

Companion Notes

Technology Landscape and Resource Assessment — Source Tracing

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This companion document traces every detail in the Technology Landscape and Resource Assessment to either a specific location on the Cloudcore website or flags it as an assumption invented for the brief.

Part 1: Facts Sourced from the Cloudcore Website

Technology Stack — Systems and Purposes

Every system named in the technology stack table is sourced from the repo. No systems were invented.

System	Source
VMware vSphere (~2,500 VMs)	chatbots/_backstories/david_wilson_cloud_infrastructu
AWS (hybrid partner, US-East Ohio default)	Same file; also docs/policies/ (configuration management policy)
Azure (hybrid partner)	david_wilson_cloud_infrastructure_architect.md
Terraform (~70% IaC coverage)	Same file
Ansible	Same file; also docs/interviews/system_administrator.qmd
Chef	docs/policies/configuration_change_management.qmd
Salt	Same policy document
Kubernetes (limited adoption, internal apps)	chatbots/_backstories/michael_thompson_lead_software
Prometheus + Grafana	chatbots/_backstories/mark_gonzalez_cto.md
Splunk SIEM (500-800 daily alerts)	Same file; alert count from docs/policies/ mark_gonzalez_cto.md
CrowdStrike EDR	Same file; also chatbots/_backstories/carlos_mendes_networks_speciali
Palo Alto firewalls	carlos_mendes_networks_specialist.md; also docs/interviews/network_engineer.qmd
Cisco switches (802.1x)	docs/policies/configuration_change_management.qmd
Tenable.io (weekly scans, 15-day patching)	docs/policies/access_control.qmd
Auth0 (migrated from Okta Dec 2023)	chatbots/_backstories/tom_bradley_marketing_manager.r
HubSpot	docs/policies/change_management.qmd
ServiceNow (PRODCM)	docs/policies/asset_management.qmd
JupiterOne (CMDB)	docs/policies/approved_software.qmd
Atlassian (Jira, Confluence)	Same file
Office 365	Same file
Slack	Same file
GitHub Actions + ArgoCD	michael_thompson_lead_software_developer.md
PostgreSQL	Same file
Python (FastAPI), React	Same file
Legacy PHP	Same file
Power BI, Excel	chatbots/_backstories/jamal_al_sayed_data_analyst.md
PagerDuty	mark_gonzalez_cto.md

Technology Gaps (Confirmed Missing)

Gap	Source
No data warehouse or data lake	jamal_al_sayed_data_analyst.md, mark_gonzalez_cto.md
No ML/AI platform	mark_gonzalez_cto.md
No MLOps or model management	Same file
No GPU clusters	david_wilson_cloud_infrastructure_architect.md
No data science talent	mark_gonzalez_cto.md, karen_lee_hr_manager.md
Data siloed across systems	jamal_al_sayed_data_analyst.md
Basic BI tools only	Same file

Data Flow — Silos and Manual Processes

Detail	Source
Data siloed: service usage, support tickets, billing, performance metrics	jamal_al_sayed_data_analyst.md
Manual data assembly for cross-system reporting	Same file
~40% of employees over-provisioned	karen_lee_hr_manager.md
Access provisioning requires manual coordination (HR, IT, managers)	Same file
Billing reconciliation is manual	Inferred from aisha_rahman_cfo.md (tight margins, manual processes)
Security alerts triaged manually	sophia_martines_ciso.md (alert fatigue context)

Resource Availability

Detail	Source
All team headcounts	See Brief 2 companion for specific sources
CSMP as major competing project	chatbots/_backstories/csmp_project.md
Security team needs 3+ more people	sophia_martines_ciso.md
IT team of 4, understaffed	chatbots/_backstories/raj_patel_it_manager.md
Data team stretched thin (2 people)	jamal_al_sayed_data_analyst.md
15% annual turnover	karen_lee_hr_manager.md
Board wants profitability in 2 years	aisha_rahman_cfo.md

Detail	Source
CTO estimates 6-12 months for AI	mark_gonzalez_cto.md
Data team estimates 6-12 months for data prep	jamal_al_sayed_data_analyst.md

Vendor Relationships

The approved vendor list comes directly from docs/policies/approved_vendors.qmd (DOC-COMP-007). All vendor names are sourced.

Change Initiative: ISO 27001

Detail	Source
Took nearly 2 years (target was shorter)	sophia_martines_ciso.md
Achieved ~18 months ago	Same file
Sophia led it	Same file
Enterprise clients require it	marcell_ziemann_ceo.md

Change Initiative: Auth0 Migration

Detail	Source
Migration from Okta to Auth0 in December 2023	docs/policies/access_control.qmd (references both systems)
Policies still reference Okta as primary IdP	Same policy document (multiple sections still say “Okta”)
Session timeout and MFA configuration inconsistencies	Same policy document (conflicting timeout values documented)

Cross-References

All website URLs reference real pages on the Cloudcore site.

