



Microland Cloud & DC Services

Service Definition Document

Table of Contents

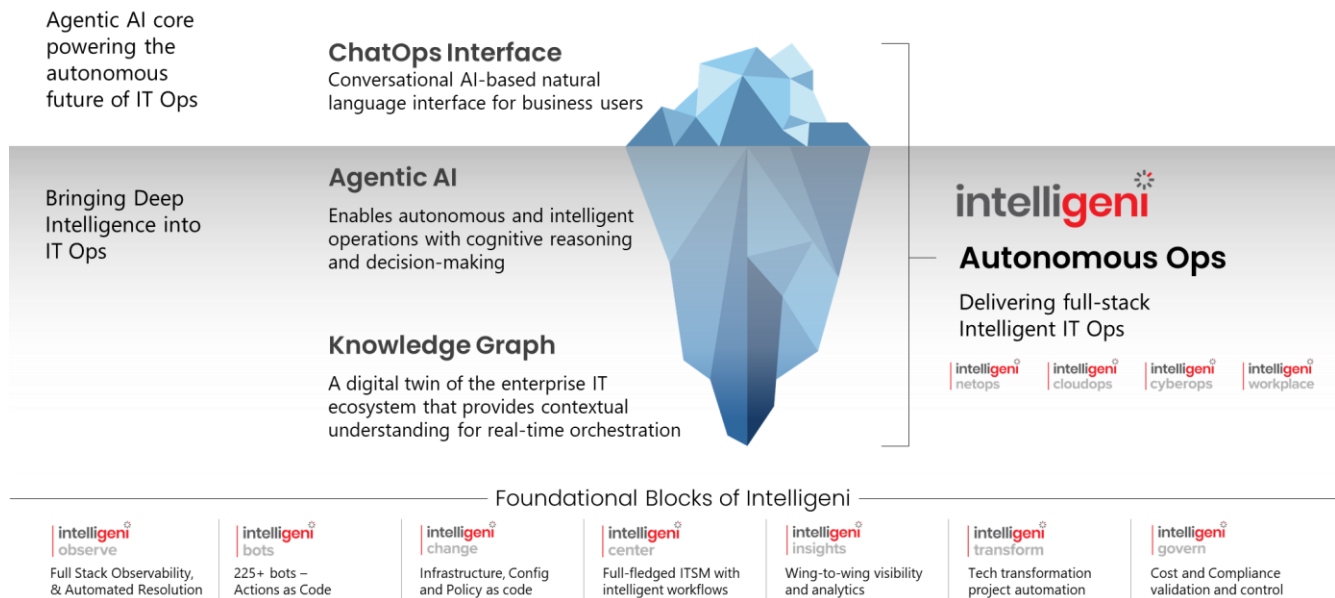
Contents

1. Microland's AI and Platform-led Hybrid Cloud Services	4
2. Hybrid Cloud Advisory & Transformation Services	5
2.1 Cloud Assessment	5
2.2 Cloud Migration	6
2.3 Data Center Transformation	8
3. Cloud FinOps.....	9
3.1 Microland's Cloud Cost Management Framework (CCMF)	10
3.2 Services Offerings & Tiers.....	10
3.2 Microland's Cost Optimization & Management Methodology	13
3.3 Scope of Work	16
a. Technology Scope	16
b. Non- Technology Scope	17
c. Work Scope - Cost Optimization Service Tiers.....	17
d. Schedule of Deliverables.....	19
3.4 RACI	24
4. Hybrid Cloud Operations.....	25
4.1 Intelligeni CloudOps.....	26
4.2 Azure, AWS, GCP Public Cloud Platform Management	27
4.3 VMWare and Hyper-V Managed services	29
4.4 Managed Operating System Services (Windows, Linux, Solaris)	32
4.5 Backup Management	33
4.6 Storage (SAN/NAS) Management.....	34
4.7 Managed Database Services with Disaster Vigilance (SQL, Oracle, MySQL).....	35
4.8 Managed Infrastructure Application Services.....	36
a. Managed Active Directory Services	37
b. Managed DNS/DHCP Services.....	38

c.	Managed Web Services (IIS, Apache) Deliverables.....	38
d.	Managed SharePoint Services	39
e.	Managed Citrix Services	40
f.	Managed SCCM Services	41
g.	Managed SolarWinds Services	42
h.	Managed SCOM Services	43
4.9	Managed Hyper Converged Infrastructure Services (Nutanix).....	44
4.10	Data Center Management.....	45
4.11	Hybrid Cloud DRaaS.....	49
5.	DevOps Services.....	50
6.	Tools and Platforms.....	51
7.	Service Coverage Window	51
8.	Service Location	51
9.	Service Delivery Principles.....	52
10.	Service Governance.....	52
11.	Quality Assurance	52
12.	Service Performance Reporting.....	54
13.	Service Level Agreements.....	54
13.1	Service Level Calculations.....	56
13.2	Exclusions from SLA.....	56
14.	Exclusions & Assumptions for Managed Service.....	57
14.1	Service Exclusions	57
14.2	Service Assumptions.....	58
14.3	Customer Obligations	58
15.	Business Continuity Plan (BCP)	59

1. Microland's AI and Platform-led Hybrid Cloud Services

Microland's Hybrid Cloud Services offer a comprehensive and integrated solution that combines the capabilities of automation, AIOps, DevSecOps, and Cloud FinOps to deliver accelerated technology and operations transformation. With our platform-based approach, enterprises can gain full visibility into their cloud and data center setups and achieve the benefits of flexibility from the public cloud and the reliability of data center infrastructure. By incorporating industry frameworks and best practices with our proprietary frameworks, our services enable organisations to leverage the latest advancements in cloud technology, empowering them to optimize their operations, explore new opportunities, and foster transformative growth.



Benefits of Microland's AI and Platform-led Hybrid Cloud Services include: -

- **Zero-risk Transformation Roadmap:** Enabling technology and Ops transformation through a well-planned roadmap ensuring minimal risk to business through the Cloud Assessment.
- **Accelerated Migration:** Leveraging Automation, Pre-defined templates, and real-time visibility through dashboards to minimize the impact on business and accelerate migration
- **Optimized Cloud Spending:** Our Cloud FinOps framework optimizes cloud spend by process, architecture, and resource optimization, visibility on cloud spending, and cost leakages
- **Improved Security Posture:** Integrating SecOps into the hybrid cloud management to improve real-time asset discovery, vulnerability management, access management & compliance
- **Intelligent Operations:** Platform-driven operations leveraging Observability, Automation, and DevSecOps to minimize incidents and downtime for efficient and agile operations
- **Secured Business Continuity:** Building robust & compliant BCP with DR and BCP policies based on specific business priorities, periodic readiness drills and assessments, multiple failsafes

2. Hybrid Cloud Advisory & Transformation Services

2.1 Cloud Assessment

Microland's Cloud Assessment service is designed to help enterprises adopt cloud technology with minimal cost and zero risk. We provide a detailed roadmap for cloud adoption, identifying compatible workloads and providing financial and technical feasibility analysis, as well as a security and risk-mitigated migration plan. Microland's CAF-Ready assessment framework helps you make informed decisions about your cloud adoption journey and optimize your use of cloud technologies.

Microland's service is highly automated and cost-efficient, and we use hyperscaler-certified practices and tools to ensure a successful transition to the cloud. We support both infrastructure and application-led approaches and have a track record of helping large and mid-sized enterprises, adopt hybrid and multi-cloud environments.

Microland's assessment framework captures a range of information about your technology landscape, business needs, compliance and security needs, and operational challenges and requirements. It leverages automation to ensure the assessment is comprehensive, structured, and objective, and it cuts down the time needed for the assessment by 40%. Trust us to guide you on your cloud adoption journey.

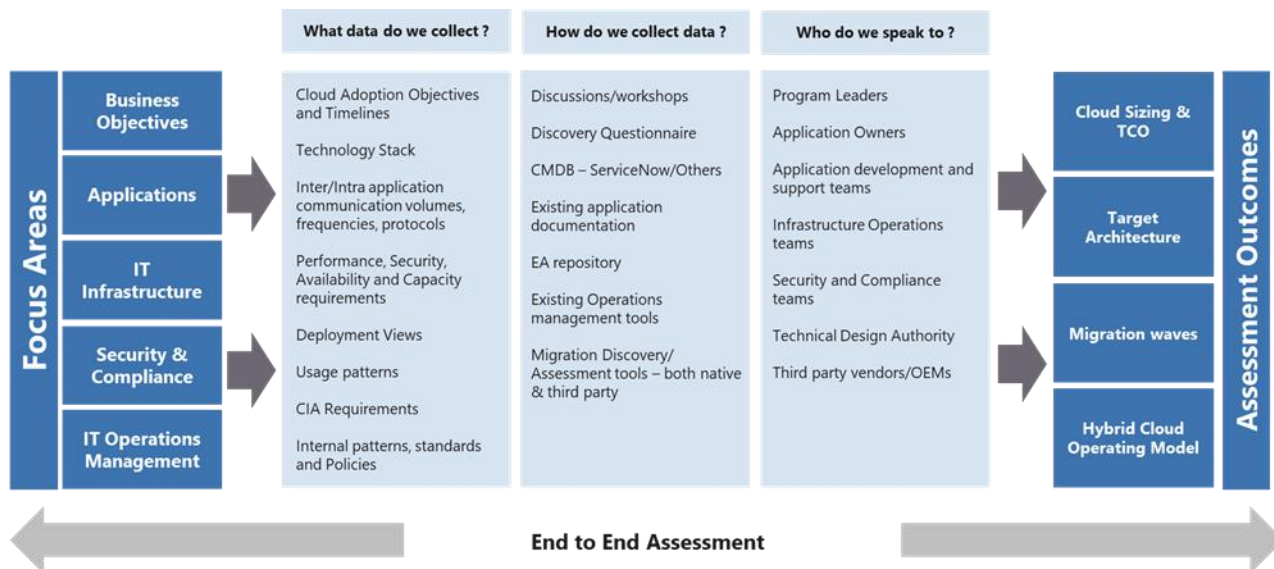


Figure 1: Cloud Transformation Service - Assessment Methodology

Microland provides the following key outputs as part of the assessment:

- Compatibility of your workloads for the target cloud model
- Comprehensive TCO analysis leveraging leading tools and methods
- Evaluation against organizational security and compliance requirements
- Target hybrid and/or multi-cloud technology architecture including landing zones
- Operating model definition, skill needs identification, and automation requirements
- Provider-neutral yet partnership-backed view of the overall Cloud migration roadmap

Here are some differentiating factors of our Cloud Assessment service to help accelerate your cloud adoption journey:

- **Expertise and experience:** Our certified experts have a proven track record of successfully helping organizations adopt and integrate cloud technology using a provider-validated, CAF-ready framework
- **Security and Compliance:** It includes a thorough analysis of your industry-specific and organization's security and compliance needs, as well as a mitigation plan to address gaps. We use leading tools and practices to ensure your organization meets its GRC goals during cloud adoption.
- **Strong partnerships:** Our strong, certified partnerships with the top 3 hyperscale cloud providers give us access to a wide range of resources, capabilities, tools, and funding programs that we leverage for you.
- **Cost-effectiveness:** Our automation, flexible engagement model, and partner funding programs enable us to provide you with competitive cost models to help kickstart your cloud journeys quickly.
- **Tools and Automation:** Our comprehensive suite of tools and automation capabilities helps us deliver accurate and faster assessments where customers spend 40% less time discovering and gathering data.

2.2 Cloud Migration

Intelligeni Transform is Microland's integrated tooling for migration lifecycle management both from a project and technology management standpoint. It is specifically designed to run Factory-based Re-host and Re-platform migrations efficiently and at scale. We have incorporated our decades of experience in migrating data center workloads and fine-tuned it to fit the new Cloud-specific needs. It enables data-driven management of tasks, resources, assets, and knowledge and has reusable automation. Key features of Intelligeni Transform are:



Figure 2: Key Features of Intelligeni Transform

Our migration platform brings industrialized capabilities along with exclusive pre-configured industry-specific tools, methods, and automation across all cloud models and multiple cloud service models (IaaS, PaaS, and SaaS). Our experts use it to identify the workloads to be migrated to the cloud, determine the migration method (lift and shift, cloud-native refactoring, etc.), and develop a high-level plan to execute the model.

Deliverables During Cloud Migration

Our comprehensive cloud migration tool supports a smooth transition from on-premises to any cloud provider environment while addressing the following during a migration program:

- Create migration packages, sequences, and schedules
- Automate pre- and post-migration checks and configurations
- Reuse knowledge gained during previously concluded migration
- Ensure the highest productivity of migration engineers
- Efficiently allocate and reassign tasks to the right skilled SMEs
- Ensure compliance with security and governance policies
- Seamless handover to the operations team and decommissioning of source

The Intelligeni Transform integrated tooling can quickly automate technical tasks and configurations related to migrations in the factory such as:

- Data Ingestion and Transformation
- Gathering inventory, dependency, workload readiness
- Integrations with CMDB, discovery, and infra-sizing tools
- Streamline various nomenclatures used within data
- Dependency definition and aggregation
- Technical Task Automation
- Build Automation, Pre-Migration Run books
- Migration technical task automation – agent install, configure, sync, retry, etc
- Migration Error Remediation and Cutover Run books
- Post Migration Run books/configurations
- Cleanup / Decommission of residual infrastructure
- Integration with Provision/configuration Automation and Migration Tools
- Visualization and Reporting

Benefits of Microland's Cloud Migration services include: -

1. **Faster Migrations** - Integrated tooling used in factory models operated by best-in-class talent expedites migrations by 30%
2. **Reduced Downtimes** - Scheduling, knowledge base, automation and collaboration ensure reduced disruptions by 20%

3. **Maximized Productivity** - Contextualized workload info and migration task list ensures maximum SME productivity
4. **Faster time to Decisions** - Impactful insights for workload owners and engagement managers to make informed decisions

2.3 Data Center Transformation

At Microland, we provide agile, business-focused wing-to-wing services around data centers from consulting and assessment to developing a strategy for transforming and operating the transformed data center.

