# Logging

# What You Will Learn

- Why log
- Syslog standard
- Generating log messages
- Custom logging functions

# Logging

- Logs are the who, what, when, where, and why.
- Output may scroll off the screen.
- Script may run unattended (via cron, etc.)

# Syslog

- The syslog standard uses facilities and severities to categorize messages.
  - Facilities: kern, user, mail, daemon, auth, local0, local7
  - Severities: emerg, alert, crit, err, warning, notice, info, debug
- Log file locations are configurable:
  - /var/log/messages
  - /var/log/syslog

# Logging with logger

- The logger utility
- By default creates user.notice messages.

```
logger "Message"
logger -p local0.info "Message"
logger -t myscript -p local0.info "Message"
logger -i -t myscript "Message"
```

```
$ logger "Message"
Aug  2 01:22:34 linuxsvr jason: Message


$ logger -p local0.info "Message"
Aug  2 01:22:41 linuxsvr jason: Message


$ logger -s -p local0.info "Message"
jason: Message    # <-- Displayed on screen.
```

```
$ logger -t myscript -p local0.info
"Message"
Aug  2 01:22:44 linuxsvr myscript: Message

$ logger -i -t myscript "Message"
Aug  2 01:22:53 linuxsvr myscript[12986]:
Message
```

```
logit () {
  local LOG_LEVEL=$1
  shift
  MSG=$@
  TIMESTAMP=$(date +"%Y-%m-%d %T")
  if [ $LOG_LEVEL = 'ERROR' ] || $VERBOSE
  then
    echo "${TIMESTAMP} ${HOST}
${PROGRAM_NAME}[${PID}]: ${LOG_LEVEL} ${MSG}"
  fi
}
```

```
logit INFO "Processing data."

fetch-data $HOST || logit ERROR "Could not
fetch data from $HOST"
```

# Summary

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