DebConf '26
SANTA FE | ARGENTINA

WST Workstation Automation

DevOps Milestones in Branch Desktop Infrastructure

Ansible-driven workstation lifecycle management across 285+ branch locations

`2022-10-22` -> `2026-07-07`

Platform Overview

Metric	Value
Total Releases (since `2022-10-22`)	`21`
Playbooks	`wst-*` series `50+` modules
Supported Browsers	*Firefox* `v68` / *Firefox* `v120` / *Chrome*
Base OS	*Ubuntu* Desktop (kernel `v5.15+`)

FreeIPA & Authentication Integration I

Enabling secure, network-bound workstation identity across all branches:

- `wst-ipa` *playbook* (`v1.7.0`): Created join/unjoin lifecycle for *FreeIPA* domain membership
- `wst-nip` *playbook*: Automated network interface configuration alongside *IPA* enrollment
- `apt_pin` *role* (`v1.7.4`): Pinned critical packages to prevent version drift in *IPA* stack

FreeIPA & Authentication Integration II

Enabling secure, network-bound workstation identity across all branches:

- `wst-ipa-uninstall` (`v1.7.5` → `1.7.7`): Full unenrollment with *DNS* `A` record cleanup automation
- `wst-sssd-service`: Ensures `After=network-online.target` ordering + automatic restart on failure
- `fix_owner_fix` (`v1.7.16`): Skip backup when user folder in `srep` is empty prevents cascading failures

Browser Strategy: *Firefox* + *Chrome*

Supporting parallel browser ecosystems for diverse branch requirements:

- *Firefox* role integration: (`v1.7.3`): Policies, preferences, and extension management
- *Firefox* `v68` → `v120` migration: Dual-version support with isolated profiles per user
- *Chrome* rollout: Parallel deployment alongside *Firefox* for branches requiring Chromium-based features
- `wst-ffox-policies` + `wst-ffox-prefs`: Centralized browser policy enforcement via *ADMX* templates
- *Proxy* configuration (`wst-ffox-check-proxy`): Dynamic proxy detection and failover

Deployment Reliability & Resilience

Building fault-tolerant workstation deployment chain:

- **wst-wol-all**: Wake-On-Lan batch deployment delegated to spve of each group no manual intervention
- **WOL + Wait-for integration** (v1.7.19): Native sleep/reboot tasks in wst-update with configurable timeouts
- **Kernel upgrade** (v1.8.0): Base image moved to kernel v5.15 for modern hardware support
- **wst-reboot**: Smart reboot playbook with optional no-wait mode - supports unattended deployments
- **sftp-mount corrections** (v1.7.11): Reliable fileserver for branch shared resources

Security & Identity Health Monitoring

Continuous authentication verification and credential lifecycle management:

- **wst-ipa-health-check** (v1.7.18): Full health probe chain WoL → SSH wait → ipa-hlt-chk in lightdm greeter-script-setup
- **wst-krb-chk** (v1.4.6): Kerberos keytab validation to prevent auth failures
- **wst-adminws groups/password management**: Centralized admin workspace provisioning with mac address binding
- **apparmor + dconf roles**: Mandatory access control and desktop configuration hardening
- **loginhelper role** (v1.5.0): Secure login notification with pre/post session hooks
- **sudoers role**: Centralized privilege escalation policy enforcement

SREP Integration rollback safety and auditability & Control

- **wst-full playbook**: Complete workstation image rebuild all roles in serial batch strategy
- **etc-keeper backport** (`v1.6.0`): `/etc` configuration versioning via etckeeper + check-only mode
- **srep backup awareness**: fix_owner skips empty `srep` folders, preventing false-positive rollback triggers
- **Serial batch deployment**: `wst-v1.5.0` introduced `serial: 1` for controlled rollout across groups
- **v1.8.0 kernel base** + role bumps (admin, apparmor, cups_ng, etc.): Unified update chain

Timeline at a Glance

Period	Version Range	Key Achievements
Oct 2022	v1.7.0–v1.6.0	wst-ipa + wst-nip playbooks created, etc-keeper backport
Early 2023	v1.7.4–v1.7.11	SSSD service management, IPA uninstall, sftp-mount, apt_pin
Late 2023	v1.7.14–v1.8.0	Firefox/Chrome parallel, kernel v5.15, health checks, WoL+Wait
2024+	v1.7.18–v1.7.19	WOL+WFL native in wst-update, reliability hardening

Core Playbook Modules (wst-* series)

Playbook	Purpose
`wst-update`	Main workstation role deployment chain
`wst-full`	Complete image rebuild all roles serial batch
`wst-ipa`	FreeIPA domain join/unjoin lifecycle
`wst-nip`	Network interface configuration
`wst-adminws`	Admin workspace + desktop provisioning
`wst-desktop-launchers`	Desktop shortcut management

Core Playbook Modules (wst-* series)

Playbook	Purpose
`wst-sssd-service`	SSSD service state & networking ordering
`wst-sftp-mount`	Secure fileserver share integration
`wst-wol-all`	Wake-On-Lan batch deployment
`wst-ipa-health-check`	Authentication health probe chain
`wst-kernel-upg`	Kernel version updates
`wst-krb-chk`	Kerberos keytab validation

References & Resources

- Site: https://filiales-gnu-linux.g.coop.ar/
- Code: https://gitlab.com/gcoop-libre | https://github.com/gcoop-libre
- Story: https://www.gcoop.coop/experiencia-exitosa/infraestructura-como-codigo-en-el-banco-credicoop

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- Video: https://debconf26.debconf.org/talks/63-como-aprovisionar-instalar-configurar-y-mantener-actualizados-miles-de-sistemas-debian-y-basados-en-debian/
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