At Microland, we understand that transforming your data center can be daunting. However, with our experience and platform-based approach, we ensure that is a seamless process to modernize Data centers to be more reliable, secure, and agile with increased optimization. We leverage platform-based unified management to ease out complexity and gain higher utilization.

Microland offers the following benefits as a part of the Data center transformation journey, including:

- A customized approach tailored to meet the unique needs of your organization
- Dedicated offshore migration factory model to expedite the migration
- A seamless and efficient transformation process
- Increased efficiency, scalability, security, and agility in operations
- Lower costs and improved return on investment
- Better alignment with business objectives and goals
- Increased visibility and transparency on the infrastructure performance and service delivery

Our end-to-end services include Data Center Consolidation, Migration, and Modernization covering aspects such as Unified Infrastructure (Azure Stack, AWS OutPost), Software-Defined Data Centers, Converged / Hyper-Converged Infrastructure, and Edge Computing. You get a highly available and agile data center that can support complex workloads and become the heart of your digital transformation initiatives, delivering exceptional customer experience. Our team of experts is ready to help you achieve your IT goals and stay ahead of the competition in today's rapidly changing technology landscape.

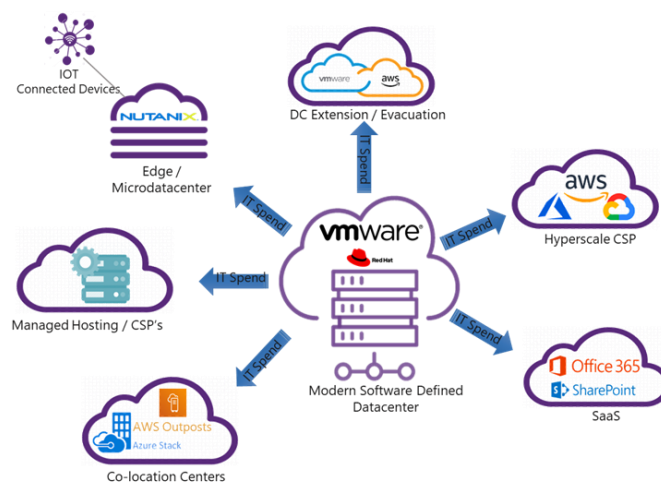


Figure 15: Consolidation and Modernization with DC Build and Migration

Microland can help you achieve your goals and take your business to the next level with the following benefits:

- Datacenter Modernization to Private Cloud
- Higher Performance at a reduced cost
- Business Agility with scalable infrastructure
- ROI from existing investments
- Reduced TCO
- Shift from CapEx to OpEx model
- Control and Governance
- Legislation & Regulatory Compliance

3. Cloud FinOps

As organizations adopt cloud technologies at an increasingly rapid pace, they often face challenges in managing and optimizing their cloud costs. Without proper management, cloud costs can quickly spiral out of control, drain budgets, and impact profitability.

Microland's Cloud FinOps managed services help you overcome these challenges and maximize the value of your cloud investments. Our proprietary framework, CCMF, is aligned with FinOps principles and helps you optimize your cloud costs, improve resource utilization, and ensure compliance with your organization's financial policies.

Our FinOps services include:

- **FinOps Platform Engineering:** Establishing a FinOps platform by working collaboratively with finance, procurement, and product teams to manage cloud usage and cost more efficiently.
- **Guardrail Implementation:** Guardrails provide governance and security controls to manage compliance in enterprise cloud environments. Streamline application security process with zero impact on productivity. This eliminates business risk and saves time and money for organizations.
- **Forecasting and Cost Optimization:** Enabling businesses to assess the cost incurred from their cloud application resources and workloads based on historical data. Our multi-cloud cost governance framework forecasts and optimizes cloud spending across multiple cloud environments.

With Microland's Cloud FinOps managed services, organizations can:

- Monitor and optimize your cloud costs in real-time
- Identify and eliminate wasted spend on idle or underutilized resources
- Implement cost allocation and chargeback models to ensure cost accountability
- Set up alerts and notifications to stay informed of potential cost issues
- Automate the identification of cost leaks and implement optimization recommendations

3.1 Microland's Cloud Cost Management Framework (CCMF)

Microland's proprietary Cloud Cost Management Framework (CCMF), along with experienced architects and partner-enabled tooling and curated best practices, quickly identifies cost leaks and helps you optimize spend and be in control. Microland's CloudFinOps managed service has achieved cost savings of up to 40% of annual cloud spend for our customers.

CCMF addresses four key areas for ongoing cost optimization and management:

- **Utilization optimization:** Monitor and optimize your resources sizing, placements, and scaling using industry-leading tools. Identify and eliminate wasted spend on idle or underutilized resources.
- **Usage optimization:** Identify resource usage patterns and find optimal run schedules, and reservations, and implement budgeting and tracking to ensure accountability across your organization.
- **Process optimization:** Streamline and automate your cloud financial management processes to achieve greater transparency, visibility, and control of your cloud spending using automation.
- **Architecture optimization:** Our team, with extensive experience in modern cloud-native architectures, provides recommendations for optimizing your workloads to improve efficiency and reduce costs.

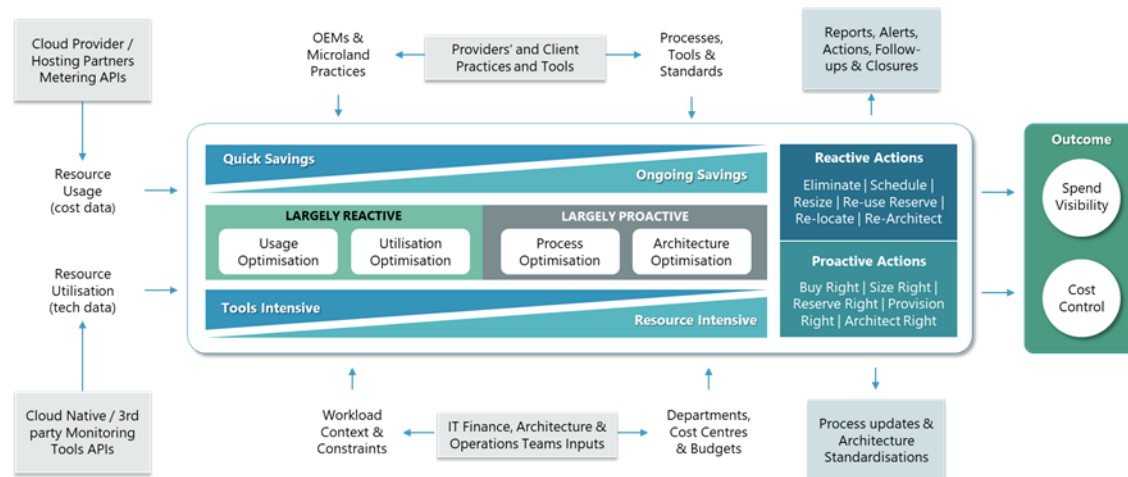


Figure 3: Microland's Cloud Cost Management Framework

3.2 Services Offerings & Tiers

Microland is offering Cloud FinOps service to customers in two ways:

- Cost Optimization Service

Independent/Solo Service with different tiers (Basic and Advance Tiers).

- One-time and project based.
- Focused on cost optimization only.
- New and Existing Customers.

- Cost Management Service

- Packaged Service (part of Cloud Operations Service - Advance Tier Only).
- One-time project followed by Ongoing management.
- Focused on finances (Invoicing, Budgeting, Advisory) & cost optimization, followed by ongoing cost management.
- New and Existing Customers
- Ongoing Cost Management
 - Implementation Tracker
 - Cost Savings (Projected vs Achieved)
 - Cloud FinOps
 - Invoicing
 - Budget Management
 - Process & Catalogues
 - Advisory



Figure 4: Cloud FinOps Service Tiers

Cost Optimization Service	
Service Description	A service focused on helping customers to identify “ Cloud spend wastage ” also known as “ Cloud bleed ” in their cloud environments. This will help them to make the right decisions and choices in terms of strategies, policies, processes, and approaches to maximize their returns on investments in the cloud. This is delivered through client-specific assessments, using proprietary frameworks, and tools, and providing recommendations and Implementation (optional) as well.

Client Problem Statement this service addresses:	- Increased costs month on month without significant changes to the environment's size or usage patterns. - Lack of visibility on Cloud spend - No Governance & Cost Control
Delivery Model	Offsite
Tiers available	Basic Advanced
Commercial Model	Spend-based (See Pricing tiers below)
Engagement Model	One time – Project Based

Cost Management Service	
Service Description	A service bundled as part of Cloud Operations (Advance Tier) focused to help customers to identify "Cloud spend wastage" also known as "Cloud bleed" in their cloud environments. This will help them to make the right decisions and choices in terms of strategies, policies, process and approach to maximize their returns on investments in cloud. This is delivered through client specific assessments, using proprietary framework, tools and providing recommendations and Implementation (optional) as well. This will be implemented as one-time project based, followed by On-going cost management, Cost Management will be an on-going set of activities that will be an inherent part of Cloud operations.
Client Problem Statement this service addresses:	- Increased costs month after month while environment size has not changed significantly. - Lack of visibility on Spends - No Governance & Cost Control
Delivery Model	Offsite
Tiers available	Advance Tier (Cloud Operations)
Commercial Model	Fixed fee only. * (Part of managed services)
Engagement Model	One time followed by Ongoing optimization.

3.2 Microland's Cost Optimization & Management Methodology

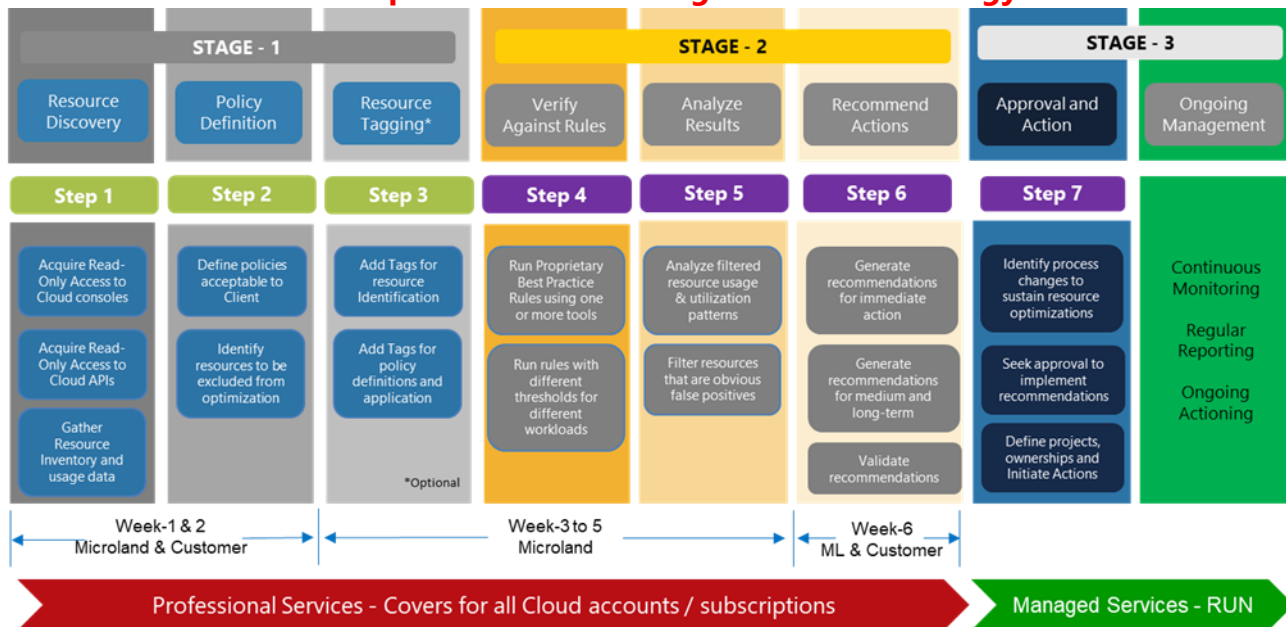


Figure 5: Cloud Cost Optimization & Management Methodology

Cost Optimization and management methodology is broadly divided into 3 key stages:

- **Stage-1:** Discovery & Visibility
- **Stage-2:** Analysis & Recommendation
- **Stage-3:** Implementation & Realization

Stage-1: Discovery and Visibility

Visibility is needed into each resource's usage, costs, Utilization and context across multiple dimensions (example: over time, across groups). This stage will be carried out in 3 steps:

- **Step 1: Discovery**

At this stage, read-only access to Cloud consoles and Cloud APIs is obtained to generate resource inventory and usage data as part of the discovery process. We also need to capture utilization data of the resources discovered as part of the discovery.

- **Step 2: Definition**

It is important to ensure that data gathered is complete, accurate, granular and contextual by making sure we

- Define Policies (Parameters, Thresholds, Rules)
- Collect historical data for Billing and Utilization (Last 30 days, 90 days or above)

- **Step 3: Tagging**

Tagging is a key mechanism for identifying and group resources which will be helpful in the discovery stage and during the Analysis phase. We must define and do:

- Tagging Guidelines
- Add tags for resources & policies defined above

For the accounts & subscriptions which are in the scope of the engagement.

Stage-2: Analysis and Recommendation

This stage also has 4 Key steps which will be executed to verify and validate, analyze, prepare recommendations and implement them. The 4 steps in continuation of Stage 1 are:

- **Step 4: Verify & validate against rules**

This will be achieved by leveraging Microland's proprietary "Best Practices Checker" or Microland's preferred Cost Optimization tool (Currently CoreStack) against the collected data.

