# Configuration of ServiceNow and New Relic
## For pulling ServiceNow tickets through NRQL

**What we need in ServiceNow**

1. Admin access to your ServiceNow instance.
2. ServiceNow API user account

**API Creation in ServiceNow to connect with New Relic**

ServiceNow provides REST APIs that you can use to access ticket data. To set up an API integration, follow these general steps:

a. Log in to your ServiceNow instance as an administrator.
b. Go to "System OAuth > Application Registry."
c. Need to create a new OAuth application for our integration. We need to provide a name, client ID, client secret, and specify the appropriate scopes and permissions needed to access ticket data.
d. Client ID and client secret we need to note down as they will be used for the integration with New Relic

**Prepare New Relic**

1. We need admin access to New Relic
2. Integration types

   a. **Webhooks**: We can send Service now data to New Relic via webhooks as New Relic consumes data using webhook

   b. **Custom Scripting**: We can write scripts or use middleware to fetch ServiceNow ticket data using ServiceNow's REST API and then send it to New Relic. This method allows you more control over data transformation and forwarding.

   c. **Third-Party Integrations**: There is one tool Zapier which can help automate the data transfer from ServiceNow to New Relic.
   **Reference:** https://zapier.com/apps/servicenow/integrations/new-relic-insights

**Python code for fetching data from ServiceNow through ServiceNow API and push data to New Relic Insights database with New Relic Insights database :**

```python
import requests

api_key = 'INSIGHTS_KEY'
event_type = 'CUSTOM_EVENT_TYPE'

servicenow_url = 'https://<SERVICE_NOW_INSTANCE>.service-now.com/api/now/table/incident'
servicenow_username = 'USERNAME'
servicenow_password = 'PASSWORD'

response = requests.get(servicenow_url, auth=(servicenow_username, servicenow_password))

if response.status_code == 200:
    incidents = response.json().get('result')


    for incident in incidents:
        payload = {
            'eventType': event_type,
            'incidentNumber': incident['number'],
        }
        headers = {
            'X-Insert-Key': api_key,
            'Content-Type': 'application/json',
        }
        insights_url = 'https://insights-collector.newrelic.com/v1/accounts/ACCOUNT/events'
        insights_response = requests.post(insights_url, headers=headers, json=payload)
        if insights_response.status_code == 200:
            print("Data Pushed")
        else:
            print("Data Pushed")
else:
    print(f"Failed to fetch data from ServiceNow. Status code: {response.status_code}")
```

**JavaScript version which can be reused in Nerdpack source code:**

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

const api_key = 'INSIGHTS_KEY';
const event_type = 'CUSTOM_EVENT_TYPE';

const servicenow_url = 'https://<SERVICE_NOW_INSTANCE>.service-now.com/api/now/table/incident';
const servicenow_username = 'USERNAME';
const servicenow_password = 'PASSWORD';

axios.get(servicenow_url, {
  auth: {
    username: servicenow_username,
    password: servicenow_password,
  }
})
  .then((response) => {
    if (response.status === 200) {
      const incidents = response.data.result;

      for (const incident of incidents) {
        const payload = {
          eventType: event_type,
          incidentNumber: incident.number,
        };
        const headers = {
          'X-Insert-Key': api_key,
          'Content-Type': 'application/json',
        };
        const insights_url = 'https://insights-collector.newrelic.com/v1/accounts/ACCOUNT/events';

        axios.post(insights_url, payload, { headers })
          .then((insights_response) => {
            if (insights_response.status === 200) {
              console.log('Data Pushed');
            } else {
              console.log('Failed to push data to New Relic Insights. Status code:', insights_response.status);
            }
          })
          .catch((error) => {
            console.error('Error pushing data to New Relic Insights:', error);
          });
      }
    } else {
      console.error('Failed to fetch data from ServiceNow. Status code:', response.status);
    }
  })
  .catch((error) => {
    console.error('Error fetching data from ServiceNow:', error);
  });
```