

Contents

[2.3] Deadline-Driven Risk Acceptance	1
-------------------------------------------------	---

[2.3] Deadline-Driven Risk Acceptance

1. Operational Definition: A cognitive state where the perceived pressure of an imminent deadline causes security personnel to consciously bypass or shortcut security protocols to meet the timeline, thereby accepting a higher level of risk.

2. Main Metric & Algorithm:

- **Metric:** Deadline Risk Acceptance Rate (DRAR). Formula: $DRAR = N_{protocol_bypass} / N_{deadline_tasks}$.

- **Pseudocode:**

```
python

def calculate_drar(tasks, start_date, end_date):
    """
    tasks: List of task objects with fields: ['deadline', 'completed_at', 'security_checks_bypassed']
    """
    bypass_count = 0
    total_deadline_tasks = 0

    for task in tasks:
        if task.deadline is not None and task.completed_at between start_date and end_date:
            total_deadline_tasks += 1
            if task.security_checks_bypassed > 0: # Assuming this is a count or a boolean
                bypass_count += 1

    if total_deadline_tasks > 0:
        DRAR = bypass_count / total_deadline_tasks
    else:
        DRAR = 0

    return DRAR
```

- **Alert Threshold:** $DRAR > 0.1$ (i.e., more than 10% of tasks near a deadline involve security bypasses).

3. Digital Data Sources (Algorithm Input):

- **Project Management API (Jira, Asana):** issues or tasks endpoint. Fields: due_date, updated_at, status, labels (e.g., #security_waiver).
- **CI/CD Pipeline Logs (Jenkins, GitLab):** pipeline_runs index. Fields: duration, end_time, success, variables (e.g., SKIP_TESTS=true).
- **Version Control System (Git):** Commit messages containing keywords like “hotfix”, “bypass”, “skip”.

4. Human-to-Human Audit Protocol:

Conduct retrospective interviews after a major release or project deadline: “Were you aware of the security requirements for task X? What trade-offs did

you feel you had to make to meet the deadline? Did you formally document the risk acceptance?” Cross-reference answers with change logs.

5. Recommended Mitigation Actions:

- **Technical/Digital Mitigation:** Implement automated guardrails in CI/CD pipelines that prevent bypassing critical security steps (e.g., SAST, secrets detection) without mandatory, logged approval from a separate security lead.
- **Human/Organizational Mitigation:** Incorporate “schedule pressure” as a formal risk factor in project planning and threat modeling sessions. Train managers to recognize and mitigate this pressure.
- **Process Mitigation:** Institute a formal, lightweight risk acceptance procedure that must be completed and logged before any security control can be bypassed, creating accountability and a paper trail.