The validated data can be filtered based on multiple parameters like resource types, based on spends, and preferred subscriptions.

- **Step 5: Analysis**

The above-mentioned data of filtered resources will be analyzed based on usage patterns, policies, and thresholds which were agreed as part of Stage 1 – Definition step.

- **Step 6: Recommendations**

This is one of the key steps during stage 2, where we will prepare & present our recommendations to the customer. These recommendations will be classified in two categories:

- Immediate Action
- Future

These reports will give an insight to the customer about immediate savings they can achieve and potential savings, once future recommendations are implemented.

- **Step 7: Approval & Action***

Microland will work with the application owners & respective stakeholders of customers to implement recommendations, post acceptance of Recommendations report.

***This step is optional and will be taken up for execution, based on customer requirements and service tier purchased.**

The data that was collected, verified & processed for actionable insights can be used for 2 areas of Usage & Utilization as covered below.

Usage analysis:

It is carried out mainly using the usage and billing-related data and the resource access and status data available from the cloud platform. It helps in understanding how various resources are used over the period and helps you identify:

- Potential reservations
- Purchase negotiation points
- License portability options

Utilization analysis:

It is carried out mainly using the resource Utilization data and the workload characteristics to which the resource belongs and finding if:

- Optimal sizing could be done
- Alternate resource types could be used
- Resources could be scheduled to start & stop
- Whether automatic scaling could be done
- They could be intelligently placed in a low-cost data center or pricing tier

The other two remaining areas for Optimization (Process & Architecture) under the Cost Management Framework are more dependent on a resource (Cloud Architect) instead of tools and associated reports.

Optimization in these areas can be done on a proactive basis and provide Ongoing savings as compared to Usage & Utilization areas where Optimization is performed reactively and give quick savings.

Process analysis:

Public Cloud, which is also addressed as an Extended Datacenter needs a different approach when it is compared with managing a traditional data center and especially from a Process perspective.

It is carried out mainly using the information from Process documentation with respect to Cloud Resource Life Cycle (Approve, Provision, Modify & Decommission) and finding if:

- Any opportunity to introduce workflow/process to approve cloud resources provisioning and decommissioning.
- Implement RBAC and limiting users to provision required & limited resource types and defined tiers/sizes depending upon the environment for which deployment is needed.
- Introduce process related to scaling up & scaling down of resources in DevTest & UAT environment.

Architecture analysis:

It is carried out mainly using the information from Application teams and application Vendors with respect to Application architecture, Application requirements & Application transformation roadmap, and finding if:

- Any opportunity to use PaaS services instead of IaaS services.
- Any opportunity to move application components to an auto-scalable deployment model.
- Any opportunity to do right-sizing & buy/change reservations (post New releases for resource type)
- Any opportunity to consolidate multiple small-size resources into large-size resources

Stage-3: Implementation & Realization

All recommendations on Potential cost savings will have no value, unless reviewed and Implemented to arrive at actual savings. The Implementation of recommendations identified in the four areas (as mentioned above) or identified during the On-going cost management can be achieved by:

- Focused projects:
- Tracking Savings (Estimated, Realized & Missed/Not Achieved)

Focused Projects:

A clear ownership & accountability of Microland resources (Cloud Architect, Automation engineer, Project Managers, Data analysts) and Customer stakeholders (Application owners, Finance team member) has to be defined in order to implement the recommendations, which were approved.

Tracking Savings

All the recommendations presented may not be approved for implementation due to certain conditions like:

- Application-level restrictions (Can't use PaaS components, cannot consolidate smaller components into bigger ones)
- Application Vendor restrictions (Specific sizing for supportability etc.)
- Compliance requirements (Resources can't be decommissioned/deleted, cannot be relocated/hosted in other regions etc.)

As a result, it is important to keep a track of Estimated savings (Projected), Savings Achieved (Implemented) and missed/not achieved due to restrictions.

3.3 Scope of Work

a. Technology Scope

Optimization Area	Cloud Services in Scope
Usage	All Cloud Services
Utilization	Compute: VM's, EC2 Instances Storage: Disks, Storage Buckets, EBS, Glacier Database: SQL Server, Azure SQL, Managed instances, Amazon RDS, CosmosDB, MySQL, PostgreSQL Networking: Application Gateway, Load Balancer, ELB, Public IP, Elastic IP Applications: App Service Plan, Web Apps
Process	Same as above

Architecture	Same as above
--------------	---------------

b. Non- Technology Scope

Area	Components
Financial Components	• Licensing • Pricing Models (PAYG, EA, CSP, Dev/Test Pricing) • Budgets • Metering, Billing and Invoicing
Process Components & Others	• Approvals & Workflows • Cloud Resource Catalogue

c. Work Scope - Cost Optimization Service Tiers

Service Name	Service Tier	Optimization Areas Covered	Comments
Cost Optimization	Basic Tier	• Usage Optimization • Utilization Optimization	Discover, Analyze & Provide Recommendations. Implementation of Recommendations not in scope.
Cost Optimization	Advance Tier	• Usage Optimization • Utilization Optimization • Process Optimization • Architecture Optimization	Discover, Analyze & Provide Recommendations. Implementation of Recommendations not in scope.
Cloud Operations	Advanced Tier	Cost Optimization – Advance Tier + Ongoing Cost Management	Implementations of Recommendations included.
Ongoing Cost Management	No Tier. Part of Cloud Ops Advance Tier	Cloud FinOps • Invoicing	

		• Budget Management • Process & Catalogues • Advisory	
--	--	---	--

Following is a high-level representation of the 4 areas of work,

Area	Suggested Tasks	Deliverables
Usage	• Understand Customer Organizational Model w.r.t Cloud Consumers (Dept/Teams/Projects) • Understand Customer Cloud Landscape (Regions/Subscriptions/Services Consumed, Usage) w.r.t. consumers (Dept/Teams/Projects) • Understand Cloud Environment management owners, stakeholders • Understand workload level detail & usage pattern. (Time & Days)	• Eliminate resources report (Immediate Savings Report) • Estimated Savings via Scheduling (Post Implementation) • Estimated Savings Via Resource Relocation
Utilization	• Understand Application classifications (Criticality, Complexity, COTS, In-house, Coupling, Scaling) • Understand Applications landscape (# of Environments, resources used in each env + resources size used) • Understand Application resources utilization & differences within each environment for same application • Understand Applications historical usage, utilization of resources consumed during specific days • Understand On-Prem Licenses which can be used in Azure using Azure Hybrid Benefit (AHB)	• Right Sizing Recommendations Report with Estimated Savings • Reserve Instances Recommendations Report with Estimated Savings • License Usage Report with Estimated Savings report
Process	• Understand Azure resources provisioning, management & decommission model & RBAC model. • Identify Standard Catalogue-able resources for various workload and Team specific uses. • Understand Tools & Methods for Azure resources provisioning, management & decommission.	• Process Recommendations Report with Estimated Cost Savings
Architecture	• Understand Application Needs (Vendor recommended) as per architecture.	• Architecture Recommendations and Potential Benefits Report with Estimated Cost Savings

	• Understand Application needs (Future State) and expansion plans. • Understand Application deployment architecture.	
Ongoing Cost Management	• Implementation of Recommendations Reports (Usage, Utilization, Process & Architecture), • Cloud FinOps ○ Invoicing ▪ Metering, Billing and Charge/Show back activities. ▪ Invoice Generation. ○ Budget Management ▪ Setting Budget. ▪ Sending Reports on Budgets thresholds. ○ Process & Catalogues ▪ Create Approval based workflows for provisioning. ▪ Create catalogues to offer limited and preferred resources using Azure RBAC roles (Default and Custom roles) ○ Advisory ▪ Suggest new resource types and onboard it. ▪ Suggest different pricing (CSP, Dev/Test) ▪ Suggest alternate cloud, multiple cloud	• Implementation Tracker • Cost Savings Tracker (Projected, Achieved & Not achieved) • Advisory Services Recommendation Report. • Budget Thresholds reports

d. Schedule of Deliverables

Phases/Activities

Phases	Activities	Deliverables	Timeline
Project Initiation	• Identify stakeholders. • Defining the Drivers, Scope and Vision • Identify key constraints – time, resources, business impact • Identify project governance requirements for planning phases of project. • Identify subscriptions/accounts where the discovery needs to be done. • Share Pre-requisites for the discovery phase	• Project Milestone document • Stakeholder communication plan	1 Week

	○ Tools Pre-requisites ○ Access to Multiple Portals ○ Access & Permissions required for Microland resources • Share requirements for Additional data/historical data or reports not available via Tool or prior to onboarding. • Finalize High Level scope.		
Discover and Analyze	• Deploy & Configure Cost Management Tool. • Setup & Configure Cost Policy, Thresholds & Rules. • Onboard subscriptions/accounts as defined in the scope. • Generate reports as identified in the 4 Work areas (Usage, Utilization, Process & Architecture)	• Eliminate Resources Report • Estimated Savings (via Scheduling) Report • Estimated Savings (via Relocation) Report • Right-Sizing Recommendations Report • Reserve Instances (RI) Recommendations Report • License Usage & Savings Report (Microsoft Azure only) • Process Recommendations Report • Architecture Recommendations and Potential Benefits Report	4 Weeks to 8 Weeks
Implement	• Implementation of Recommendations as identified in the Implementation. • Perform additional activities related to FinOps as identified in the work scope.	• Implementation Tracker (Advance Tier Only) • Cost Savings Tracker (Projected & Achieved) - (Advance Tier Only) • Advisory Services Recommendations Report (Advance Tier Only)	Weekly

Deliverable	Deliverable Description	Acceptance Criteria
Project Milestone document	The project milestone document is capturing the vision of the project and the milestones with respect to the Project Success factor and time bound	Project Kick-off with Customer Stakeholders

	based on the discussions during kick-off.	Agreeing and Signoff by Project stakeholders from both Microland and Customer
Stakeholder communication plan (With Cloud Ops – Advanced Tier)	The Stakeholder communication plan includes the change management communication with respective stakeholders involved and impacted by the change / migration such as Business / Application owners and Support team.	Stakeholder communication plan need to be agreed by both the parties and signoff.
Eliminable Resources Report	The report will list all resources across all resource types which can be removed/deleted across on-boarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application and Infrastructure related SMEs and stakeholders for validation & acceptance within 2 business days. Implementation (Based on Service offering bought).
Estimated Savings (via Scheduling) Report	The report will list all resources across all resource types which can be scheduled for required hours & days across on-boarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application and Infrastructure related SMEs and stakeholders for validation & acceptance within 2 business days. Implementation (Based on Service offering bought).
Estimated Savings (via Relocation) Report	The report will list out all resources across all resource types which can be relocated to alternate regions across onboarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application and Infrastructure related SMEs and stakeholders for validation & acceptance within 2 business days. Implementation (Based on Service offering bought).
Right Sizing Recommendations Report	The report will list all resources which can be resized/moved to a different size or tier, change from Committed to Usage pricing across onboarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application/Application Vendor and Infrastructure related SMEs and stakeholders for validation & acceptance within 2 business days.

		Implementation (Based on Service offering bought).
Reserve Instances (RI) Recommendations Report	The report will list all compute resources which can be reserved across onboarded subscriptions/accounts with estimated savings per year.	Availability of Business, Application and Infrastructure related SMEs, finance stakeholders for validation & acceptance within 2 business days. Implementation (Based on Service offering bought) along with Customer SPOC) for purchase.

Deliverable	Deliverable Description	Acceptance Criteria
License Usage & Savings Report (Microsoft Azure only)	The report will list all the existing licenses under (EA, EA with Software Assurance) which can be reused in Microsoft Azure via Azure Hybrid Benefits (AHB) across on boarded subscriptions with estimated savings per month.	Availability of IT Head/Licensing SPOC for validation & acceptance within 2 business days. Implementation (Based on Service offering bought).
Process Recommendations Report	The report will list out all the recommendations w.r.t Cloud resource Lifecycle (Request, Provision, Manage, Decommission) across multiple environments hosted within on-boarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application and Infrastructure related SMEs and stakeholders for validation & acceptance within 2 business days.
Architecture Recommendations and Potential Benefits Report	The report will list all recommendations w.r.t Applications hosted in Cloud across on-boarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application/Application Vendor and Infrastructure related SMEs and stakeholders for validation & acceptance within 2 business days.

	It will also list potential benefits w.r.t Performance, Availability, and Scalability for that application.	Implementation (Based on Service offering bought).
Implementation Tracker (Advance Tier Only)	The report will list all implementations done as per recommendations suggested across all work areas (Usage, Utilization, Process & Architecture).	Availability of Business, Application/Application Vendor, and Infrastructure related SMEs and stakeholders for validation & acceptance, post-implementation.
Cost Savings Tracker (Projected, Achieved and Not Achieved) (Advance Tier Only)	The report will share cost savings Achieved vs Projected after the implementation of recommendations, across on-boarded subscriptions/accounts.	Availability of Business, Application, and Infrastructure SMEs and stakeholders (IT Owner) for validation & acceptance, post-implementation.
Advisory Services Recommendation Report (Advance Tier Only)	The report will list all recommendation which can be implemented across on-boarded subscriptions/accounts with estimated savings per month.	Availability of Business, Application and Infrastructure related SMEs and stakeholders (IT Owner) for validation & acceptance within 2 Business days.

Hours of Support

Monday- Friday UK hours excluding bank holidays

Geography & Language

Microland operates globally with service delivery locations both Off-Shore and On-Shore. The below table describes the service availability at the delivery locations.

