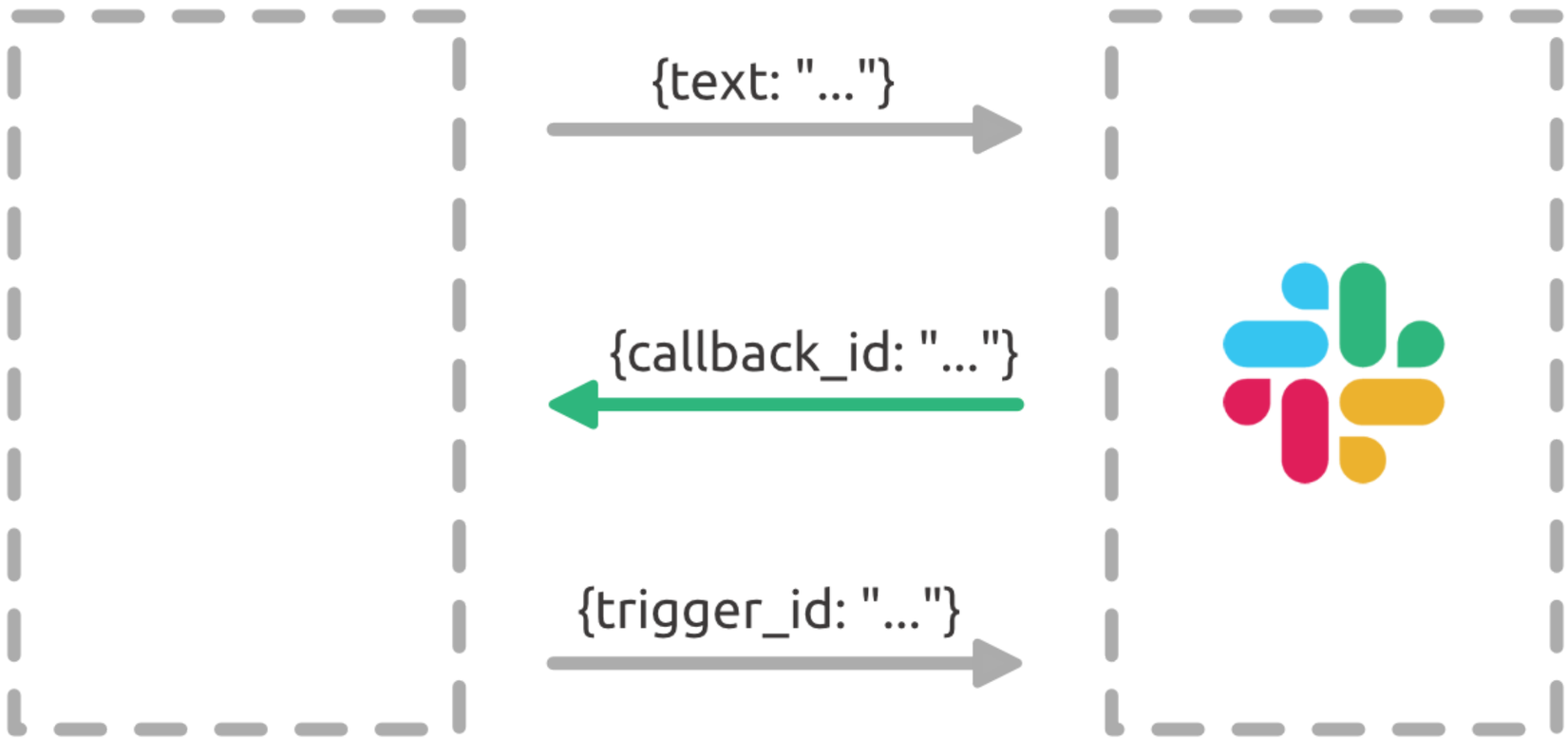
Dialog öffnen



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Dialog öffnen

```
axios.post('https://slack.com/api/dialog.open', {
        trigger_id: payload.trigger_id,
        dialog: {
            callback_id: "lunch-order",
            title: "Choose your menu",
            submit_label: "Order",
            notify_on_cancel: true,
            elements: [...]
        }
    }, {
        headers: {
            Authorization: "Bearer " + slackOAuthToken,
        },
    }).catch(console.log);
```

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Select zusammenstellen

```
elements: [{
    type: "select",
    label: "Restaurant",
    name: "restaurant",
    option_groups: [{
        label: "Braustübl",
        options: [{
            label: "Knuspriges Zigeuner-Schnitzel mit Butterspätzle",
            value: "regular",
            // ...
        }],
        // ...
    }],
}]
```

