SharePoint

Platform Maintenance Case Study

HCL

Digital & Analytics
by HCL Technologies

SharePoint

Case Study:
Oil and Gas Company, US Operations

Client Background:

One of the world's largest integrated oil and gas companies, headquartered in UK

Area of Service:

Platform maintenance and Operations on SharePoint 2010/2013/2016/SharePoint Online

Nature of Engagement:

Long-term Operational Efficiency enhancement for large on-premise SharePoint footprint

Key Challenges

Stability
- ❖ **Unstable platform,** frequent tickets and critical issues causing **frequent outages**.
- ❖ **Recurring issues** with user profiles and faulty configurations - Frequent escalations and complaints. Long running MS Cases.
- ❖ **Time required** for SharePoint Patching of multiple servers was causing negative feedback

Security (General)
- ❖ Unused Public IPs, external certificates and DNS hosts causing security risk.
- ❖ Tracking servers from CMDB.
- ❖ Test applications were using external certificates, causing **cost overrun**
- ❖ Multiple incidents of **confidentiality breach**
- ❖ Lack of **Password governance** and implementation.

Upgrade and Patching
- ❖ No plan for **emergency patching**
- ❖ Different SharePoint versions were running without **requisite patching**
- ❖ **Missing security end-points** on Severs
- ❖ Unsupported versions of 3rd party software e.g. Nintex, Metalogix ControlPoint etc.
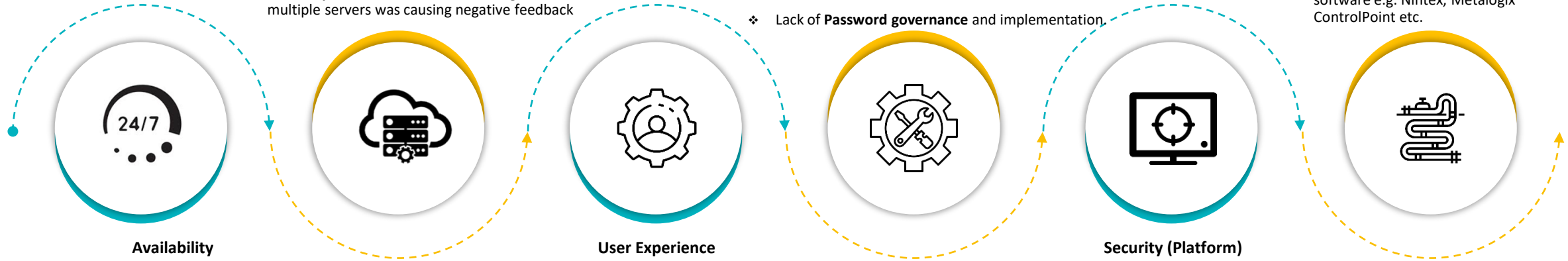
Availability
- ❖ **No DR plans** were available for the platform
- ❖ Most DR environments were non-operational. **DR and BCP compliance score** for SharePoint Track was less than 20%
- ❖ **Extended outages** for patching and long failover window (~2 hours)
- ❖ Coordination challenges during off business hours.

User Experience
- ❖ Tedious process for identifying and tracking SharePoint application owners
- ❖ No governance around expiring licenses
- ❖ No standard way to **manage access**
- ❖ **Poor Navigation** for existing applications
- ❖ **Poor Search experience**

Security (Platform)
- ❖ Several instances of Brute Force attacks on SMTP ports/SharePoint mail servers
- ❖ Risky **use of Shared Service Accounts** for remote access
- ❖ SharePoint applications were published on the Internet without a firewall
- ❖ Unsecured storage of credentials.