Service Element	Service Delivery Location	Support Language
Cost Optimization	UK and India	English
Cost Management	UK, and India	English

Services are delivered from Microland's ISO20001-accredited delivery centers. Additionally, if necessary, services can be provided by security-cleared staff.

Service Governance

- No customer data/application data is collected/exported/analyzed as part of this exercise for analysis.
- The tool will capture billing data and resource level usage and utilization data from Cloud Platforms.
- Service Governance meetings will be setup at mutually agreed time to review and discuss recommendations and progress. Participants shall include Microland's Cloud FinOps teams and relevant stakeholders in the customer's organization

Constraints/Dependencies

- Required access for Microland resources must be approved in respective portals and configured as per the pre-requisites of the project.
- All relevant stakeholders should be available for discussion of recommendations.
- Approval of change window for implementation by the customer (based on service purchased.)
- Approval related to Purchase of Reserve Instance or any other purchase will be part of customer responsibility.

The amount of savings by leveraging Hybrid benefits is subject to the customer License agreement with Microsoft.

Exclusions

- Application code changes, deployment, testing, restoration.
- Application Troubleshooting & Support when running in cloud.
- Assessment & Migration of Applications & Data.
- Performance tracking & validation, after recommendations implementation.
- Build & Create Change Management documentation w.r.t to any of the work areas.

3.4 RACI

Activities	Microland	Customer
Appoint & Allocate Resources (Consultants, Architect, Project Manager) to detail the plan of activities for the project.	✓	
Share all pre-requisites w.r.t discover phase with the customer (Tools Pre-requisites, Access to Multiple portals, Access & Permissions required for Microland resources)	✓	
Deploy, Setup and Configure Cost Management tool and associated components.	✓	
Generate Reports as agreed for each work area (Usage, Utilization, Process, Architecture & Management (Optional)).	✓	
Appoint & Allocate SPOC and Stakeholders as part of this project.		✓
Sign-off Scope, Project Milestone document & Stake holder Communication plan (optional).	✓	✓

Provide required access for Microland resources for accounts/subscriptions & to onboard Cost management tool.		✓
Provide historical data/reports of Usage & Utilization.		✓
Provide documentation related to Process (Cloud resource lifecycle, application architecture designs, app vendor documentation)		✓
Provide details on Licensing agreements between • Customer • Customer & Application vendors and • Customer & Cloud providers.		✓
Validate & Sign-off all recommendations report within 2 business days.		✓
Provide contact details & support agreement between Customer & Application Vendors		✓
Validate application functionality across all tiers (Front, Middle & Backend) , post implementation of recommendations during architecture work areas.		✓

4. Hybrid Cloud Operations

Microland's well-oiled approach to hybrid and multi-cloud operations combines the best of both public and private cloud environments. It leverages the latest technologies and best practices to deliver exceptional efficiency, agility, and security. With our Cloud Operation services, enterprises can take full advantage of the flexibility, scalability, and cost benefits of multiple public clouds with the security and control of a private cloud. It also enables multi-cloud governance with well-defined compliance policies and a streamlined change management approach.

Our team of highly skilled cloud professionals is dedicated to helping organizations get the most out of their cloud investments. We leverage a combination of automation and hands-on expertise to ensure your enterprise systems are running smoothly and efficiently. Our Cloud Operations offers a gamut of features making it a one-stop solution to streamline your enterprise cloud operations. These include:

- **Flexibility:** Our hybrid, multi-cloud approach allows enterprises to choose the best mix of hyperscalers and private cloud environments to meet their specific business needs.
- **Cost-effectiveness:** Our team of experts helps optimize enterprise cloud costs by up to 30%, ensuring our clients pay only for the resources they need and cut down on unnecessary expenses.
- **Security and compliance:** We place a strong emphasis on security and compliance, with mechanisms in place to ensure data is 100% compliant with all applicable regulatory requirements.
- **Platform-Delivered:** Intelligeni CloudOps, our proprietary automation platform streamlines cloud operations by improving efficiency and reducing the need for manual intervention by 30%.
- **Expertise and Experience:** Our team of highly skilled and certified cloud professionals has the experience and expertise to ensure enterprise systems are up and running without any disruption.

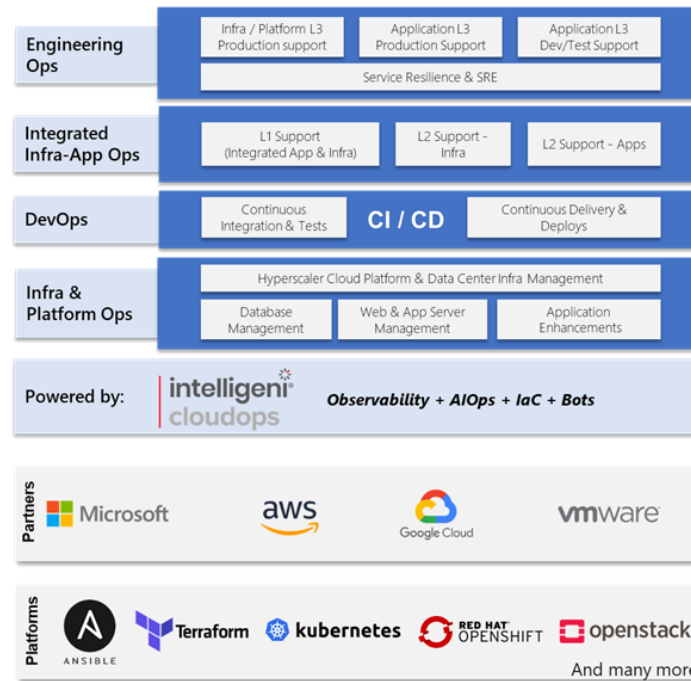


Figure 6: Modern Cloud Operations

4.1 Intelligeni CloudOps

At the core of our Hybrid Cloud Operations services is our hybrid and multi-cloud management platform, Intelligeni CloudOps, which is fully integrated with GitOps principles and designed to enable observability, financial optimization (FinOps), and auto-remediation (Automated Ops) to deliver unparalleled efficiency, agility, and security to our clients.

Intelligeni CloudOps is fully compatible with GitOps, a methodology that uses Git as a single source of truth for infrastructure and application code. This allows us to easily track changes to the IaC code and roll back if necessary, ensuring that the infrastructure is always in a stable state. It helps streamline cloud operations, improve efficiency, and reduce manual errors. It is used for a diverse set of cloud operations, such as configuring and provisioning resources, deploying, and updating applications, and enforcing cost, compliance, and security policies across multiple cloud environments.

In addition to GitOps, Intelligeni CloudOps incorporates Automated Ops, Microland's automation-first approach to managing and maintaining cloud infrastructure. It includes features that enable observability for accurate and faster diagnosis, root cause analysis, and bots for auto-remediation, ensuring that the enterprise infrastructure is resilient and performant. The platform continuously analyzes usage patterns and identifies opportunities to reduce costs and improve efficiency with FinOps best practices.

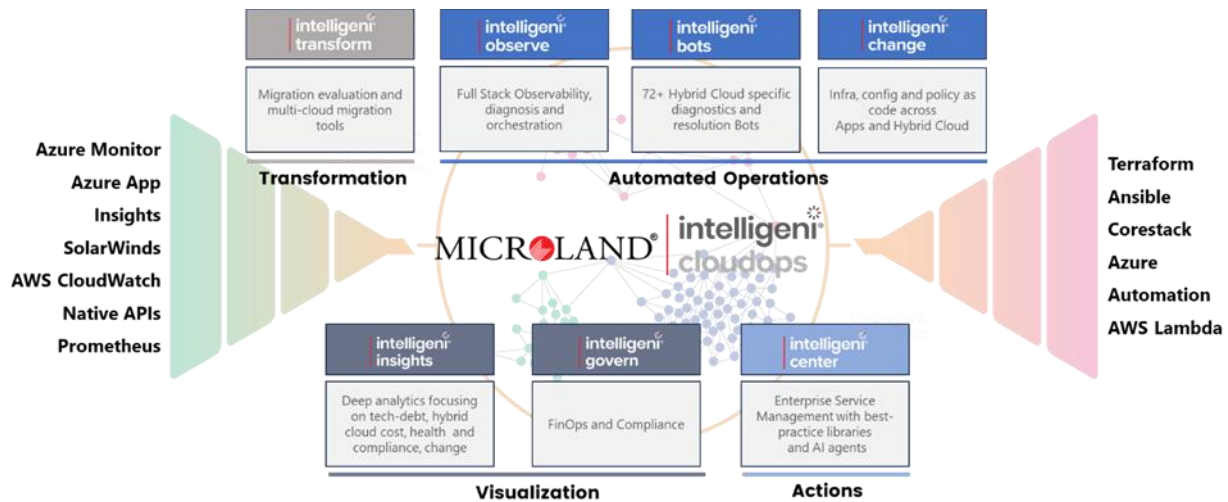


Figure 7: Microland's Platform-First approach - Intelligeni CloudOps

Service Tiers in Intelligeni CloudOps

Service Levels	Standard			Advanced (Standard +)			Specialized (Advanced +)		
Configuration, Management & Maintenance (All Cloud Resources)	Intelligent Monitoring	Data Backup & Restore		DR Drill Support		Security Management	Architecture Reviews and Assessments *		SRE Style, IaC based Cloud Native Ops
	VM Image Management	System / Services Health Reporting		Configuration Automation		Provisioning Automation	Application Perf. Monitoring & Mgmt.		Middleware & DB Management
	Patch Management	Security Monitoring		Best Practice Governance		Release Management			
	Operating System Management	Cloud Spend Reporting		Ongoing Spend Optimization		Audit & Compliance Support			
CaaS / PaaS Platform	Container Monitoring	Repository Management		Registry & Image Management		Cluster & Tooling Management			
Cloud Services Support & Reporting (Foundation Services)	Tools / Cloud Services Platform Mgmt. (Microland Provided)			Tools / Cloud Services Platform Mgmt. (Customer / Microland Provided)					
	Cloud Account Mgmt.	Monitoring & Notification	Incident Management	Change Management	Identity and Access Mgmt.	Log Management	SLA Management	Reporting	

Figure 8: Service Tiers in Intelligeni CloudOps

4.2 Azure, AWS, GCP Public Cloud Platform Management

Microland's Azure Lifecycle services leverage a combination of proprietary assets, best practices, and certified professionals to ensure efficient management. We provide management of Azure, AWS & GCP platforms/subscriptions for high performance and compliance at optimized costs

Azure Platform Management Service Deliverables

Service Element	Deliverables
Platform Support	
Subscription Administration - Virtual Machine	Create / Create from Image
	Start / Shutdown / Restart
	Attach / Edit / Detach /Delete virtual disk (Managed or Storage Account)
	IP Configurations / Public IP, Reserved IP
	Interface Network Security Group
	Set / Edit VM Size
	Enable / Disable Azure Disk Encryption
	Add / Remove Extensions
Subscription Administration – Storage	View storage subscription status
	Create General or Blob Storage Account
	Manage access keys
	Enable / Disable Storage Account Encryption
	Manage domain
	Delete storage account
	View Monitoring chart
	Create import / export jobs
	Configure replication, monitoring and logging
	Add / Edit / Delete containers
Subscription Administration - Recovery Services	Create site recovery or backup vault
	Create / Edit / Delete Scheduled Backups
	Take Ad-hoc Backups
	Delete site recovery or backup vault
	View registered and protected item status
	Monitor Jobs
	Delete registered item
Subscription Administration – Networks	Create / Edit Virtual Network and Subnets
	Export configuration, Edit, Delete local network Address spaces and VPN gateway
	View virtual networks status
	Set / View DNS Servers
	Create / Edit Azure Network Gateways
	Create / Edit Azure Route Tables
	Create / Edit / Delete Azure Load Balancers
	Edit / Apply Network Security Groups
Subscription Administration - Active Directory	View status of domain
	Active Directory User Synchronization Failure Resolution
Subscription Administration – Settings	View /Edit Management certificates
	View/Edit Service administrators, co-administrators, owners
	Create Custom RBAC roles
	Report on RBAC delegation
	Create / Edit / Delete RBAC access
	Create / Edit / Delete Resource Groups

Automation	Create / Maintain Automation Accounts
	Create / Edit Runbooks
Coordination with Cloud Provider	Logging Incidents with Microsoft, AWS, Google Premier Support from a 3rd line perspective
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.3 VMWare and Hyper-V Managed services

Products Covered under this service are -

- VMware vSphere Suite of products
- VMware vSAN
- VMware vCloud Suite®
- VMware vRealize™ Operations Manager™
- VMware vRealize
- VMware vRealize Log Insight™
- VMware NSX
- VMware HCX
- VMware on AWS
- VMware on Azure

VMWare Environment Management

Service Element	Deliverables
VMWare Support	
Availability and Capacity Monitoring	Monitor ESXi availability via the Availability Management Tool provided by Customer
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools

	Analyze Capacity monitoring reports and provide recommendations to Customer & the end customers provided that the Customer monitoring tool provides the relevant information
VMWare ESXi Host Service Management	Server management
	Manage and monitor the ESXi host service management
	Manage and monitor the Network, Storage controller services through VMWare kernel of ESXi server
	Server Firmware/application upgrades at a pre-agreed maintenance schedule
	Adding/Removing the Physical resources of ESXi host
Patch Management	Patching ESX hosts following the satisfactory completion of such updates in QA/Test environment and an agreement of a roll-out plan with Customer and Customer via change controls
	Test all the new patches in an simulated environment
	Installation of patches will be carried out during approved service window provided by business
VMWare Virtual Center (VC) Application Management	Creating Guest OS template
	Manage the VM Virtual Center services
	Adding/Modifying the VMGuest hardware configuration
	Cloning the VMWare guest based on necessary approval
	VM guest movement from one VM host to another VM host via VMotion
	Responsible for Virtual Disk movement based on Change/Service Request
3rd Party Co-ordination	Virtual Center Database management
	Coordination with Microsoft in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools as per Customer's required Service Levels
	Ensure the status of Incidents is updated in accordance with Customer's Incident Management Procedures
	To provide RCA within three working days for all Severity 1 incidents which are deemed necessary provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Customer Change Management Procedure
	Ensure all the changes are planned and implemented as per Customer Change Management Procedure
Problem Management	Provide input to Customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent their re-occurrence
	Identify opportunities to improve services via effective Problem Management

