

Pseudocode: Token-based API Authentication

```
function requestAccessToken(client_id, client_secret, grant_type, scope):  
    payload = {  
        "client_id": client_id,  
        "client_secret": client_secret,  
        "grant_type": grant_type,  
        "scope": scope  
    }  
    response = HTTP.post("https://auth.example.com/token", json=payload)  
    if response.status_code != 200:  
        logError(response.body)  
        raise AuthError("Failed token issuance")  
    token_data = parseJSON(response.body)  
    return token_data["access_token"], token_data["expires_in"]
```

Edge cases

- When grant_type="refresh_token", payload needs "refresh_token" field, not client_secret.
- If JSON has BOM or non-UTF8, parseJSON will throw; wrap in try/catch.
- Rate limit: if 429 returned, backoff exponentially: base_delay=1s, max_delay=32s.

Notes:

- Some servers ignore unknown JSON fields; others reject outright.
- Clock skew: tokens issued at T may be invalid until $T + \Delta$; clock sync required.