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## **AWS Managed Service Provider (MSP) Partner Program Audit Report**

**Partner Name:** tecRacer

**Audit Date:** 14 November 2017

## Introduction

The validation audit was conducted by David Pool of ISSI at the tecRacer office at Vahrenwalder Str. 156, Hannover, Germany, on 14 November 2017.

## About the AWS MSP Partner Program

The Amazon Web Services (AWS) Managed Service Provider (MSP) Partner Program recognizes AWS Partner Network (APN) Partners who embrace a new approach to providing cloud managed services and who are experts that can unlock agility and innovation for their customers. Partners in this program have been assessed for their capabilities to fulfill their customers' full lifecycle needs: plan/design >> build/migrate >> run/operate >> optimize. The rigorous process of the program validation audit is designed to support MSP Partners' continual development and to give customers a means to confidently identify those APN Partners whose have raised the bar with next generation managed services. Please see the MSP Program webpage (<https://aws.amazon.com/partners/managed-service/>) to learn more about the program and to download the full list of program criteria.

## About tecRacer

tecRacer is a Consulting, Managed Services and Training company 100% dedicated to the Amazon Web Services platform. As a Premier Consulting Partner they help AWS Customers with Migrations, Design Reviews and Big data Projects. As an authorized AWS Training Partner they offer all AWS Courses. As an audited AWS MSP Partner they help AWS Customers to operate their Services 24x7.

## Audit Objectives and Methodology

The objectives of this audit were:

- to validate Partner capabilities in relation to the requirements of AWS MSP Partner program
- to ensure Partner focus on Customer Obsession
- to encourage the use of AWS and industry best practices through value-added auditing

The audit validated tecRacer operational capabilities against program requirements for an AWS Managed Service Provider. This was assessed through discussion with tecRacer and by reviewing selected tecRacer processes and procedures.

The remainder of the audit focused on tecRacer technical competencies and any business or technical capability identifiers chosen by tecRacer to differentiate their unique skills.

Throughout the audit, considerable effort was made to make the event a value-added experience for the Partner by identifying opportunities for improvement and highlighting partner strengths and best practices. Information was obtained through data provided by tecRacer and through review of sample documents and records observed during the audit.

The audit concluded with a review of the specific audit findings, including any mandatory or score-impacting Action Items.

## Strengths

The following organizational strengths were noted during the audit:

- tecRacer have achieved a number of AWS validations, including the Big Data Competency and
- many specializations.
- tecRacer are proactive in messaging AWS service capabilities from a next-generation managed
- services perspective, and are active in many forums.

- As a Training Partner, tecRacer have placed a strong emphasis on internal training, including the
- additional ITIL certifications as well as a bootcamp approach to getting new hires up to speed.
- Standardization on Chef with dedicated capabilities for infrastructure and application migration.
- Implementation of OpsGenie for alarm consolidation and intelligent call routing.
- Implementation of a customer focused team will ensure a more consistent end-end customer experience when using tecRacer services.
- The use of Site24X7 allows tecRacer to provide cost effective but relatively advanced capabilities for their target market.

## Program Requirements Validation

### 1. Business Health

AWS MSPs are trusted advisors to customers of all sizes, helping companies make decisions based on their overall goals. In undertaking customer engagements, AWS MSPs take the lead in ensuring customer data is protected and AWS best practices are followed in all areas including the planning and design, migration, and new solution development. The expectation is that these solutions and workloads will be monitored and maintained on an ongoing basis, with the AWS MSP providing regular touch points with the customer with continual recommendations on ways to increase efficiencies. Due to the importance of the role of the AWS MSP, Partners must also show that they have viable businesses to earn and maintain customer trust.

tecRacer has demonstrated the following capabilities related to business health:

- ✓ Partner regularly assesses financial health of their business
- ✓ Partner has processes in place for financial planning, including forecasting, budgeting, and review of final metrics and reports
- ✓ Areas of business risk are outlined with documented mitigation plans
- ✓ Partner has a succession plan in place to address loss of key leadership personnel related to their AWS MSP practice.
- ✓ Partner has the ability to objectively capture employee satisfaction data.
- ✓ Partner has  $\geq 3$  AWS Customer References including at least 1 that is publicly referenceable.