Hyper-V & SCVM Management

Service Element	Deliverables
-----------------	--------------

Hyper-V & SCVM Support	
Availability and Capacity Monitoring	Monitor device availability via the Availability Management Tool provided by Customer/Microland
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
	Analyse Capacity monitoring reports and provide recommendations to Customer & the end customers provided that the Customer monitoring tool provides the relevant information
Hyper-V Host Service Management	Server management
	Manage and monitor the Hyper-V host service management
	Manage and monitor the Network, Storage controller services
	Server Firmware/application upgrades at a pre-agreed maintenance schedule
	Adding/Removing the Physical resources of Hyper-V hosts
Patch Management	Patching of Hyper-V hosts following the satisfactory completion of such updates in QA/Test environment and an agreement of a roll-out plan with Customer and Customer via change controls
	Test all the new patches in an simulated environment
	Installation of patches will be carried out during approved service window provided by business
SCVM Application Management	Creating Guest OS template
	Manage the SCVM services
	Adding/Modifying the VM guest hardware configuration
	Cloning the VM as and when required
	VM guest movement from one VM host to another VM host via VMotion
	Responsible for Virtual Disk movement based on Change/Service Request
3rd Party Co-ordination	Coordination with Microsoft in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools as per Customer's required Service Levels
	Ensure the status of Incidents is updated in accordance with Customer's Incident Management Procedures
	To provide RCA within three working days for all Severity 1 incidents which are deemed necessary provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Customer Change Management Procedure
	Ensure all the changes are planned and implemented as per Customer Change Management Procedure
Problem Management	Provide input to Customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent their re-occurrence

Identify opportunities to improve services via effective Problem Management

4.4 Managed Operating System Services (Windows, Linux, Solaris)

The Managed Operating System service includes:

- Monitoring of the server OS instance, such that defects, failures, breaches in threshold limits resulting in the alarms along with performance monitoring of the Operating Systems.
- Performance Management including configuration of Operating System, Operating System Network configuration and Maintenance of the Operating System security configuration settings.
- Patch Management, restricted to the Operating System patch management only
- Antivirus Management, management of the Antivirus on the servers to ensure that the servers are always protected with the latest AV definitions and protected against vulnerabilities.

Service Element	Deliverables
Server Operating System Support	
Availability and Capacity Monitoring	Monitor device availability via the Availability Management Tool provided by customer
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
	Analyze Capacity monitoring reports and provide recommendations to the customer
Performance Management	Analyze the server's performance to check the stability and scalability
	Fine-tune the system performance as and when required
	Identify solutions for Performance and Capacity constraints and provide recommendations
Patch Management	Check latest Security and Critical patches and Hot fixes for the server OS
	Apply Operating System patches via change controls
Antivirus Management	Use the central AV console to manage the Antivirus
	Ensure the server is updated with latest AV definitions
	Take corrective actions if the AV definitions are not up to date
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure

Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.5 Backup Management

Service Element	Deliverables
Backup and Restoration Support	
Availability Monitoring	Monitor Backup tools availability via the Availability Management Tool provided by Customer
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
Performance Management	Fine tune the backup performance as and when required
	Identify solutions for Performance and Capacity constraints and recommend to Customer / End Customer
Backup Management	Microland shall monitor the backups for the devices under the scope
	Ensure backups are taken as per the agreed backup schedule
	Proactively verify the tape availability in the tape library and its inventory (logical) and escalate any issues to Media Team
	Perform restoration of the data as and when required in accordance with Customer required Service Levels
	Provide retention, restoration & test of backups performed as per Customer's Backup Policy
	To ensure Incident calls are raised via Service Now for all the backup failure problems
	To resolve all the backup related Incidents for devices in scope of support
	Liaise with Customer media team for all the tape related issues including secure retention, rotation of back-up media, etc
	Microland in conjunction with Customer and Customer shall define device backup strategy, policies, backup scheduling, and backup software configurations
	To maintain backup media catalogues and other necessary information to provide effective Data restoration by Microland
3rd Party Co-ordination	Coordinate with 3rd Party vendor if Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools as per Customer required Service Levels
	Ensure the status of Incidents is updated in accordance with Customer Incident Management Procedures

	To provide RCA within three working days for all Severity 1 incidents which are deemed necessary provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Customer Change Management Procedure
	Ensure all the changes are planned and implemented as per Customer Change Management Procedure
Problem Management	Provide input to Customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent their re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.6 Storage (SAN/NAS) Management

Service Element	Deliverables
Storage Device Support	
Availability Monitoring	Monitor appliance availability via the Availability Management Tool / SNMP alerts provided by Customer
	Monitoring and Management of Hard drives in SAN Arrays
	Identification of storage device failures (hardware, system)
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
	Storage Networking management (SAN Switches)
	Monitor and keeping up to date replication as per the standard installed in conjunction with virtualizations and recoveries
Storage Administration	Configure or Re-configure in accordance with client Management Procedure of • Raid Groups/pool • LUN Groups • Storage Groups
	Provisioning of additional disk space
	De-provisioning of Raid Groups
	Co-ordinate with appropriate operating system team for troubleshooting HBA card issues
	Investigate any bugs in the Array software and come out with solutions or deploy hot fixes in concurrence with the OEM
	Configuration of new zone server/tape drive added in the SAN switches
	Creating/Deleting the File system
	Creating /Deleting of File systems snapshots
	Configure/ Delete and expand replicated LUN

Performance Management	Analyze the Storage performance to check IOPS, stability and scalability
	Fine tune the system performance as and when required
	Determine opportunities for improving the performance and reducing the utilization of the SAN and make recommendations
	Providing specific LUN performance report as and when necessary
Patch Management	Recommend Firmware updates on SAN Devices
	Co-ordinate with storage vendor for firmware upgrade
3rd Party Co-ordination	Coordination with principal vendor in case Microland requires product line (4 th level) support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools as per Customer's required Service Levels
	Ensure the status of Incidents is updated in accordance with Customer's Incident Management Procedures
	To provide RCA within three working days for all Severity 1 incidents which are deemed necessary provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Customer Change Management Procedure
	Ensure all the changes are planned and implemented as per Customer Change Management Procedure
Problem Management	Provide input to Customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent their re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.7 Managed Database Services with Disaster Vigilance (SQL, Oracle, MySQL)

As a specialist IT services provider, our extensive experience enables optimization, transformation, and efficient management of databases across multiple database technologies. Our database services enable:

- **Enhance agility:** Our customer-focused, business-need-aligned solutions enable improved responsiveness and disaster vigilance
- **Increase service availability:** Our effective performance management methodologies improve uptime and availability of data ecosystems
- **Build robust data architecture:** Our services aid in the quick and effortless setup of multi-tenant data infrastructure
- **Provide comprehensive support:** Our services support all major database technologies on-premise or on-cloud across flexible delivery models and support windows
- **Automation and Analytics:** Our automation and analytics-driven initiatives such as dashboard reporting, process optimizations, and continual service improvements through left shifts ensure easier and cost-optimized data environment management

Service Deliverables (SQL, Oracle, MySQL)

Service Element	Deliverables
Database Support	
Availability Monitoring	Monitor Database availability via the Availability Management Tool provided by the customer
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
Performance Management	Fine tune the database performance as and when required
	Identify solutions for Performance and Capacity constraints and provide recommendations
Patch Management	To check latest Database related patches
	Assess the current patch and its applicability
	Apply service patches and configuration settings to databases and ensure that such service patches and configuration settings shall only be applied following the satisfactory completion of proper testing and in agreement of a roll-out plan with the customer
	Maintain the integrity of all databases by applying latest service patches and configuration settings as recommended by the OEM vendor or identified by the Incident and Problem Management processes in compliance with the Configuration Management procedures
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.8 Managed Infrastructure Application Services

Microland's Infrastructure Application Management services address a wide range of enterprise requirements. The Application Management Services portfolio includes, but not limited to:

- Active Directory
- DNS/DHCP

- Web Services (IIS, Apache)
- Microsoft SharePoint
- Citrix XenApp
- Microsoft SCCM
- SolarWinds
- Microsoft SCOM

Microland's Managed Application services enable:

- Enhanced performance, user experience, and compliance at optimum investment
- Maximum up time for critical applications
- A scalable environment employing industry best practices
- A stable environment with ITIL-aligned processes and meticulous governance

a. Managed Active Directory Services

Service Element	Deliverables
Microsoft Active Directory Services Support	
Availability Monitoring	Take necessary corrective actions for all the valid alerts received through the monitoring tools provided by the customer and/or during health checks
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
Active Directory Management	Manage FSMO roles
	Site replication checks, Event log monitoring. Intersite and intrasite replications
	Group Policy Management, Testing & Implementation
	Group Policy for servers and application access
	Creation and management of the shared folders
	Managing domain and domain controller security policies
	Configuring directory service parameters, such as setting the functional level of a forest or putting the directory in the special List-Object security mode
3rd Party Coordination	Manage Active Directory Sync service
	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure

Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

b. Managed DNS/DHCP Services

Service Element	Deliverables
DNS/DHCP Services Support	
Availability Monitoring	Take necessary corrective actions for all the valid alerts received through the monitoring tools provided by the customer and/or during health checks
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
DNS/ DHCP Management	Administration of the DHCP scopes, superscopes and reservation as per the IP range defined by the Network Support team
	Backup and restoration of the configuration database
	Creation, deletion and alteration of DHCP scopes and reservation
	DNS administration and new entries for DNS zones, alias name and SRV records etc.
	Troubleshooting DNS issues
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

c. Managed Web Services (IIS, Apache) Deliverables

Service Element	Deliverables
Web Services Support	
Availability Monitoring	Take necessary corrective actions for all the valid alerts received through the monitoring tools provided by the customer and/or during health checks

	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
Performance Management	Fine tune the application performance as and when required using vendor recommendations
Patch Management	To check latest patches
	Assess the current patch and its applicability
	Apply patches as per vendor recommendations or using standard processes and apply following the satisfactory completion of proper testing and in agreement of a roll-out plan with the customer
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

d. Managed SharePoint Services

Service Element	Deliverables
SharePoint Support	
Availability Monitoring	Monitor SharePoint service availability via the Availability Management Tool provided by the customer
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
Application Management	Manage SharePoint Groups ○ Add/Remove users to the appropriate SharePoint group(s)
	Ensure that all the users are able to access the site(s) with the right kind of permissions
	Create/Delete site level custom permissions (based on the requirement)
	Site Customization ○ Creation/Deletion of web applications ○ Browser level customization of existing web content

	Solution Management - Managing features - Deployment of any third party/custom modules - Managing master pages & layouts
Performance Management	Analyze the SharePoint server's performance to check the stability and scalability
	Fine tune the system performance as and when required
Patch Management	Check latest SharePoint patches and Hot Fixes
	Apply SharePoint patches via change controls
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

e. Managed Citrix Services

Service Element	Deliverables
Citrix XenApp Support	
Application Management	Managing Citrix XenApp
	Managing the Citrix Web interface
	Publish Applications as per customer requirements
	Provide access to users to published applications / Desktop / Resource / File or Folder
	Configure and modify the Citrix policies
	Printer Management – Carry out the driver installation/mapping on the Citrix servers. Work with end client to resolve printing issues. Install and configure Citrix universal print drivers.
	Manage Citrix licenses and usage
	Install agreed upon application on production site
	Configure and manage Citrix scan client and policies
	Analyze the Citrix server's performance to check the stability and scalability
Performance Management	Fine tune the system performance as and when required
	Add / Remove servers from Farm

	Management of load activity in the farm
Patch Management	Check latest Citrix patches and Hotfixes
	Apply Citrix patches via change controls
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

f. Managed SCCM Services

Service Element	Deliverables
	SCCM Support
Availability & Capacity Monitoring	Take necessary corrective actions for all the valid alerts received through the monitoring tools provided by the customer and/or during health checks
	Monitor for threshold violations against pre-configured performance monitoring thresholds
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
	Analyze capacity monitoring reports and provide recommendations
Software Updates Management	Windows patch updates on Servers, Desktops as well as VDI Templates
	Check for available patches, hotfixes & updates every month and select required updates for deployment post agreement with the customer.
Performance Management	Fine tune the application performance as and when required using vendor recommendations
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnosing and resolving all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures

	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

g. Managed SolarWinds Services

Service Element	Deliverables
	SolarWinds Support
SolarWinds Management	Managing SolarWinds Integrated environment
	Managing and adhere to SolarWinds license compliance
	Managing and control of network discovery through SolarWinds NPM module
	Commission and decommission of devices in SolarWinds
	NCM: plan and schedule backup on network devices
	NCM: Policy Management
	User Access Control
	Customize dashboard and report as per organization needs
	Alert Integration with ITSM and its management
	NCM : Manage Device Configuration Template
	Manage Network Mapping with SolarWinds topology
	Management of SNMP / WMI communication from SolarWinds to endpoints
	NPM: Design, Installation and management of NPM
	Managing Orion Web Console Message Center
	Managing multiple technologies via SolarWinds monitoring and alerting
	Creating and managing groups in SolarWinds
	Managing /assigning respective Universal Device Poller to the nodes and management of polling engine
	Event correlation management using SolarWinds event manager
	Supporting SNMP Traps wherever it's applicable
	Management of SolarWinds Orion Database and it's backup
	NTA: Planning, deploying and managing of NetFlow Traffic Analyzer
	Configuration & refinement of NTA
	SolarWinds Web-console management in respect to all Orion suits
	Troubleshooting and resolving SolarWinds suits of products
	IPAM: Installation, Configuration and Support
	Configuration of Subnet Scan Settings
	Enabling and disabling IP address using IPAM
Performance Management	Fine tune the application performance as and when required using vendor recommendations