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Antwort verarbeiten

```
slackService.webhook('lunch-order', null, sendLunchConfirmation);

async function sendLunchConfirmation(value, payload) {
    axios.post('https://hooks.slack.com/services/' + process.env.SLACK_DEVELOPM
        text: '*Lunch ordered*\n'
            + 'Ordered ' + payload.submission.restaurant + '\nYour order will a
    }).catch(console.log);
}
```

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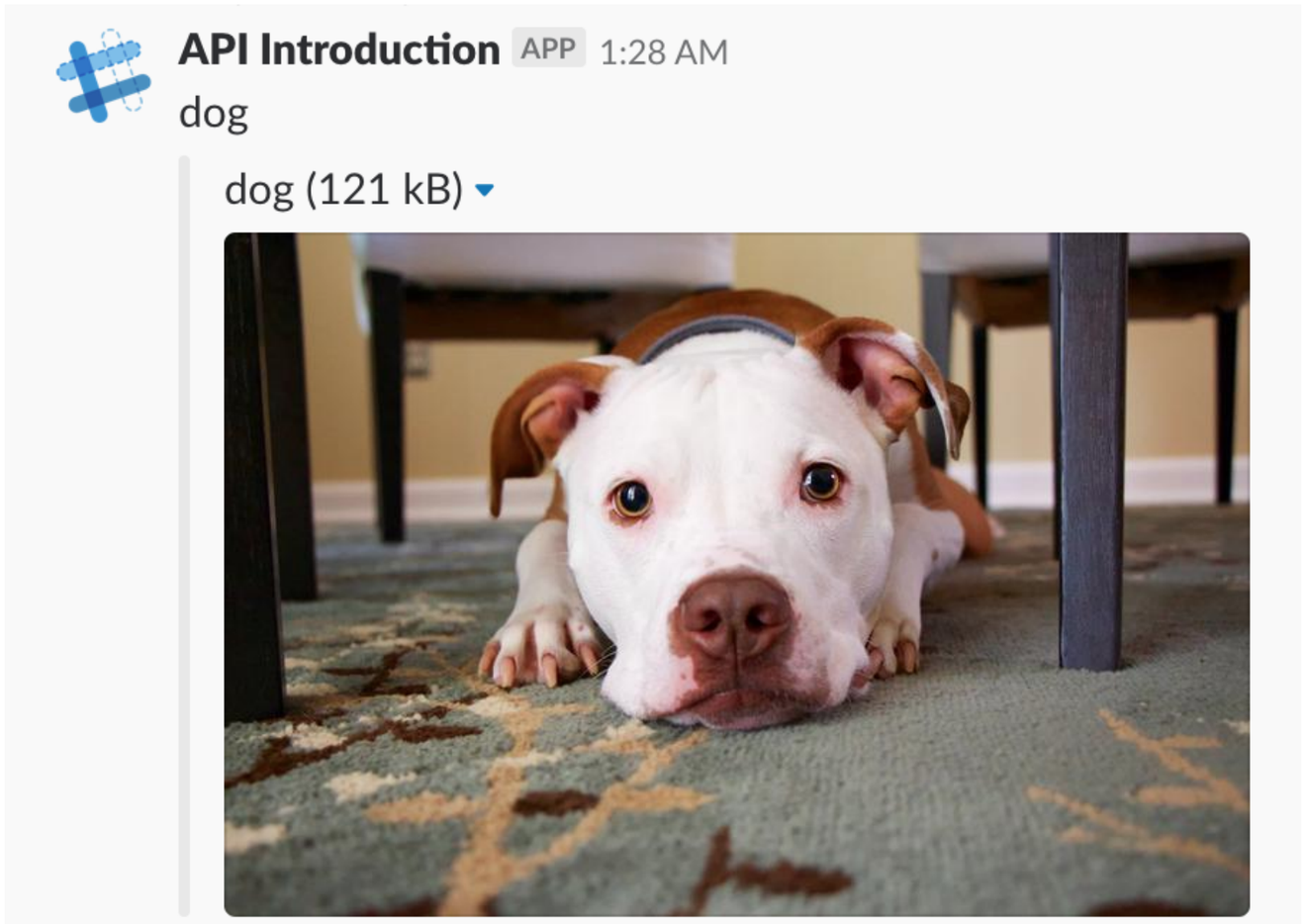
Unsplash Command