### 2. Partner Capabilities Overview

AWS MSP Partners are able to effectively and succinctly communicate the breadth of their capabilities to their customers and the actively seek to educate customers about the new values that they can attain through next generation managed cloud solutions. These companies provide thought leadership and education through the sharing of rich content with their customers and potential customers.

tecRacer has demonstrated the following capabilities related to capabilities overview:

- ✓ Partner has a company overview presentation to set the stage for customer conversations as applicable to their AWS MSP practice, in addition to demonstration capabilities.
- ✓ Partner publicizes how managed services are different in an AWS environment vs. traditional on premise or hosted managed services with emphasis on automation enabled by DevOps practices.

### 3. AWS Knowledge

Customers moving to the cloud are interested in working with consulting companies who are able to provide expertise and guidance on how to best leverage all of the unique services and features that the AWS platform provides.

The traditional roles and responsibilities of Managed Service Providers have changed to include the ability for MSPs to provide those consulting services which are required to build operationally sustainable workloads and solutions for the customer.

Although customer objectives will drive which AWS services are used, there are fundamental AWS services that all AWS MSPs must be fluent in, to provide next-generation MSP Value to their customers.

tecRacer has demonstrated the following capabilities related to AWS knowledge of fundamental AWS services:

- ✓ Examples of customer solutions leveraging each service
- ✓ If AWS service is not being leveraged by an active customer, a hypothetical use case is available including where that service should be considered and how it will be supported
- ✓ Description of how services are supported by Partner, alone or as part of a solution comprising multiple services

### 4. Business Management

Customers need to be confident in the business health and management of the MSP Partners with whom they choose to engage. This confidence supports customers in building long term relationships with these companies and in making decisions to engage in ongoing services that are critical to their businesses.

tecRacer has demonstrated the following capabilities related to business management:

- ✓ Partner determines and provides resources needed for business demand, including resources related to personnel and infrastructure.
- ✓ Partner has an overview of the job roles within their company, supporting the AWS business.
- ✓ Partner has defined hiring and termination processes and checklists for on- and off-boarding of personnel.
- ✓ Partner has at least one person at a leadership position certified to ITIL Foundation or above.
- ✓ Partner sales teams and/or applicable business units supporting the AWS MSP practice have all completed the Business Professional or Technical Professional accreditations.
- ✓ Partner has at least one person at a leadership position certified with an AWS Associate level certification.
- ✓ Partner has signed contracts with customers defining the specific billing model and any other contractual agreements.
- ✓ Customer contracts define the specific legal ownership of data, including arrangements for handling of customer data upon termination of the contract by either party
- ✓ Partner has defined processes for selection and evaluation of suppliers (e.g., SaaS vendors or any other third parties to whom activities or services are subcontracted).
- ✓ Where Partner uses SaaS solutions for systems which contain customer information or have access to AWS resources, Partner demonstrates that due diligence has been carried out to assess the security compliance of these solutions with a focus on customer privacy and security.
- ✓ Partner has an AWS Support plan in place.

## 5. Billing and Cost Management

AWS MSPs who are also AWS Channel Resellers need to be experts in AWS usage with a deep understanding of how to manage and secure their customers' accounts. They should also have the ability to make usage related and buying strategy recommendations, as well as other insights, to help their customers best leverage AWS services.

tecRacer has demonstrated the following capabilities related to billing and cost management:

- ✓ Partner uses AWS Billing and Cost Management service.
- ✓ Partner leverages the AWS Account Settings page to manage up to date contact and security information for both the payer and/or linked account/s they manage.
- ✓ Partner leverages third-party ISV or Partner-developed solutions for billing management and optimization to strengthen their ability to provide proactive recommendations to customers.
- ✓ AWS Reseller Partner has account management capabilities
- ✓ AWS Reseller Partner has rebilling capabilities
- ✓ Partner uses Account Controls
- ✓ Partner integrates AWS License terms with customer contracts and processes to ensure compliance to AWS agreements (i.e., reseller agreement).
- ✓ Reseller Partners provide End User Reporting to AWS as terms of their Reseller Agreement.

## 6. Solution Design Capabilities

AWS MSPs must demonstrate the ability to deliver complete and detailed customer design documents assuring that due diligence, capacity planning, architectural review, and long term operational processes have been assessed for the engagement.