3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnosing and resolving all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures
	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

h. Managed SCOM Services

Service Element	Deliverables
SCOM Support	
SCOM Management	Managing SCOM Environment
	Designing, developing, unit testing, and troubleshooting MPs
	Install, Configure and Customize management packs
	Ensure SCOM clients are running and healthy on all servers
	Create Custom Monitoring and Alerts
	Create views and SCOM reports
	Installing Cumulative Updates and latest Service Packs for SCOM
	Log auditing
	Removal of insecure packages and unnecessary software
	Advanced administration of Microsoft SCOM
	Managing respective/customized scripts in SCOM
	Managing SCOM service model and its usage (classes, relationships, referenced classes)
	SCOM Management Pack Authoring
	Deployment of integration, management of integration
	Refinement existing management packs to improve monitoring solution
	Certification management
Performance Management	Fine tune the application performance as and when required using vendor recommendations
3rd Party Coordination	Coordinate with OEM vendor if in case Microland requires 4th level support to resolve problems
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools in line with agreed Service Levels
	Ensure the status of Incidents is updated in accordance with Incident Management Procedures

	To provide RCA within five working days for all Priority 1 incidents which are deemed necessary, provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Change Management Procedure
	Ensure all the changes are planned and implemented as per the Change Management Procedure
Problem Management	Provide input to the customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent such re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.9 Managed Hyper Converged Infrastructure Services (Nutanix)

Nutanix Block Support (Compute, Storage and Network)

Service Element	Deliverables
Nutanix Support	
Availability Monitoring	Monitor network device availability via the Availability Management Tool provided by Customer
	Take necessary corrective actions for all the valid alerts received through the monitoring tools
Compute Administration	Create service profiles in accordance with the client
	Create / Manage / Modify pools
	Association / Disassociation of Service profiles with respective Node
	Troubleshooting on Chassis and Flex /IO modules
	Manage / Troubleshoot Fabric interconnects
	Create / Modify / Assign VLANs
	Comprehensive management of the systems using the CVM
	Troubleshooting on Nutanix Nodes
	Virtualization · Modify / Delete / Manage Hyper-V Hosts · Configure / Manage SCVMM · Create / Modify / Delete / Manage virtual switches · Create / Modify / Delete / Manage Datastores · Create/Manage Resource Pools
	Configuring and Re-Configuring: · Volumes · Host Groups
Storage Administration	Provisioning additional disk space
	Create / Remove Hosts
	Create / Expand / Destroy Volumes
	Creating / Deleting / Troubleshoot snapshots
	Configure zoning on a fabric switch
	Troubleshooting issues on fabric switches

	Troubleshoot issues regarding hardware failure
	Co-ordinate with appropriate teams for troubleshooting HBA card issues
Network Administration	Taking a backup of Switch configuration
	Troubleshooting port-related issues
	End to end communication test as a part of monitoring
	Configure / Manage / Delete VLANs
	Configure or Re-Configure in accordance with client management procedure
CVM Management	Create / Manage Complete cluster
	Configure the management servers
	Troubleshooting issues related to management servers
	Provision / Modify / Manage storage
	Provision / Modify / Manage switches
Performance Management	Analyze the performance to check the stability and scalability using the available toolsets
	Troubleshoot performance related issues
	Monitor traffic and provide inputs to enhance and maintain the efficiency and resilience
Patch Management	Recommend Patch deployment to Customer
	Co-ordinate with the Nutanix and apply patches in accordance with the Customer Change Management Procedure
3rd Party Coordination	Coordinate with Nutanix if Microland needs 4th level support to resolve problems
	Co-ordinate with the vendor for hardware faults and replacements
Incident Management	Diagnose and resolve all Incidents that can be resolved using remote management tools as per Customer's required Service Levels
	Ensure the status of Incidents is updated in accordance with Customer Incident Management Procedures
	To provide RCA within three working days for all Severity 1 incidents which are deemed necessary provided they are not linked to a Problem Record wherein the RCA is provided via the Problem Record
Change Management	Adherence to Customer Change Management Procedure
	Ensure all the changes are planned and implemented as per Customer Change Management Procedure
Problem Management	Provide input to Customer on the causes of Problems, the effort that would be needed to correct such Problems and what could be done to prevent their re-occurrence
	Identify opportunities to improve services via effective Problem Management

4.10 Data Center Management

Microland's Data Center Management Services solve the rapidly evolving enterprise customer business challenges for managing on-premises environments consisting of private clouds, and physical and virtualized infrastructure. Microland's proprietary methodology resolves technical, political, and organizational challenges while addressing many customers' security and regulatory concerns.

Microland offers a comprehensive range of services that cater to diverse IT infrastructure needs, from traditional data center operations to fully managed private cloud solutions powered by cutting-edge technology. Our Data Center Management Services suite includes Managed Hosting, Server and Storage Management, Virtualization, and spanning multiple platforms and technologies. For private clouds, we enhance our service suite with cloud service catalog-based automated provisioning, configuration management, cost/capacity optimization, increased flexibility, and self-service capabilities. All these benefits are delivered in a secure and dedicated environment, offering an appealing pathway to hybrid data center/cloud environments for enterprise customers.

Our services include:

- **Security and Compliance:** We understand the importance of protecting your critical data and systems and will ensure that your data center is secure and compliant with industry regulations and standards.
- **Monitoring and Troubleshooting:** This involves monitoring your data center around the clock to ensure its availability and performance and quickly resolving any issues that arise.
- **Asset Management:** This involves tracking and managing the assets within the data center, including servers, storage devices, and other hardware components.
- **Capacity Planning and Management:** This involves forecasting and managing data center capacity to ensure that it meets the current and future needs of the organization.
- **Software and Operating System Management:** This involves the management and maintenance of the software and operating systems running on the data center infrastructure

With our team of experts and a focus on the latest technologies and best practices, we can help you achieve your goals and take your business to the next level with the following benefits:

1. Efficiency through an integrated ITSM, Observability & Hyper-Automation
2. Scalable IT Transformation – ensuring “Always On” Business Availability
3. Integrated Operation - ensuring IT agility aligns with Business needs
4. Cohesive Governance driving Digital Enablement & Hybrid Strategy
5. Transparent Financial Models for greater Predictability

Microland's Data Center Management Services leverage Intelligeni Bots, our Data Center Automation framework, to automate 60% of the Management activities, thereby reducing MTTR and leading to increased availability, reliability, and efficiency of Data Centers.

Service Tiers	Basic		Standard		Advanced	
Technology Management	Usage Administration	Capacity and Demand Management	Usage Optimization	Infrastructure Life Cycle Management	Application Performance Management (APM)	Software Defined Data Center Management
	Monitoring and Event Management	Backup and Restore Management	Align resources with Business groups	OS Patch vulnerability test	XaaS & Service Catalogs management and entitlements	Custom Integration & Dashboards
	Security and Access Management	Patch Management	PaaS, IaaS catalog management and entitlements	Infrastructure Blueprint	Edge Computing Management	HCI & Other modern Infra Management
	CMDB and Knowledge Management	Identity & Access Management	Log Analytics and Management	Virtualization Management		
Service Management	Incident/Problem Management	Change & Config Management	Service Level Management	Security & Compliance Management	Capacity & Demand Mgmt.	Service & Vendor Management
Operations Management	Shift Roster Management	Resource Management	Service Quality Improvements	Program Management & Governance	Reporting	
Technologies	Beam	TRAVERSE by Kaseya	ZABBIX	vmware vRealize Automation	vRealize Orchestrator	vmware vRealize Log Insight
					vmware NSX	vmware

Figure 12: Service Tiers of Data Center Managed Service

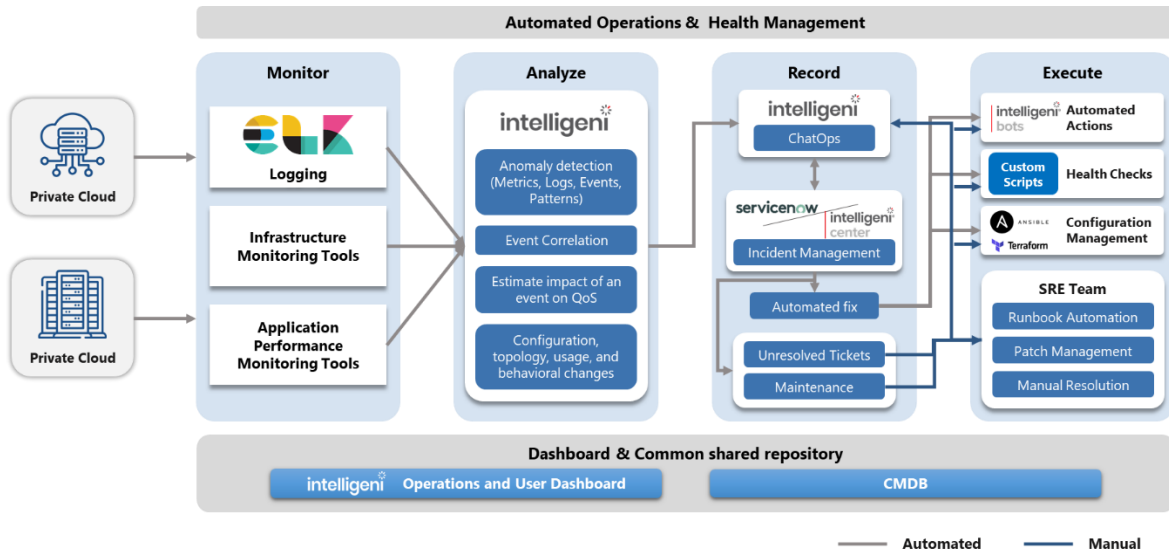


Figure 13: Overview of Microland's Automated DC Operations

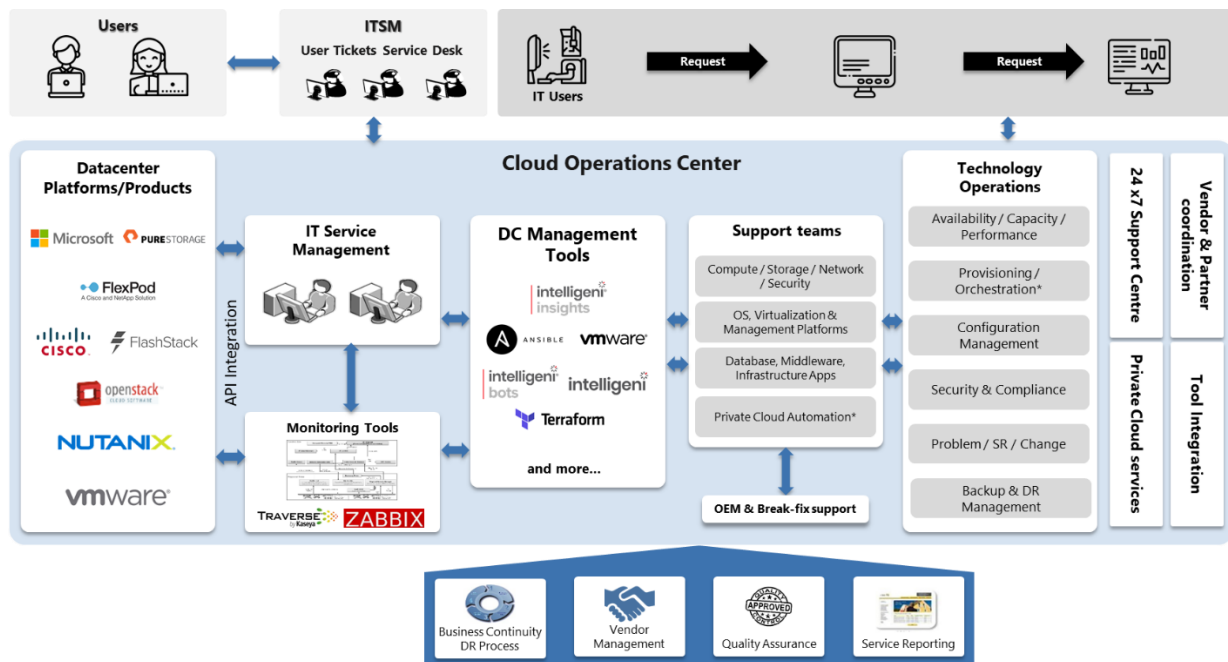


Figure 14: Microland's Modern Data Center Operations Model

Delivery Model:

Factory	Remote & shared delivery model with shared team, infra & tools
Remote	Remote delivery with dedicated team, infra & tools
Onsite	Onsite team with dedicated infrastructure & tools
Hybrid	Right sized & distributed team with dedicated infrastructure & tools
Standard Service Windows	24 * 7 12 * 5 8 * 5

Pricing Model:

Percentage of Spend*	- Where PaaS spend is 50% or more - Hybrid-Where IaaS spend is 50% to 80%
Unit Based	- Per VM + Per Cloud Account/Subscription - Per Cloud Resource + Per Cloud Account - Where IaaS spending is 80% or more
Fixed Price with ARC/RRC	- Fixed Device and Work Volumes - Slabs for additional/reduction load
T&M Based*	FTE Based with SLA

Note:

All models have minimum baseline volumes/duration

* Non-Standard Models – Conditions Apply

Infra = Connectivity, tools, delivery network, laptops, license, Email IDs, etc.

