

# Sprint Breakdown

## Overview

This page outlines the sprint planning and breakdown for delivering features of the AutoSync Cloud Service. It details the sprint goals, tasks, timelines, team allocations, and deliverables for each sprint.

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## 1. Sprint Objectives

### Sprint 1: Initial Setup and Core Features

- **Objective:** Build foundational components of the system, including authentication and basic file synchronization.
- **Duration:** 2 weeks.
- **Key Deliverables:**
  - Authentication service (OAuth2, SSO, and username/password).
  - Basic file upload and download functionality.
  - Dockerized microservices with local deployment.

### Sprint 2: Advanced Features and Testing

- **Objective:** Introduce conflict resolution, file versioning, and automated tests.
- **Duration:** 3 weeks.
- **Key Deliverables:**
  - Sync conflict detection and resolution workflows.
  - Unit and integration test coverage at 80%.
  - Local storage integration with MinIO.

### Sprint 3: Kubernetes Deployment and Scalability

- **Objective:** Deploy services on Kubernetes and enable scaling.
- **Duration:** 2 weeks.
- **Key Deliverables:**
  - Helm charts for all services.
  - Horizontal Pod Autoscaling (HPA).
  - Prometheus and Grafana integration.

### Sprint 4: Finalizing Production Readiness

- **Objective:** Prepare the system for production with backup, monitoring, and high availability.
  - **Duration:** 2 weeks.
  - **Key Deliverables:**
    - Multi-region deployment setup.
    - Disaster recovery workflows.
    - API rate limiting and documentation.
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## 2. Sprint Breakdown

### Sprint 1: Tasks

Task ID	Task Description	Assigned To	Story Points	Status
S1-T1	Set up authentication service	Alice	5	In Progress
S1-T2	Design database schema for file storage	Bob	3	Completed
S1-T3	Develop basic file upload API	Charlie	8	In Progress
S1-T4	Dockerize services for local deployment	Alice, Bob	5	Pending

**Sprint 2: Tasks**

Task ID	Task Description	Assigned To	Story Points	Status
S2-T1	Implement conflict resolution workflows	Charlie	8	Pending
S2-T2	Write unit tests for authentication	Alice	5	In Progress
S2-T3	Integrate MinIO for local file storage	Bob	5	Pending
S2-T4	Develop E2E tests using Cypress	Charlie	8	Pending

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**3. Team Allocation**

Team Member	Role	Expertise	Allocation
Alice	Backend Developer	Authentication, APIs	50% (2 sprints)
Bob	DevOps Engineer	Kubernetes, CI/CD	40% (3 sprints)
Charlie	Full Stack Developer	Frontend and Backend Dev	60% (All sprints)
Eve	QA Engineer	Automated Testing, Cypress	30% (Last 2 sprints)

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## 4. Workflow

### Development Workflow

1. **Task Assignment:** Use Jira for assigning and tracking sprint tasks.
2. **Daily Standups:** 15-minute daily meetings to review progress.
3. **Code Reviews:** All PRs must have at least 2 approvals.

### CI/CD Workflow

- Automated build, test, and deployment pipelines set up with GitHub Actions.
  - Merge to `develop` triggers staging deployment.
  - Merge to `main` triggers production deployment.
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## 5. Sprint Timelines

### Gantt Chart (*Visualizing Sprint Timelines*)