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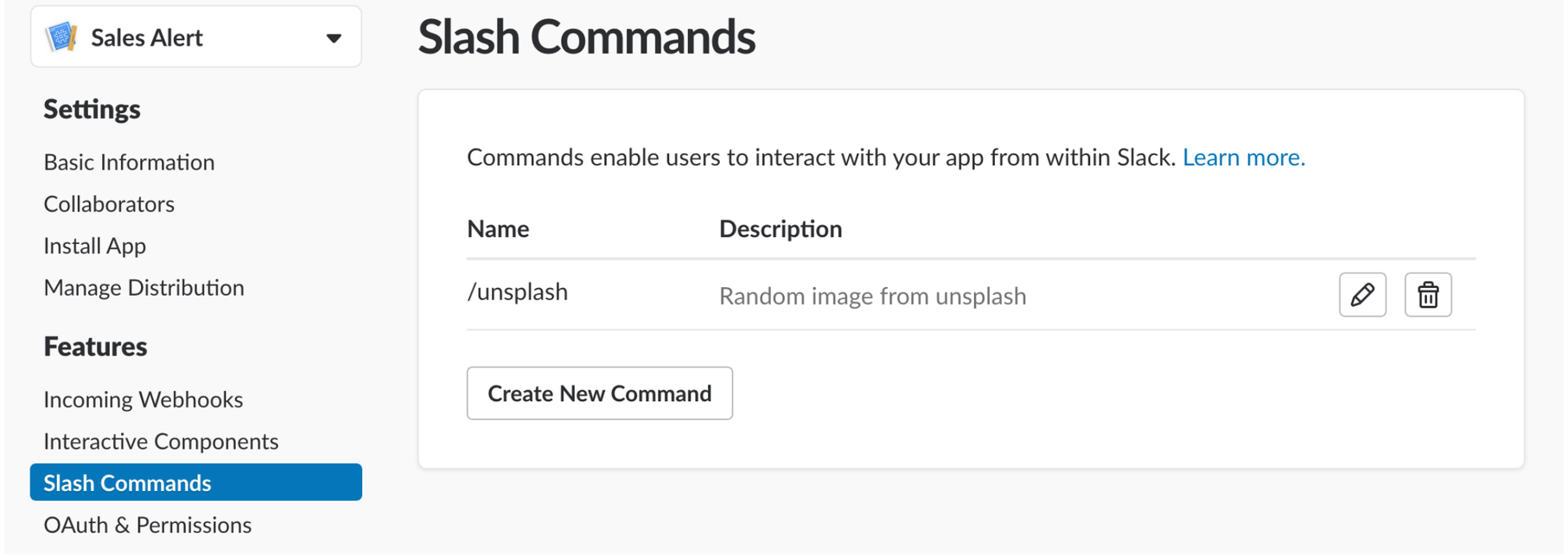
Command registieren



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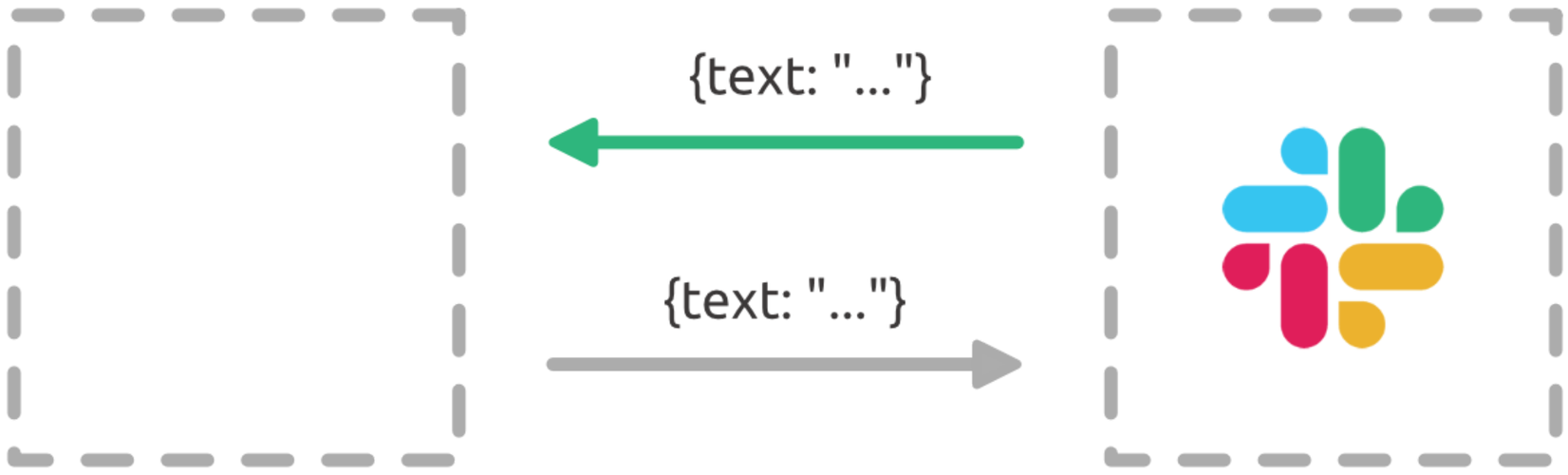
Slash Command verarbeiten

```
'https://your.domain.example/unsplash'
```



