

Scheduling Report

L. O'Toole and H. Simonis

Report Generated on October 7, 2024

1 Introduction

Table 1: Problem

| Name | Label | Timepoints as Date | Nr Products | Nr Process | Nr Disjunctive Resources | Nr Cumulative Resources | Nr Orders | Nr Jobs | Nr Tasks |
|-----------|-------|--------------------------|----------------|---------------|--------------------------------|-------------------------------|--------------|------------|-------------|
| Generated | | true | 10 | 10 | 8 | 1 | 50 | 50 | 200 |

2 Solution

Table 2: Relaxation of Constraints

| Name | Label | Enforce Release Date | Enforce Due Date | Enforce Cumulative | Enforce WiP | Enforce Downtime | Nr Threads | Timeout (s) |
|------|-------|----------------------------|------------------------|-----------------------|----------------|---------------------|---------------|----------------|
| Sol1 | | true | false | true | true | true | 2 | 30 |

Table 3: Solutions (Total 1)

| Name | Solver Status | Objective Type | Objective Value | Bound | Gap | Makespan | Flowtime | Total Lateness | Max Lateness | Nr Late | Total Earliness | Max Earliness | Nr Early | Model Type | Time (s) |
|------|---------------|----------------|-----------------|---------|------|----------|----------|----------------|--------------|---------|-----------------|---------------|----------|------------|----------|
| Sol1 | Solution | Makespan | 2,605 | 1672.00 | 0.36 | 2,605 | 64,780 | 6,383 | 1,584 | 10 | 97,012 | 4,951 | 40 | CPO | 30.15 |