4.11 Hybrid Cloud DRaaS

Microland's DRaaS solution is a fully managed, highly automated cloud-based disaster recovery solution. It provides comprehensive disaster recovery services including health monitoring, and continuous replication of business-critical applications, infrastructure, data, and systems.

Key features of our Cloud DRaaS include:

- **Improved RTO and RPO:** Our use of cloud-native and leading partner solutions, continuous automated, monitoring, and testing of recovery scenarios enable us to provide enterprises with near-zero RPOs and less than 15 minutes RTOs
- **End-to-End solution:** Our DRaaS helps enterprises strategize their recovery plan to support the business, design a customized solution, implement the solution with best practices, and continually manage recovery tests and drills to help protect and recover the business during real disaster situations.
- **High level of automation:** Microland's custom automation approach enables DRaaS to achieve 50% reduced solution deployment times, with more than 80% automated recovery drills, compliance checks, and automated failovers that ensure enterprises get their business back up and running seamlessly.
- **Security and reliability:** Leveraging the cloud provider's robust security and compliance standards, reliable infrastructure and Microland's best practices and tools, we ensure that your enterprise data is secure and disaster recovery solution is always available.
- **Cost-effectiveness:** Our DRaaS offers a cost-effective solution, with a pay-as-you-go model. It is easy to implement and maintain, with no upfront cost of infrastructure and staffing or lock-ins if colocation is leveraged.
- **Flexibility and scalability:** Our DRaaS provides organizations with more user control and the ability to scale their computing resources to the production environment in a short period.
- **Choice of Cloud:** Our DRaaS provides recovery on the top three hyperscalers and allows enterprises to set up recovery forms between on-premises and public cloud, multiple regions of the same cloud, and among different public cloud providers.

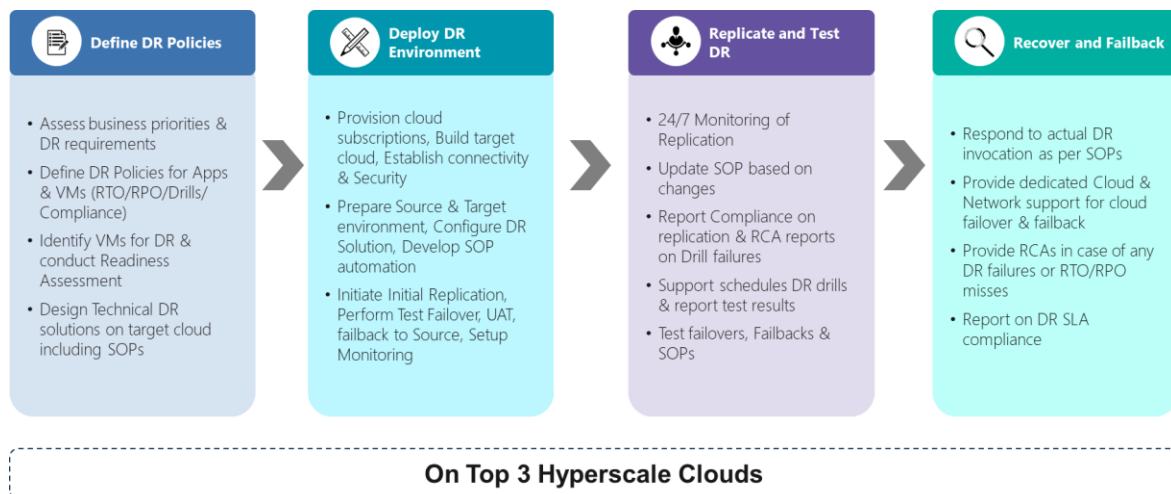


Figure 11: Enable Guaranteed Business Continuity with Hybrid Cloud DRaaS

5. DevOps Services

Microland's DevSecOps platform is designed to help enterprises adopt cloud-native and microservices in a flexible and scalable manner. With a focus on API-centric approach, the platform enables the implementation of DevSecOps culture and CI/CD for faster deployment while reducing costs. It also provides SRE and DR for microservices at heart, automating the management and monitoring of micro service environments. By adopting DevSecOps, businesses can reduce DevOps implementation costs by 30% and achieve build, deploy, and release cycles that are 20-40% faster.

Microland can support customers throughout their DevOps journey.

- **DevOps Assessment framework:** Powered by our proprietary solution accelerators, Microland's DevOps Assessment Framework provides a customized approach to assessing customer applications, tools, teams and processes. Our framework provides maturity level scores and recommends the DevOps roadmap for existing IT environments.
- Microland's DevOps Adoption Framework helps define an adoption strategy for organizations wanting to move to the DevOps paradigm. The framework provides a structured approach guiding customers in their DevOps transition journey, defining process workflows, life-cycle models, solution architecture and organization structure based on best-in-class industry standards.
- Microland's DevOps Integration & Automation Services employ tool-chain and multi-product integration mechanisms across heterogeneous environments/architectures enabling customers to improve process quality & reduce costs.
- Microland's DevOps Environment-Managed Services ensure businesses reap the maximum benefits from their DevOps investments through efficient management of DevOps environments. Our services range from creation & monitoring to end-to-end management of DevOps tool chains and processes. Delivered by certified DevOps experts, our services guarantee increased availability, end-to-end traceability, and optimized performance of the DevOps environment.
- Our Infrastructure-As-Code services allow the creation of cloud infra on an on-demand basis, promoting faster go-to-markets.
- We are one of the Global MSPs for CloudBees (Jenkins) and have our own DevOps orchestration IP, DevSecOps.

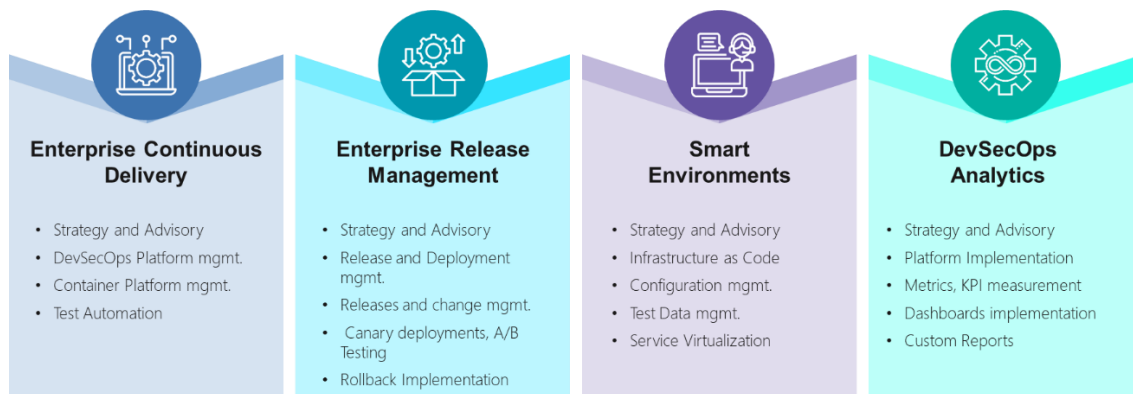
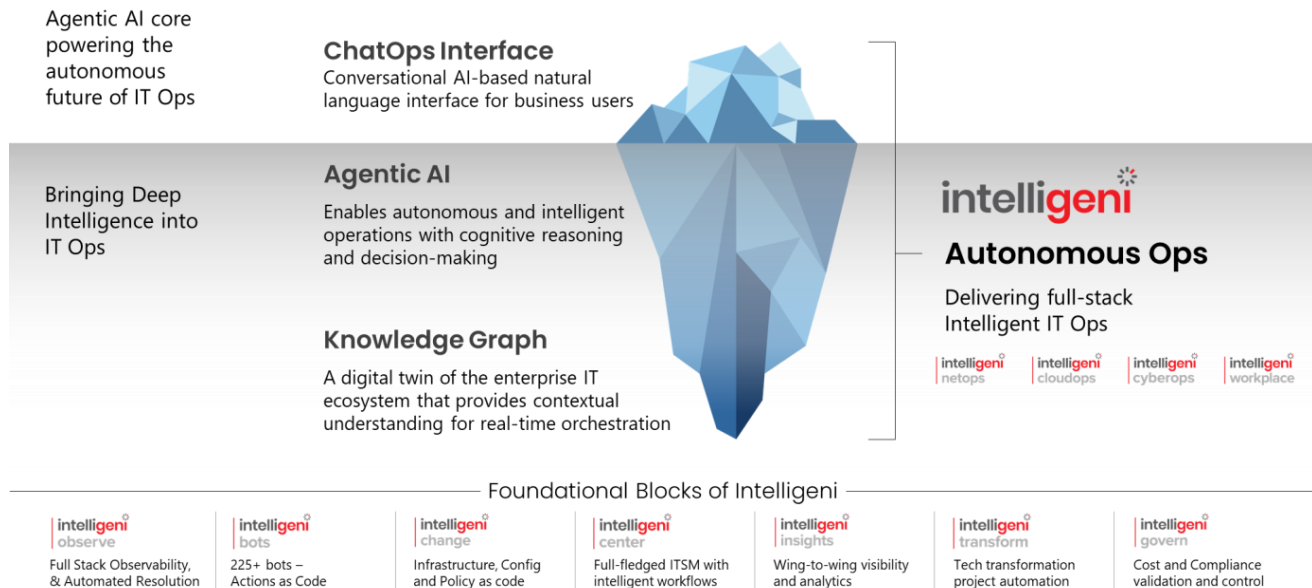


Figure 12: Faster & Secure Releases with DevSecOps

6. Tools and Platforms

In addition to Microland's Intelligeni platform, Microland will leverage and maximise the customer's investments in technology to deliver the managed services:

- **Availability Monitoring:** Customer provided Availability Monitoring Toolset
- **Service Management:** Customer provided Service Management Toolset



7. Service Coverage Window

The Service coverage for this service is as follows:

UK Business Hours Monday to Friday (not including UK Bank Holidays) for all priorities and 24x7 call out support for high severities (Priority 1 and Priority 2). Hence the overall support timing for the various severities are as follows:

- **Priority 1** – 24x7x365
- **Priority 2** – 24x7x365
- **Priority 3/4** – UK Business hours 08:30 am to 5 pm only

8. Service Location

Microland will deliver the services from the Microland Delivery Centers located in Bangalore, India and United Kingdom or from the Customer Premises. Additionally, if necessary, services can be provided by security-cleared staff.

9. Service Delivery Principles

For all Services provided by Microland to the Customer, the Customer will be responsible for the Service definitions, infrastructure and overarching governance including architecture design, provisioning of hardware, and overall platform capacity management of all Services delivered within the scope of the agreement.

The Principle of the Service Delivery Model is as follows:

- Customer service management processes are used for end-to-end delivery of Service within scope.
- Microland support for the service will be 24 x 7 x 365 for all high and critical incidents.
- All Intelligent hands requests will be processed and delivered by the Customer organization.
- Microland will provide governance of the Deliverables in scope and will have Service Governance and Quality Assurance processes in place to demonstrate effective management and reporting of the services delivered.
- Focus on Customer requirements and satisfaction.
- Microland will provide thought leadership and continuous improvement discipline across the entire Service Delivery framework. The associated value-add will be measured and reported on a regular mutually agreed intervals through continual improvement forums with the Customer.

10. Service Governance

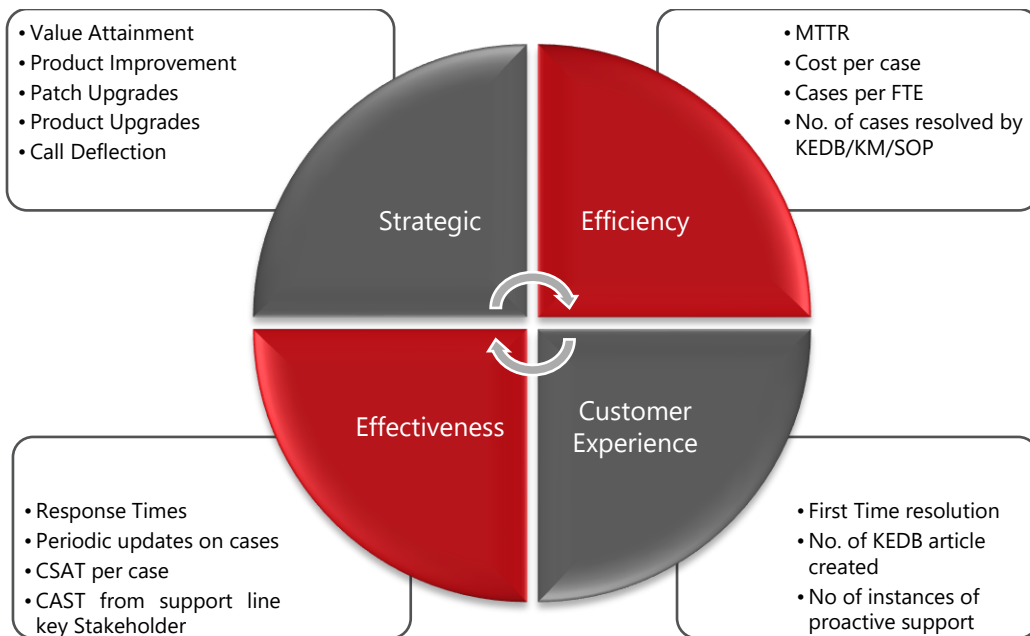
Microland and the Customer will jointly ensure that a strict service management discipline is always adhered to. This will be managed via a tightly defined set of service management policies and procedures that must be adhered to by both parties involved in the delivery of services.