Part 2: Assumptions and Invented Details

All System Deployment Dates

No deployment dates exist anywhere in the repo. Every date in the “Deployed” column was invented to create a plausible technology timeline:

System	Invented Date	Reasoning
VMware	~2014	Company founded 2010; virtualisation would have been early infrastructure
Cisco switches	~2014	Core networking, deployed with initial data centre
Office 365	~2015	Standard productivity suite, early adoption
PostgreSQL	~2015	Core database, needed early
Chef	~2015	Early configuration management before Ansible adoption
Legacy PHP	~2012	Described as pre-dating current standards; 2+ years old at time of breach
Salt	~2016	Secondary config tool, deployed before Ansible
Atlassian	~2016	Project management, mid-stage adoption
Palo Alto firewalls	~2017	Network security, pre-dates security build-up
AWS	~2018	Hybrid cloud partnership
Slack	~2018	Team communication
Ansible	~2019	Replacing Chef; more modern tooling
Azure	~2019	Secondary cloud partner
Terraform	~2020	IaC adoption alongside Ansible
Prometheus + Grafana	~2020	Modern monitoring stack
Splunk SIEM	~2021	Security build-up period
Tenable.io	~2021	Vulnerability scanning, same period
GitHub Actions	~2021	CI/CD modernisation

System	Invented Date	Reasoning
Python (FastAPI) + React	~2021	Application stack modernisation
CrowdStrike	~2022	EDR deployment, security maturation
HubSpot	~2022	CRM migration (see below)
JupiterOne	~2022	Asset management
Kubernetes	~2022	Limited adoption, recent
ArgoCD	~2022	GitOps, tied to Kubernetes
Power BI	~2022	BI adoption by data team
ServiceNow	~2023	Change management, recent deployment
Auth0	Dec 2023	This date IS sourced (from policy docs)

Data Flow Diagram

The diagram structure is invented. The repo confirms data silos and manual processes but does not contain a data flow diagram. The specific connections shown (and gaps highlighted) are inferred from backstory descriptions of how teams work.

Vendor AI Relevance Assessments

The “Relevance to AI” column in the vendor table was invented. The repo lists approved vendors but does not assess their AI capabilities. The AI capabilities noted (e.g., Splunk ML analytics, HubSpot predictive features, CrowdStrike AI threat detection) are real product features but their applicability to Cloudcore was assumed.

Change Initiative: CRM Consolidation (2021-2022)

This entire story was invented. The repo establishes the following facts that support it:

- HubSpot is the current CRM — `tom_bradley_marketing_manager.md`
- CRM data has quality issues (duplicates, missing fields) — `jamal_al_sayed_data_analyst.md`, `tom_bradley_marketing_manager.md`
- Sales team adoption of HubSpot is incomplete — inferred from `tom_bradley_marketing_manager.md` (marketing uses it; sales pipeline tracking not mentioned)
- No integration between CRM and billing/support — `jamal_al_sayed_data_analyst.md`

The following details were invented:

- The existence of a prior “legacy contact management system”
- The migration being a defined project (2021-2022)
- The project running 3 months late and 40% over budget
- Sales team continuing to use spreadsheets (plausible but not confirmed)
- Data quality problems being specifically caused by migration (backstories confirm the problems exist but not their origin)
- Post-migration cleanup never being resourced

Auth0 Migration — Framing as “Partial Success”

The technical facts are sourced (migration happened, policies not updated). The framing as a “partial success” and the narrative about missing change management planning were invented. The repo simply shows the gap exists without characterising it.

ISO 27001 — Narrative Details

The repo confirms it took nearly 2 years. The following details were invented:

- Initial target was 12 months
- “Staff resistance to new processes” (plausible but not stated)
- “Documentation burden strained a small team” (plausible but not stated)
- Specific “lessons for AI” framing

Resource Availability Table — “Available for AI Work” Column

The repo gives team sizes and current responsibilities. The assessment of how much capacity could be allocated to AI work (e.g., “1 to 2 engineers could be partially allocated”) was invented based on the described workloads.

Competing Commitments — Specific Details

- “ISO 27001 surveillance audit expected within 6 months” — invented; the repo confirms certification but does not mention a surveillance audit timeline
- “SOC 2 Type II renewal” requiring annual recertification — standard practice, not explicitly stated in repo
- Post-breach remediation described as “multi-quarter programme” — inferred from scope of changes described, not explicitly stated

Budget Commentary

The statement that “\$250,000 envelope is tight for any initiative that requires both a specialist hire and platform investment” is analysis, not sourced fact. The individual cost components (\$180-250K salary from Karen Lee’s backstory; platform costs invented) support this conclusion.

Timeline Pressures Framing

The individual facts are sourced (board expectations, CTO timeline, data analyst timeline). The framing as “timeline pressures” and the implication of conflict between them was composed for the brief.

This companion document is for instructor reference. It is not intended for student distribution unless adapted.