



WHAT'S NEW

In Red Hat Enterprise Linux 8?

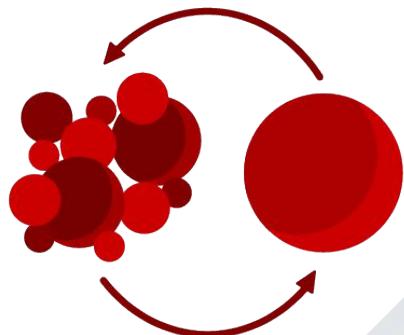
Siddharth Nagar
Manager, RHEL Product Management

5-8-2019

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Senior Director, Linux Engineering

Access to emerging Open Source technology

Red Hat turns projects into **enterprise products**



- Invest in the future of enterprise open source technology by paying Red Hat to **represent your needs & contribute code** to influential communities.
- Take advantage of **hardened, tested, certified enterprise-ready solutions** identified & evolved by Red Hat.

A Familiar Experience

What's the same

- Enterprise OS on all footprints
- Development Process (Fedora)
- 10-year lifecycle for most content
- Offerings and Add-Ons
- Managed by Satellite

What's different

- Simpler delivery structure
- Predictable release cadence
- More life cycle options
- More frequent application updates

Quick Facts

Name	Details
Kernel version	4.18x
System compiler	gcc 8.2, llvm 6.0
Hardware architecture	Intel/AMD 64-bit, IBM Power LE, IBM z Systems, ARM 64-bit
Default file system	XFS
Package management	Yum4
Init system	Systemd 239

Audience Poll 1:

Raise your hand if you like managing Red Hat's channel (repo) system!

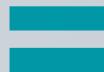


EASY ADOPTION AND UPGRADES

Simplified Delivery

Reducing complexity is a key benefit to using Red Hat Enterprise Linux 8 and that starts with being able to consume it easily

RED HAT®
ENTERPRISE
LINUX®



BASE OS

1. Provides the foundation of our operating system
2. Completely self contained operating system
3. Guaranteed 10 years of enterprise support



APPLICATION STREAMS

1. Provides flexible lifecycle options
2. Fully enterprise supported
3. Common Red Hat Enterprise Linux languages supported at launch
4. Defaults to 10 years of enterprise support

Note:

RHEL subscriptions also provide access to additional content for Developer use. More details available at the developer.redhat.com

Upgrades

The upgrade framework in 8 has been drastically improved to make upgrading from previous releases easier than ever before



PRE-UPGRADE

Doing a risk assessment before making any changes is critical to understanding what is about to happen



UPGRADE

Fully pluggable and fully supported upgrade framework makes moving to new major releases of RHEL easy



ROLLBACK

If anything goes wrong, rollback to the previous snapshot - this is not a downgrade but instead a full byte-level rollback

Demo: Easy Adoption and Upgrades

```
mmcgrath@desktop:~  
File Edit View Search Terminal Help  
/dev/sdc2 100M 36M 64M 36% /boot/efi  
/dev/mapper/VolGroup00-home 100G 69G 32G 69% /home  
/dev/mapper/VolGroup00-atomic_images 100G 98G 2.1G 98% /home/mmcgrath/atomic_images  
tmpfs 3.2G 12K 3.2G 1% /run/user/42  
tmpfs 3.2G 72K 3.2G 1% /run/user/1000  
[mmcgrath@desktop ~]$ ulimit -a  
core file size (blocks, -c) unlimited  
data seg size (kbytes, -d) unlimited  
scheduling priority (-e) 0  
file size (blocks, -f) unlimited  
pending signals (-i) 127455  
max locked memory (kbytes, -l) 16384  
max memory size (kbytes, -m) unlimited  
open files (-n) 1024  
pipe size (512 bytes, -p) 8  
POSIX message queues (bytes, -q) 819200  
real-time priority (-r) 0  
stack size (kbytes, -s) 8192  
cpu time (seconds, -t) unlimited  
max user processes (-u) 127455  
virtual memory (kbytes, -v) unlimited  
file locks (-x) unlimited  
[mmcgrath@desktop ~]$
```