Figure 1: Cost of Intermediate Solutions

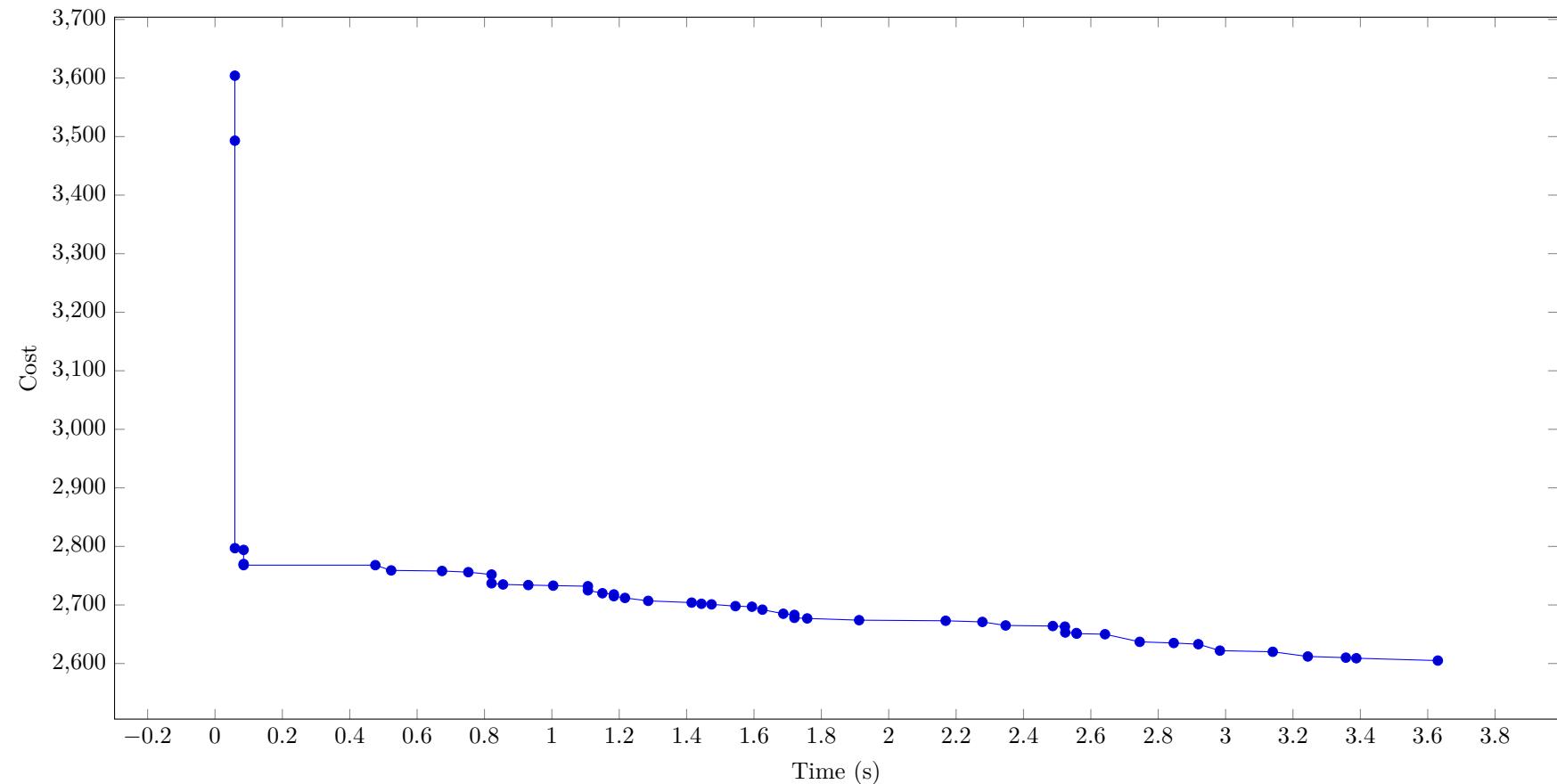


Figure 2: Machine Gantt for Solution Sol1

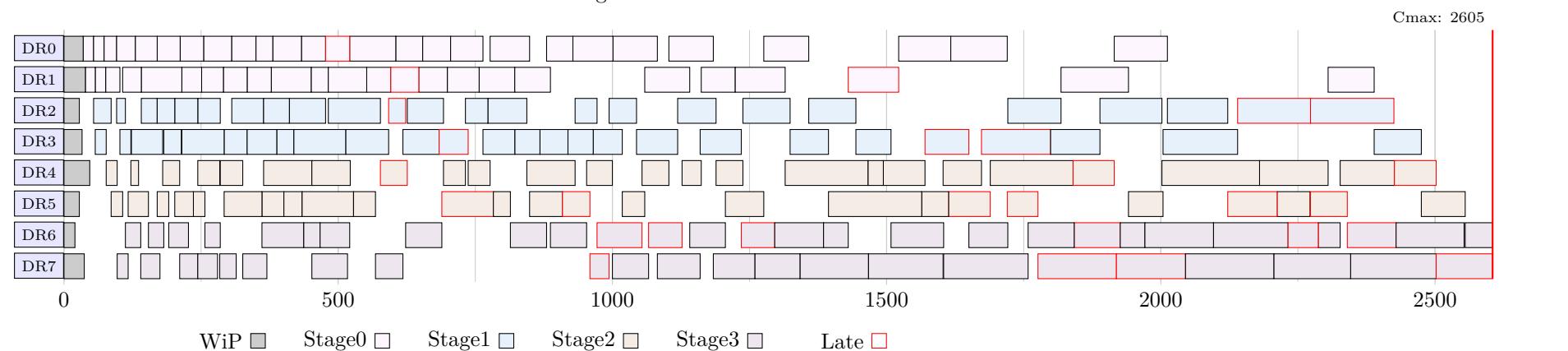
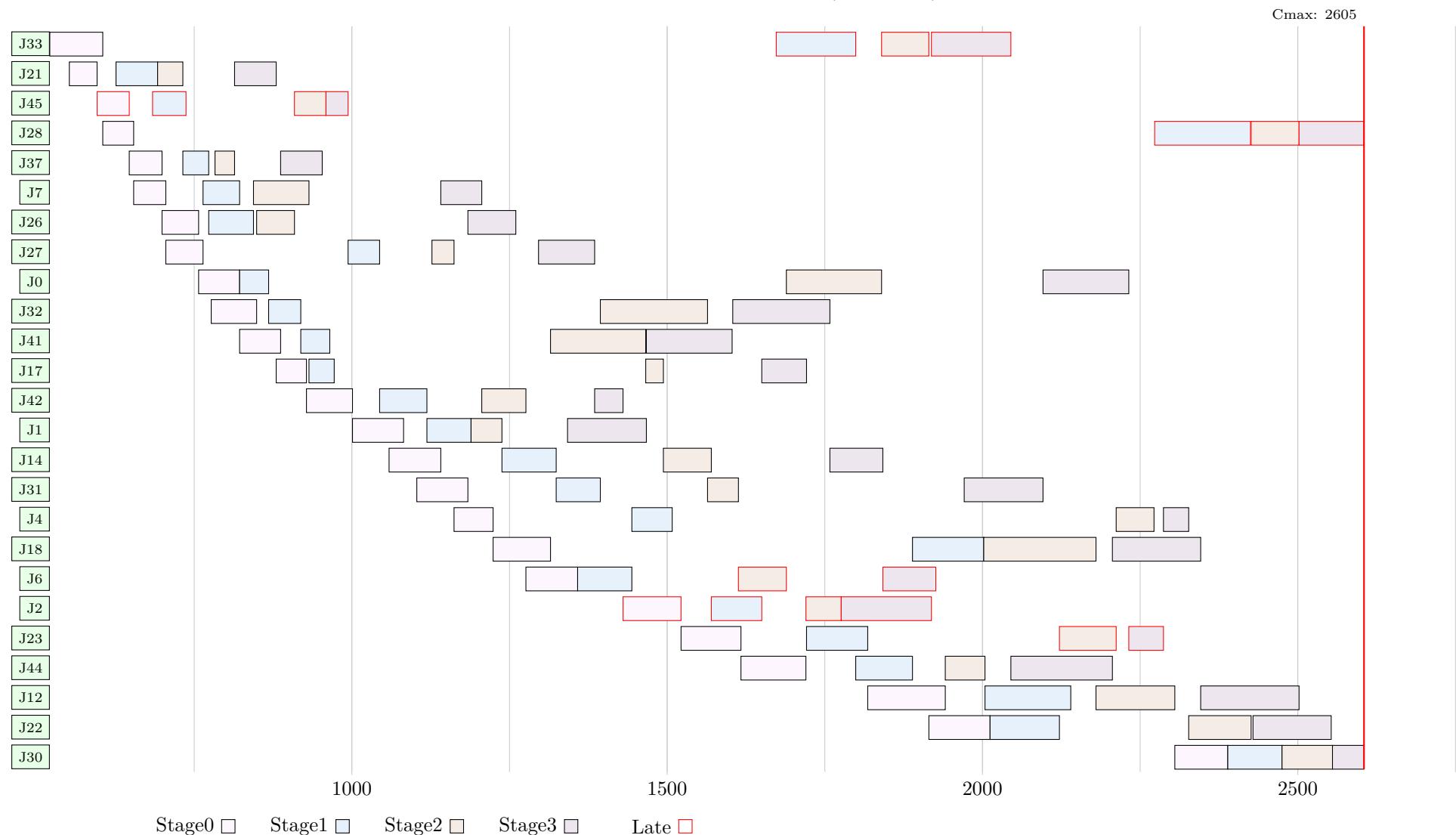