Service Governance requirements are as follows:

S. No.	Deliverables	Customer	Microland
1	All Service Management Policies will be always adhered to	C	A
2	Weekly Service Reports to be produced as part of current weekly reporting structure	C	A
3	Weekly Service Reviews to be held	A	R
4	Monthly Performance Dashboard to be produced. This will contain information relative to SLAs and OLAs	C	A
5	Monthly Performance Review to be performed	A	R
6	Continual Service Improvement to be demonstrated	C	A

11. Quality Assurance

The balanced scorecard followed by Microland, in outsourced technical support engagements of this nature, is a comprehensive and detailed scorecard and measures performance related KPIs.



Microland focuses on 4 key aspects of engagements, to capture the overall performance:

- **Strategic** - This dimension covers strategic aspects of value attainment, Customer retention and growth strategies, and product support improvement like call defection methodologies etc. This is one of the critical areas of the engagements.
- **Efficiency**– The measurement of the relevant parameters in this dimension reflects the engagement performance in the key areas of service improvement, process maturity, productivity improvements and technology automation.
- **Customer Experience** – These covers aspects which lead to Customer delight, e.g. self-help articles, first-time resolutions etc.
- **Effective** – The measurement of the relevant parameters in this dimension reflect the performance in terms of support quality like CSAT results, proactive and periodic updates on cases, better response times etc.

Each block will have appropriate metrics that are key to performance measurements. Each of the metric listed will have different weightages, in line with product line expectations. The top metrics will become the SLA and the remaining be measured as KPI for quality and sustainability.

When a particular KPI or SLA with a low performance is identified, the following actions are taken to improve it:

- **Reviews:** Feedback and reports are reviewed periodically for service improvement opportunities. The triggers include SLA breaches, process breaches, etc. to take remedial action, resulting in improved productivity, reduced cycle time, etc.
- **RCA & Trend analysis:** Trend analysis of the received Customer requests to ensure the issues the fixed permanently at the root level.
- **Customer Feedback:** Engagement-specific feedback and Customer satisfaction responses are considered for improvement opportunities. Variations in satisfaction levels are investigated, understood,

and considered as input to support improvement. A lower satisfaction rating is considered a breach and corrective action is taken, e.g. training the technical support engineer, having knowledge articles created for a certain recurring problem, etc.

- **Customer Complaints:** Customer complaints are analyzed periodically to identify trends leading to improvement opportunities for specialized support in certain areas.
- **Internal / External Audits and Assessments:** Non-conformances and observations reported as a part of Internal / External assessments are analyzed to feed into service improvement programs.

12. Service Performance Reporting

Microland will submit Full Service & Quality check reports periodically, based on the status of the program. Typically, these reports will be provided on weekly, fortnightly and monthly basis in formats that will be as per Customer guidelines. These reports will include:

- Service delivery performance with respect to the Service Level Agreements (SLAs)
- Critical incidents that had an impact on the availability of IT services or user satisfaction and plans to prevent/handle such incidents in future
- Highlights and issues / concerns
- Analysis of service performance reports and improvement actions
- Customer/user complaints or escalations and the corrective and preventive actions

Microland's Service Delivery Manager will schedule and conduct a monthly management review meeting. The participants from Customer organisation may include Project Manager, Tower Leads, Service management executives and any other key executives. The review includes performance against service levels, critical incidents and resolution and open problems, if any. The agenda for such meetings will include:

- Highlights of the past month's performance, on major issues reported any service delivery trends and service achievements.
- Explanation on outstanding matters from previous periods and, in particular, issues which have been or are about to be escalated
- Customer satisfaction and trends
- Review of the scheduled workload
- Suggestions for improvements in service delivery
- Issues with contract management, billing / invoicing and other financial matters

In addition to the monthly reviews, Microland will hold quarterly and annual reviews, around the structure of services delivered to the Customer, to ensure their relevance and alignment to the business goals.

13. Service Level Agreements

Microland will adhere to the below Service Level Agreements & KPI's for all in-scope services:

	Type	Service Levels	Target (Percentage or Minutes)	Measure	Formula	Measurement Window
Response Time	SLA	Priority 1 Response Time - Each Priority 1 (Critical) calls responded to within 15 minutes	95%	For each Priority 1 (Critical) Incident, from the time the Ticket is logged in the Ticket Management System and queued to Partner, to the time that the assigned resolving team electronically accepts the Incident.	Number of Priority 1 Incidents responded to within 15 minutes in the Measurement Period ----- ----- X 100 Number of Priority 1 Incidents logged within the Measurement Period	24 x 7
	SLA	Priority 2 Response Time - Percentage of Priority 2 (High) calls responded to within 30 minutes	95%	For each Priority 2 (High) Incident, from the time the Ticket is logged in the Ticket Management System and queued to Partner, to the time that the assigned resolving team electronically accepts the Incident.	Number of Priority 2 Incidents responded to within 30 minutes in the Measurement Period ----- ----- X 100 Number of Priority 2 Incidents logged within the Measurement Period	24 x 7
Resolution Time	SLA	Priority 1 (Critical) Incident Resolution - Each Incident Resolved within 4 hours (240 minutes)	95%	For each Priority 1 (Critical) Incident, from the time the Ticket is logged in the Ticket Management System and queued to Partner, to the time that the Incident is Resolved	Number of Priority 1 Incidents Resolved within 240 mins in the Measurement Period ----- ----- X 100 Number of Priority 1 Incidents logged within the Measurement Period	24x7
	SLA	Priority 2 (High) Incident Resolution - Each Incident Resolved within 8 hours (480 minutes)	95%	For each Priority 2 (High) Incident, from the time the Ticket is logged in the Ticket Management System and queued to Partner, to the time that the Incident is Resolved. Subject to a minimum of 20 tickets per Customer per month	Number of Priority 2 Incidents Resolved within 480 mins in the Measurement Period ----- ----- X 100 Number of Priority 2 Incidents logged within the Measurement Period	24x7

	SLA	Priority 3 (Medium) Incident Resolution - Percentage of Incidents Resolved within 4 Business Days	90%	For each Priority 3 (Medium) Incident, from the time the Ticket is logged in the Ticket Management System and queued to Partner, to the time that the Incident is Resolved. Subject to a minimum of 20 tickets per Customer per month	Number of Priority 3 Incidents Resolved within 3 business days in the Measurement Period ----- ----- X 100 Number of Priority 3 Incidents logged within the Measurement Period	Core UK hours
	SLA	Priority 4 (Low) Incident Resolution - Percentage of Incidents Resolved within 10 Business Days	90%	For each Priority 4 (Low) Incident, from the time the Ticket is logged in the Ticket Management System and queued to Partner, to the time that the Incident is Resolved. Subject to a minimum of 20 tickets per Customer per month	Number of Priority 4 Incidents Resolved to within 5 business days in the Measurement Period ----- ----- X 100 Number of Priority 4 Incidents logged within Measurement Period	Core UK hours

13.1 Service Level Calculations

1. All SLA measurements will be implemented with the aid of data captured during actual transactions by the Service management system and using analytical capabilities built into the Service management system.
2. SLA's will be measured against defined performance targets during each calendar month operational cycle.
3. At the end of each calendar month operational cycle, the activity counters for compliance and non-compliance shall be reset to zero, and the measurement process of SLA adherence shall begin again.
4. All delays related to non-Microland teams shall be excluded when reporting Microland Operational SLA compliance.
5. Any design-specific issues, hardware issues or product specific issues (like End-of-Life Products) are excluded from SLA measurement.
6. All incident breaches that cannot be pended due to various dependencies, viz. 3rd Party, non-Microland teams, user feedback etc., are excluded from Microland SLA calculations.

13.2 Exclusions from SLA

1. The time lapsed for an incident, which is pending due to end-user delay in responding to a ticket, will be excluded from the measurement/calculation of SLA Target of Microland as mentioned above.
2. The time lapsed on any other incidents escalated to third-party vendors or other support groups will be excluded from the measurement/calculation of the SLA Target of Microland as mentioned above.
3. The SLA will begin to toll when the third party resolves the open issue, either by addressing the problem or remanding it back to Microland with a solution.
4. The support for all EOS/EOL products will be delivered only on a reasonable endeavor basis and will be excluded from the measurement/calculation of the SLA Target of Microland.

5. Delay due to a Force Majeure event or any acts or omission beyond the control of Microland.

14. Exclusions & Assumptions for Managed Service

14.1 Service Exclusions

1. Provisioning and Supply of all hardware, software and licenses
2. Vendor (Hardware and Software) Contract Management
3. The following services are deemed to be out of the scope of this Statement of Work:
 - a. Service Management
 - b. Smart Hands & Eyes within the datacentre;
 - c. Activities related to planned DR exercise that are not considered BAU;
 - d. Product version upgrades (Version upgrade is defined as an upgrade from a current version of the product to next available/suggested version which requires a focused project-based approach to ensure risks are properly analyzed & risk mitigation/minimization activities are carried out while doing an upgrade);
 - e. Technology and Platform migrations to new/other platforms.
 - f. Dedicated support request for apps upgrade activity.
 - g. Infrastructure/Product upgrade/hotfix implementation as a prerequisite for a project requirement or requirement from user/business for additional features within the existing product;
 - h. Capacity upgrade or activities based on the outcome of the capacity review to cater to growing demand or new requirements from business, other than those tasks that are accepted through the business-as-usual change process;
 - i. The rollout of customized/standard scripts related to OS or software across site/multiple servers/devices;
 - j. Any specific reporting requirements from the user/business that are significantly different than standard reports delivered or any new reporting requirements from the user/business or reporting requirements where the Customer has not provided the required toolset to deliver the report;
 - k. Any significant changes to infrastructure design as a result of business or security requirements.
 - l. Any desktop-specific activities like AV monitoring for desktops, patching of desktops, etc.
 - m. Manual Monitoring of Key services/applications, excluding services and applications currently monitored and any monitoring that has been agreed to provide during the introduction of new services.
 - n. Generation of Manual reports and collating data from various tools to meet specific business / Customer requirements, excluding reporting on current business and Customer requirements and any reporting agreed to provide during the introduction of new services.
4. Microland shall assist in the planning for the technology revamp of the Customer estate, however, all tasks performed shall be considered as project work and shall be charged separately.
5. Resolution of issues related to end-user equipment like Desktops/handhelds, and desktop application functionalities are considered out of scope;
6. It is assumed that all tools and software required for performing and enhancing the technical performance and functionality of the support teams shall be provided by the Customer Organization.
7. Microland assumes that all necessary enterprise-wide monitoring and management tools are available within the Customer organization to manage the proposed infrastructure. Design, Implementation and documentation of new infrastructure to this environment shall be considered out of scope. However, if

the Customer does require Microland to perform such Project activities, Microland shall analyze the requirement and propose the necessary charges to the Customer.

14.2 Service Assumptions

1. The employees of Microland shall in no event be considered employees or agents of the Customer organization, nor shall they be entitled to or eligible, by reason of the contractual relationship hereby created, to participate in any benefits or privileges given or extended by Customer to its employees.
2. Any dependency on the Customer for completion of the services or delay due to incorrect or incomplete asset information would also be considered as exclusions while measuring Microland SLA compliance. It is the responsibility of Microland to make Customer aware of any asset inaccuracies through active communications.
3. Microland agrees to discuss & deliberate the process and documentation required to support any device found in the infrastructure that is non-standard.
4. Any major upgrade (architecture-related) is not part of the managed services scope. Such requirements would be considered as a separate project and would need to be mutually discussed between the two organisations on the plan.
5. Microland assumes that the Customer's centralized service management teams are responsible for communications of incidents on related infrastructure within the Customer organisation.
6. Microland will also coordinate with vendors/ Customer support teams providing local "hands & eyes" support needed for delivering this service wherein onsite support is needed.
7. Customer shall provide necessary access to all relevant tools to Microland for carrying out the services;
8. No personal data of the Customer will be processed by Microland as part of this agreement;
9. A data security plan will be formulated for every SoW and mutually agreed before the start of delivering the service.
10. All required infrastructure, hardware, software, licenses and certificates will be provided by Customer.
11. Customer will provide required access to the Microland engineers to support the solution.
12. Microland assumes Customer has valid contracts with the principal vendors and Microland can liaise with them in case Level 4 support is required.
13. Customer will identify and assess application compatibility.
14. 01st & 2nd line Support/Service Desk & Hardware break-fix/hardware swap is out of scope for Microland service for Win10

14.3 Customer Obligations

1. A Service Management/Ticketing tool will be provided by the Customer.
2. Customer's current hardware service/maintenance contract(s) support 24X7 response time and same or next business day resolution. In the event a problem is identified that requires Microland to engage the appropriate hardware service/software/maintenance vendor, any portion of the committed Microland SLA cycle time where Microland is dependent on the vendor to complete contracted services, would be excluded from the measurement of Microland SLA compliance. This shall apply only where the SLA has been missed by Microland and the Root Cause Analysis (RCA) can relate the miss directly to such vendor.
3. Microland assumes that Customer's Monitoring tools have the required & full capability to carry out monitoring to enable Microland to deliver proactive service.
4. Microland assumes that all service management functions are to be managed by Customer's Service Management teams. Microland assumes that the centralized Customer service management teams are directly involved and also need to be kept informed of all major incidents and changes in the environment.

5. The Customer shall provide up-to-date IT Policies such as Security Policy, Backup Policy, and Assets Inventory Policy, etc. to Microland.
6. The Customer will provide Customer Email ID's to Microland resources supporting the infrastructure.
7. The Customer shall provide necessary access to all relevant tools to Microland to carry out the services.
8. The Customer shall provide secure connectivity channels for Microland to deliver the services.

15. Business Continuity Plan (BCP)

In the event of a disaster or incidents requiring Microland to invoke service continuity measures, Microland will ensure service continuity in the form of resource availability, network connectivity, and ability to deliver services through intra-city disaster recovery delivery sites.