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Command initialisieren

```
app.post('/unsplash', (req, res) => {
    const body = req.body;
    getRandomImageFromUnsplash(body.response_url, body.text);

    res.status(200).end();
});
```

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Bild laden

```
async function getRandomImageFromUnsplash(responseUrl, query) {
    const result = await axios.get(
        'https://api.unsplash.com/photos/random?query=' + query,
        {
            headers: {
                'Authorization': 'Client-ID '
                    + process.env.UNSPLASH_ACCESS_KEY
            },
        }
    ).catch(console.log);

    //  ...
}
```

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Bild anzeigen

```
async function getRandomImageFromUnsplash(responseUrl, query) {
    // ...

    const randomImage = result.data.urls.regular;
    axios.post(responseUrl, {
        text: query,
        attachments: [{
            text: query,
            image_url: randomImage,
        }],
    }).catch(console.log);
}
```

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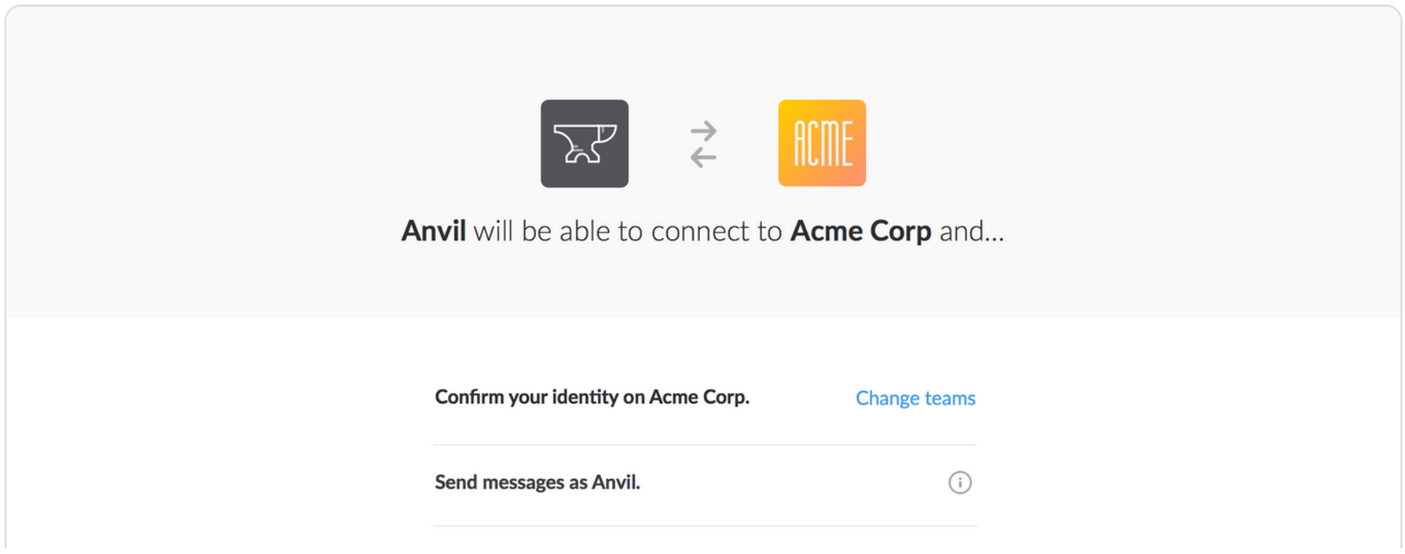
App als SaaS bereistellen

OAuth Permission scopes

OAuth scopes let you specify exactly how your app needs to access a Slack user's account. As an app developer, you specify your desired scopes in the initial OAuth authorization request. When a user is responding to your OAuth request, the requested scopes will be displayed to them when they are asked to approve your request.

Slack's system of OAuth permission scopes governs usage of Slack Apps and their use of the Web API, Events API, RTM API, Slash Commands, and Incoming Webhooks.



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Vielen Dank für eure Aufmerksamkeit

/niklasbuechner/slack-api-presentation

niklas.buechner@pickware.com