MODERN DEVELOPMENT PLATFORM

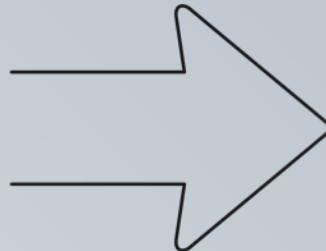
Audience Poll 2:

Raise your hand if you are currently running a container of some kind in production



Containers

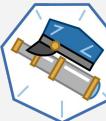
Red Hat Enterprise Linux 8 brings container modernization



podman



buildah



skopeo



Containers

Providing stability, flexibility and performance with containers and images



podman

Build OCI/docker Images

Powerful CLI tool that replaces the need for docker CLI

```
alias docker=podman
```

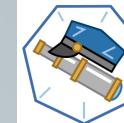


buildah

run, manage, debug containers

Build OCI and Docker compatible images using standard Dockerfile format

Mount a containers root filesystem and manipulation



skopeo

Inspect, copy, & sign Images

Provides fidelity and chain of trust control to container images - just as important as RPM signing

Easily copy and move images across registries

SOFTWARE ECOSYSTEM



redhat®

COMBINED



Couchbase

SALTSTACK®

BLACKDUCK
BY synopsys®

Microsoft

bmc

splunk®



IBM

NGINX

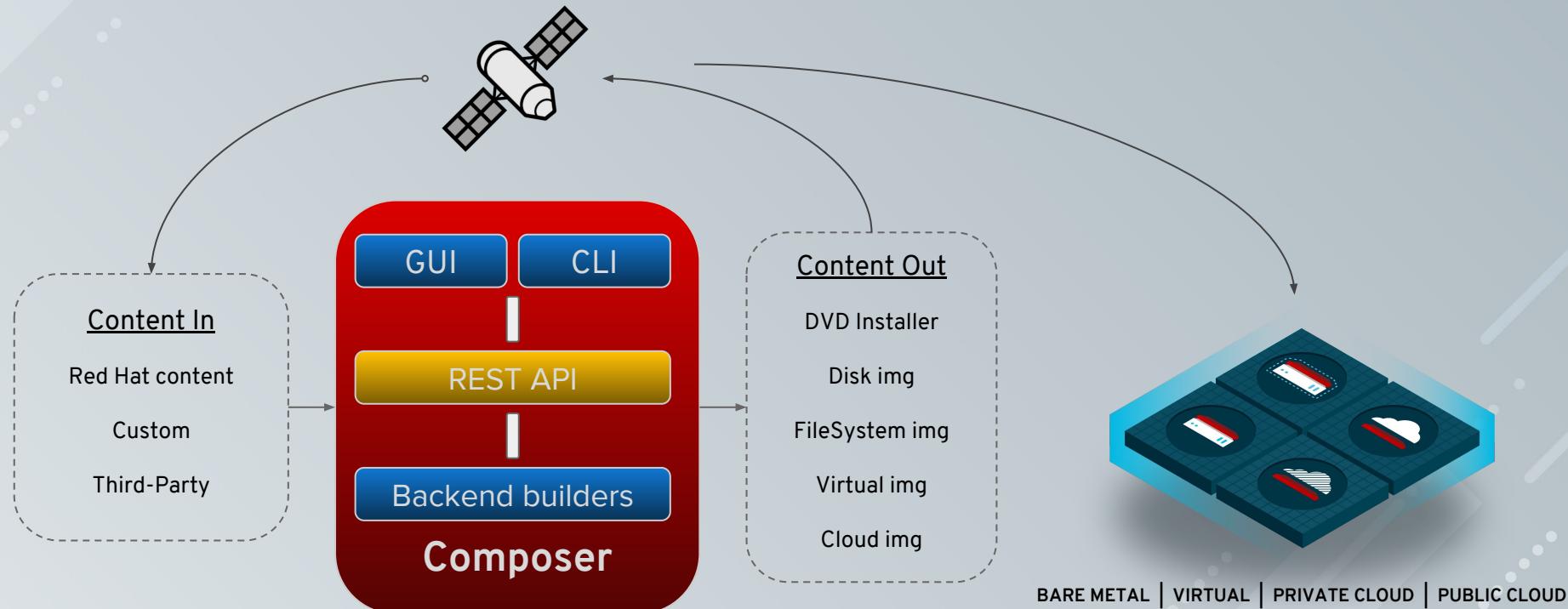
SAP

.net

RED HAT®
CODEREADY

IMAGE BUILDER

Tooling to enable automated creation of customized RHEL OS images



Demo: Modern Development Platform