Key Operational Challenges:
- ❖ Lack of Documentation
- ❖ Lack of Ownership and/or source of Information
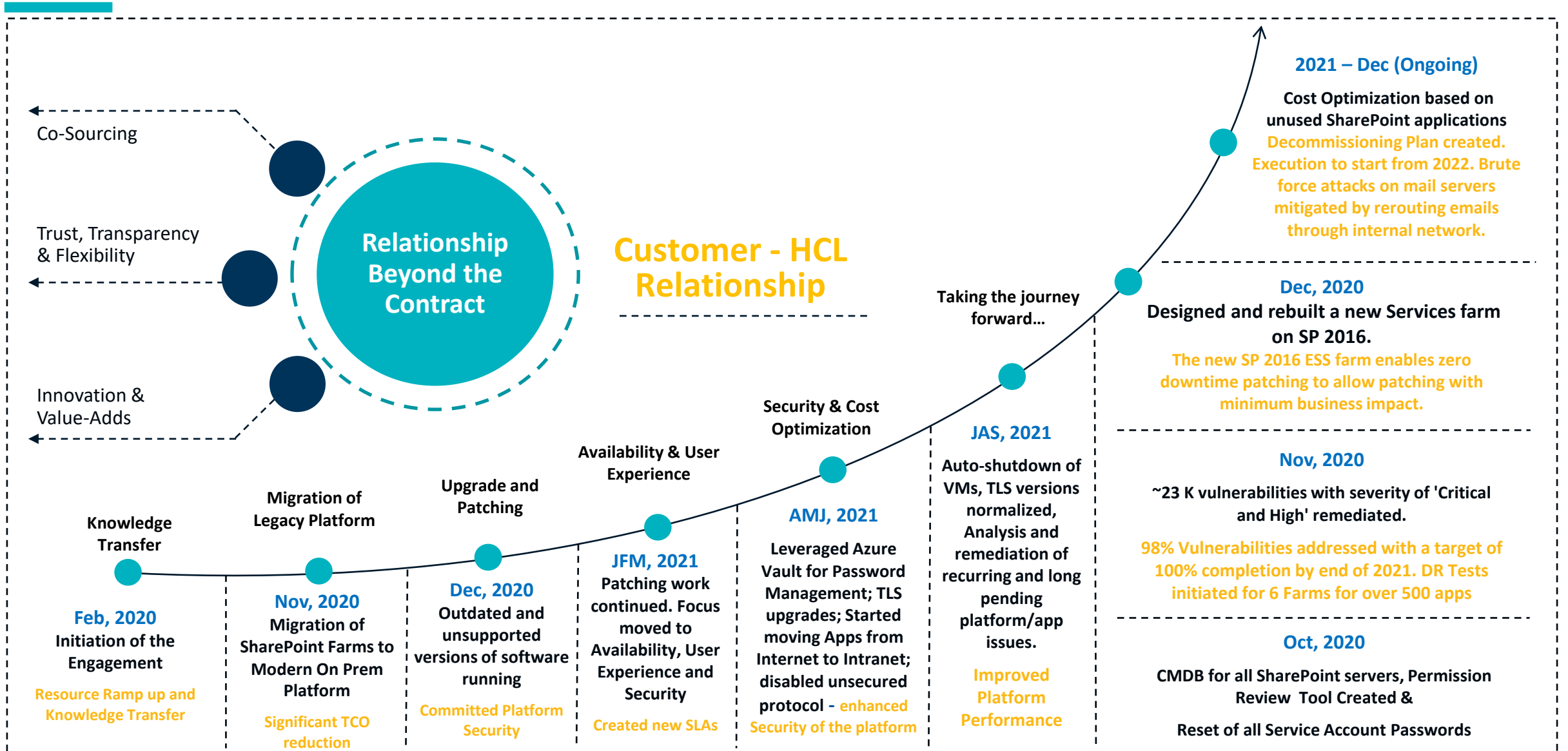- ❖ Roles/Responsibility changes amongst key stakeholders

- ❖ Business and IT Priority conflicts
- ❖ Huge hidden dependencies on Security, Mail, DNS and other teams
- ❖ Conflict of interest between incumbent and incoming support vendors

The Journey

Partnership Journey

Relationship Beyond the Contract

Co-Sourcing

Trust, Transparency & Flexibility

Innovation & Value-Adds

Customer - HCL Relationship

Knowledge Transfer

Feb, 2020
Initiation of the Engagement
Resource Ramp up and Knowledge Transfer

Migration of Legacy Platform

Nov, 2020
Migration of SharePoint Farms to Modern On Prem Platform
Significant TCO reduction

Upgrade and Patching

Dec, 2020
Outdated and unsupported versions of software running
Committed Platform Security

Availability & User Experience

JFM, 2021
Patching work continued. Focus moved to Availability, User Experience and Security
Created new SLAs

Security & Cost Optimization

AMJ, 2021
Leveraged Azure Vault for Password Management; TLS upgrades; Started moving Apps from Internet to Intranet; disabled unsecured protocol - enhanced Security of the platform

Taking the journey forward...

JAS, 2021
Auto-shutdown of VMs, TLS versions normalized, Analysis and remediation of recurring and long pending platform/app issues.
Improved Platform Performance

2021 – Dec (Ongoing)
Cost Optimization based on unused SharePoint applications
Decommissioning Plan created. Execution to start from 2022. Brute force attacks on mail servers mitigated by rerouting emails through internal network.