Figure 3: Job Gantt for Solution Sol1 (Part 1 of 2)



Figure 4: Job Gantt for Solution Sol1 (Part 2 of 2)



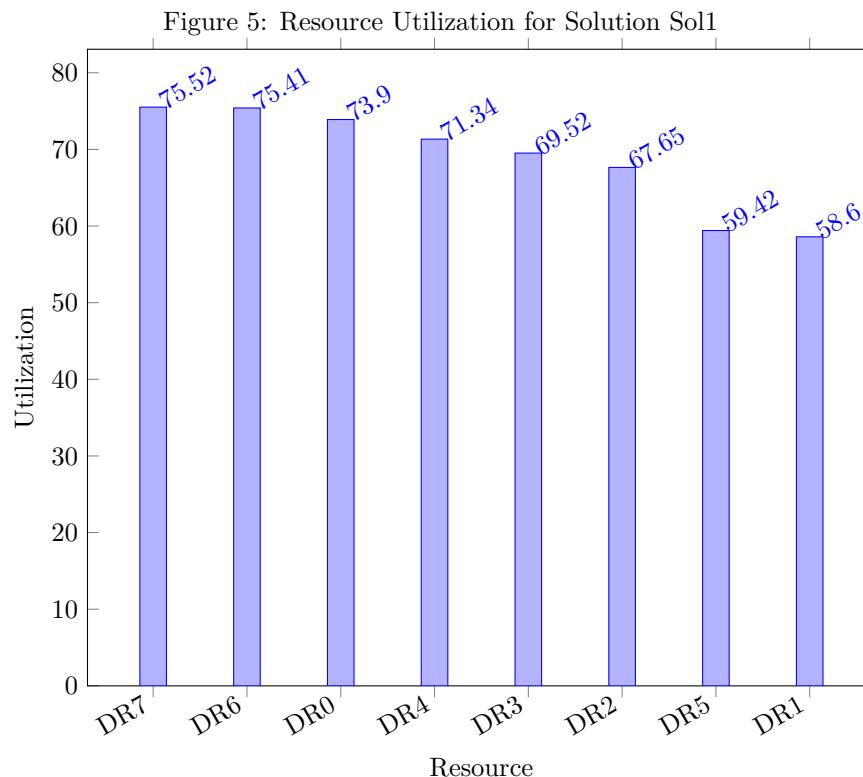


Figure 6: Cumulative Resource Use CR0