```
mmcgrath@desktop:~  
File Edit View Search Terminal Help  
/dev/sdc2 100M 36M 64M 36% /boot/efi  
/dev/mapper/VolGroup00-home 100G 69G 32G 69% /home  
/dev/mapper/VolGroup00-atomic_images 100G 98G 2.1G 98% /home/mmcgrath/atomic_images  
tmpfs 3.2G 12K 3.2G 1% /run/user/42  
tmpfs 3.2G 72K 3.2G 1% /run/user/1000  
[mmcgrath@desktop ~]$ ulimit -a  
core file size (blocks, -c) unlimited  
data seg size (kbytes, -d) unlimited  
scheduling priority (-e) 0  
file size (blocks, -f) unlimited  
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cpu time (seconds, -t) unlimited  
max user processes (-u) 127455  
virtual memory (kbytes, -v) unlimited  
file locks (-x) unlimited  
[mmcgrath@desktop ~]$
```

SIMPLE SYSTEM MANAGEMENT

Built-in Defaults

Starting with 8, Red Hat is fully supporting a library of configurations to match complex enterprise grade workloads



TUNED PROFILES

Supported tunables for MS SQL, SAP HANA, Oracle Database, NFV hosts and more!



SYSTEM ROLES

Supported Ansible roles and modules providing a common configuration interface

Starting with networking, SELinux, time sync, and kdump



CRYPTO POLICIES

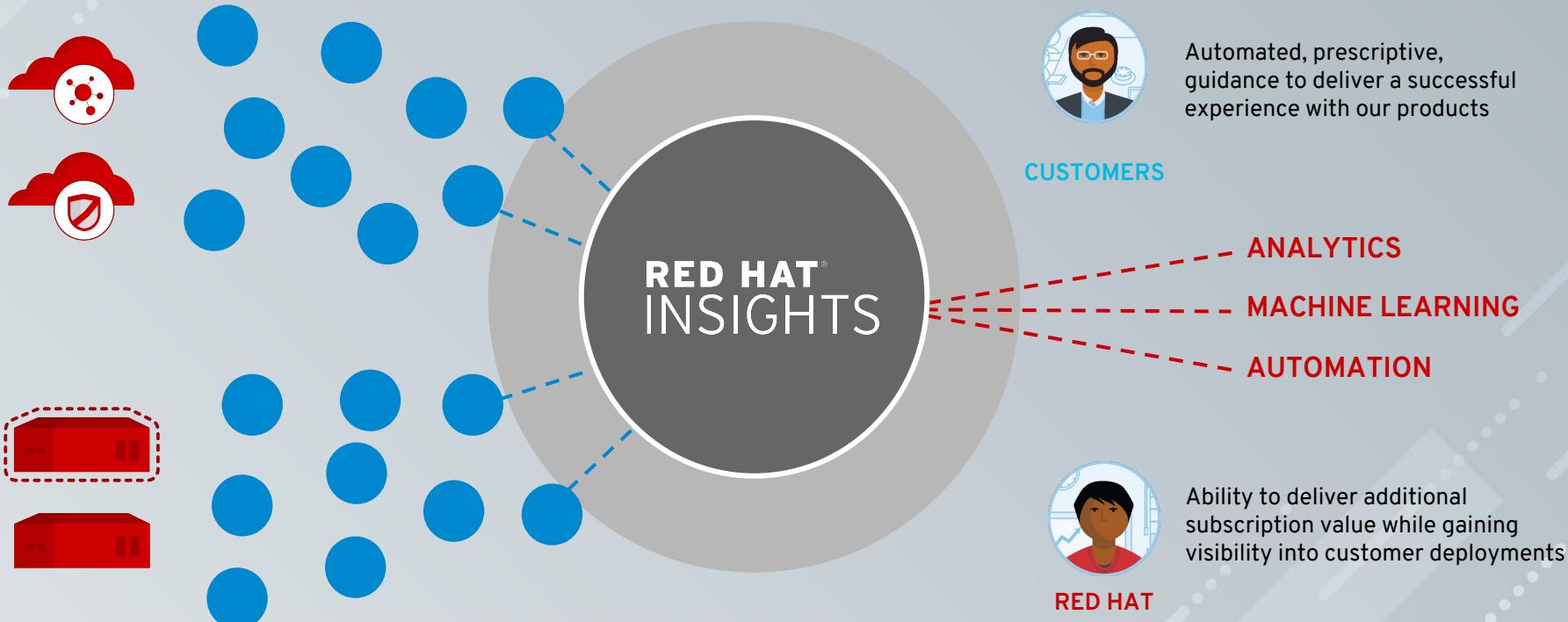
Supported crypto policies to match your encryption needs