Partner has demonstrated that during customer engagements, a complete detailed design document is delivered such that customers and Partners are both assured that due diligence, capacity planning, architectural review and long term operational process have been assessed for the customer engagement. Detailed design documents include:

- ✓ Documentation of customer requirements
- ✓ Architectural details of the proposed design
- ✓ Details of the system performance, capacity management and availability measurement systems to be put in place to measure success of the proposed design
- ✓ Assessment of customer's security policies and procedures with gap identification
- ✓ Customer infrastructure architected per AWS Security best practices as outlined in <https://aws.amazon.com/whitepapers/aws-security-best-practices>.
- ✓ Governance and risk management at scale as per <https://aws.amazon.com/whitepapers/overview-of-risk-and-compliance/> and <https://aws.amazon.com/whitepapers/aws-security-best-practices>.
- ✓ Initial and ongoing customer assessments using AWS basic and enterprise operations checklists

## 7. Infrastructure and Application Migration Design Capabilities

While the role of the traditional MSP focused on the operations of a customers' environment, next-generation MSPs bring value to the customer through their AWS expertise along with other industry or solution-specific knowledge (e.g., big data). Customers look to their AWS MSP to help them make decisions on how to move workloads to AWS utilizing highly available, elastic and reliable infrastructure unique to AWS.

While MSPs in the past focused on how to react to failures generally stemming from capacity issues and/or faulty hardware, good AWS design and migrations should be fault tolerant by nature; allowing MSPs to focus their resources and provide value to customers in new ways.

tecRacer has demonstrated the following capabilities related to infrastructure and application migration design:

- ✓ Infrastructure that is aligned with AWS architecture best practices and reference architectures.
- ✓ Application migration capabilities and provision of continual integration, automated deployment and taking advantage of elastic, highly available infrastructure
- ✓ Provision of tooling that abstracts application deployment from infrastructure deployment and allows customers to, independently or in conjunction with the managed service, deploy and configure their applications

## 8. Security

Security is a top priority for AWS and should also be for AWS MSPs. As trusted experts, these MSPs should have extensive knowledge of AWS security best practices and seek to educate their customers, in support of AWS shared security model. These companies should leverage this knowledge and ability in both their customers' AWS environments and in their own systems.

Partner has demonstrated the following capabilities related to security:

- ✓ Security policies and procedures to protect their own systems from attacks
- ✓ System that provides access to customer resources to its engineers based on the principle of least privilege, including a process for defining the appropriate level of access, and control of access to critical or sensitive data (as defined by the customer) by multi-factor or quorum authentication with access based alerts
- ✓ Security policies and procedures to protect their customer's systems from attacks
- ✓ Deployment of all supported AWS infrastructure into Amazon Virtual Private Cloud
- ✓ No administration of AWS accounts by use of root account credentials
- ✓ Provision of encryption at rest services for AWS infrastructure as outlined in <https://aws.amazon.com/whitepapers/encrypting-data-at-rest/>
- ✓ Provision of onboarding and educational documentation to ensure customer understanding of AWS security processes and technologies as outlined in <https://aws.amazon.com/whitepapers/aws-security-best-practices/>.
- ✓ Activation of multi-factor authentication on all Partner and customer AWS root accounts
- ✓ Secret shopper testing on vectors vulnerable for social engineering attacks, including call, chat, and email systems
- ✓ Encryption of customer contact and business/personal information on all Partner systems including Partner, billing, and ticketing systems
- ✓ Retention of Security Event Logs for the duration contractually agreed with customers
- ✓ Systems to support and maintain Security Event Logs
- ✓ Use of AWS Config service for security components auditing
- ✓ AWS CloudTrail enabled on all managed accounts, and a process in place to maintain log integrity
- ✓ Documented Access Management Strategy, including but not limited to AWS Identity and Access Management users, symmetric access keys, asymmetric X.509 certificates, console passwords, and hardware or virtual MFA devices
- ✓ Monitoring of internal systems to ensure that customer services are not compromised by internal failures, and reasonable and tested processes to respond to internal outages and failures

## 9. Service Desk Operations and Customer Support

Service desk and support capabilities are a fundamental foundation for MSPs. They must be able to provide and manage effective communications and engagements with their customers as a baseline for building even more robust services.

Partner has demonstrated the following capabilities related to service desk operations and customer support:

- ✓ 24x7 customer service available over multiple communication means
- ✓ Definition, documentation, and communication of support priority and severity levels
- ✓ IT Service Management (ITSM) ticketing system with: event/incident ticket creation and escalation; immediate logging and time stamping of tickets; documented escalation to AWS Support; automated escalation alerts; integration with AWS Support Center; customer verification of case closure
- ✓ Tracking of cases escalated to AWS Support, and regular reviews with team to share lessons learned, leveraging information obtained from those meetings for improving Partner's internal knowledge base
- ✓ Proactive monitoring and alerting using systems, tools, or applications capable of monitoring the performance of all AWS services included in the customer's managed service agreement, including corresponding service desk functionality to take action on events/alerts according to SLAs/contractual obligations
- ✓ Service intelligence monitoring capabilities which gather intelligence from heterogeneous monitoring and logging sources.
- ✓ Monitoring solution capable of using statistical analysis algorithms to identify outliers or anomalies in metrics to generate alerts rather than defined thresholds
- ✓ Provision to customers of dashboard and advance reporting capabilities that showcase a service-intelligence approach to monitoring, as opposed to more traditional threshold-based monitoring and handling of events and incidents
- ✓ Provision to customers of continuous compliance solutions which apply to AWS managed resources
- ✓ A process for detecting, categorizing, and taking action on all events
- ✓ The ability to differentiate between monitoring events that require customer engagement and those that don't
- ✓ Documented incident management processes
- ✓ A defined process to communicate updates on open incidents
- ✓ A documented process for problem management encompassing incidents with no known or available resolution or for those that are proactively identified based on performance trending or monitoring
- ✓ Identification and documentation of root cause, and storage in Known Error Database (KEDB) that is searchable by appropriate support personnel
- ✓ A strategy for tracking and managing AWS deployed assets
- ✓ Processes for configuration and change management, including a change rollback process
- ✓ Storage of configuration records in a Configuration Management Database (CMDB)
- ✓ Application release and deployment management processes
- ✓ Infrastructure release and deployment management processes

## 10. Service Level Agreements

Foundational Service Level Agreements (SLAs) are fundamental in providing a positive customer experience and next generation MSPs are providing unique value to their customers through workload and solution specific SLAs, focusing on driving business outcomes for their customers.

tecRacer has demonstrated the following capabilities related to service level agreements:

- ✓ Provision of foundational SLAs, i.e., for response times, actions, and customer notifications
- ✓ Provision of workload or solution-specific SLAs based on customer workloads operating in the AWS Cloud
- ✓ Documentation and supporting processes and metrics for all SLAs

## 11. Customer Obsession

Earning and maintaining customer trust is critical to an MSP's ability to build long term relationships with their customers. All AWS MSP Partners are expected to maintain a strong focus on customer obsession and delivering outstanding customer experiences.

tecRacer has demonstrated the following capabilities related to customer obsession:

- ✓ Objective capturing of customer satisfaction data, e.g., by a formal survey process, contact-based surveys, or as part of customer review meetings
- ✓ Low-score or customer dissatisfaction follow-up, including documentation of resolution
- ✓ Regular customer review meetings to ensure customers understand the value of a managed solution, with reports and recommendations provided
- ✓ Regular assessment of customer infrastructure cost and communication of opportunities for cost optimization

## 12. Service Reporting

Robust Service Reporting enables a high degree of visibility that contributes significantly to an organization's ability to assess its own performance. This reporting also provides transparency to customers', enabling insights to the value of services provided by their MSP.

tecRacer has demonstrated the following capabilities related to service reporting:

- ✓ Provision of incident management reports, including details of current work activities to correct incidents and metrics on the management of incidents
- ✓ Provision of non-service affective incident reports, including incidents where action was taken to proactively re-route, new services provisioned according to automated triggers, etc.
- ✓ Provision of performance analysis reports, including historical performance analysis over a number of sample periods, allowing the customer to understand how the overall service is performing
- ✓ Provision of asset/resource reports, including reporting of assets/resources under management for the customer
- ✓ Provision of exception reports, including reports generated by customer-specified thresholds or ranges, allowing customers to self-select parameters on individual devices and determine thresholds for the raising of exception reports
- ✓ Provision of customer access to reports via the web or a web portal

## 13. Internal Process Optimization

Continual improvement is another key focus area for next generation MSPs. This involves both internal process improvement, as well as identifying means to drive increased automation to deliver increasingly resilient and lower cost customer solutions.

tecRacer has demonstrated the following capabilities related to internal process optimization:

- ✓ Regular reviews of internal performance and recommendations for improvement, including looking for efficiencies within the Partner's operations that result in financial efficiencies, process efficiencies, and/or greater customer satisfaction
  - ✓ Process for tracking automated vs manual recovery activities and regular reviews of these for opportunities to reduce manual processes.

## 14. SLA Optimization

Next generation MSPs are also focused on continual improvement in their performance objectives. Opportunities for improvement exist in all organizations as AWS MSPs are expected to be self-critical in identify and addressing these opportunities.



tecRacer has demonstrated the following capabilities related to SLA optimization:

- ✓ Continual improvement of performance to objectives, including records of actions taken to improve performance, particularly when established objectives are not being met