Dec, 2020
Designed and rebuilt a new Services farm on SP 2016.
The new SP 2016 ESS farm enables zero downtime patching to allow patching with minimum business impact.

Nov, 2020
~23 K vulnerabilities with severity of 'Critical and High' remediated.
98% Vulnerabilities addressed with a target of 100% completion by end of 2021. DR Tests initiated for 6 Farms for over 500 apps

Oct, 2020
CMDB for all SharePoint servers, Permission Review Tool Created &
Reset of all Service Account Passwords

Our Solutions

Availability and Stability

We provided an aggressive remediation plan and executed it to perfection:
Marathon rounds DR Drills and issue fixing for a working DR and Updation of the DR plans and the DR test dates in SNOW.
Implemented Azure Traffic Manager for automated switching of traffic and preconfigured endpoints for each SharePoint farm in the Traffic Manger profiles.
Analyzed the SP farms, services and servers running the applications.
Fixed underlying issues, reprovisioned services, rebuilt servers and SharePoint farms for a permanent fix.
Provisioning a new user profile service application in the HAUS farm to fix frequent issues with refinery applications.
Created index partitions to solve the recurring issues with the HA-US search issues.
Designed and rebuilt a new Services farm on SP 2016.
Configured Azure Update Manager and moved all server to AUM (Azure Update Manager) for patching.
Fixed underlying issues so all servers are reporting to AUM.

Security

We provided a holistic approach to Security through the following measures:

Identified and decommissioned unused Public IPs and Load balancers to secure the environment and all vulnerabilities with severity of 'Critical and High' remediated.

Restricted access for test applications ONLY from the customer Intranet. Reduced public IPs and Load balancers.

Identified unused certificates/DNS names and revoked the same. External certificates on the SharePoint Test applications were replaced with Internal Certificates.

Remote access has been blocked for all SharePoint service accounts and SharePoint applications running on non-secured HTTP protocols were identified and disabled.

Worked with the CMDB teams to put an automation in place for updating SharePoint servers in SNOW.

Introduced storing the credentials centrally in Azure Key Vault with restricted access.

Worked with the Security Operations team to find an appropriate and feasible solution and finalized Azure application gateway. Prepared a plan for the rollout of App gateway for all SharePoint applications.

Prepared a plan for the access management for SharePoint resources and removed non-legitimate users from the SP farm admins, web app policies, Databases and servers.

Password reset of all SharePoint service accounts was completed successfully and Password policy was implemented.

Created a Site Permissions Review tool that provides an easy-to-use tool to review site permissions and modify user access.

User Experience and Patching

We provided a permanent solution to patching issues causing tremendous user dissatisfaction and poor user experience:
Prepared a detailed plan for the emergency patching
Applied latest SPCU patches to all farms and resolved issues that were encountered.
Ensured that all farms/Environments are running on the same SP version (N-6 or less)
Planned for the upgrade of all SharePoint farms and fixed inherent issues with the farms.
Automated deployment of Crowd Strike and Qualys agents through DSC policies on all SharePoint Servers.
Successfully upgraded Telerik in all SharePoint farms in a record time following a Security incident.
Upgraded Nintex, Metagix Control Pont and OWA to the latest versions.
Successfully upgraded a critical farm to SP 2016. The new version supports more portfolio management capabilities and integration with execution systems like JIRA, ADO, and MS Project.
TLS version upgraded to v1.2 on SharePoint farms to mitigate related vulnerabilities.

The Target Operating Model

Target Operating Model

Benefits Delivered

Benefits

Stability

- **A more stable and performing SP platform.** Substantial decrease in issues (including many long-pending) related to SP platform.
- **Closed multiple escalations from Business. Closed multiple MS cases** (some of them running for several months).
- The new SP 2016 Shared Services farm **enables zero downtime patching**

Security (General)

- **Enhanced Security** and Cost saving by revoking unused certificates by limiting public end points.
- **Automation of CMDB updates in SNOW** for SharePoint server details
- **Security tightening** of access to SharePoint resources. Reset of all Service Accounts
- Easy-to-use tool for **permissions review and management.**