Current policies include Legacy, Default (PCI-DSS), FIPS, and Future

RED HAT INSIGHTS

Automated, experience driven, proactive guidance for customer success with our products

NOW INCLUDED with RHEL!



A SECURE PLATFORM

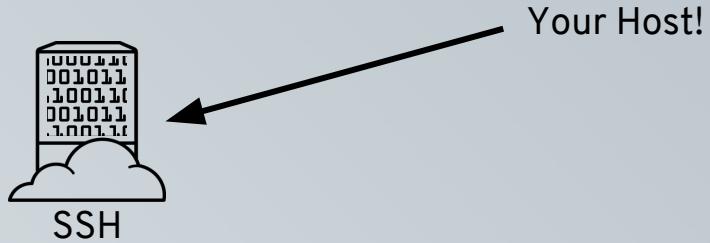
Audience Poll 3:

Who here has ever found a system in some unknown state and wondered what happened to it?



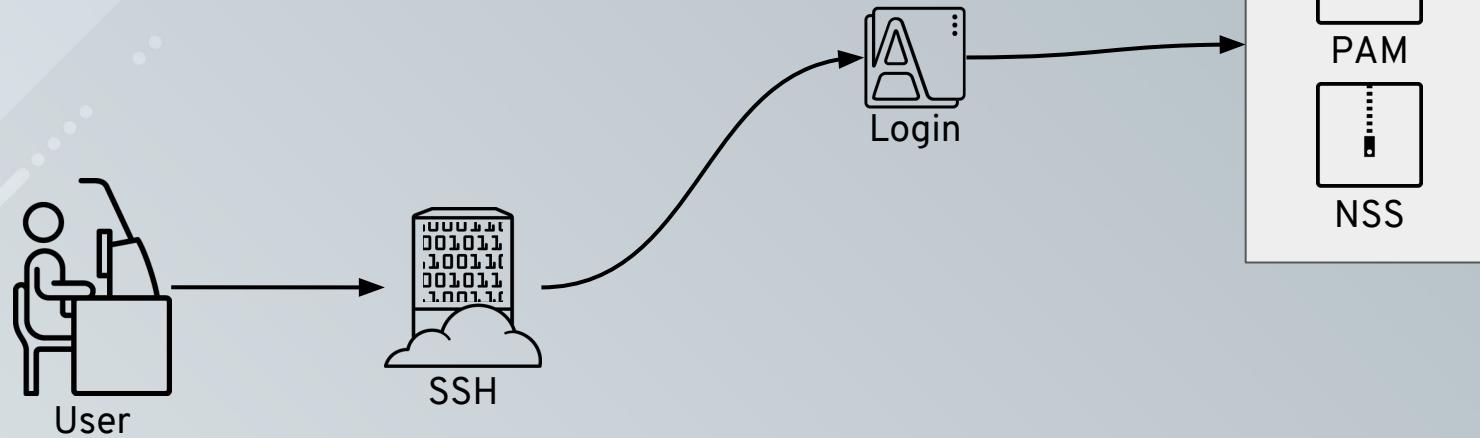
SESSION RECORDING

Now you can record and playback user terminal sessions. This is an example of a production host which may require additional scrutiny



