Course Directive
IN719 Systems Administration
Semester One, 2020

Description

In his opinion document for the 1964 *Jacobells v. Ohio* case in the United States Supreme Court, Justice Potter Stewart wrote:

> I shall not today attempt further to define the kinds of material I understand to be embraced within that shorthand description; and perhaps I could never succeed in intelligibly doing so. But I know it when I see it, ...

It turns out that Stewart was referring to hard-core pornography, but he could have easily been talking about systems administration. It's difficult to define precisely what systems administration is, but it is an important area of work in any organisation that relies on functional ICT infrastructure. In this paper we attempt to identify a solid core of modern systems administration practice and model it.

Course Information

- 15 Credits
- Class session Mondays & Thursdays, 8:00 AM
- D202/207

Lecturers

Tom Clark
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Faisal Hasan
Email: faisal.hasan@op.ac.nz

Course Dates

Term 1 (8 weeks)	17 February - 9 April
Term 2 (8 weeks)	28 April - 19 June

Learning Outcomes

On completion of this paper you will be able to:

1. work as a member of a systems administration team following industry standard work practices;
2. use a centralised configuration management system;
3. monitor and track system states of multiple servers using a monitoring tool;
4. perform backup and recovery tasks.

Resources

- Course notes, lecture slides, and lab documents are availble in a GitHub repository published at `https://github.com/tclark/op-papers/sysadmin`.
- We will access our systems remotely using ssh.
- We will use a ticketing system for work ticketing. We will set up your account during the second week.
- We will use MediaWiki for team and course documentation. We will set up your account during the second week.
- You will need a (free) GitHub account to manage your files.
- A Slack workspace has been created for this class at `https://in719workspace.slack.com`. Invitations to join will be sent to your student email addresses.

Course Content and Schedule

This schedule is subject to change based on the needs of the class. A good sysadmin is flexible and responds to changes gracefully.

Week	Week Start	Topic	Assessment
1	17 Feb	Introduction, Time Management	
2	24 Feb	Ticketing, Documentation	
3	2 Mar	Configuration Management	
4	9 Mar	Configuration Management	
5	16 Mar	Configuration Management	
6	23 Mar	System Monitoring.	
7	30 Mar	System Monitoring	
8	6 Apr	System Monitoring	Performance Review
H1	13 Apr	Holiday	
H2	20 Apr	Holiday	
9	28 Apr	System Monitoring	
10	4 May	Backup and Recovery	
11	11 May	Backup and Recovery	
12	18 May	Work Time	
13	25 May	Team Operations Assessment	Ops Assessment
14	1 Jun	Team Operations Assessment	Ops Assessment
15	8 Jun	Postmortem	
16	15 Jun	Final Assessment	Final

Assessment

There are three assessments in this paper, weighted as follows:

Assessment	Due Date	Weighting
Individual Performance Review	Week 8	20%
Team Operational Assessment	Week 13 and 14	60%
Final Assessment	Week 16	20%.

Criteria for Passing

You must earn an overall average mark of 50% or better to pass this paper. There must be a genuine attempt at all assessments. There are no resits.

Course Requirements and Expectations

Attendance

- Students are expected to attend all classes, both lectures and labs.

- If you miss a class you should get notes from another student.
- If you cannot attend for two or more consecutive sessions, contact the lecturer.
- You must turn up ready for assessments on the due date and at the correct time. No extra time will be scheduled. If you do not turn up, you have failed the assessment.

Proprietary software

Most of this class can be completed using free/open source software (FOSS) and in particular all of the day to day work can be performed using FOSS. However, since the virtualisation platform used to host student servers is proprietary, it is not possible to complete this paper without using proprietary software, at least indirectly. The standard Slack client, which you may choos to use, is proprietary, but it is not required for this paper. In addition, desktop systems supplied in labs use proprietary operation systems and applications.

Third party online tools used in this paper have not been screened for their possible use of proprietary software.

Communication

Important announcements and discussions about the course, assessments, and scheduling may take place during class sessions. It is your responsibility to be informed about them. If you cannot attend a class session, be sure to check with another student.

The class Slack workspace is an official communication channel. You must join the channel and monitor it regularly. It will frequently be the main source of important updates and announcements and is also a place to discuss the class and get help.

Your student email is another official communication channel. It is your responsibility to regularly check your student email for important course related material, including changes to class scheduling or assessment details. Not checking will not be accepted as an excuse.

You can manage your email at the Student Hub and download the instructions for forwarding your email at `http://www.op.ac.nz/students/student-hub/`

Polytechnic Closure

In the event that the Polytechnic is closed or has a delayed opening because of snow or bad weather you should not attempt to attend class if it is unsafe to do so. It is possible that your instructor will not be able to attend either, so classes may not physically meet. However, this does not become a holiday. Rather, material will be available on GutHub covering the classes affected by the closure. You are responsible for any material presented in this manner. Information about closure will be posted on the Otago Polytechnic Facebook page `https://www.facebook.com/OtagoPoly`.

Group Work and Originality

Students in the Bachelor of Information Technology degree are expected to hand in original work. Students are encouraged to discuss assignments with their fellow students. However, all assignments are to be completed as individual works unless group work is explicitly involved. Failure to submit your own unique work will be treated as plagiarism.

Referencing

Appropriate referencing is required for all work. Referencing standards will be specified by your instructor.

Plagiarism

Plagiarism is submitting someone else's work as your own. Plagiarism offences are taken seriously and an assessment that has been plagiarised may be awarded a zero mark. A definition of plagiarism is in the Student Handbook, available online or at the school office.

Submission Requirements

All assignments are to be submitted by the time, date, and method given when the assignment is issued. Failure to meet all requirements may result in a penalty of up to 10% per day (including weekends).

Extensions

Extensions are only available for unusual circumstances. These must be applied for, and approved, prior to the submission deadline.

Impairment

In case of sickness contact your lecturer or year co-ordinator as soon as possible, preferably before the test or assignment is due. The policy regarding the granting of a mark that considers impaired performance requires a medical certificate and a medical practitioners signature on a form. You may should refer to the guide on impaired performance on the student handbook.

Appeals

If you are concerned about any aspect of your assessment, please approach the lecturer in the first instance. We support an open door policy and aim to resolve issues promptly. Further support is available from the Programme Manager and Head of School. Otago Polytechnic has a formal process for academic appeals if necessary.

Other Documents

Regulatory documents relating this course can be found on the Polytechnic website.

Special Resources and Requirements

If you have any special needs, whether they relate to the course material, the exercises, the assessment, or anything in the course - then *please* let your instructor know as soon as possible.