Upgrade and Patching

- **Business users pleasantly surprised** to know patching had been completed without their applications being impacted (650+ servers and 390 subsequent application tests within 48 hours)
- Achieved "All Green" for the first time in the last 10 years. Currently all SP farms are at green i.e. N/N-1 Patch level.
- Security end points deployed on all servers. Automation in place to sync future changes.
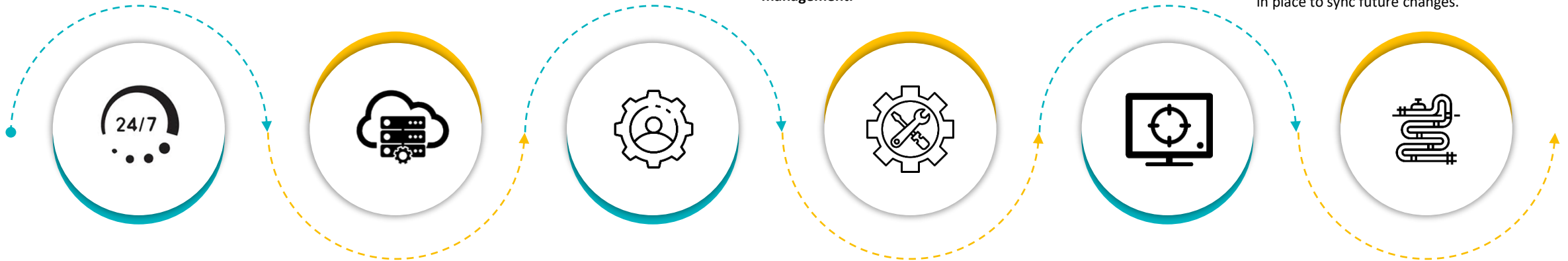
Availability

- **FIRST successful** DR for applications hosted in four of the key farms.
- **BCP** status in "**Green**" with a **compliance score of 100%**
- **Faster switching of user traffic (~15 Mins)** between Production and DR environments
- Better prepared for **Emergency patching**.

User Experience

- Enhanced portfolio management capabilities and integration with execution systems like JIRA, ADO and MS Project.
- Improved network performance.
- Successfully Migrated several **critical applications to SharePoint Online**
- New Shared services farm designed with sufficient index partition capacity **for error free search operations**

Security (Platform)

- **Prevention of attacks** on the servers and sites.
- All SharePoint applications are now **hosted only on HTTPS**.
- All the SharePoint applications (1200+ site collections) hosted in the legacy subscription (SSL) have been **successfully migrated** from Load Balancers **to Azure Application Gateway**
- Brute force attacks on mail servers mitigated by rerouting the SharePoint emails through internal network.

Customer Appreciation

Appreciations

I would like to recognize Nalini and all the hard work that's gone into providing a great service recently.
It really has made such a huge different to the way we work and I have to deal with far less issues now.
Nalini – Thank you. You make things 10 times easier now we have you on hand to support.

Rachel Innes

Very well done on the great work .
That was a challenge that had been going on for some time, you managed to crack the issue and close this for XX. Great work

Andrew

Faisal is an extra ordinary engineer/architect with excellent knowledge in SharePoint and best in solution providing. I am happing to say his solutions were implemented to overcome these hurdles. In fact, we followed his proposed solution for data migration since Microsoft suggestion was not helping the project. He was very committed, friendly and was available around the clock for any help.

Jayakumar, Nair

I had excellent feedback from Aleks - Both her and the team are extremely appreciative for the prompt action and support Siva provided in being able to find and retrieve files.

James Kurzemnieks

Siva and Praveen from the SP support team have shown the true XX OneTeam spirit and have stuck with us in getting the issue resolved… so a big thank you to them and their support team.

Purcell, Tony (MS)

"Very pleased with the service that I received. The documents have been updated within the OMS Library and this was completed in a timely manner."

Kevin Fontenot

Great job Faisal! I am going to have to start calling you Superman or something like that you seem to be at the heart of everything in the SharePoint team, and of course keeping this up at your normal pace through Ramadan. I wish we had 10 of you!

Eid Mubarak!

Regards,
Tracy

"Shafiq has been a great help in the decommissioning process so far and I would like to highlight the quick support he has provided to the requests made for Trinidad and North Sea regions."

Gupta, Pranav

Thanks so much for helping out with our SharePoint migration. You have saved us a lot of work and thanks for helping us out so quickly.

Phil Kershaw

"This is a great accomplishment!
I don't think we have ever been at this point in my 10 years with SharePoint at XX.
Well done!!"

John Foster

HCL

Relationship™

BEYOND THE CONTRACT

$10.5 BILLION | 176,000+ IDEAPRENEURS | 50 COUNTRIES