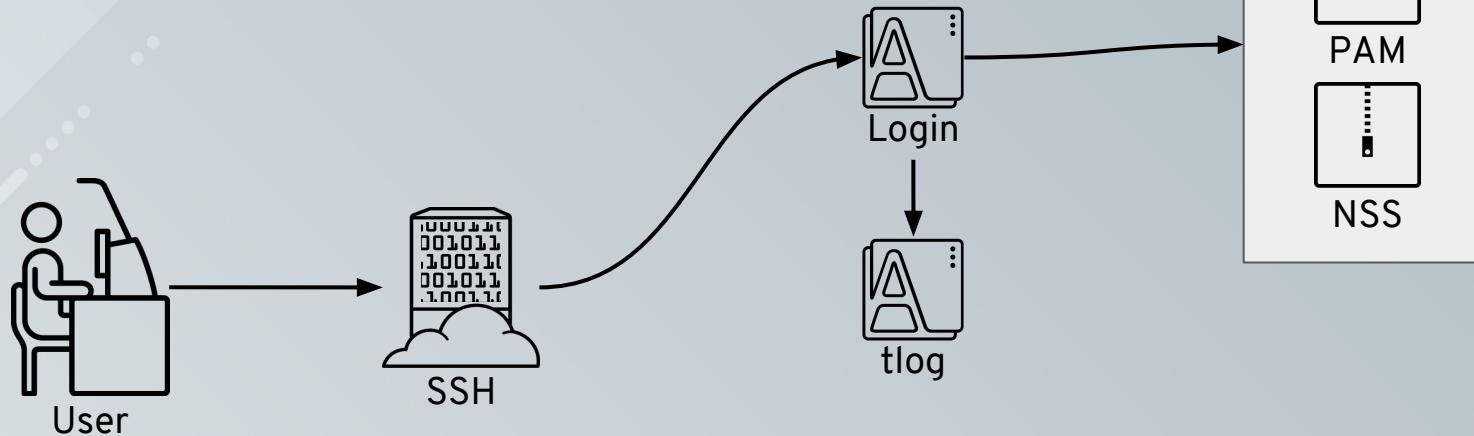
SESSION RECORDING

A user can log into the system as normal via PAM



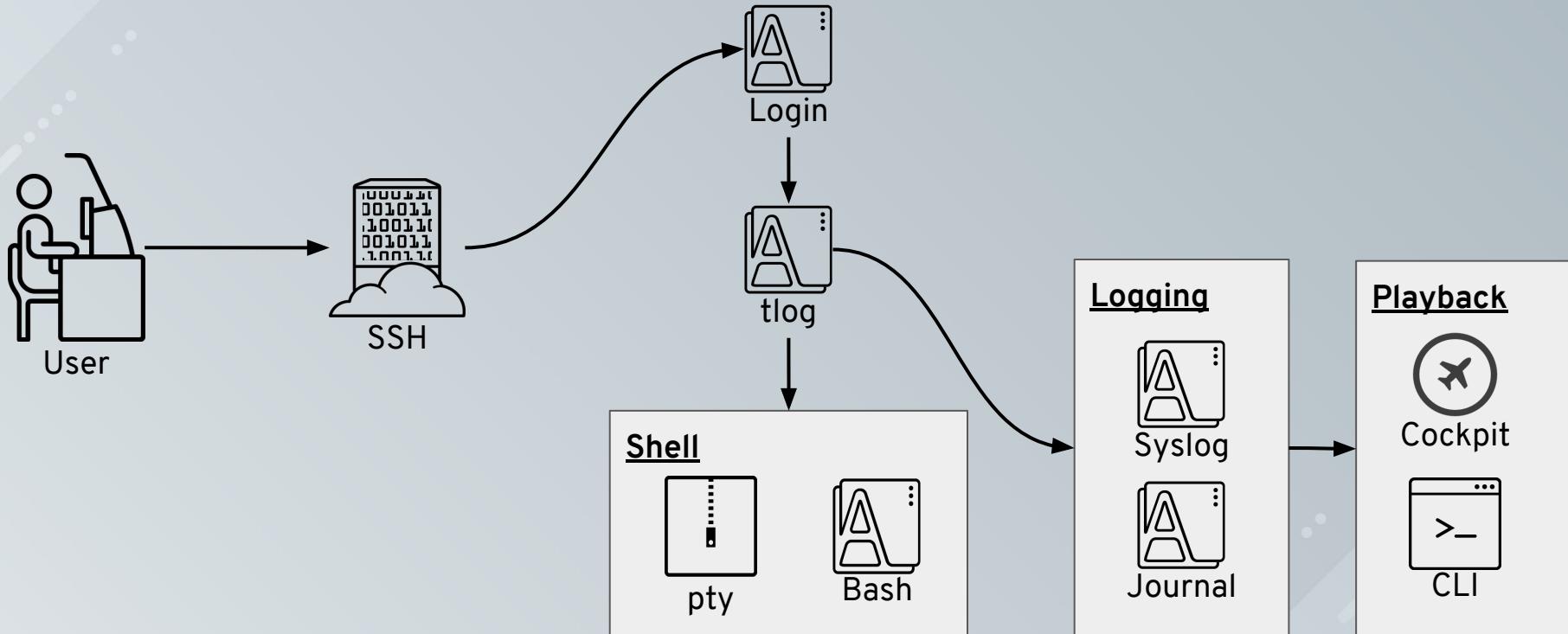
SESSION RECORDING

After logging in, NSS tells login that tlog is the shell of choice
- but it's really more of a wrapper



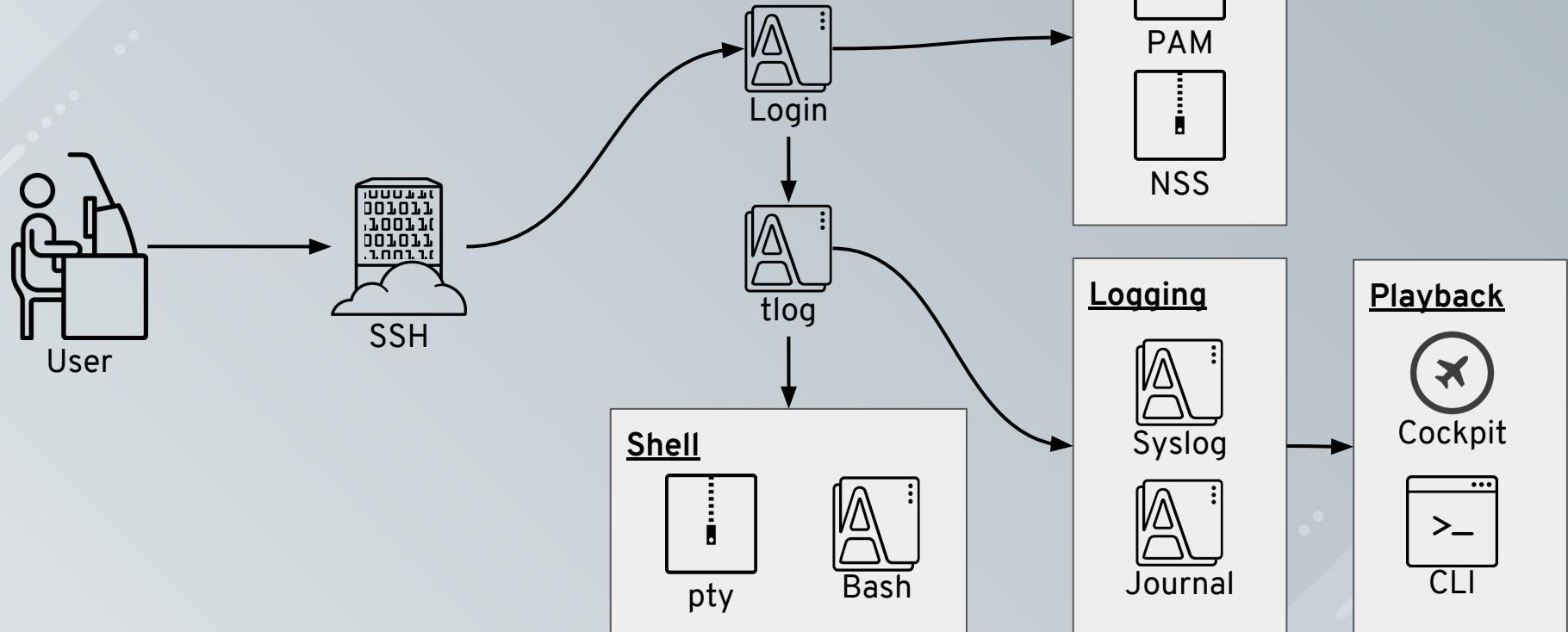
SESSION RECORDING

Once the login is complete, tlog sits between ssh and the users actual shell to track everything that goes on - it can even do remote logging so not a keystroke is missed



SESSION RECORDING

Now you can record and playback user terminal sessions





THANK YOU



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